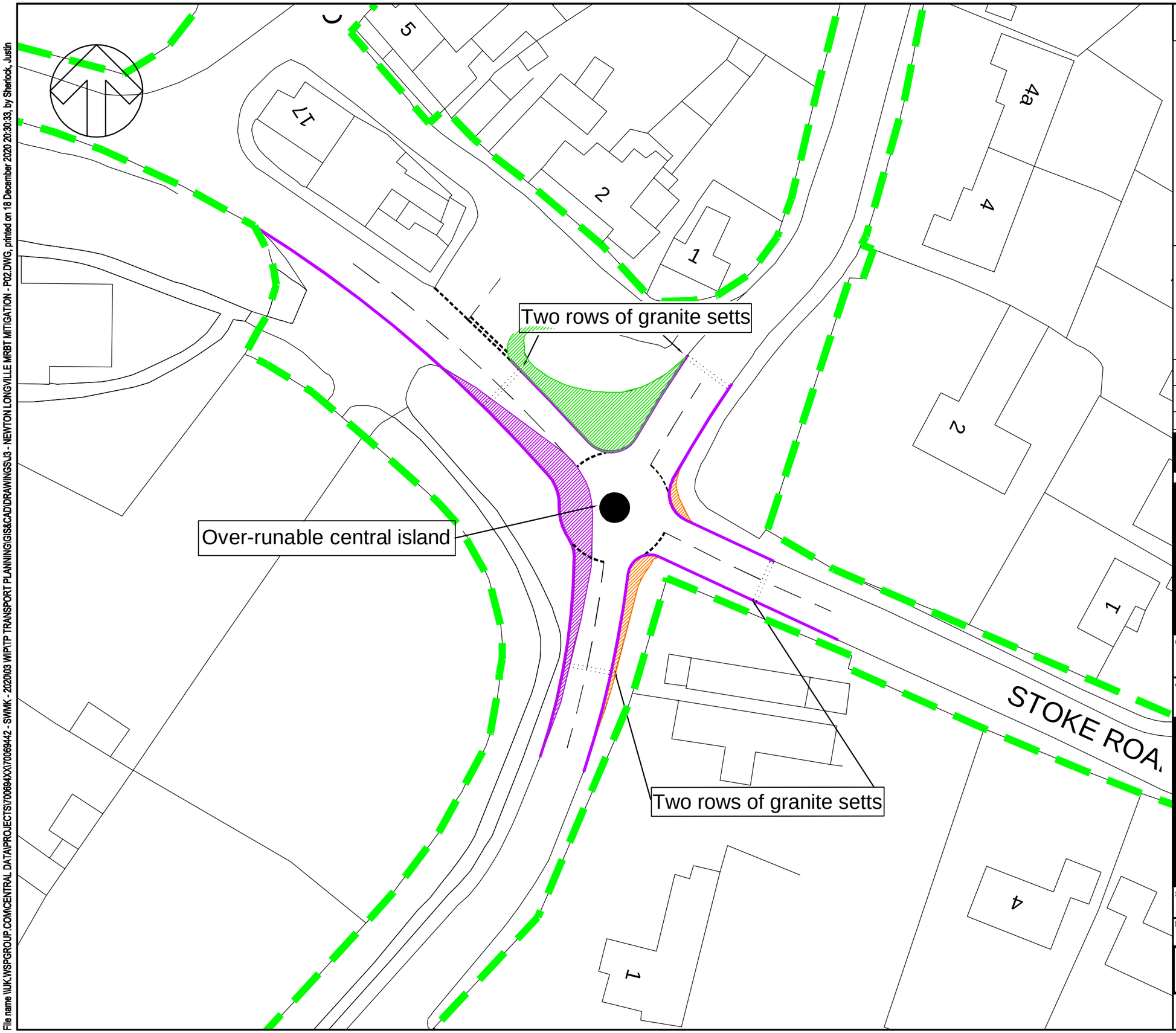
Appendix D

MITIGATION DRAWINGS



DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Footway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	09/12/2020	JS	TRN2 LAYOUT	SH	MJP
P01	15/05/2020	SMR	FIRST ISSUE	JS	JS

DRAWING STATUS: S0 - WORK IN PROGRESS

wsp

2 London Square, Cross Lanes, Guildford, GU1 1UN, UK
T+ 44 (0) 1483 528 400
wsp.com

CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

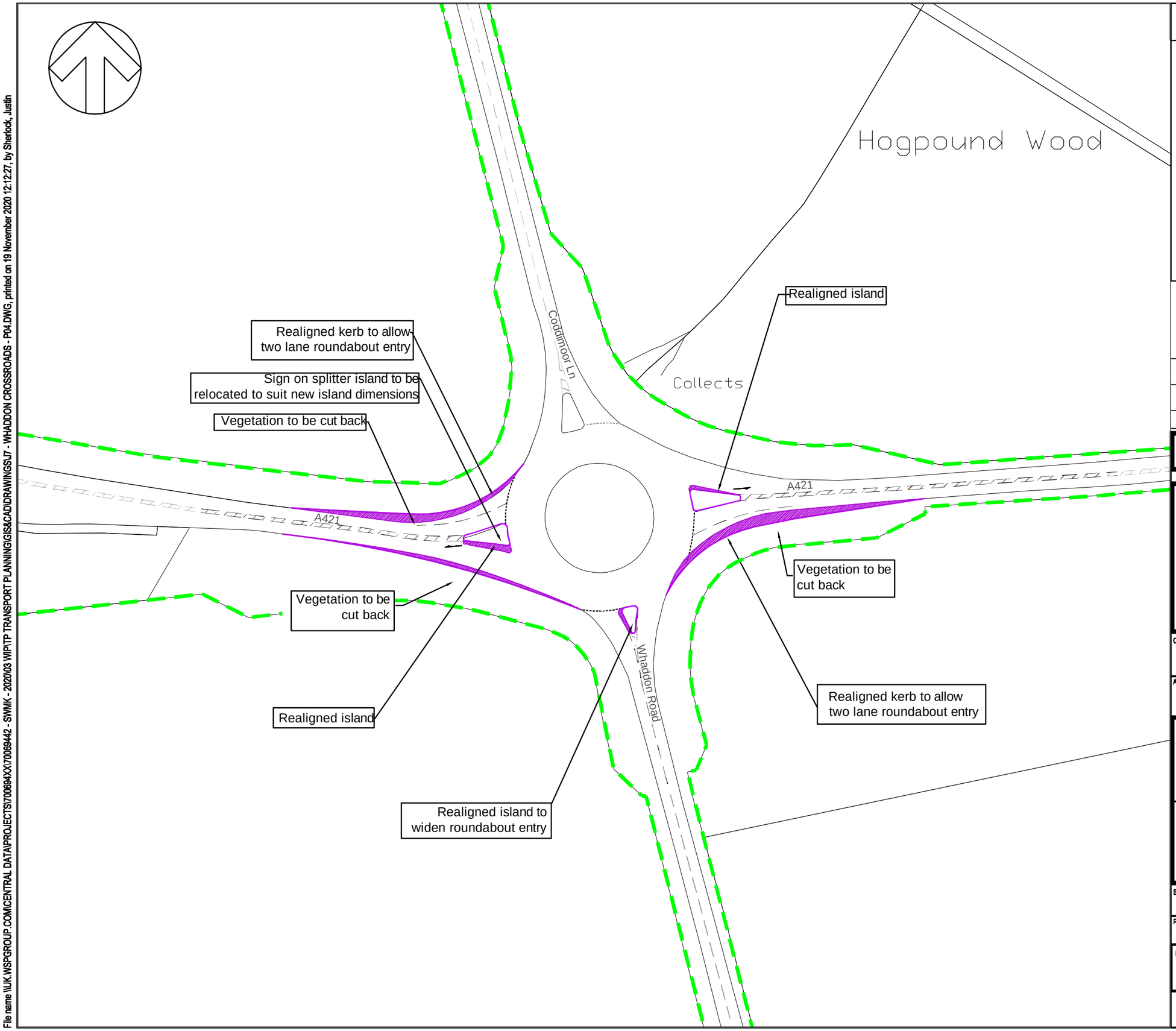
PROJECT: South West Milton Keynes

TITLE: Junction 3 Mitigation Layout
Whaddon Road / Stoke Road
Mini - roundabout

SCALE @ A3:	CHECKED:		APPROVED:
1:500	JS		JS
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	JS	SMR	Dec 2020

DRAWING No: 70069442-002 REV: P02

File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\70069442XX\70069442 - SWMK - 2020\03 WIP\TP TRANSPORT PLANNING\GIS&CAD\DRAWINGS\J3 - NEWTON LONGVILLE MRBT MITIGATION - P02.DWG, printed on 18 December 2020 20:30:33, by Sherlock, Justin



DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P04	13/11/2020	JS	AMENDED LAYOUT	JS	SH
P01	15/05/2020	SMR	FIRST ISSUE	JS	JS

DRAWING STATUS: S2 - FOR INFORMATION

wsp

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T+ 44 (0) 1483 528 400
wsp.com

CLIENT: South West Milton Keynes Consurtium

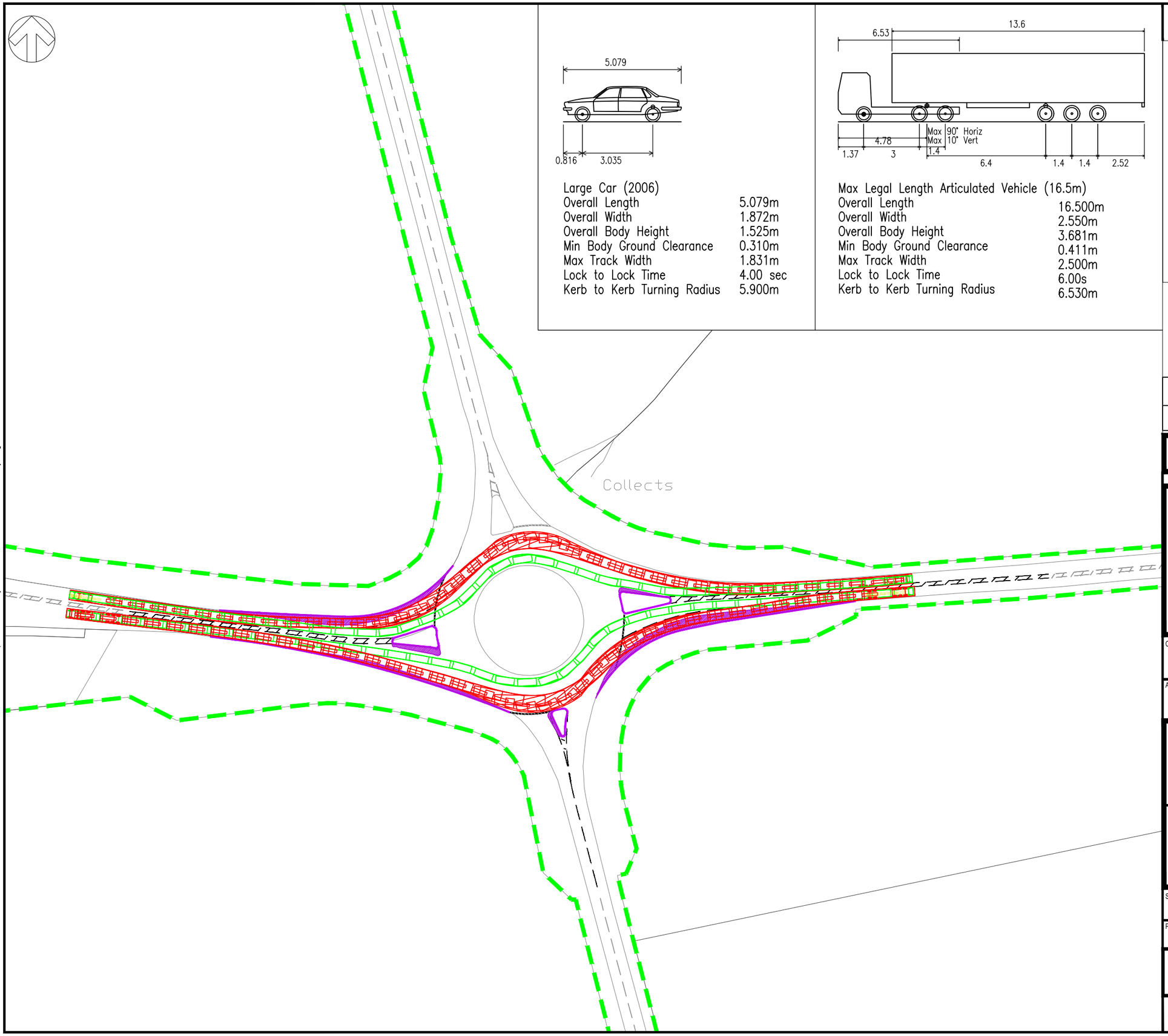
ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 7 Mitigation Layout
A421 Whaddon Crossroads Roundabout

SCALE @ A3:	CHECKED:		APPROVED:
1:1000	JS		JS
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	JS	SET	November 2020

DRAWING No:	REV:
70069442-005	P04



Large Car (2006)

Overall Length	5.079m
Overall Width	1.872m
Overall Body Height	1.525m
Min Body Ground Clearance	0.310m
Max Track Width	1.831m
Lock to Lock Time	4.00 sec
Kerb to Kerb Turning Radius	5.900m

Max Legal Length Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.530m

DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS: S2 - FOR INFORMATION

wsp
2 London Square, Cross Lanes, Guildford, GU1 1UN, UK
T+ 44 (0) 1483 528 400
wsp.com

CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 7 Mitigation Layout
A421 Whaddon Crossroads Roundabout
Swept Path Analysis

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SH	MP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 2020

DRAWING No: 70069442-005-ATR1

REV: P01

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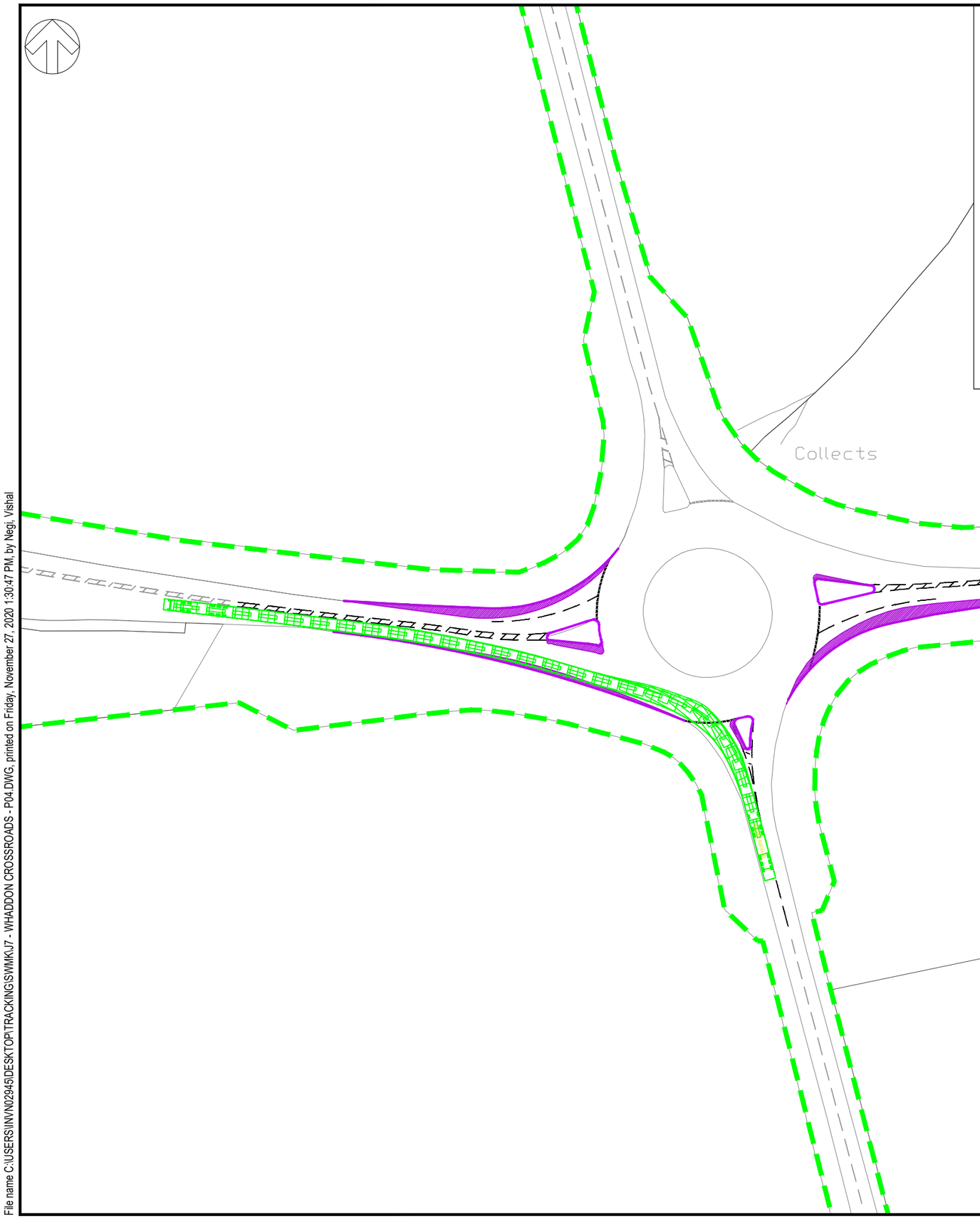

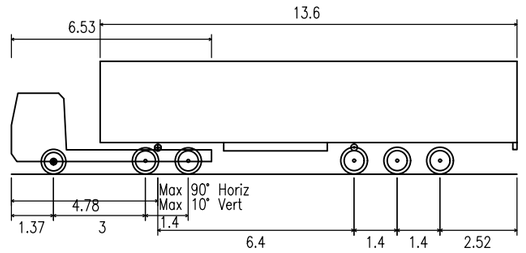

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Kerb to Kerb Turning Radius	6.530m

DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS:

wsp

2 London Square, Cross Lanes, Guildford, GU1 1UN, UK
T+ 44 (0) 1483 528 400
wsp.com

CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 7 Mitigation Layout
A421 Whaddon Crossroads Roundabout
Swept Path Analysis

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SH	MP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 2020

DRAWING No:	REV:
70069442-005-ATR2	P01

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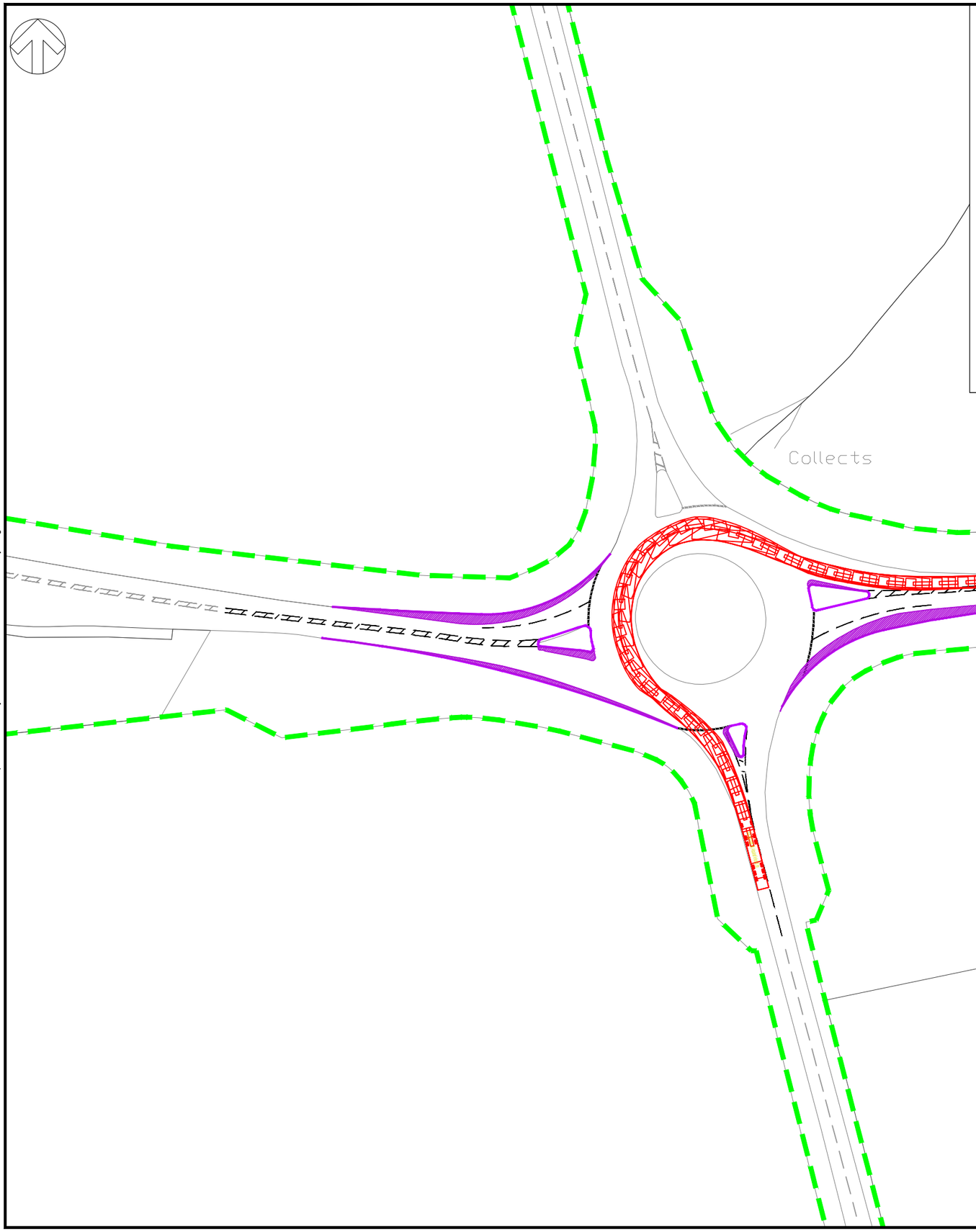

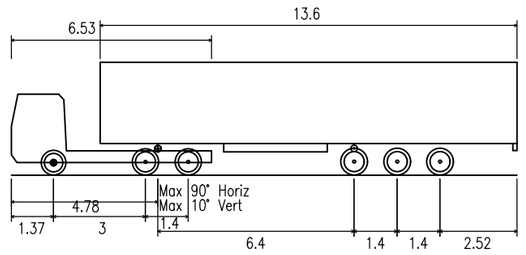

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Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.530m

DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS:

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2 London Square, Cross Lanes, Guildford, GU1 1UN, UK
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wsp.com

CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 7 Mitigation Layout
A421 Whaddon Crossroads Roundabout
Swept Path Analysis

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SH	MP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 2020

DRAWING No:	REV:
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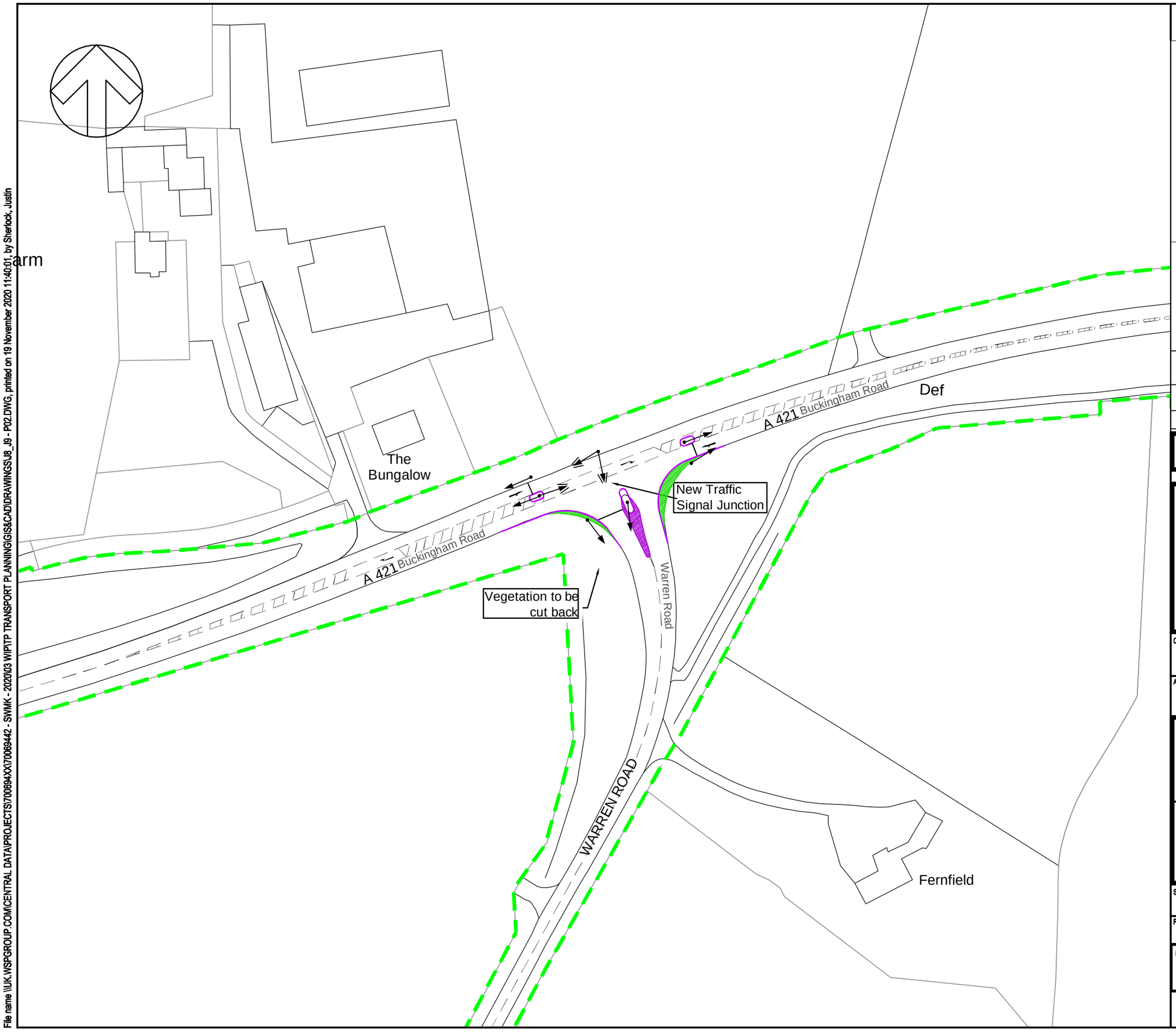

DO NOT SCALE

KEY

Highway Boundary

Kerb Amendments

Carriageway Constructio

Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	18/11/2020	JS	AMENDED LAYOUT	SH	MJP
P01	15/05/2020	SMR	FIRST ISSUE	JS	JS

DRAWING STATUS: S2 - FOR INFORMATION

wsp

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CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 8 A421/Warren Road Traffic Signal Mitigation Layout

SCALE @ A3:	CHECKED:		APPROVED:
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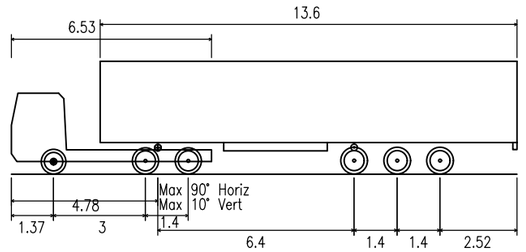
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	JS	SMR	November 2020

DRAWING No: 70069442-006 REV: P02



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Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.530m

DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS: S2 - FOR INFORMATION

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CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

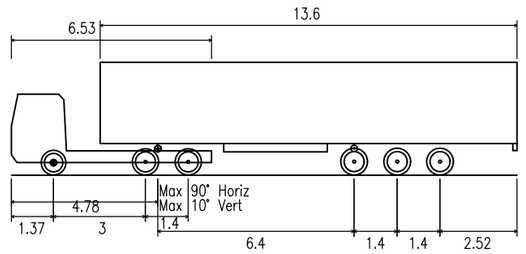
PROJECT: South West Milton Keynes

TITLE: Junction 8 A421/Warren Road
Traffic Signal Mitigation Layout
Swept Path Analysis

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SH	MP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 2020

DRAWING No:	REV:
70069442-006-ATR1	P01



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Kerb to Kerb Turning Radius	6.530m

DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS: S2 - FOR INFORMATION

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CLIENT: South West Milton Keynes Consurtium

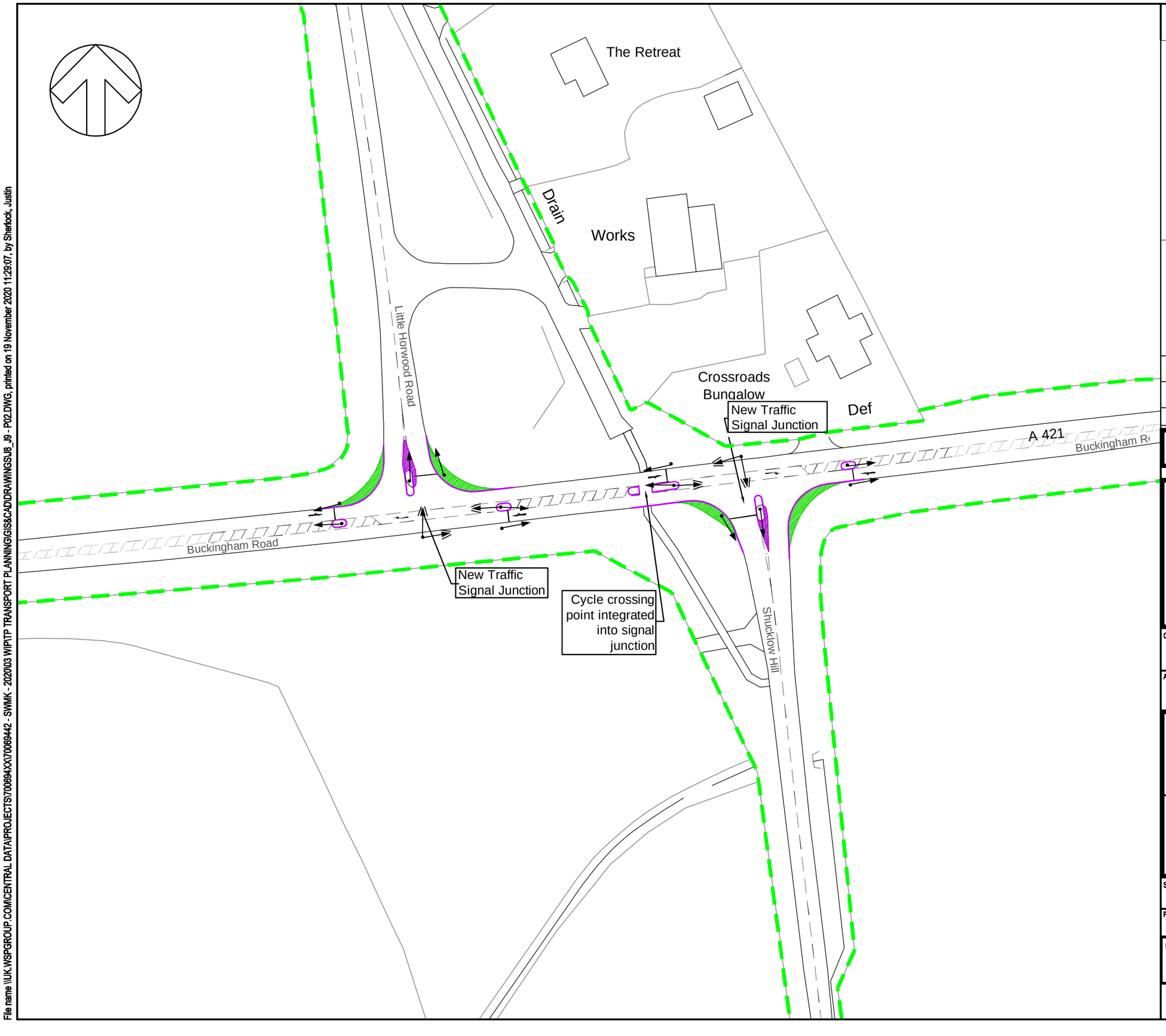
ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 8 A421/Warren Road
Traffic Signal Mitigation Layout
Swept Path Analysis

SCALE @ A3:	CHECKED:		APPROVED:
1:1000	SH		MP
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 2020

DRAWING No: 70069442-006-ATR2 REV: P01



DO NOT SCALE

KEY

Highway Boundary

Kerb Amendments

Carriageway Constructio

Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P02	18/11/2020	JS	AMENDED LAYOUT	SH	MJP
P01	15/05/2020	SMR	FIRST ISSUE	JS	JS

DRAWING STATUS: S2 - FOR INFORMATION

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2 London Square, Cross Lanes, Guildford, GU1 1UN, UK
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wsp.com

CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 9 A421/Shucklow Hill/Little Horwood Road Traffic Signal Layout

SCALE @ A3:	CHECKED:		APPROVED:
1:1000	JS		JS
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	JS	SMR	November 20

DRAWING No:	REV:
70069442-007	P02

Issues

The Retreat

Drain

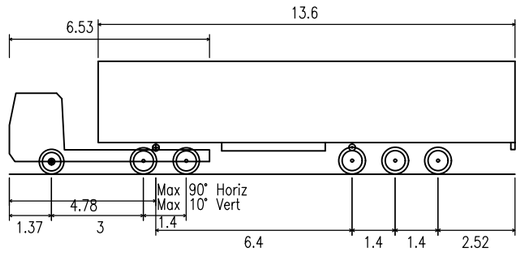
Works

Crossroads Bungalow

Def

A 421

A 421



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DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS: S2 - FOR INFORMATION

2 London Square, Cross Lanes, Guildford, GU1 1UN, UK
T+ 44 (0) 1483 528 400
wsp.com

CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 9 A421 Shucklow Hill/Little Horwood Road Traffic Signal Layout Swept Path Analysis

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SH	MP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 2020

DRAWING No:	REV:
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Issues

The Retreat

Drain

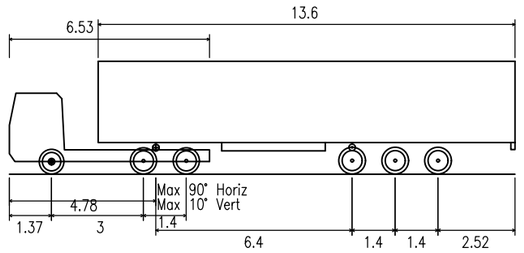
Works

Crossroads Bungalow

Def

A 421

A 421



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DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS: S2 - FOR INFORMATION

2 London Square, Cross Lanes, Guildford, GU1 1UN, UK
T+ 44 (0) 1483 528 400
wsp.com

CLIENT: South West Milton Keynes Consortium

ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 9 A421 Shucklow Hill/Little Horwood Road Traffic Signal Layout Swept Path Analysis

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SH	MP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 2020

DRAWING No: 70069442-007-ATR2

REV: P01

Issues

The Retreat

Drain

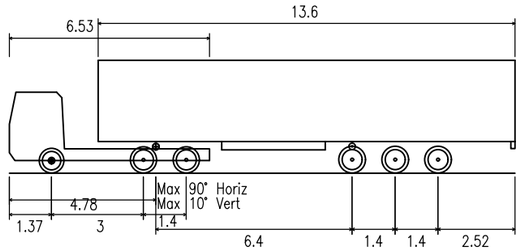
Works

Crossroads Bungalow

Def

A 421

A 421



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DO NOT SCALE

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- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS: S2 - FOR INFORMATION

wsp

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T+ 44 (0) 1483 528 400
wsp.com

CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 9 A421/Shucklow Hill/Little Horwood Road
Traffic Signal Layout
Swept Path Analysis

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SH	MP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 20

DRAWING No:	REV:
70069442-007-ATR3	P01

Issues

The Retreat

Drain

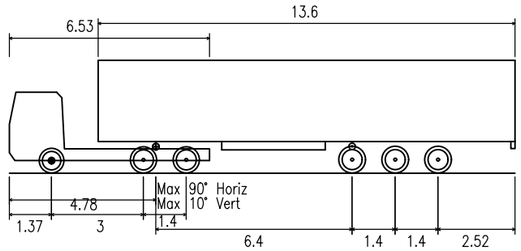
Works

Crossroads Bungalow

Def

A 421

A 421



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DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS: S2 - FOR INFORMATION

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2 London Square, Cross Lanes, Guildford, GU1 1UN, UK
T+ 44 (0) 1483 528 400
wsp.com

CLIENT: South West Milton Keynes Consurtium

ARCHITECT:

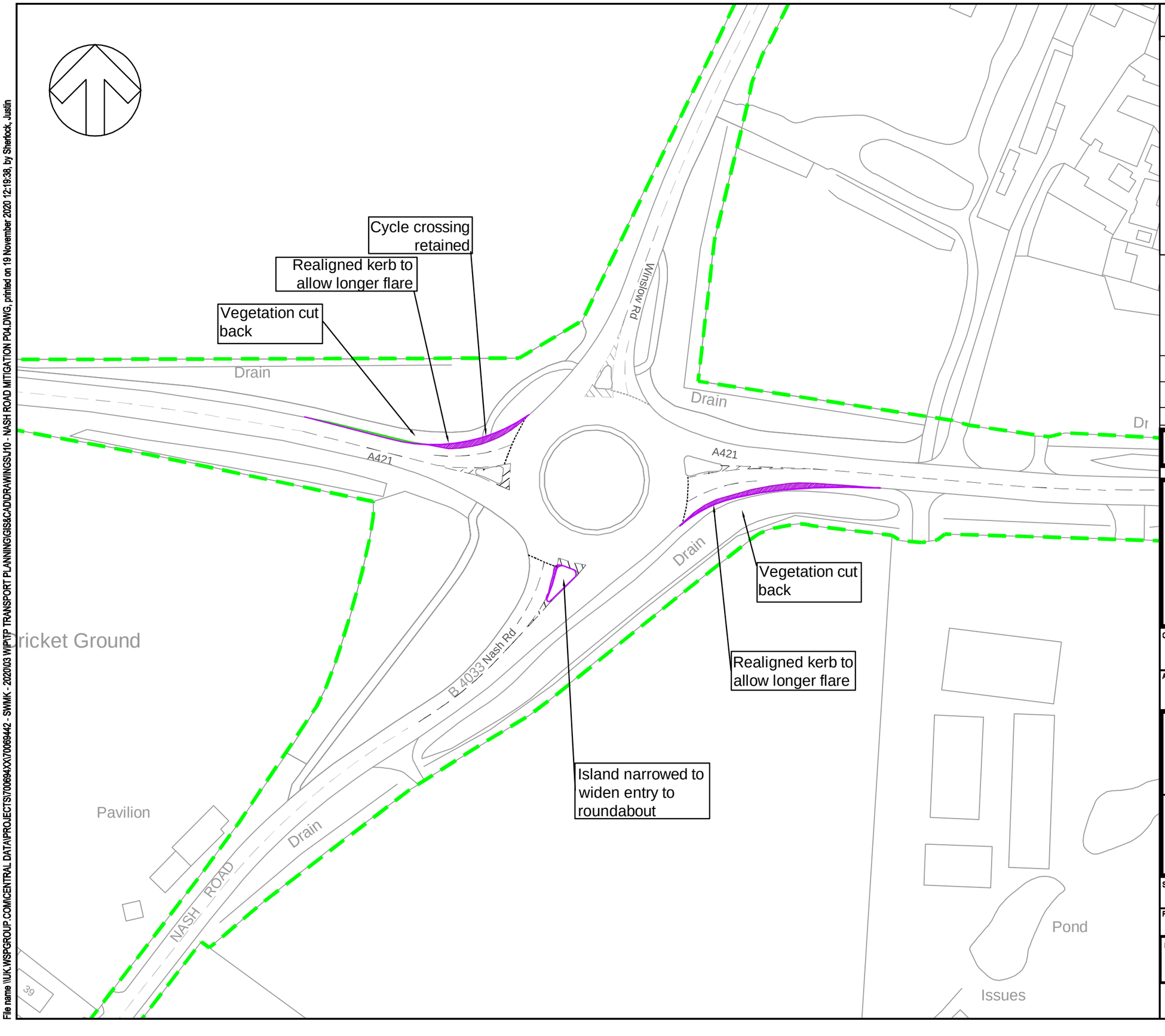
PROJECT: South West Milton Keynes

TITLE: Junction 9 A421/Shucklow Hill/Little Horwood Road
Traffic Signal Layout
Swept Path Analysis

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SH	MP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 20

DRAWING No:	REV:
70069442-007-ATR4	P01



DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Constructior
- Verge Construction

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APP
P04	12/11/2020	SET	AMENDED LAYOUT	JS	SH
P01	15/05/2020	SMR	FIRST ISSUE	JS	JS

DRAWING STATUS: S2 - FOR INFORMATION

wsp
2 London Square, Cross Lanes, Guildford, GU1 1UN, UK
T+ 44 (0) 1483 528 400
wsp.com

CLIENT: South West Milton Keynes Consortium

ARCHITECT:

PROJECT: South West Milton Keynes

TITLE: Junction 10 Mitigation Layout
A421/Nash Road/ Winslow Roundabout

SCALE @ A3:	CHECKED:		APPROVED:
1:1000	JS		JS
PROJECT No:	DESIGNED:	DRAWN:	DATE:
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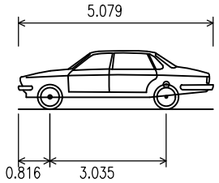
DRAWING No: 70069442-008 REV: P04



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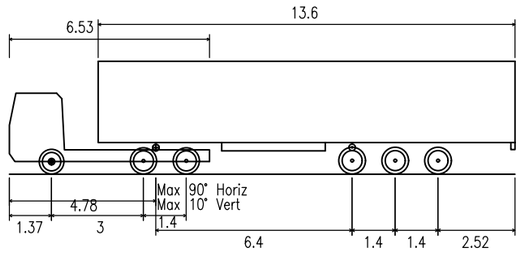

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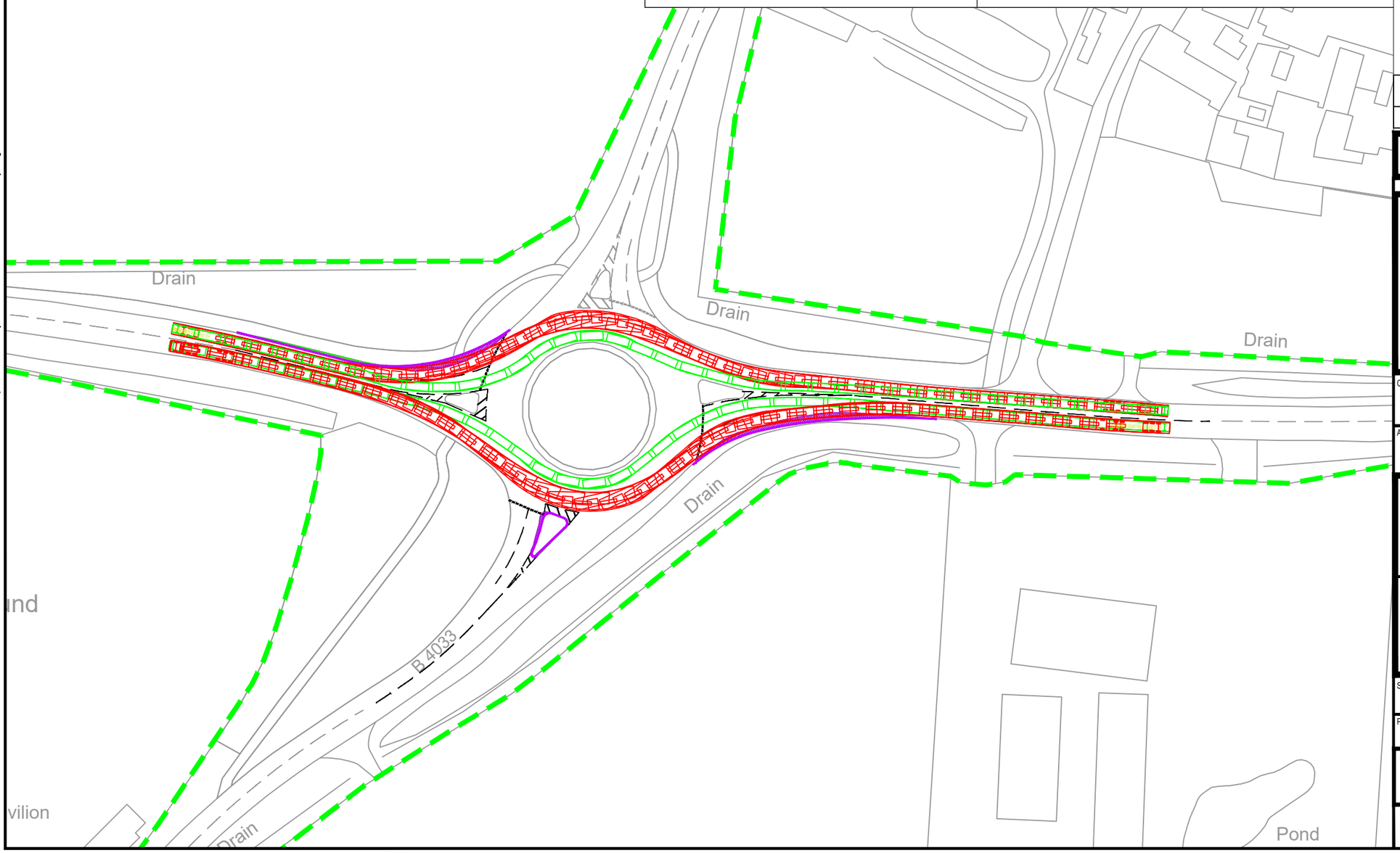

DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

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REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS: S2 - FOR INFORMATION

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CLIENT: South West Milton Keynes Consortium

ARCHITECT:

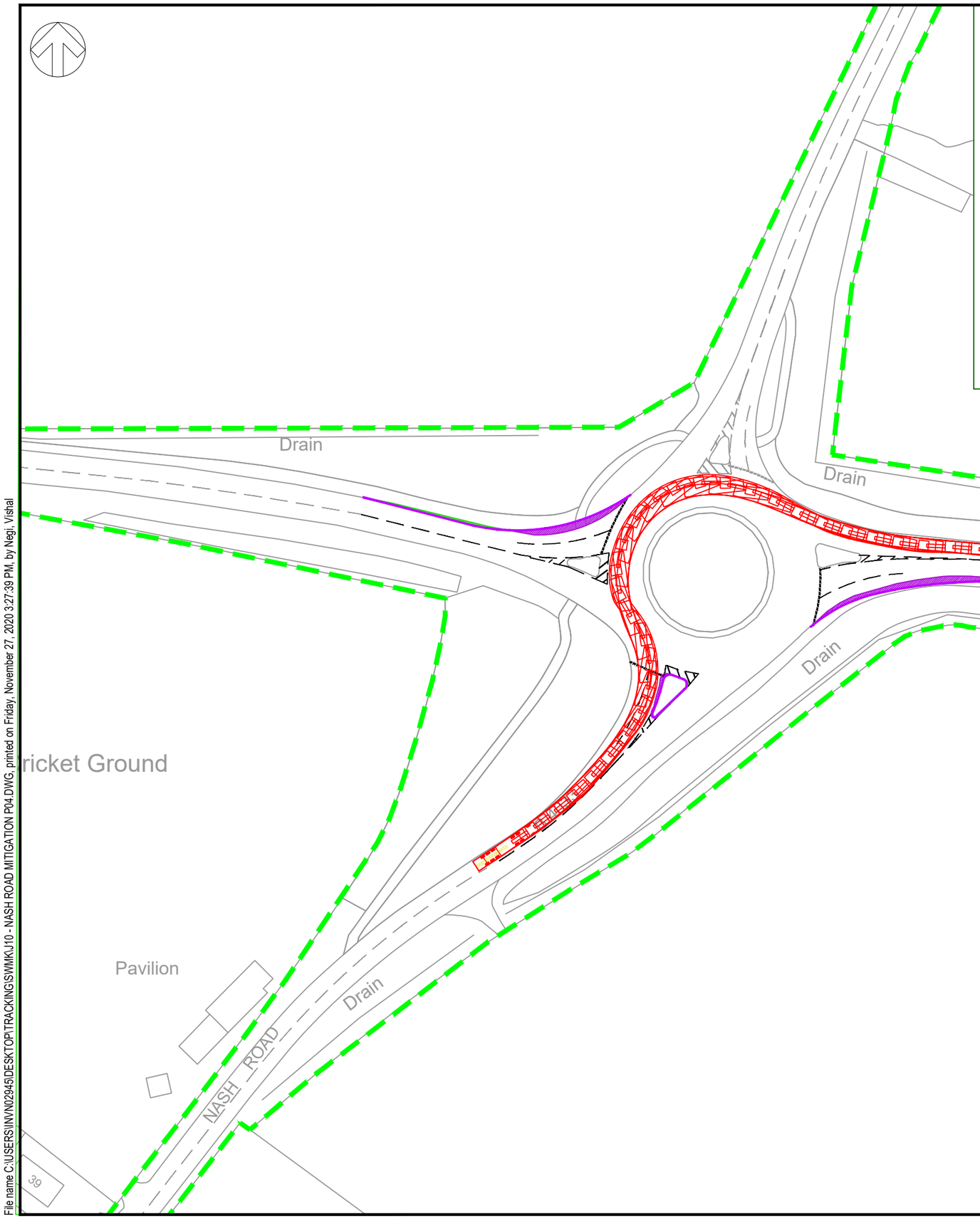
PROJECT: South West Milton Keynes

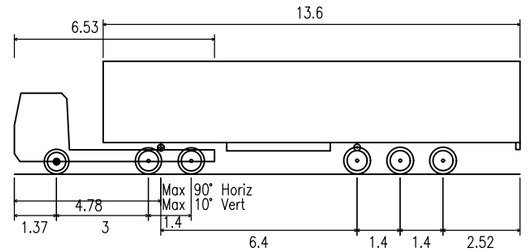
TITLE: Junction 10 Mitigation Layout
A421/Nash Road/ Winslow Roundabout
Swept Path Analysis

SCALE @ A3:	CHECKED:	APPROVED:
1:1000	SH	MP

PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 2020

DRAWING No: 70069442-008-ATR1 REV: P01





Max Legal Length Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.530m

DO NOT SCALE

KEY

- Highway Boundary
- Kerb Amendments
- Carriageway Construction
- Verge Construction

UNTIL TECHNICAL APPROVAL HAS BEEN OBTAINED FROM THE RELEVANT LOCAL AUTHORITIES OR STATUTORY BODIES, IT SHOULD BE UNDERSTOOD THAT ALL DRAWINGS ARE ISSUED AS PRELIMINARY AND NOT FOR CONSTRUCTION. SHOULD THE CONTRACTOR AND / OR EMPLOYER COMMENCE WORK PRIOR TO APPROVAL BEING GIVEN, IT IS ENTIRELY AT THEIR OWN RISK

REV	DATE	BY	DESCRIPTION	CHK	APP
P01	25/11/2020	VN	FIRST ISSUE	SH	MP

DRAWING STATUS: S2 - FOR INFORMATION

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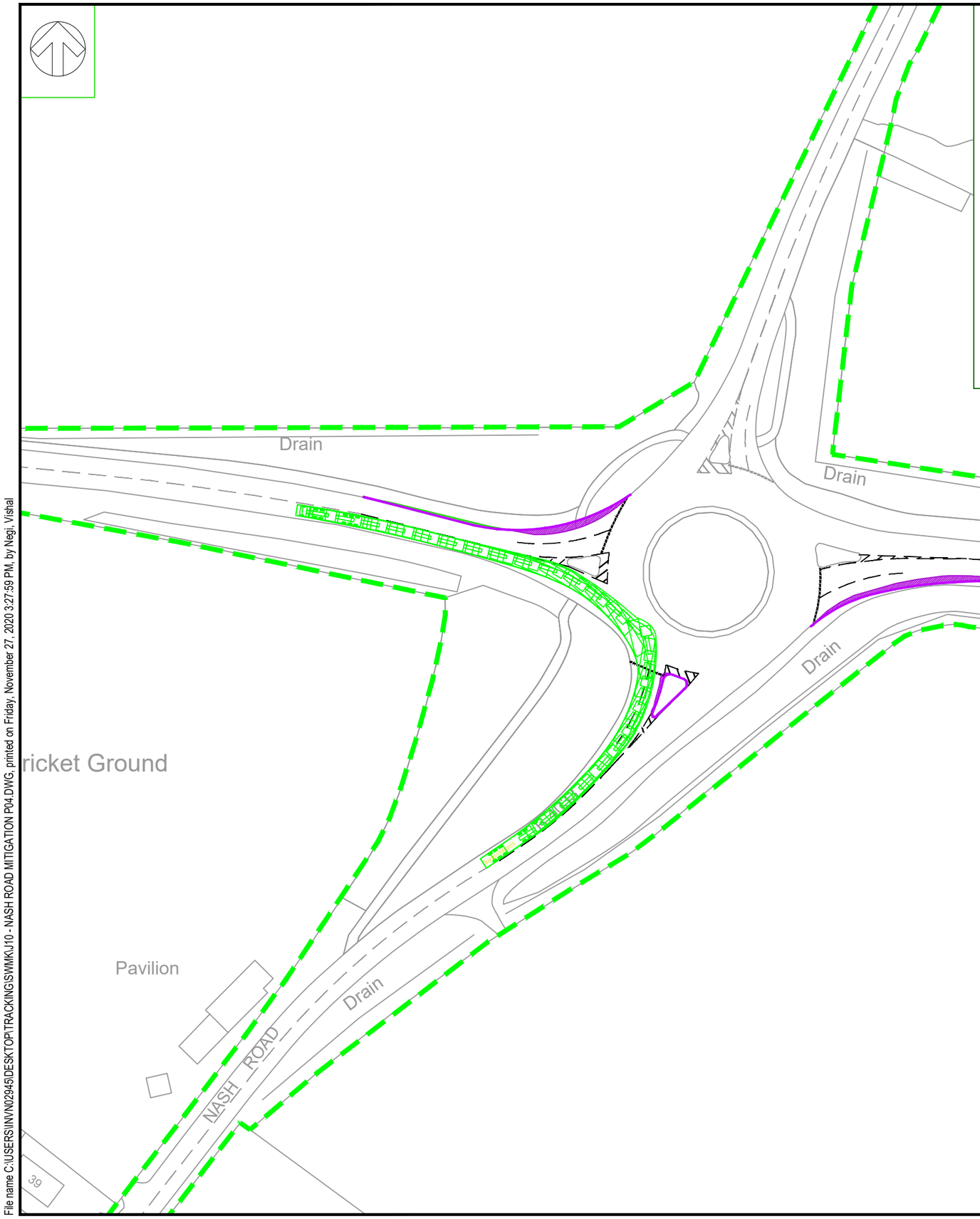
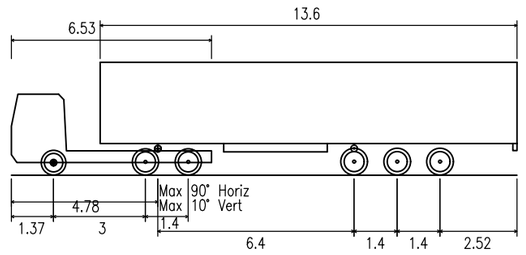
PROJECT No:	DESIGNED:	DRAWN:	DATE:
70069442	VN	VN	November 2020

DRAWING No: 70069442-008-ATR2 REV: P01

File name C:\USERS\INVN02945\DESKTOP\TRACKING\SWMKJ10 - NASH ROAD MITIGATION P04.DWG, printed on Friday, November 27, 2020 3:27:39 PM, by Negi, Vishal





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KEY

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- Verge Construction

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DRAWING No: 70069442-008-ATR3 REV: P01

Appendix E

MITIGATION JUNCTION CAPACITY ASSESSMENT RESULTS

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: 201204 J3 -Post Calibration Adjustment Mitigation.j9
Path: \\uk.wspgroup.com\central data\Projects\700694xx\70069442 - SWMK - 2020\03 WIP\TP Transport Planning\Analysis\September 2020 Junction Modelling\Mitigation\J3
Report generation date: 18/12/2020 16:41:03

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2033 Base + CD + D									
A - Bletchley Rd	D13	0.7	8.82	0.40	A	D14	0.6	8.30	0.38	A
B - Stoke Rd		2.6	18.61	0.73	C		2.5	18.28	0.72	C
C - Drayton Rd		0.4	7.92	0.31	A		0.3	7.05	0.22	A
D - Whaddon Rd		1.5	11.94	0.60	B		1.2	9.85	0.54	A
	2033 Base + CD + D with TP									
A - Bletchley Rd	D15	0.6	8.72	0.39	A	D16	0.6	8.22	0.38	A
B - Stoke Rd		2.6	18.14	0.73	C		2.4	17.61	0.71	C
C - Drayton Rd		0.4	7.83	0.31	A		0.3	6.97	0.22	A
D - Whaddon Rd		1.4	11.65	0.59	B		1.1	9.68	0.53	A
	2033 Base + CD + D - ST									
A - Bletchley Rd	D17	0.7	9.07	0.40	A	D18	0.6	8.39	0.38	A
B - Stoke Rd		2.8	19.44	0.74	C		2.7	19.57	0.74	C
C - Drayton Rd		0.5	8.02	0.32	A		0.3	7.19	0.23	A
D - Whaddon Rd		1.6	12.70	0.63	B		1.2	10.06	0.55	B

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.

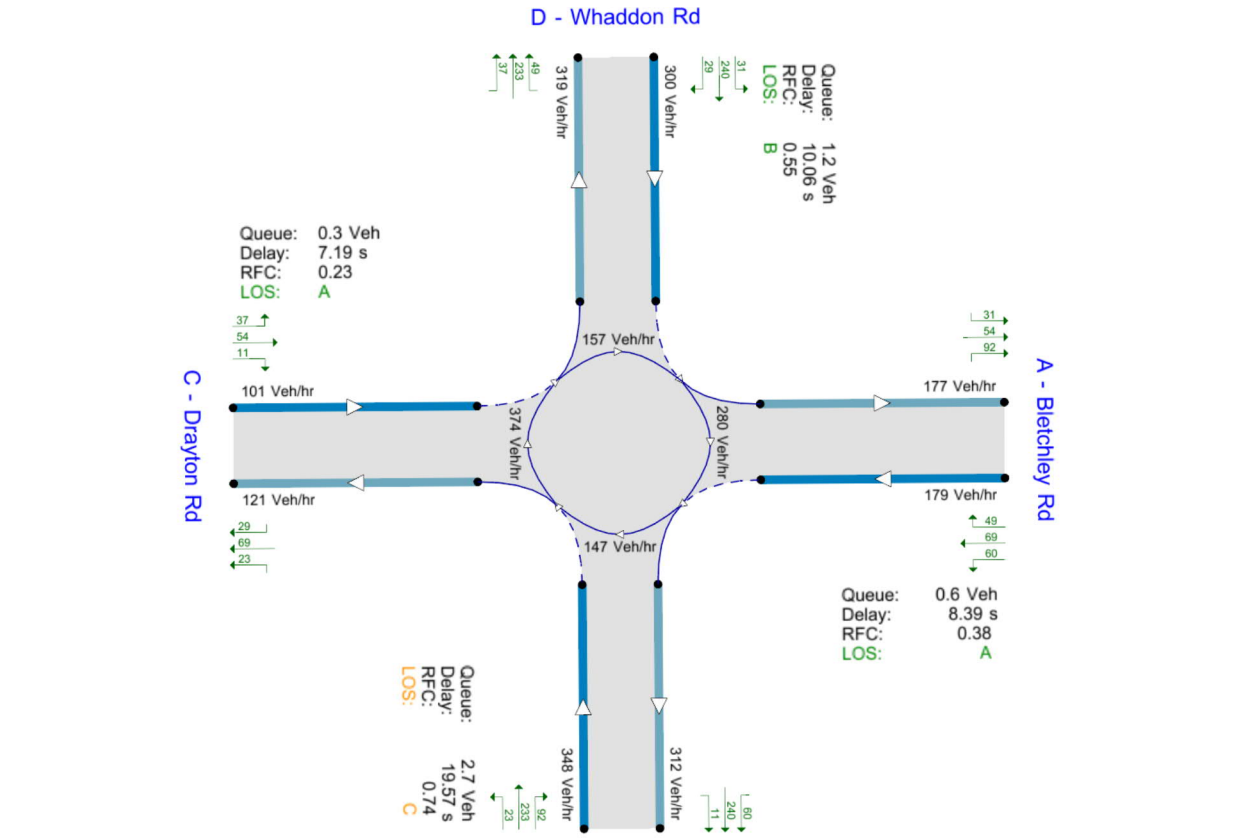
File summary

File Description

Title	Bletchley Road/ Stoke Road/ Drayton Road/ Whaddon Road
Location	51°58'28.41"N, 0°45'57.62"W
Site number	3
Date	01/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Will Forster
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	Veh	Veh	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	5.75				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)	Run automatically
D13	2033 Base + CD + D	AM	ONE HOUR	07:30	09:00	15	✓
D14	2033 Base + CD + D	PM	ONE HOUR	16:45	18:15	15	✓
D15	2033 Base + CD + D with TP	AM	ONE HOUR	07:30	09:00	15	✓
D16	2033 Base + CD + D with TP	PM	ONE HOUR	16:45	18:15	15	✓
D17	2033 Base + CD + D - ST	AM	ONE HOUR	07:30	09:00	15	✓
D18	2033 Base + CD + D - ST	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	✓	D13,D14,D15,D16,D17,D18	100.000	100.000

2033 Base + CD + D, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J3	Bletchley Road/ Stoke Road/ Drayton Road/ Whaddon Road	Mini-roundabout		A, B, C, D	13.20	B

Junction Network Options

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

Arms

Arms

Arm	Name	Description
A	Bletchley Rd	
B	Stoke Rd	
C	Drayton Rd	
D	Whaddon Rd	

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 - Bletchley Rd	3.50	3.50	3.50	0.0	9.30	3.60	0.0	
B - Stoke Rd	3.00	3.00	3.30	3.3	9.10	3.20	0.0	
C - Drayton Rd	3.10	3.10	4.00	5.5	13.40	9.06	0.0	
D - Whaddon Rd	3.50	3.50	3.50	0.0	9.90	3.60	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Bletchley Rd	0.609	957
B - Stoke Rd	0.599	839
C - Drayton Rd	0.617	1002
D - Whaddon Rd	0.609	953

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)	Run automatically
D13	2033 Base + CD + D	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bletchley Rd		ONE HOUR	✓	244	100.000
B - Stoke Rd		ONE HOUR	✓	478	100.000
C - Drayton Rd		ONE HOUR	✓	187	100.000
D - Whaddon Rd		ONE HOUR	✓	415	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	133	79	32
	B - Stoke Rd	111	0	30	337
	C - Drayton Rd	112	28	0	47
	D - Whaddon Rd	56	312	47	0

Proportions

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0.00	0.54	0.32	0.13
	B - Stoke Rd	0.23	0.00	0.06	0.70
	C - Drayton Rd	0.60	0.15	0.00	0.25
	D - Whaddon Rd	0.14	0.75	0.11	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	2	1	4
	B - Stoke Rd	2	0	0	2
	C - Drayton Rd	1	0	0	3
	D - Whaddon Rd	0	3	11	0

Average PCU Per Veh

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	1.000	1.017	1.014	1.036
	B - Stoke Rd	1.021	1.000	1.000	1.015
	C - Drayton Rd	1.010	1.000	1.000	1.033
	D - Whaddon Rd	1.000	1.026	1.107	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Bletchley Rd	07:30-07:45	184	187
	07:45-08:00	220	224
	08:00-08:15	269	274
	08:15-08:30	269	274
	08:30-08:45	220	224
	08:45-09:00	184	187
B - Stoke Rd	07:30-07:45	360	365
	07:45-08:00	430	436
	08:00-08:15	526	535
	08:15-08:30	526	535
	08:30-08:45	430	436
	08:45-09:00	360	365
C - Drayton Rd	07:30-07:45	141	143
	07:45-08:00	168	170
	08:00-08:15	205	208
	08:15-08:30	205	208
	08:30-08:45	168	170
	08:45-09:00	141	143
D - Whaddon Rd	07:30-07:45	313	322
	07:45-08:00	373	385
	08:00-08:15	457	472
	08:15-08:30	457	472
	08:30-08:45	373	385
	08:45-09:00	313	322

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Bletchley Rd	0.40	8.82	0.7	A	224	336
B - Stoke Rd	0.73	18.61	2.6	C	439	658
C - Drayton Rd	0.31	7.92	0.4	A	171	257
D - Whaddon Rd	0.60	11.94	1.5	B	381	571

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	184	46	289	761	0.242	183	209	0.0	0.3	6.205	A
B - Stoke Rd	360	90	118	753	0.478	356	353	0.0	0.9	8.997	A
C - Drayton Rd	141	35	358	766	0.183	140	117	0.0	0.2	5.740	A
D - Whaddon Rd	313	78	188	811	0.385	310	310	0.0	0.6	7.149	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	220	55	347	726	0.303	219	251	0.3	0.4	7.101	A
B - Stoke Rd	430	107	142	738	0.582	428	424	0.9	1.4	11.525	B
C - Drayton Rd	168	42	430	721	0.233	167	140	0.2	0.3	6.498	A
D - Whaddon Rd	373	93	225	789	0.473	372	372	0.6	0.9	8.617	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	269	67	423	678	0.397	268	306	0.4	0.6	8.759	A
B - Stoke Rd	526	132	174	719	0.732	522	518	1.4	2.6	17.811	C
C - Drayton Rd	205	51	524	663	0.310	205	171	0.3	0.4	7.851	A
D - Whaddon Rd	457	114	275	759	0.602	455	454	0.9	1.5	11.740	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	269	67	425	677	0.397	269	308	0.6	0.7	8.823	A
B - Stoke Rd	526	132	174	718	0.733	526	520	2.6	2.6	18.615	C
C - Drayton Rd	205	51	529	660	0.311	205	172	0.4	0.4	7.916	A
D - Whaddon Rd	457	114	276	758	0.603	457	458	1.5	1.5	11.945	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	220	55	350	724	0.303	220	253	0.7	0.4	7.162	A
B - Stoke Rd	430	107	143	738	0.583	435	427	2.6	1.4	12.054	B
C - Drayton Rd	168	42	436	717	0.234	168	141	0.4	0.3	6.563	A
D - Whaddon Rd	373	93	227	788	0.474	376	377	1.5	0.9	8.788	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	184	46	292	759	0.242	184	212	0.4	0.3	6.264	A
B - Stoke Rd	360	90	119	752	0.478	362	357	1.4	0.9	9.270	A
C - Drayton Rd	141	35	364	762	0.184	141	118	0.3	0.2	5.795	A
D - Whaddon Rd	313	78	190	810	0.386	314	315	0.9	0.6	7.269	A

2033 Base + CD + D, 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 B and D have 69% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J3	Bletchley Road/ Stoke Road/ Drayton Road/ Whaddon Road	Mini-roundabout		A, B, C, D	12.40	B

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)	Run automatically
D14	2033 Base + CD + D	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bletchley Rd		ONE HOUR	✓	239	100.000
B - Stoke Rd		ONE HOUR	✓	457	100.000
C - Drayton Rd		ONE HOUR	✓	133	100.000
D - Whaddon Rd		ONE HOUR	✓	395	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	81	92	66
	B - Stoke Rd	123	0	31	302
	C - Drayton Rd	72	15	0	47
	D - Whaddon Rd	42	316	37	0

Proportions

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0.00	0.34	0.39	0.28
	B - Stoke Rd	0.27	0.00	0.07	0.66
	C - Drayton Rd	0.54	0.11	0.00	0.35
	D - Whaddon Rd	0.11	0.80	0.09	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	3	0	2
	B - Stoke Rd	1	0	0	2
	C - Drayton Rd	2	0	0	0
	D - Whaddon Rd	0	2	0	0

Average PCU Per Veh

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	1.000	1.029	1.000	1.018
	B - Stoke Rd	1.009	1.000	1.000	1.019
	C - Drayton Rd	1.016	1.000	1.000	1.000
	D - Whaddon Rd	1.000	1.017	1.000	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Bletchley Rd	16:45-17:00	180	182
	17:00-17:15	215	218
	17:15-17:30	263	267
	17:30-17:45	263	267
	17:45-18:00	215	218
	18:00-18:15	180	182
B - Stoke Rd	16:45-17:00	344	349
	17:00-17:15	411	417
	17:15-17:30	503	510
	17:30-17:45	503	510
	17:45-18:00	411	417
	18:00-18:15	344	349
C - Drayton Rd	16:45-17:00	100	101
	17:00-17:15	120	121
	17:15-17:30	147	148
	17:30-17:45	147	148
	17:45-18:00	120	121
	18:00-18:15	100	101
D - Whaddon Rd	16:45-17:00	297	301
	17:00-17:15	355	360
	17:15-17:30	435	441
	17:30-17:45	435	441
	17:45-18:00	355	360
	18:00-18:15	297	301

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Bletchley Rd	0.38	8.30	0.6	A	219	329
B - Stoke Rd	0.72	18.28	2.5	C	419	629
C - Drayton Rd	0.22	7.05	0.3	A	122	183
D - Whaddon Rd	0.54	9.85	1.2	A	362	543

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	180	45	275	776	0.232	179	177	0.0	0.3	6.015	A
B - Stoke Rd	344	86	146	740	0.465	340	308	0.0	0.9	8.945	A
C - Drayton Rd	100	25	366	765	0.131	100	120	0.0	0.1	5.403	A
D - Whaddon Rd	297	74	157	845	0.352	295	309	0.0	0.5	6.523	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	215	54	330	742	0.289	214	212	0.3	0.4	6.811	A
B - Stoke Rd	411	103	175	722	0.568	409	369	0.9	1.3	11.423	B
C - Drayton Rd	120	30	440	720	0.166	120	144	0.1	0.2	5.998	A
D - Whaddon Rd	355	89	188	826	0.430	354	371	0.5	0.7	7.617	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	263	66	404	698	0.377	262	259	0.4	0.6	8.255	A
B - Stoke Rd	503	126	215	699	0.719	498	451	1.3	2.4	17.547	C
C - Drayton Rd	147	37	536	660	0.222	146	176	0.2	0.3	7.010	A
D - Whaddon Rd	435	109	230	801	0.543	433	453	0.7	1.2	9.748	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	263	66	405	697	0.378	263	260	0.6	0.6	8.301	A
B - Stoke Rd	503	126	215	699	0.720	502	453	2.4	2.5	18.282	C
C - Drayton Rd	147	37	541	657	0.223	147	177	0.3	0.3	7.053	A
D - Whaddon Rd	435	109	231	800	0.544	435	456	1.2	1.2	9.855	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	215	54	333	741	0.290	216	214	0.6	0.4	6.862	A
B - Stoke Rd	411	103	176	722	0.569	415	372	2.5	1.4	11.909	B
C - Drayton Rd	120	30	446	716	0.167	120	145	0.3	0.2	6.047	A
D - Whaddon Rd	355	89	190	825	0.430	357	376	1.2	0.8	7.718	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	180	45	278	774	0.232	180	179	0.4	0.3	6.067	A
B - Stoke Rd	344	86	148	739	0.465	346	311	1.4	0.9	9.203	A
C - Drayton Rd	100	25	372	762	0.132	101	122	0.2	0.2	5.442	A
D - Whaddon Rd	297	74	159	844	0.352	298	313	0.8	0.5	6.608	A

2033 Base + CD + D with TP, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J3	Bletchley Road/ Stoke Road/ Drayton Road/ Whaddon Road	Mini-roundabout		A, B, C, D	12.90	B

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)	Run automatically
D15	2033 Base + CD + D with TP	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bletchley Rd		ONE HOUR	✓	244	100.000
B - Stoke Rd		ONE HOUR	✓	474	100.000
C - Drayton Rd		ONE HOUR	✓	185	100.000
D - Whaddon Rd		ONE HOUR	✓	408	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	133	79	32
	B - Stoke Rd	111	0	30	333
	C - Drayton Rd	112	28	0	45
	D - Whaddon Rd	56	306	46	0

Proportions

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0.00	0.54	0.32	0.13
	B - Stoke Rd	0.23	0.00	0.06	0.70
	C - Drayton Rd	0.61	0.15	0.00	0.24
	D - Whaddon Rd	0.14	0.75	0.11	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	2	1	4
	B - Stoke Rd	2	0	0	2
	C - Drayton Rd	1	0	0	3
	D - Whaddon Rd	0	3	11	0

Average PCU Per Veh

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	1.000	1.017	1.014	1.036
	B - Stoke Rd	1.021	1.000	1.000	1.015
	C - Drayton Rd	1.010	1.000	1.000	1.033
	D - Whaddon Rd	1.000	1.026	1.107	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Bletchley Rd	07:30-07:45	184	187
	07:45-08:00	220	224
	08:00-08:15	269	274
	08:15-08:30	269	274
	08:30-08:45	220	224
	08:45-09:00	184	187
B - Stoke Rd	07:30-07:45	357	362
	07:45-08:00	426	433
	08:00-08:15	522	530
	08:15-08:30	522	530
	08:30-08:45	426	433
	08:45-09:00	357	362
C - Drayton Rd	07:30-07:45	139	141
	07:45-08:00	166	169
	08:00-08:15	204	206
	08:15-08:30	204	206
	08:30-08:45	166	169
	08:45-09:00	139	141
D - Whaddon Rd	07:30-07:45	307	317
	07:45-08:00	367	379
	08:00-08:15	449	464
	08:15-08:30	449	464
	08:30-08:45	367	379
	08:45-09:00	307	317

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Bletchley Rd	0.39	8.72	0.6	A	224	336
B - Stoke Rd	0.73	18.14	2.6	C	435	653
C - Drayton Rd	0.31	7.83	0.4	A	170	254
D - Whaddon Rd	0.59	11.65	1.4	B	375	562

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	184	46	284	765	0.241	183	209	0.0	0.3	6.173	A
B - Stoke Rd	357	89	118	753	0.474	353	349	0.0	0.9	8.915	A
C - Drayton Rd	139	35	355	768	0.181	138	116	0.0	0.2	5.710	A
D - Whaddon Rd	307	77	188	811	0.379	305	306	0.0	0.6	7.076	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	220	55	340	730	0.301	219	251	0.3	0.4	7.047	A
B - Stoke Rd	426	107	141	739	0.577	424	418	0.9	1.3	11.378	B
C - Drayton Rd	166	42	427	724	0.230	166	139	0.2	0.3	6.453	A
D - Whaddon Rd	367	92	225	789	0.465	366	367	0.6	0.9	8.490	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	269	67	416	683	0.394	268	306	0.4	0.6	8.662	A
B - Stoke Rd	522	130	173	720	0.725	517	512	1.3	2.5	17.404	C
C - Drayton Rd	204	51	520	666	0.306	203	170	0.3	0.4	7.773	A
D - Whaddon Rd	449	112	275	759	0.592	447	448	0.9	1.4	11.460	B

08:15 - 08:30

	Total	Junction	Circulating				Throughput	Start	End		Unsignalised

Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	Delay (s)	level of service
A - Bletchley Rd	269	67	418	682	0.395	269	308	0.6	0.6	8.720	A
B - Stoke Rd	522	130	173	719	0.726	522	514	2.5	2.6	18.144	C
C - Drayton Rd	204	51	524	663	0.307	204	171	0.4	0.4	7.834	A
D - Whaddon Rd	449	112	276	758	0.593	449	451	1.4	1.4	11.646	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	220	55	343	728	0.302	220	253	0.6	0.4	7.106	A
B - Stoke Rd	426	107	142	738	0.577	431	422	2.6	1.4	11.873	B
C - Drayton Rd	166	42	433	720	0.231	167	140	0.4	0.3	6.518	A
D - Whaddon Rd	367	92	227	788	0.466	369	372	1.4	0.9	8.647	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	184	46	287	763	0.241	184	211	0.4	0.3	6.231	A
B - Stoke Rd	357	89	119	753	0.474	359	352	1.4	0.9	9.186	A
C - Drayton Rd	139	35	361	764	0.182	140	117	0.3	0.2	5.764	A
D - Whaddon Rd	307	77	190	810	0.379	308	310	0.9	0.6	7.192	A

2033 Base + CD + D with TP, 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 B and D have 69% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J3	Bletchley Road/ Stoke Road/ Drayton Road/ Whaddon Road	Mini-roundabout		A, B, C, D	12.06	B

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)	Run automatically
D16	2033 Base + CD + D with TP	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bletchley Rd		ONE HOUR	✓	239	100.000
B - Stoke Rd		ONE HOUR	✓	451	100.000
C - Drayton Rd		ONE HOUR	✓	132	100.000
D - Whaddon Rd		ONE HOUR	✓	389	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	81	92	66
	B - Stoke Rd	123	0	31	296
	C - Drayton Rd	72	15	0	45
	D - Whaddon Rd	42	311	36	0

Proportions

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0.00	0.34	0.39	0.28
	B - Stoke Rd	0.27	0.00	0.07	0.66
	C - Drayton Rd	0.54	0.11	0.00	0.34
	D - Whaddon Rd	0.11	0.80	0.09	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	3	0	2
	B - Stoke Rd	1	0	0	2
	C - Drayton Rd	2	0	0	0
	D - Whaddon Rd	0	2	0	0

Average PCU Per Veh

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	1.000	1.029	1.000	1.018
	B - Stoke Rd	1.009	1.000	1.000	1.019
	C - Drayton Rd	1.016	1.000	1.000	1.000
	D - Whaddon Rd	1.000	1.017	1.000	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Bletchley Rd	16:45-17:00	180	182
	17:00-17:15	215	218
	17:15-17:30	263	267
	17:30-17:45	263	267
	17:45-18:00	215	218
	18:00-18:15	180	182
B - Stoke Rd	16:45-17:00	339	344
	17:00-17:15	405	411
	17:15-17:30	496	504
	17:30-17:45	496	504
	17:45-18:00	405	411
	18:00-18:15	339	344
C - Drayton Rd	16:45-17:00	99	100
	17:00-17:15	118	119
	17:15-17:30	145	146
	17:30-17:45	145	146
	17:45-18:00	118	119
	18:00-18:15	99	100
D - Whaddon Rd	16:45-17:00	293	296
	17:00-17:15	349	354
	17:15-17:30	428	434
	17:30-17:45	428	434
	17:45-18:00	349	354
	18:00-18:15	293	296

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Bletchley Rd	0.38	8.22	0.6	A	219	329
B - Stoke Rd	0.71	17.61	2.4	C	414	620
C - Drayton Rd	0.22	6.97	0.3	A	121	181
D - Whaddon Rd	0.53	9.68	1.1	A	357	535

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	180	45	271	779	0.231	179	177	0.0	0.3	5.987	A
B - Stoke Rd	339	85	145	740	0.458	336	304	0.0	0.8	8.834	A
C - Drayton Rd	99	25	362	768	0.129	98	119	0.0	0.1	5.371	A
D - Whaddon Rd	293	73	157	845	0.346	290	304	0.0	0.5	6.468	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	215	54	325	746	0.288	214	212	0.3	0.4	6.764	A
B - Stoke Rd	405	101	174	723	0.560	403	365	0.8	1.2	11.206	B
C - Drayton Rd	118	30	435	723	0.164	118	143	0.1	0.2	5.950	A
D - Whaddon Rd	349	87	188	826	0.423	348	364	0.5	0.7	7.530	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	263	66	397	702	0.375	262	259	0.4	0.6	8.176	A
B - Stoke Rd	496	124	213	700	0.709	492	446	1.2	2.3	16.964	C
C - Drayton Rd	145	36	530	663	0.218	145	175	0.2	0.3	6.932	A
D - Whaddon Rd	428	107	230	800	0.534	426	445	0.7	1.1	9.576	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	263	66	399	701	0.375	263	260	0.6	0.6	8.222	A
B - Stoke Rd	496	124	214	700	0.709	496	448	2.3	2.4	17.613	C
C - Drayton Rd	145	36	534	661	0.219	145	176	0.3	0.3	6.972	A
D - Whaddon Rd	428	107	231	800	0.535	428	448	1.1	1.1	9.675	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	215	54	327	744	0.288	215	214	0.6	0.4	6.814	A
B - Stoke Rd	405	101	175	722	0.561	409	367	2.4	1.3	11.648	B
C - Drayton Rd	118	30	440	719	0.164	119	144	0.3	0.2	5.995	A
D - Whaddon Rd	349	87	190	825	0.424	351	369	1.1	0.7	7.623	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	180	45	273	777	0.231	180	179	0.4	0.3	6.038	A
B - Stoke Rd	339	85	146	739	0.459	341	307	1.3	0.9	9.078	A
C - Drayton Rd	99	25	367	765	0.129	99	120	0.2	0.1	5.411	A
D - Whaddon Rd	293	73	159	844	0.347	293	308	0.7	0.5	6.553	A

2033 Base + CD + D - ST, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J3	Bletchley Road/ Stoke Road/ Drayton Road/ Whaddon Road	Mini-roundabout		A, B, C, D	13.79	B

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)	Run automatically
D17	2033 Base + CD + D - ST	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bletchley Rd		ONE HOUR	✓	244	100.000
B - Stoke Rd		ONE HOUR	✓	483	100.000
C - Drayton Rd		ONE HOUR	✓	189	100.000
D - Whaddon Rd		ONE HOUR	✓	431	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	133	79	32
	B - Stoke Rd	111	0	30	342
	C - Drayton Rd	112	28	0	49
	D - Whaddon Rd	56	324	51	0

Proportions

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0.00	0.54	0.32	0.13
	B - Stoke Rd	0.23	0.00	0.06	0.71
	C - Drayton Rd	0.59	0.15	0.00	0.26
	D - Whaddon Rd	0.13	0.75	0.12	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	2	1	4
	B - Stoke Rd	2	0	0	2
	C - Drayton Rd	1	0	0	3
	D - Whaddon Rd	0	3	11	0

Average PCU Per Veh

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	1.000	1.017	1.014	1.036
	B - Stoke Rd	1.021	1.000	1.000	1.015
	C - Drayton Rd	1.010	1.000	1.000	1.033
	D - Whaddon Rd	1.000	1.026	1.107	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Bletchley Rd	07:30-07:45	184	187
	07:45-08:00	220	224
	08:00-08:15	269	274
	08:15-08:30	269	274
	08:30-08:45	220	224
	08:45-09:00	184	187
B - Stoke Rd	07:30-07:45	364	369
	07:45-08:00	434	441
	08:00-08:15	532	540
	08:15-08:30	532	540
	08:30-08:45	434	441
	08:45-09:00	364	369
C - Drayton Rd	07:30-07:45	142	144
	07:45-08:00	170	172
	08:00-08:15	208	211
	08:15-08:30	208	211
	08:30-08:45	170	172
	08:45-09:00	142	144
D - Whaddon Rd	07:30-07:45	325	335
	07:45-08:00	388	400
	08:00-08:15	475	490
	08:15-08:30	475	490
	08:30-08:45	388	400
	08:45-09:00	325	335

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Bletchley Rd	0.40	9.07	0.7	A	224	336
B - Stoke Rd	0.74	19.44	2.8	C	443	665
C - Drayton Rd	0.32	8.02	0.5	A	173	260
D - Whaddon Rd	0.63	12.70	1.6	B	396	594

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	184	46	301	754	0.244	183	209	0.0	0.3	6.286	A
B - Stoke Rd	364	91	121	751	0.484	360	362	0.0	0.9	9.124	A
C - Drayton Rd	142	36	362	763	0.186	141	119	0.0	0.2	5.779	A
D - Whaddon Rd	325	81	188	811	0.400	322	316	0.0	0.7	7.323	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	220	55	361	717	0.306	219	251	0.3	0.4	7.228	A
B - Stoke Rd	434	109	146	736	0.590	432	434	0.9	1.4	11.777	B
C - Drayton Rd	170	42	434	718	0.236	170	143	0.2	0.3	6.554	A
D - Whaddon Rd	388	97	225	788	0.492	386	379	0.7	0.9	8.928	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	269	67	441	667	0.403	268	306	0.4	0.7	8.996	A
B - Stoke Rd	532	133	178	716	0.743	527	531	1.4	2.7	18.514	C
C - Drayton Rd	208	52	529	660	0.315	207	175	0.3	0.5	7.952	A
D - Whaddon Rd	475	119	275	759	0.626	472	462	0.9	1.6	12.444	B

08:15 - 08:30

	Total	Junction	Circulating				Throughput	Start	End		Unsignalised

Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	Delay (s)	level of service
A - Bletchley Rd	269	67	443	666	0.404	269	308	0.7	0.7	9.067	A
B - Stoke Rd	532	133	179	716	0.743	531	533	2.7	2.8	19.441	C
C - Drayton Rd	208	52	534	657	0.317	208	176	0.5	0.5	8.022	A
D - Whaddon Rd	475	119	276	758	0.627	475	466	1.6	1.6	12.700	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	220	55	364	715	0.307	221	253	0.7	0.4	7.300	A
B - Stoke Rd	434	109	147	735	0.591	439	438	2.8	1.5	12.367	B
C - Drayton Rd	170	42	441	714	0.238	170	145	0.5	0.3	6.627	A
D - Whaddon Rd	388	97	227	787	0.493	390	384	1.6	1.0	9.132	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	184	46	304	752	0.245	184	212	0.4	0.3	6.351	A
B - Stoke Rd	364	91	123	750	0.485	366	366	1.5	1.0	9.416	A
C - Drayton Rd	142	36	367	760	0.187	143	121	0.3	0.2	5.834	A
D - Whaddon Rd	325	81	190	810	0.401	326	320	1.0	0.7	7.463	A

2033 Base + CD + D - ST, 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 B and D have 69% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J3	Bletchley Road/ Stoke Road/ Drayton Road/ Whaddon Road	Mini-roundabout		A, B, C, D	13.01	B

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)	Run automatically
D18	2033 Base + CD + D - ST	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Bletchley Rd		ONE HOUR	✓	239	100.000
B - Stoke Rd		ONE HOUR	✓	468	100.000
C - Drayton Rd		ONE HOUR	✓	136	100.000
D - Whaddon Rd		ONE HOUR	✓	402	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	81	92	66
	B - Stoke Rd	123	0	31	313
	C - Drayton Rd	72	15	0	49
	D - Whaddon Rd	42	321	39	0

Proportions

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0.00	0.34	0.39	0.28
	B - Stoke Rd	0.26	0.00	0.07	0.67
	C - Drayton Rd	0.53	0.11	0.00	0.36
	D - Whaddon Rd	0.10	0.80	0.10	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	0	3	0	2
	B - Stoke Rd	1	0	0	2
	C - Drayton Rd	2	0	0	0
	D - Whaddon Rd	0	2	0	0

Average PCU Per Veh

		To			
		A - Bletchley Rd	B - Stoke Rd	C - Drayton Rd	D - Whaddon Rd
From	A - Bletchley Rd	1.000	1.029	1.000	1.018
	B - Stoke Rd	1.009	1.000	1.000	1.019
	C - Drayton Rd	1.016	1.000	1.000	1.000
	D - Whaddon Rd	1.000	1.017	1.000	1.000

Detailed Demand Data

Demand for each time segment

Arm	Time Segment	Demand (Veh/hr)	Demand in PCU (PCU/hr)
A - Bletchley Rd	16:45-17:00	180	182
	17:00-17:15	215	218
	17:15-17:30	263	267
	17:30-17:45	263	267
	17:45-18:00	215	218
	18:00-18:15	180	182
B - Stoke Rd	16:45-17:00	352	357
	17:00-17:15	420	427
	17:15-17:30	515	523
	17:30-17:45	515	523
	17:45-18:00	420	427
	18:00-18:15	352	357
C - Drayton Rd	16:45-17:00	102	103
	17:00-17:15	122	123
	17:15-17:30	149	151
	17:30-17:45	149	151
	17:45-18:00	122	123
	18:00-18:15	102	103
D - Whaddon Rd	16:45-17:00	302	306
	17:00-17:15	361	366
	17:15-17:30	442	448
	17:30-17:45	442	448
	17:45-18:00	361	366
	18:00-18:15	302	306

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Bletchley Rd	0.38	8.39	0.6	A	219	329
B - Stoke Rd	0.74	19.57	2.7	C	429	644
C - Drayton Rd	0.23	7.19	0.3	A	124	187
D - Whaddon Rd	0.55	10.06	1.2	B	368	553

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	180	45	280	773	0.233	179	177	0.0	0.3	6.046	A
B - Stoke Rd	352	88	147	739	0.477	348	312	0.0	0.9	9.142	A
C - Drayton Rd	102	26	374	760	0.134	101	121	0.0	0.2	5.458	A
D - Whaddon Rd	302	76	157	845	0.358	300	319	0.0	0.6	6.582	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	215	54	336	739	0.291	214	212	0.3	0.4	6.859	A
B - Stoke Rd	420	105	177	721	0.583	419	374	0.9	1.4	11.815	B
C - Drayton Rd	122	30	450	714	0.171	122	146	0.2	0.2	6.079	A
D - Whaddon Rd	361	90	188	826	0.437	360	383	0.6	0.8	7.715	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	263	66	411	693	0.380	262	259	0.4	0.6	8.341	A
B - Stoke Rd	515	129	216	698	0.738	510	457	1.4	2.6	18.647	C
C - Drayton Rd	149	37	548	652	0.229	149	178	0.2	0.3	7.144	A
D - Whaddon Rd	442	111	230	801	0.552	440	467	0.8	1.2	9.943	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	263	66	413	692	0.380	263	260	0.6	0.6	8.389	A
B - Stoke Rd	515	129	217	697	0.738	515	459	2.6	2.7	19.566	C
C - Drayton Rd	149	37	553	650	0.230	149	179	0.3	0.3	7.193	A
D - Whaddon Rd	442	111	231	800	0.553	442	471	1.2	1.2	10.060	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	215	54	339	737	0.291	216	214	0.6	0.4	6.912	A
B - Stoke Rd	420	105	178	721	0.583	425	376	2.7	1.4	12.393	B
C - Drayton Rd	122	30	456	709	0.172	122	147	0.3	0.2	6.135	A
D - Whaddon Rd	361	90	190	824	0.438	363	388	1.2	0.8	7.826	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Bletchley Rd	180	45	283	771	0.233	180	179	0.4	0.3	6.097	A
B - Stoke Rd	352	88	149	738	0.477	354	315	1.4	0.9	9.429	A
C - Drayton Rd	102	26	380	757	0.135	102	123	0.2	0.2	5.502	A
D - Whaddon Rd	302	76	159	844	0.358	303	324	0.8	0.6	6.674	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: J7 -Post Calibration (AM) Miti.j9
Path: \\uk.wspgroup.com\central data\Projects\700694xx\70069442 - SWMK - 2020\03 WIP\TP Transport Planning\Analysis\September 2020 Junction Modelling\Mitigation\J7
Report generation date: 18/12/2020 16:51:41

»2033 Base + CD + D, AM
»2033 Base + CD + D with TP, AM
»2033 Base + CD + D - ST, AM

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2033 Base + CD + D				
A - Coddimor Ln	D15	0.8	17.31	0.46	C
B - A421 (East)		3.7	8.91	0.79	A
C - Whaddon Rd		48.6	368.99	1.25	F
D - A421 (West)		33.1	78.16	1.02	F
	2033 Base + CD + D with TP				
A - Coddimor Ln	D17	0.8	17.26	0.46	C
B - A421 (East)		3.6	8.70	0.79	A
C - Whaddon Rd		46.3	351.86	1.24	F
D - A421 (West)		31.8	75.77	1.01	F
	2033 Base + CD + D - ST				
A - Coddimor Ln	D19	0.8	17.36	0.46	C
B - A421 (East)		4.2	9.75	0.81	A
C - Whaddon Rd		57.2	436.84	1.32	F
D - A421 (West)		36.1	83.55	1.02	F

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	Whaddon Crossroads
Location	51°59'6.32"N, 0°49'39.55"W
Site number	7
Date	04/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Will Forster
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)

5.75				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)	Run automatically
D15	2033 Base + CD + D	AM	ONE HOUR	07:30	09:00	15	✓
D17	2033 Base + CD + D with TP	AM	ONE HOUR	07:30	09:00	15	✓
D19	2033 Base + CD + D - ST	AM	ONE HOUR	07:30	09:00	15	✓

Analysis Set Details

ID	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	✓	D15,D17,D19	100.000	100.000

2033 Base + CD + D, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J7	Whaddon Crossroads	Standard Roundabout		A, B, C, D	81.04	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Coddimor Ln	
B	A421 (East)	
C	Whaddon Rd	
D	A421 (West)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Coddimor Ln	2.80	6.70	8.5	21.5	50.6	40.0	
B - A421 (East)	2.90	9.70	23.6	35.0	50.6	40.0	
C - Whaddon Rd	2.90	7.20	10.6	23.0	50.6	42.0	
D - A421 (West)	3.10	8.50	18.6	35.0	50.6	45.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
A - Coddimor Ln	None		
B - A421 (East)	Direct	For consistency with base model	200
C - Whaddon Rd	Direct	For consistency with base model	-275
D - A421 (West)	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Coddimor Ln	0.519	1287
B - A421 (East)	0.644	2124
C - Whaddon Rd	0.538	1120
D - A421 (West)	0.603	1732

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)	Run automatically
D15	2033 Base + CD + D	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Coddimor Ln		ONE HOUR	✓	158	100.000
B - A421 (East)		ONE HOUR	✓	1393	100.000
C - Whaddon Rd		ONE HOUR	✓	402	100.000
D - A421 (West)		ONE HOUR	✓	1346	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	53	55	50
	B - A421 (East)	32	0	239	1122
	C - Whaddon Rd	49	286	0	67
	D - A421 (West)	23	1304	19	0

Proportions

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0.00	0.33	0.35	0.32
	B - A421 (East)	0.02	0.00	0.17	0.81
	C - Whaddon Rd	0.12	0.71	0.00	0.17
	D - A421 (West)	0.02	0.97	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	0	0	2
	B - A421 (East)	0	0	1	6
	C - Whaddon Rd	2	3	0	5
	D - A421 (West)	5	5	12	0

Average PCU Per Veh

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	1.000	1.000	1.000	1.023
	B - A421 (East)	1.000	1.000	1.011	1.060
	C - Whaddon Rd	1.023	1.033	1.000	1.052
	D - A421 (West)	1.050	1.045	1.118	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - Coddimor Ln	119	120
	B - A421 (East)	1049	1101
	C - Whaddon Rd	302	313
	D - A421 (West)	1014	1060
07:45-08:00	A - Coddimor Ln	142	143
	B - A421 (East)	1252	1315
	C - Whaddon Rd	361	374
	D - A421 (West)	1210	1266
08:00-08:15	A - Coddimor Ln	174	176
	B - A421 (East)	1534	1610
	C - Whaddon Rd	442	458
	D - A421 (West)	1482	1551
08:15-08:30	A - Coddimor Ln	174	176
	B - A421 (East)	1534	1610
	C - Whaddon Rd	442	458
	D - A421 (West)	1482	1551
08:30-08:45	A - Coddimor Ln	142	143
	B - A421 (East)	1252	1315
	C - Whaddon Rd	361	374
	D - A421 (West)	1210	1266
08:45-09:00	A - Coddimor Ln	119	120
	B - A421 (East)	1049	1101
	C - Whaddon Rd	302	313
	D - A421 (West)	1014	1060

Results

Results Summary for whole modelled period

					Average Demand	Total Junction

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	(Veh/hr)	Arrivals (Veh)
A - Coddimor Ln	0.46	17.31	0.8	C	145	218
B - A421 (East)	0.79	8.91	3.7	A	1278	1918
C - Whaddon Rd	1.25	368.99	48.6	F	369	553
D - A421 (West)	1.02	78.16	33.1	F	1236	1853

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	119	30	1201	632	0.189	118	78	0.0	0.2	7.000	A
B - A421 (East)	1049	262	93	1964	0.534	1044	1225	0.0	1.1	3.896	A
C - Whaddon Rd	302	76	903	586	0.516	298	235	0.0	1.0	12.356	B
D - A421 (West)	1014	253	273	1494	0.679	1005	928	0.0	2.1	7.255	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	142	36	1433	506	0.281	142	93	0.2	0.4	9.851	A
B - A421 (East)	1252	313	112	1952	0.641	1250	1463	1.1	1.8	5.106	A
C - Whaddon Rd	361	90	1081	488	0.740	355	281	1.0	2.6	25.942	D
D - A421 (West)	1210	303	325	1463	0.827	1201	1111	2.1	4.4	13.280	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	174	44	1636	397	0.439	173	102	0.4	0.8	15.927	C
B - A421 (East)	1534	383	136	1937	0.792	1526	1673	1.8	3.6	8.603	A
C - Whaddon Rd	442	111	1320	357	1.240	348	342	2.6	26.0	170.854	F
D - A421 (West)	1482	371	326	1462	1.014	1412	1342	4.4	22.1	44.456	E

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	174	44	1665	382	0.457	174	103	0.8	0.8	17.311	C
B - A421 (East)	1534	383	137	1937	0.792	1534	1702	3.6	3.7	8.911	A
C - Whaddon Rd	442	111	1326	353	1.252	352	344	26.0	48.6	368.993	F
D - A421 (West)	1482	371	329	1460	1.015	1439	1349	22.1	33.1	78.158	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	142	36	1627	403	0.353	143	110	0.8	0.6	13.940	B
B - A421 (East)	1252	313	115	1951	0.642	1260	1656	3.7	1.8	5.268	A
C - Whaddon Rd	361	90	1090	483	0.747	473	285	48.6	20.5	264.908	F
D - A421 (West)	1210	303	424	1404	0.862	1312	1139	33.1	7.6	48.923	E

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	119	30	1287	585	0.204	120	89	0.6	0.3	7.763	A
B - A421 (East)	1049	262	95	1963	0.534	1051	1312	1.8	1.2	3.962	A
C - Whaddon Rd	302	76	909	582	0.520	380	237	20.5	1.1	25.567	D
D - A421 (West)	1014	253	341	1453	0.698	1034	948	7.6	2.4	9.002	A

2033 Base + CD + D with TP, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J7	Whaddon Crossroads	Standard Roundabout		A, B, C, D	77.99	F

Junction Network Options

Driving side	Lighting
Left	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)	Run automatically
D17	2033 Base + CD + D with TP	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Coddimor Ln		ONE HOUR	✓	158	100.000
B - A421 (East)		ONE HOUR	✓	1384	100.000
C - Whaddon Rd		ONE HOUR	✓	400	100.000
D - A421 (West)		ONE HOUR	✓	1341	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	53	55	50
	B - A421 (East)	32	0	236	1116
	C - Whaddon Rd	49	285	0	67
	D - A421 (West)	23	1299	19	0

Proportions

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0.00	0.33	0.35	0.32
	B - A421 (East)	0.02	0.00	0.17	0.81
	C - Whaddon Rd	0.12	0.71	0.00	0.17
	D - A421 (West)	0.02	0.97	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	0	0	2
	B - A421 (East)	0	0	1	6
	C - Whaddon Rd	2	3	0	5
	D - A421 (West)	5	5	12	0

Average PCU Per Veh

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	1.000	1.000	1.000	1.023
	B - A421 (East)	1.000	1.000	1.011	1.060
	C - Whaddon Rd	1.023	1.033	1.000	1.052
	D - A421 (West)	1.050	1.045	1.118	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - Coddimor Ln	119	120
	B - A421 (East)	1042	1094
	C - Whaddon Rd	301	312
	D - A421 (West)	1010	1057
07:45-08:00	A - Coddimor Ln	142	143
	B - A421 (East)	1244	1306
	C - Whaddon Rd	360	373
	D - A421 (West)	1206	1262
08:00-08:15	A - Coddimor Ln	174	176
	B - A421 (East)	1523	1600
	C - Whaddon Rd	441	456
	D - A421 (West)	1477	1545
08:15-08:30	A - Coddimor Ln	174	176
	B - A421 (East)	1523	1600
	C - Whaddon Rd	441	456
	D - A421 (West)	1477	1545
08:30-08:45	A - Coddimor Ln	142	143
	B - A421 (East)	1244	1306
	C - Whaddon Rd	360	373
	D - A421 (West)	1206	1262
08:45-09:00	A - Coddimor Ln	119	120
	B - A421 (East)	1042	1094
	C - Whaddon Rd	301	312
	D - A421 (West)	1010	1057

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Coddimor Ln	0.46	17.26	0.8	C	145	218
B - A421 (East)	0.79	8.70	3.6	A	1270	1905
C - Whaddon Rd	1.24	351.86	46.3	F	367	551
D - A421 (West)	1.01	75.77	31.8	F	1231	1846

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	119	30	1196	634	0.188	118	78	0.0	0.2	6.966	A
B - A421 (East)	1042	260	93	1963	0.531	1037	1221	0.0	1.1	3.869	A
C - Whaddon Rd	301	75	898	588	0.513	297	232	0.0	1.0	12.220	B
D - A421 (West)	1010	252	272	1494	0.676	1002	924	0.0	2.0	7.197	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	142	36	1428	509	0.279	142	93	0.2	0.4	9.776	A
B - A421 (East)	1244	311	112	1952	0.637	1241	1458	1.1	1.7	5.051	A
C - Whaddon Rd	360	90	1075	491	0.733	354	278	1.0	2.5	25.304	D
D - A421 (West)	1206	301	324	1463	0.824	1197	1105	2.0	4.3	13.060	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	174	44	1634	398	0.438	173	103	0.4	0.8	15.864	C
B - A421 (East)	1523	381	136	1937	0.787	1516	1671	1.7	3.5	8.417	A
C - Whaddon Rd	441	110	1313	360	1.224	351	339	2.5	25.0	163.777	F
D - A421 (West)	1477	369	328	1461	1.011	1409	1336	4.3	21.4	43.496	E

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	174	44	1664	382	0.456	174	104	0.8	0.8	17.260	C
B - A421 (East)	1523	381	137	1936	0.787	1523	1701	3.5	3.6	8.702	A
C - Whaddon Rd	441	110	1319	357	1.236	355	341	25.0	46.3	351.864	F
D - A421 (West)	1477	369	332	1459	1.012	1436	1343	21.4	31.8	75.775	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	142	36	1620	407	0.350	143	110	0.8	0.6	13.735	B
B - A421 (East)	1244	311	115	1950	0.638	1251	1648	3.6	1.8	5.205	A
C - Whaddon Rd	360	90	1084	486	0.741	476	282	46.3	17.3	244.726	F
D - A421 (West)	1206	301	426	1403	0.860	1304	1134	31.8	7.3	46.031	E

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	119	30	1273	593	0.201	120	87	0.6	0.3	7.637	A
B - A421 (East)	1042	260	95	1962	0.531	1044	1298	1.8	1.1	3.934	A
C - Whaddon Rd	301	75	905	585	0.516	366	235	17.3	1.1	21.865	C
D - A421 (West)	1010	252	330	1460	0.692	1030	942	7.3	2.3	8.744	A

2033 Base + CD + D - ST, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J7	Whaddon Crossroads	Standard Roundabout		A, B, C, D	91.41	F

Junction Network Options

Driving side	Lighting
Left	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)	Run automatically
D19	2033 Base + CD + D - ST	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Coddimor Ln		ONE HOUR	✓	158	100.000
B - A421 (East)		ONE HOUR	✓	1425	100.000
C - Whaddon Rd		ONE HOUR	✓	406	100.000
D - A421 (West)		ONE HOUR	✓	1360	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	53	55	50
	B - A421 (East)	32	0	249	1144
	C - Whaddon Rd	49	290	0	67
	D - A421 (West)	23	1317	19	0

Proportions

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0.00	0.33	0.35	0.32
	B - A421 (East)	0.02	0.00	0.17	0.80
	C - Whaddon Rd	0.12	0.71	0.00	0.16
	D - A421 (West)	0.02	0.97	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	0	0	2
	B - A421 (East)	0	0	1	6
	C - Whaddon Rd	2	3	0	5
	D - A421 (West)	5	5	12	0

Average PCU Per Veh

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	1.000	1.000	1.000	1.023
	B - A421 (East)	1.000	1.000	1.011	1.060
	C - Whaddon Rd	1.023	1.033	1.000	1.052
	D - A421 (West)	1.050	1.045	1.118	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - Coddimor Ln	119	120
	B - A421 (East)	1073	1126
	C - Whaddon Rd	306	316
	D - A421 (West)	1024	1071
07:45-08:00	A - Coddimor Ln	142	143
	B - A421 (East)	1281	1345
	C - Whaddon Rd	365	378
	D - A421 (West)	1222	1279
08:00-08:15	A - Coddimor Ln	174	176
	B - A421 (East)	1569	1647
	C - Whaddon Rd	447	463
	D - A421 (West)	1497	1566
08:15-08:30	A - Coddimor Ln	174	176
	B - A421 (East)	1569	1647
	C - Whaddon Rd	447	463
	D - A421 (West)	1497	1566
08:30-08:45	A - Coddimor Ln	142	143
	B - A421 (East)	1281	1345
	C - Whaddon Rd	365	378
	D - A421 (West)	1222	1279
08:45-09:00	A - Coddimor Ln	119	120
	B - A421 (East)	1073	1126
	C - Whaddon Rd	306	316
	D - A421 (West)	1024	1071

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Coddimor Ln	0.46	17.36	0.8	C	145	218
B - A421 (East)	0.81	9.75	4.2	A	1307	1961
C - Whaddon Rd	1.32	436.84	57.2	F	373	559
D - A421 (West)	1.02	83.55	36.1	F	1248	1872

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	119	30	1213	625	0.191	118	78	0.0	0.2	7.095	A
B - A421 (East)	1073	268	93	1964	0.546	1068	1238	0.0	1.2	3.998	A
C - Whaddon Rd	306	76	919	577	0.530	301	242	0.0	1.1	12.880	B
D - A421 (West)	1024	256	276	1492	0.686	1015	944	0.0	2.1	7.426	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	142	36	1448	499	0.285	142	93	0.2	0.4	10.063	B
B - A421 (East)	1281	320	112	1952	0.656	1278	1477	1.2	1.9	5.321	A
C - Whaddon Rd	365	91	1100	477	0.765	358	290	1.1	2.9	28.616	D
D - A421 (West)	1222	306	328	1461	0.837	1212	1130	2.1	4.7	13.916	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	174	44	1638	396	0.440	173	100	0.4	0.8	16.036	C
B - A421 (East)	1569	392	136	1937	0.810	1560	1676	1.9	4.0	9.336	A
C - Whaddon Rd	447	112	1343	344	1.300	338	353	2.9	30.3	199.770	F
D - A421 (West)	1497	374	317	1467	1.020	1421	1363	4.7	23.7	46.707	E

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	174	44	1666	381	0.457	174	101	0.8	0.8	17.364	C
B - A421 (East)	1569	392	137	1936	0.810	1568	1703	4.0	4.2	9.750	A
C - Whaddon Rd	447	112	1350	340	1.315	339	355	30.3	57.2	436.840	F
D - A421 (West)	1497	374	319	1466	1.021	1448	1370	23.7	36.1	83.553	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	142	36	1643	394	0.361	143	108	0.8	0.6	14.406	B
B - A421 (East)	1281	320	115	1950	0.657	1290	1671	4.2	1.9	5.520	A
C - Whaddon Rd	365	91	1110	472	0.774	464	294	57.2	32.6	344.108	F
D - A421 (West)	1222	306	417	1408	0.868	1334	1157	36.1	8.2	55.926	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	119	30	1337	559	0.213	120	94	0.6	0.3	8.233	A
B - A421 (East)	1073	268	95	1963	0.547	1076	1362	1.9	1.2	4.073	A
C - Whaddon Rd	306	76	926	573	0.534	431	245	32.6	1.2	53.729	F
D - A421 (West)	1024	256	385	1427	0.717	1046	972	8.2	2.6	9.966	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: J7 -Post Calibration (PM) Miti_ST.j9
Path: \\uk.wspgroup.com\central data\Projects\700694xx\70069442 - SWMK - 2020\03 WIP\TP Transport Planning\Analysis\September 2020 Junction Modelling\Mitigation\J7
Report generation date: 18/12/2020 17:00:08

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2033 Base + CD + D				
A - Coddimor Ln	D16	0.7	14.09	0.42	B
B - A421 (East)		4.2	9.39	0.81	A
C - Whaddon Rd		67.1	634.65	1.53	F
D - A421 (West)		11.8	31.36	0.94	D
	2033 Base + CD + D with TP				
A - Coddimor Ln	D18	0.7	13.93	0.42	B
B - A421 (East)		4.0	9.16	0.81	A
C - Whaddon Rd		64.6	607.98	1.50	F
D - A421 (West)		11.2	29.97	0.93	D
	2033 Base + CD + D - ST				
A - Coddimor Ln	D20	0.7	14.50	0.43	B
B - A421 (East)		4.3	9.69	0.82	A
C - Whaddon Rd		73.9	694.36	1.59	F
D - A421 (West)		13.2	34.85	0.95	D

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	Whaddon Crossroads
Location	51°59'6.32"N, 0°49'39.55"W
Site number	7
Date	04/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Will Forster
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)

5.75				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)	Run automatically
D16	2033 Base + CD + D	PM	ONE HOUR	16:45	18:15	15	✓
D18	2033 Base + CD + D with TP	PM	ONE HOUR	16:45	18:15	15	✓
D20	2033 Base + CD + D - ST	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	✓	D16,D18,D20	100.000	100.000

2033 Base + CD + D, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J7	Whaddon Crossroads	Standard Roundabout		A, B, C, D	81.47	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Coddimor Ln	
B	A421 (East)	
C	Whaddon Rd	
D	A421 (West)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - Coddimor Ln	2.80	6.70	8.5	21.5	50.6	40.0	
B - A421 (East)	2.90	9.70	23.6	35.0	50.6	40.0	
C - Whaddon Rd	2.90	7.20	10.6	23.0	50.6	42.0	
D - A421 (West)	3.10	8.50	18.6	35.0	50.6	45.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
A - Coddimor Ln	None		
B - A421 (East)	Direct	For consistency with base model	250
C - Whaddon Rd	Direct	For consistency with base model	-330
D - A421 (West)	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - Coddimor Ln	0.519	1287
B - A421 (East)	0.644	2174
C - Whaddon Rd	0.538	1065
D - A421 (West)	0.603	1732

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)	Run automatically
D16	2033 Base + CD + D	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Coddimor Ln		ONE HOUR	✓	171	100.000
B - A421 (East)		ONE HOUR	✓	1483	100.000
C - Whaddon Rd		ONE HOUR	✓	340	100.000
D - A421 (West)		ONE HOUR	✓	1308	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	32	53	85
	B - A421 (East)	24	1	210	1248
	C - Whaddon Rd	51	253	0	36
	D - A421 (West)	31	1245	32	0

Proportions

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0.00	0.19	0.31	0.50
	B - A421 (East)	0.02	0.00	0.14	0.84
	C - Whaddon Rd	0.15	0.75	0.00	0.11
	D - A421 (West)	0.02	0.95	0.02	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	0	0	0
	B - A421 (East)	5	0	1	2
	C - Whaddon Rd	0	0	0	0
	D - A421 (West)	0	3	4	0

Average PCU Per Veh

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	1.000	1.000	1.000	1.000
	B - A421 (East)	1.048	1.000	1.012	1.019
	C - Whaddon Rd	1.000	1.000	1.000	1.000
	D - A421 (West)	1.000	1.029	1.036	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Coddimor Ln	129	129
	B - A421 (East)	1117	1137
	C - Whaddon Rd	256	256
	D - A421 (West)	985	1013
17:00-17:15	A - Coddimor Ln	154	154
	B - A421 (East)	1333	1358
	C - Whaddon Rd	305	305
	D - A421 (West)	1176	1210
17:15-17:30	A - Coddimor Ln	188	188
	B - A421 (East)	1633	1663
	C - Whaddon Rd	374	374
	D - A421 (West)	1441	1482
17:30-17:45	A - Coddimor Ln	188	188
	B - A421 (East)	1633	1663
	C - Whaddon Rd	374	374
	D - A421 (West)	1441	1482
17:45-18:00	A - Coddimor Ln	154	154
	B - A421 (East)	1333	1358
	C - Whaddon Rd	305	305
	D - A421 (West)	1176	1210
18:00-18:15	A - Coddimor Ln	129	129
	B - A421 (East)	1117	1137
	C - Whaddon Rd	256	256
	D - A421 (West)	985	1013

Results

Results Summary for whole modelled period

					Average Demand	Total Junction

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	(Veh/hr)	Arrivals (Veh)
A - Coddimor Ln	0.42	14.09	0.7	B	157	235
B - A421 (East)	0.81	9.39	4.2	A	1361	2041
C - Whaddon Rd	1.53	634.65	67.1	F	312	467
D - A421 (West)	0.94	31.36	11.8	D	1201	1801

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	129	32	1143	679	0.189	128	79	0.0	0.2	6.521	A
B - A421 (East)	1117	279	128	2053	0.544	1112	1143	0.0	1.2	3.805	A
C - Whaddon Rd	256	64	1018	507	0.505	252	221	0.0	1.0	13.923	B
D - A421 (West)	985	246	244	1540	0.640	978	1026	0.0	1.7	6.329	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	154	38	1365	561	0.274	153	94	0.2	0.4	8.814	A
B - A421 (East)	1333	333	153	2037	0.655	1331	1365	1.2	1.9	5.076	A
C - Whaddon Rd	305	76	1219	397	0.769	298	265	1.0	2.9	34.092	D
D - A421 (West)	1176	294	289	1514	0.777	1170	1227	1.7	3.3	10.279	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	188	47	1564	454	0.414	187	97	0.4	0.7	13.401	B
B - A421 (East)	1633	408	186	2016	0.810	1624	1564	1.9	4.1	8.993	A
C - Whaddon Rd	374	93	1488	249	1.500	246	323	2.9	34.9	304.027	F
D - A421 (West)	1441	360	248	1538	0.937	1413	1486	3.3	10.3	24.548	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	188	47	1584	443	0.424	188	97	0.7	0.7	14.092	B
B - A421 (East)	1633	408	188	2015	0.810	1632	1584	4.1	4.2	9.385	A
C - Whaddon Rd	374	93	1495	245	1.526	245	325	34.9	67.1	634.650	F
D - A421 (West)	1441	360	247	1538	0.936	1435	1493	10.3	11.8	31.361	D

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	154	38	1465	508	0.302	155	108	0.7	0.4	10.215	B
B - A421 (East)	1333	333	155	2036	0.655	1342	1465	4.2	1.9	5.256	A
C - Whaddon Rd	305	76	1230	391	0.781	385	268	67.1	47.2	506.677	F
D - A421 (West)	1176	294	367	1468	0.801	1206	1247	11.8	4.3	15.080	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	129	32	1298	598	0.215	129	108	0.4	0.3	7.691	A
B - A421 (East)	1117	279	129	2052	0.544	1119	1298	1.9	1.2	3.871	A
C - Whaddon Rd	256	64	1026	503	0.509	440	223	47.2	1.2	146.321	F
D - A421 (West)	985	246	413	1441	0.683	993	1053	4.3	2.2	8.179	A

2033 Base + CD + D with TP, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J7	Whaddon Crossroads	Standard Roundabout		A, B, C, D	78.26	F

Junction Network Options

Driving side	Lighting
Left	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)	Run automatically
D18	2033 Base + CD + D with TP	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Coddimor Ln		ONE HOUR	✓	171	100.000
B - A421 (East)		ONE HOUR	✓	1474	100.000
C - Whaddon Rd		ONE HOUR	✓	339	100.000
D - A421 (West)		ONE HOUR	✓	1300	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	32	53	85
	B - A421 (East)	24	1	208	1241
	C - Whaddon Rd	51	252	0	36
	D - A421 (West)	31	1237	32	0

Proportions

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0.00	0.19	0.31	0.50
	B - A421 (East)	0.02	0.00	0.14	0.84
	C - Whaddon Rd	0.15	0.74	0.00	0.11
	D - A421 (West)	0.02	0.95	0.02	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	0	0	0
	B - A421 (East)	5	0	1	2
	C - Whaddon Rd	0	0	0	0
	D - A421 (West)	0	3	4	0

Average PCU Per Veh

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	1.000	1.000	1.000	1.000
	B - A421 (East)	1.048	1.000	1.012	1.019
	C - Whaddon Rd	1.000	1.000	1.000	1.000
	D - A421 (West)	1.000	1.029	1.036	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Coddimor Ln	129	129
	B - A421 (East)	1110	1130
	C - Whaddon Rd	255	255
	D - A421 (West)	979	1007
17:00-17:15	A - Coddimor Ln	154	154
	B - A421 (East)	1325	1350
	C - Whaddon Rd	304	304
	D - A421 (West)	1169	1202
17:15-17:30	A - Coddimor Ln	188	188
	B - A421 (East)	1623	1653
	C - Whaddon Rd	373	373
	D - A421 (West)	1432	1473
17:30-17:45	A - Coddimor Ln	188	188
	B - A421 (East)	1623	1653
	C - Whaddon Rd	373	373
	D - A421 (West)	1432	1473
17:45-18:00	A - Coddimor Ln	154	154
	B - A421 (East)	1325	1350
	C - Whaddon Rd	304	304
	D - A421 (West)	1169	1202
18:00-18:15	A - Coddimor Ln	129	129
	B - A421 (East)	1110	1130
	C - Whaddon Rd	255	255
	D - A421 (West)	979	1007

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Coddimor Ln	0.42	13.93	0.7	B	157	235
B - A421 (East)	0.81	9.16	4.0	A	1353	2029
C - Whaddon Rd	1.50	607.98	64.6	F	311	466
D - A421 (West)	0.93	29.97	11.2	D	1193	1790

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	129	32	1137	682	0.188	128	79	0.0	0.2	6.480	A
B - A421 (East)	1110	277	128	2053	0.541	1105	1137	0.0	1.2	3.780	A
C - Whaddon Rd	255	64	1013	509	0.500	251	220	0.0	1.0	13.742	B
D - A421 (West)	979	245	244	1541	0.635	972	1021	0.0	1.7	6.261	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	154	38	1357	565	0.272	153	94	0.2	0.4	8.729	A
B - A421 (East)	1325	331	153	2037	0.651	1323	1357	1.2	1.8	5.020	A
C - Whaddon Rd	304	76	1213	400	0.761	297	263	1.0	2.8	32.976	D
D - A421 (West)	1169	292	289	1514	0.772	1163	1221	1.7	3.2	10.075	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	188	47	1559	457	0.412	187	98	0.4	0.7	13.270	B
B - A421 (East)	1623	406	186	2016	0.805	1615	1559	1.8	3.9	8.797	A
C - Whaddon Rd	373	93	1480	253	1.472	249	321	2.8	33.6	289.731	F
D - A421 (West)	1432	358	251	1536	0.932	1405	1479	3.2	9.8	23.760	C

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	188	47	1579	446	0.422	188	98	0.7	0.7	13.935	B
B - A421 (East)	1623	406	188	2015	0.806	1623	1579	3.9	4.0	9.159	A
C - Whaddon Rd	373	93	1488	249	1.496	249	323	33.6	64.6	607.975	F
D - A421 (West)	1432	358	250	1536	0.932	1427	1486	9.8	11.2	29.965	D

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	154	38	1458	512	0.300	155	109	0.7	0.4	10.106	B
B - A421 (East)	1325	331	155	2036	0.651	1334	1458	4.0	1.9	5.191	A
C - Whaddon Rd	304	76	1223	394	0.772	388	266	64.6	43.6	478.836	F
D - A421 (West)	1169	292	370	1466	0.797	1197	1241	11.2	4.2	14.556	B

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	129	32	1281	607	0.212	129	106	0.4	0.3	7.543	A
B - A421 (East)	1110	277	129	2052	0.541	1113	1281	1.9	1.2	3.845	A
C - Whaddon Rd	255	64	1020	505	0.504	425	222	43.6	1.1	121.266	F
D - A421 (West)	979	245	399	1449	0.675	987	1046	4.2	2.1	7.922	A

2033 Base + CD + D - ST, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J7	Whaddon Crossroads	Standard Roundabout		A, B, C, D	89.96	F

Junction Network Options

Driving side	Lighting
Left	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)	Run automatically
D20	2033 Base + CD + D - ST	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - Coddimor Ln		ONE HOUR	✓	171	100.000
B - A421 (East)		ONE HOUR	✓	1494	100.000
C - Whaddon Rd		ONE HOUR	✓	348	100.000
D - A421 (West)		ONE HOUR	✓	1322	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	32	53	85
	B - A421 (East)	24	1	214	1255
	C - Whaddon Rd	51	261	0	36
	D - A421 (West)	31	1259	32	0

Proportions

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0.00	0.19	0.31	0.50
	B - A421 (East)	0.02	0.00	0.14	0.84
	C - Whaddon Rd	0.15	0.75	0.00	0.10
	D - A421 (West)	0.02	0.95	0.02	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	0	0	0	0
	B - A421 (East)	5	0	1	2
	C - Whaddon Rd	0	0	0	0
	D - A421 (West)	0	3	4	0

Average PCU Per Veh

		To			
		A - Coddimor Ln	B - A421 (East)	C - Whaddon Rd	D - A421 (West)
From	A - Coddimor Ln	1.000	1.000	1.000	1.000
	B - A421 (East)	1.048	1.000	1.012	1.019
	C - Whaddon Rd	1.000	1.000	1.000	1.000
	D - A421 (West)	1.000	1.030	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - Coddimor Ln	129	129
	B - A421 (East)	1125	1146
	C - Whaddon Rd	262	262
	D - A421 (West)	996	1025
17:00-17:15	A - Coddimor Ln	154	154
	B - A421 (East)	1343	1368
	C - Whaddon Rd	312	312
	D - A421 (West)	1189	1224
17:15-17:30	A - Coddimor Ln	188	188
	B - A421 (East)	1645	1676
	C - Whaddon Rd	383	383
	D - A421 (West)	1456	1499
17:30-17:45	A - Coddimor Ln	188	188
	B - A421 (East)	1645	1676
	C - Whaddon Rd	383	383
	D - A421 (West)	1456	1499
17:45-18:00	A - Coddimor Ln	154	154
	B - A421 (East)	1343	1368
	C - Whaddon Rd	312	312
	D - A421 (West)	1189	1224
18:00-18:15	A - Coddimor Ln	129	129
	B - A421 (East)	1125	1146
	C - Whaddon Rd	262	262
	D - A421 (West)	996	1025

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - Coddimor Ln	0.43	14.50	0.7	B	157	235
B - A421 (East)	0.82	9.69	4.3	A	1371	2057
C - Whaddon Rd	1.59	694.36	73.9	F	319	478
D - A421 (West)	0.95	34.85	13.2	D	1214	1820

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	129	32	1159	670	0.192	128	79	0.0	0.2	6.631	A
B - A421 (East)	1125	281	128	2053	0.548	1120	1159	0.0	1.2	3.841	A
C - Whaddon Rd	262	65	1024	504	0.520	257	224	0.0	1.0	14.397	B
D - A421 (West)	996	249	250	1535	0.648	988	1031	0.0	1.8	6.500	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	154	38	1383	551	0.279	153	94	0.2	0.4	9.041	A
B - A421 (East)	1343	336	153	2037	0.659	1340	1383	1.2	1.9	5.147	A
C - Whaddon Rd	312	78	1225	393	0.795	304	268	1.0	3.2	37.179	E
D - A421 (West)	1189	297	295	1509	0.788	1182	1234	1.8	3.5	10.794	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	188	47	1575	448	0.420	187	95	0.4	0.7	13.737	B
B - A421 (East)	1645	411	186	2016	0.816	1636	1575	1.9	4.2	9.257	A
C - Whaddon Rd	383	96	1495	245	1.561	242	327	3.2	38.3	336.537	F
D - A421 (West)	1456	364	245	1538	0.947	1425	1492	3.5	11.3	26.457	D

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	188	47	1596	436	0.431	188	96	0.7	0.7	14.500	B
B - A421 (East)	1645	411	188	2015	0.817	1645	1596	4.2	4.3	9.694	A
C - Whaddon Rd	383	96	1503	241	1.590	240	329	38.3	73.9	694.360	F
D - A421 (West)	1456	364	244	1539	0.946	1448	1500	11.3	13.2	34.854	D

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	154	38	1482	498	0.308	155	107	0.7	0.5	10.509	B
B - A421 (East)	1343	336	155	2036	0.660	1353	1482	4.3	2.0	5.344	A
C - Whaddon Rd	312	78	1236	387	0.807	382	272	73.9	56.5	573.221	F
D - A421 (West)	1189	297	365	1468	0.810	1223	1253	13.2	4.6	16.468	C

18:00 - 18:15

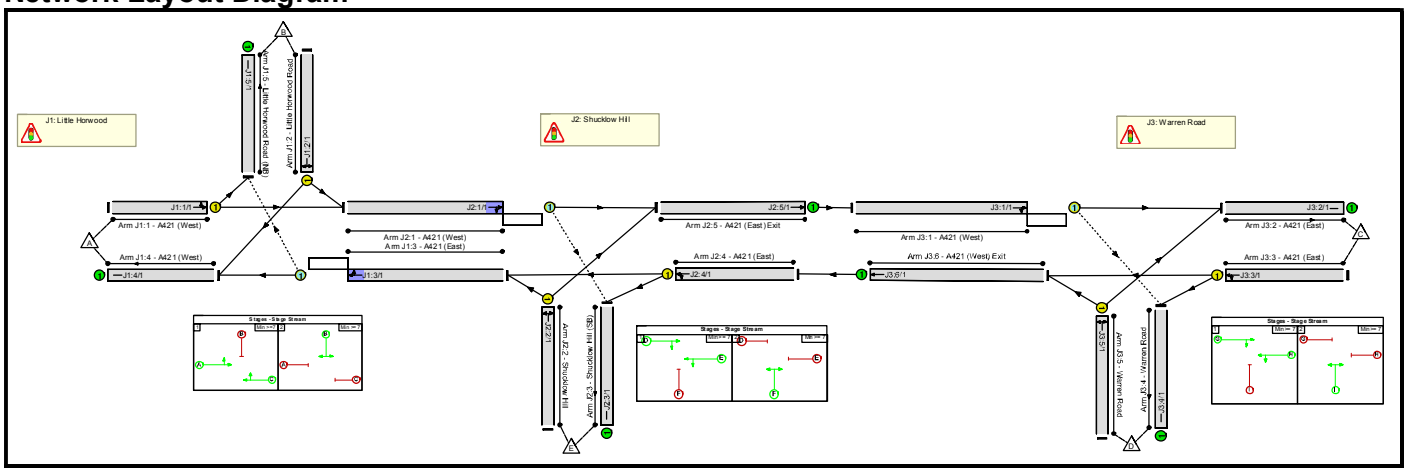
Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - Coddimor Ln	129	32	1343	574	0.224	129	112	0.5	0.3	8.106	A
B - A421 (East)	1125	281	129	2052	0.548	1128	1343	2.0	1.2	3.909	A
C - Whaddon Rd	262	65	1031	499	0.524	482	226	56.5	1.5	215.438	F
D - A421 (West)	996	249	451	1417	0.702	1004	1062	4.6	2.4	8.888	A

Full Input Data And Results

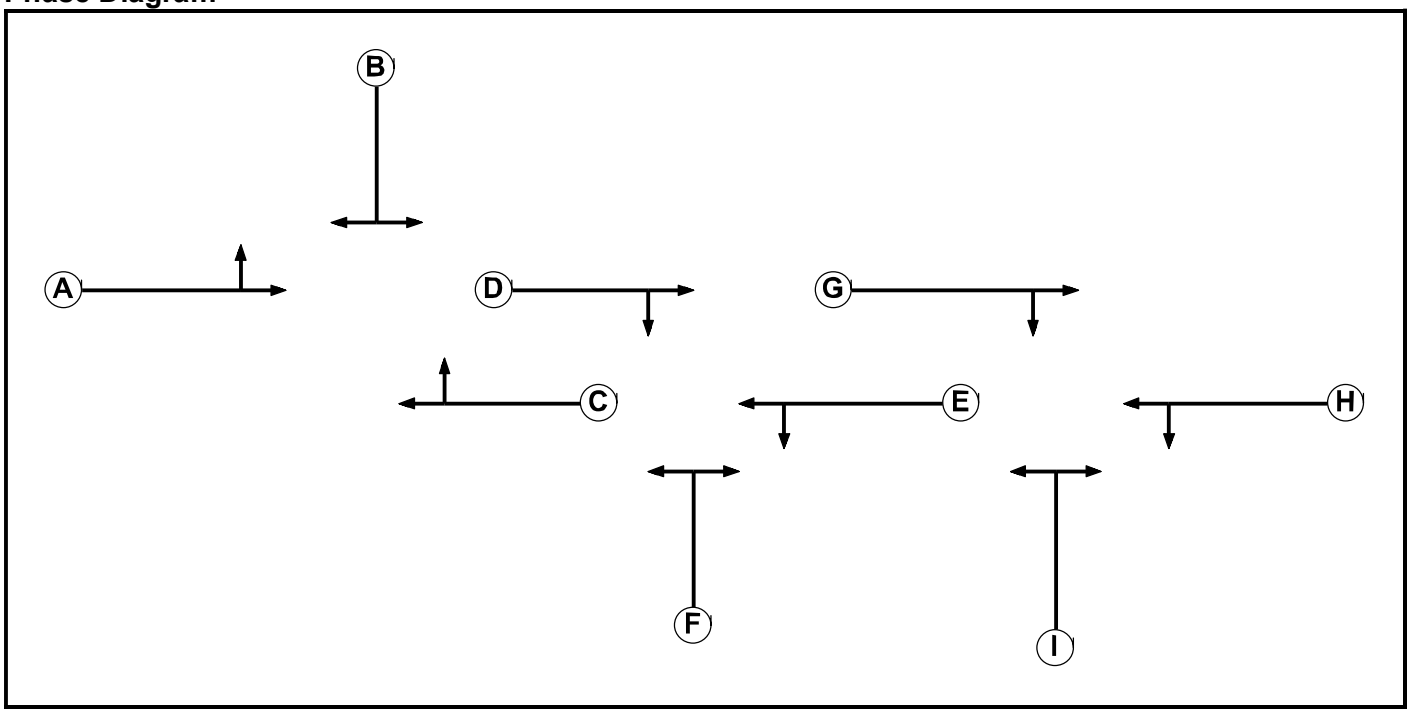
User and Project Details

Project:	**South West milton Keynes**
Title:	**Signalisation of Little Horwood Junction**
Location:	Buckinghamshire
File name:	201203 J8_J9 - Warren Road A421_A421 Shucklow Hill Little Horwood Road.lsg3x
Author:	
Company:	WSP
Address:	Guildford
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Traffic	2		7	7
E	Traffic	2		7	7
F	Traffic	2		7	7
G	Traffic	3		7	7
H	Traffic	3		7	7
I	Traffic	3		7	7

Phase Intergreens Matrix

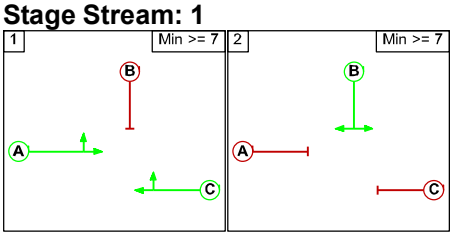
Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I
A		6	-	-	-	-	-	-	-
B	7		5	-	-	-	-	-	-
C	-	6		-	-	-	-	-	-
D	-	-	-		-	6	-	-	-
E	-	-	-	-		7	-	-	-
F	-	-	-	5	5		-	-	-
G	-	-	-	-	-	-		-	6
H	-	-	-	-	-	-	-		8
I	-	-	-	-	-	-	5	5	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A C
1	2	B
2	1	D E
2	2	F
3	1	G H
3	2	I

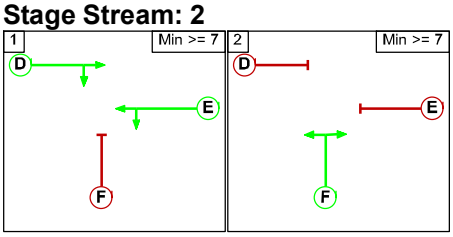
Stage Diagram

Stage Stream: 1

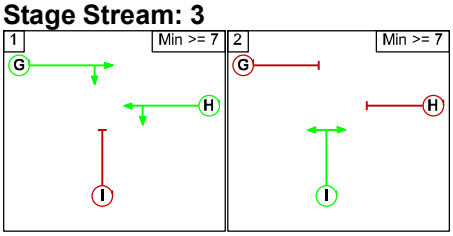


Full Input Data And Results

Stage Stream: 2



Stage Stream: 3



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Stage Stream: 3

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

Prohibited Stage Change

Stage Stream: 1

	To Stage		
		1	2
From Stage	1		6
	2	7	

Stage Stream: 2

	To Stage		
		1	2
From Stage	1		7
	2	5	

Stage Stream: 3

	To Stage		
		1	2
From Stage	1		8
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: Little Horwood

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)
J1:3/1 (A421 (East))	J1:5/1 (Right)	1439	0	J1:1/1	1.09	All	5.00	5.00	0.50	5	2.00

Junction: J2: Shucklow Hill

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)
J2:1/1 (A421 (West))	J2:3/1 (Right)	1439	0	J2:4/1	1.09	All	5.00	5.00	0.50	5	2.00

Junction: J3: Warren Road

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)
J3:1/1 (A421 (West))	J3:4/1 (Right)	1439	0	J3:3/1	1.09	All	5.00	5.00	0.50	5	2.00

Full Input Data And Results

Lane Input Data

Junction: J1: Little Horwood

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)
J1:1/1 (A421 (West))	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J2:1 Ahead	Inf
											Arm J1:5 Left	12.10
J1:2/1 (Little Horwood Road)	U	B	2	3	60.0	Geom	-	5.00	0.00	Y	Arm J2:1 Left	12.30
											Arm J1:4 Right	12.10
J1:3/1 (A421 (East))	O	C	2	3	16.5	Geom	-	3.20	0.00	Y	Arm J1:4 Ahead	Inf
											Arm J1:5 Right	7.50
J1:4/1 (A421 (West))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:5/1 (Little Horwood Road (NB))	U		2	3	60.0	Inf	-	-	-	-	-	-

Junction: J2: Shucklow Hill

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)
J2:1/1 (A421 (West))	O	D	2	3	15.9	Geom	-	3.50	0.00	Y	Arm J2:3 Right	9.20
											Arm J2:5 Ahead	Inf
J2:2/1 (Shucklow Hill)	U	F	2	3	60.0	Geom	-	5.00	0.00	Y	Arm J1:3 Left	15.40
											Arm J2:5 Right	12.60
J2:3/1 (Shucklow Hill (SB))	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:4/1 (A421 (East))	U	E	2	3	173.9	Geom	-	3.20	0.00	Y	Arm J1:3 Ahead	Inf
											Arm J2:3 Left	15.70
J2:5/1 (A421 (East) Exit)	U		2	3	22.1	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J3: Warren Road

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)
J3:1/1 (A421 (West))	O	G	2	3	173.9	Geom	-	3.40	0.00	Y	Arm J3:2 Ahead	Inf
											Arm J3:4 Right	7.90
J3:2/1 (A421 (East))	U		2	3	60.0	Inf	-	-	-	-	-	-
J3:3/1 (A421 (East))	U	H	2	3	60.0	Geom	-	3.80	0.00	Y	Arm J3:4 Left	12.30
											Arm J3:6 Ahead	Inf
J3:4/1 (Warren Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
J3:5/1 (Warren Road)	U	I	2	3	60.0	Geom	-	5.00	0.00	Y	Arm J3:2 Right	16.00
											Arm J3:6 Left	17.80
J3:6/1 (A421 (West) Exit)	U		2	3	21.4	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2033 Base + CD + Dev AM'	07:45	08:45	01:00	
2: '2033 Base + CD + Dev PM'	17:00	18:00	01:00	
3: '2033 Base + CD + Dev with TP AM'	07:45	08:45	01:00	
4: '2033 Base + CD + Dev with TP PM'	17:00	18:00	01:00	
5: '2033 Base + CD + Dev - ST AM'	07:45	08:45	01:00	
6: '2033 Base + CD + Dev - ST PM'	17:00	18:00	01:00	

Scenario 1: '2033 Base + CD + D AM' (FG1: '2033 Base + CD + Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	4	1288	3	26	1321
	B	1	0	24	0	25	50
	C	1231	21	0	81	3	1336
	D	5	0	107	0	0	112
	E	38	30	14	0	0	82
	Tot.	1275	55	1433	84	54	2901

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2033 Base + CD + D AM
Junction: J1: Little Horwood	
J1:1/1	1321
J1:2/1	50
J1:3/1	1325
J1:4/1	1275
J1:5/1	55
Junction: J2: Shucklow Hill	
J2:1/1	1366
J2:2/1	82
J2:3/1	54
J2:4/1	1260
J2:5/1	1329
Junction: J3: Warren Road	
J3:1/1	1329
J3:2/1	1433
J3:3/1	1336
J3:4/1	84
J3:5/1	112
J3:6/1	1260

Lane Saturation Flows

Junction: J1: Little Horwood

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:1 Ahead	Inf	99.7 %	1964	1964
				Arm J1:5 Left	12.10	0.3 %		
J1:2/1 (Little Horwood Road)	5.00	0.00	Y	Arm J2:1 Left	12.30	98.0 %	1885	1885
				Arm J1:4 Right	12.10	2.0 %		
J1:3/1 (A421 (East))	3.20	0.00	Y	Arm J1:4 Ahead	Inf	96.2 %	1920	1920
				Arm J1:5 Right	7.50	3.8 %		
J1:4/1 (A421 (West) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Shucklow Hill

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:3 Right	9.20	3.7 %	1953	1953
				Arm J2:5 Ahead	Inf	96.3 %		
J2:2/1 (Shucklow Hill)	5.00	0.00	Y	Arm J1:3 Left	15.40	82.9 %	1921	1921
				Arm J2:5 Right	12.60	17.1 %		
J2:3/1 (Shucklow Hill (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1 (A421 (East))	3.20	0.00	Y	Arm J1:3 Ahead	Inf	99.8 %	1935	1935
				Arm J2:3 Left	15.70	0.2 %		
J2:5/1 (A421 (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J3: Warren Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (A421 (West))	3.40	0.00	Y	Arm J3:2 Ahead	Inf	99.8 %	1954	1954
				Arm J3:4 Right	7.90	0.2 %		
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:3/1 (A421 (East))	3.80	0.00	Y	Arm J3:4 Left	12.30	6.1 %	1980	1980
				Arm J3:6 Ahead	Inf	93.9 %		
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:5/1 (Warren Road)	5.00	0.00	Y	Arm J3:2 Right	16.00	95.5 %	1934	1934
				Arm J3:6 Left	17.80	4.5 %		
J3:6/1 (A421 (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2033 Base + CD + D PM' (FG2: '2033 Base + CD + Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	1	1304	1	18	1324
	B	0	0	29	0	16	45
	C	1271	18	0	109	6	1404
	D	2	0	33	0	0	35
	E	21	17	12	0	0	50
	Tot.	1294	36	1378	110	40	2858

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2033 Base + CD + D PM
Junction: J1: Little Horwood	
J1:1/1	1324
J1:2/1	45
J1:3/1	1329
J1:4/1	1294
J1:5/1	36
Junction: J2: Shucklow Hill	
J2:1/1	1368
J2:2/1	50
J2:3/1	40
J2:4/1	1297
J2:5/1	1346
Junction: J3: Warren Road	
J3:1/1	1346
J3:2/1	1378
J3:3/1	1404
J3:4/1	110
J3:5/1	35
J3:6/1	1297

Lane Saturation Flows

Junction: J1: Little Horwood

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:1 Ahead	Inf	99.9 %	1965	1965
				Arm J1:5 Left	12.10	0.1 %		
J1:2/1 (Little Horwood Road)	5.00	0.00	Y	Arm J2:1 Left	12.30	100.0 %	1885	1885
				Arm J1:4 Right	12.10	0.0 %		
J1:3/1 (A421 (East))	3.20	0.00	Y	Arm J1:4 Ahead	Inf	97.4 %	1925	1925
				Arm J1:5 Right	7.50	2.6 %		
J1:4/1 (A421 (West) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Shucklow Hill								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:3 Right	9.20	2.5 %	1957	1957
				Arm J2:5 Ahead	Inf	97.5 %		
J2:2/1 (Shucklow Hill)	5.00	0.00	Y	Arm J1:3 Left	15.40	76.0 %	1918	1918
				Arm J2:5 Right	12.60	24.0 %		
J2:3/1 (Shucklow Hill (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1 (A421 (East))	3.20	0.00	Y	Arm J1:3 Ahead	Inf	99.5 %	1934	1934
				Arm J2:3 Left	15.70	0.5 %		
J2:5/1 (A421 (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J3: Warren Road								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J3:1/1 (A421 (West))	3.40	0.00	Y	Arm J3:2 Ahead	Inf	99.9 %	1955	1955
				Arm J3:4 Right	7.90	0.1 %		
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:3/1 (A421 (East))	3.80	0.00	Y	Arm J3:4 Left	12.30	7.8 %	1976	1976
				Arm J3:6 Ahead	Inf	92.2 %		
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:5/1 (Warren Road)	5.00	0.00	Y	Arm J3:2 Right	16.00	94.3 %	1935	1935
				Arm J3:6 Left	17.80	5.7 %		
J3:6/1 (A421 (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2033 Base + CD + D with TP AM' (FG3: '2033 Base + CD + Dev with TP AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	4	1283	3	26	1316
	B	1	0	24	0	25	50
	C	1225	21	0	81	3	1330
	D	5	0	106	0	0	111
	E	38	30	14	0	0	82
	Tot.	1269	55	1427	84	54	2889

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2033 Base + CD + D with TP AM
Junction: J1: Little Horwood	
J1:1/1	1316
J1:2/1	50
J1:3/1	1319
J1:4/1	1269
J1:5/1	55
Junction: J2: Shucklow Hill	
J2:1/1	1361
J2:2/1	82
J2:3/1	54
J2:4/1	1254
J2:5/1	1324
Junction: J3: Warren Road	
J3:1/1	1324
J3:2/1	1427
J3:3/1	1330
J3:4/1	84
J3:5/1	111
J3:6/1	1254

Lane Saturation Flows

Junction: J1: Little Horwood

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:1 Ahead	Inf	99.7 %	1964	1964
				Arm J1:5 Left	12.10	0.3 %		
J1:2/1 (Little Horwood Road)	5.00	0.00	Y	Arm J2:1 Left	12.30	98.0 %	1885	1885
				Arm J1:4 Right	12.10	2.0 %		
J1:3/1 (A421 (East))	3.20	0.00	Y	Arm J1:4 Ahead	Inf	96.1 %	1920	1920
				Arm J1:5 Right	7.50	3.9 %		
J1:4/1 (A421 (West) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Shucklow Hill

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:3 Right	9.20	3.7 %	1953	1953
				Arm J2:5 Ahead	Inf	96.3 %		
J2:2/1 (Shucklow Hill)	5.00	0.00	Y	Arm J1:3 Left	15.40	82.9 %	1921	1921
				Arm J2:5 Right	12.60	17.1 %		
J2:3/1 (Shucklow Hill (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1 (A421 (East))	3.20	0.00	Y	Arm J1:3 Ahead	Inf	99.8 %	1935	1935
				Arm J2:3 Left	15.70	0.2 %		
J2:5/1 (A421 (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J3: Warren Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (A421 (West))	3.40	0.00	Y	Arm J3:2 Ahead	Inf	99.8 %	1954	1954
				Arm J3:4 Right	7.90	0.2 %		
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:3/1 (A421 (East))	3.80	0.00	Y	Arm J3:4 Left	12.30	6.1 %	1980	1980
				Arm J3:6 Ahead	Inf	93.9 %		
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:5/1 (Warren Road)	5.00	0.00	Y	Arm J3:2 Right	16.00	95.5 %	1934	1934
				Arm J3:6 Left	17.80	4.5 %		
J3:6/1 (A421 (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2033 Base + CD + D with TP PM' (FG4: '2033 Base + CD + Dev with TP PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	1	1297	1	18	1317
	B	0	0	29	0	16	45
	C	1266	18	0	107	6	1397
	D	2	0	32	0	0	34
	E	21	17	12	0	0	50
	Tot.	1289	36	1370	108	40	2843

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2033 Base + CD + D with TP PM
Junction: J1: Little Horwood	
J1:1/1	1317
J1:2/1	45
J1:3/1	1324
J1:4/1	1289
J1:5/1	36
Junction: J2: Shucklow Hill	
J2:1/1	1361
J2:2/1	50
J2:3/1	40
J2:4/1	1292
J2:5/1	1339
Junction: J3: Warren Road	
J3:1/1	1339
J3:2/1	1370
J3:3/1	1397
J3:4/1	108
J3:5/1	34
J3:6/1	1292

Lane Saturation Flows

Junction: J1: Little Horwood

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:1 Ahead	Inf	99.9 %	1965	1965
				Arm J1:5 Left	12.10	0.1 %		
J1:2/1 (Little Horwood Road)	5.00	0.00	Y	Arm J2:1 Left	12.30	100.0 %	1885	1885
				Arm J1:4 Right	12.10	0.0 %		
J1:3/1 (A421 (East))	3.20	0.00	Y	Arm J1:4 Ahead	Inf	97.4 %	1925	1925
				Arm J1:5 Right	7.50	2.6 %		
J1:4/1 (A421 (West) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Shucklow Hill

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:3 Right	9.20	2.5 %	1957	1957
				Arm J2:5 Ahead	Inf	97.5 %		
J2:2/1 (Shucklow Hill)	5.00	0.00	Y	Arm J1:3 Left	15.40	76.0 %	1918	1918
				Arm J2:5 Right	12.60	24.0 %		
J2:3/1 (Shucklow Hill (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1 (A421 (East))	3.20	0.00	Y	Arm J1:3 Ahead	Inf	99.5 %	1934	1934
				Arm J2:3 Left	15.70	0.5 %		
J2:5/1 (A421 (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J3: Warren Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (A421 (West))	3.40	0.00	Y	Arm J3:2 Ahead	Inf	99.9 %	1955	1955
				Arm J3:4 Right	7.90	0.1 %		
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:3/1 (A421 (East))	3.80	0.00	Y	Arm J3:4 Left	12.30	7.7 %	1977	1977
				Arm J3:6 Ahead	Inf	92.3 %		
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:5/1 (Warren Road)	5.00	0.00	Y	Arm J3:2 Right	16.00	94.1 %	1935	1935
				Arm J3:6 Left	17.80	5.9 %		
J3:6/1 (A421 (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: '2033 Base + CD + D - ST AM' (FG5: '2033 Base + CD + Dev - ST AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	4	1301	3	26	1334
	B	1	0	24	0	25	50
	C	1255	21	0	81	3	1360
	D	5	0	107	0	0	112
	E	38	30	14	0	0	82
	Tot.	1299	55	1446	84	54	2938

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2033 Base + CD + D - ST AM
Junction: J1: Little Horwood	
J1:1/1	1334
J1:2/1	50
J1:3/1	1349
J1:4/1	1299
J1:5/1	55
Junction: J2: Shucklow Hill	
J2:1/1	1379
J2:2/1	82
J2:3/1	54
J2:4/1	1284
J2:5/1	1342
Junction: J3: Warren Road	
J3:1/1	1342
J3:2/1	1446
J3:3/1	1360
J3:4/1	84
J3:5/1	112
J3:6/1	1284

Lane Saturation Flows

Junction: J1: Little Horwood

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:1 Ahead	Inf	99.7 %	1964	1964
				Arm J1:5 Left	12.10	0.3 %		
J1:2/1 (Little Horwood Road)	5.00	0.00	Y	Arm J2:1 Left	12.30	98.0 %	1885	1885
				Arm J1:4 Right	12.10	2.0 %		
J1:3/1 (A421 (East))	3.20	0.00	Y	Arm J1:4 Ahead	Inf	96.2 %	1920	1920
				Arm J1:5 Right	7.50	3.8 %		
J1:4/1 (A421 (West) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Shucklow Hill

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:3 Right	9.20	3.7 %	1953	1953
				Arm J2:5 Ahead	Inf	96.3 %		
J2:2/1 (Shucklow Hill)	5.00	0.00	Y	Arm J1:3 Left	15.40	82.9 %	1921	1921
				Arm J2:5 Right	12.60	17.1 %		
J2:3/1 (Shucklow Hill (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1 (A421 (East))	3.20	0.00	Y	Arm J1:3 Ahead	Inf	99.8 %	1935	1935
				Arm J2:3 Left	15.70	0.2 %		
J2:5/1 (A421 (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J3: Warren Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (A421 (West))	3.40	0.00	Y	Arm J3:2 Ahead	Inf	99.8 %	1954	1954
				Arm J3:4 Right	7.90	0.2 %		
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:3/1 (A421 (East))	3.80	0.00	Y	Arm J3:4 Left	12.30	6.0 %	1981	1981
				Arm J3:6 Ahead	Inf	94.0 %		
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:5/1 (Warren Road)	5.00	0.00	Y	Arm J3:2 Right	16.00	95.5 %	1934	1934
				Arm J3:6 Left	17.80	4.5 %		
J3:6/1 (A421 (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: '2033 Base + CD + D - ST PM' (FG6: '2033 Base + CD + Dev - ST PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	1	1320	1	18	1340
	B	0	0	29	0	16	45
	C	1279	18	0	109	6	1412
	D	2	0	33	0	0	35
	E	21	17	12	0	0	50
	Tot.	1302	36	1394	110	40	2882

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2033 Base + CD + D - ST PM
Junction: J1: Little Horwood	
J1:1/1	1340
J1:2/1	45
J1:3/1	1337
J1:4/1	1302
J1:5/1	36
Junction: J2: Shucklow Hill	
J2:1/1	1384
J2:2/1	50
J2:3/1	40
J2:4/1	1305
J2:5/1	1362
Junction: J3: Warren Road	
J3:1/1	1362
J3:2/1	1394
J3:3/1	1412
J3:4/1	110
J3:5/1	35
J3:6/1	1305

Lane Saturation Flows

Junction: J1: Little Horwood

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:1 Ahead	Inf	99.9 %	1965	1965
				Arm J1:5 Left	12.10	0.1 %		
J1:2/1 (Little Horwood Road)	5.00	0.00	Y	Arm J2:1 Left	12.30	100.0 %	1885	1885
				Arm J1:4 Right	12.10	0.0 %		
J1:3/1 (A421 (East))	3.20	0.00	Y	Arm J1:4 Ahead	Inf	97.4 %	1925	1925
				Arm J1:5 Right	7.50	2.6 %		
J1:4/1 (A421 (West) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:5/1 (Little Horwood Road (NB) Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Shucklow Hill

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (A421 (West))	3.50	0.00	Y	Arm J2:3 Right	9.20	2.5 %	1957	1957
				Arm J2:5 Ahead	Inf	97.5 %		
J2:2/1 (Shucklow Hill)	5.00	0.00	Y	Arm J1:3 Left	15.40	76.0 %	1918	1918
				Arm J2:5 Right	12.60	24.0 %		
J2:3/1 (Shucklow Hill (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1 (A421 (East))	3.20	0.00	Y	Arm J1:3 Ahead	Inf	99.5 %	1934	1934
				Arm J2:3 Left	15.70	0.5 %		
J2:5/1 (A421 (East) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

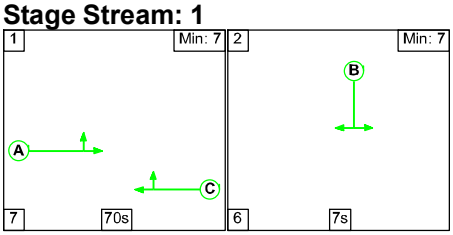
Junction: J3: Warren Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (A421 (West))	3.40	0.00	Y	Arm J3:2 Ahead	Inf	99.9 %	1955	1955
				Arm J3:4 Right	7.90	0.1 %		
J3:2/1 (A421 (East) Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:3/1 (A421 (East))	3.80	0.00	Y	Arm J3:4 Left	12.30	7.7 %	1976	1976
				Arm J3:6 Ahead	Inf	92.3 %		
J3:4/1 (Warren Road Lane 1)	Infinite Saturation Flow						Inf	Inf
J3:5/1 (Warren Road)	5.00	0.00	Y	Arm J3:2 Right	16.00	94.3 %	1935	1935
				Arm J3:6 Left	17.80	5.7 %		
J3:6/1 (A421 (West) Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

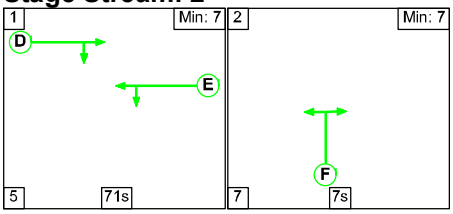
Scenario 1: '2033 Base + CD + D AM' (FG1: '2033 Base + CD + Dev AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1

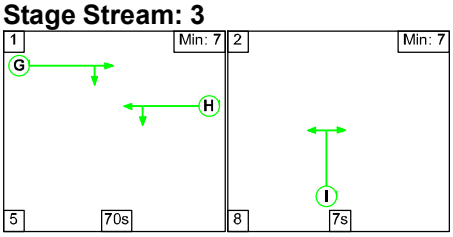


Stage Stream: 2



Full Input Data And Results

Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	70	7
Change Point	0	77

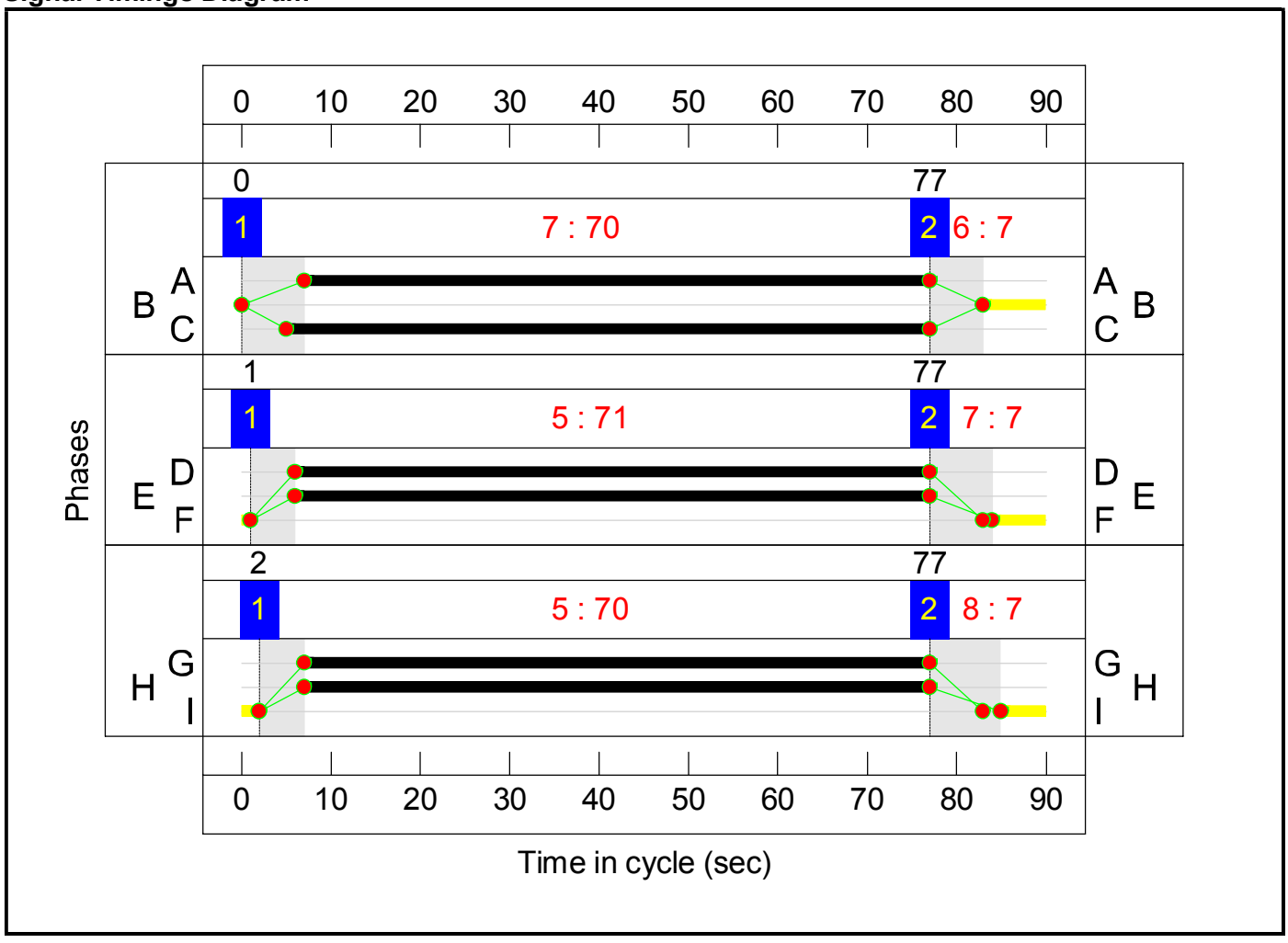
Stage Stream: 2

Stage	1	2
Duration	71	7
Change Point	1	77

Stage Stream: 3

Stage	1	2
Duration	70	7
Change Point	2	77

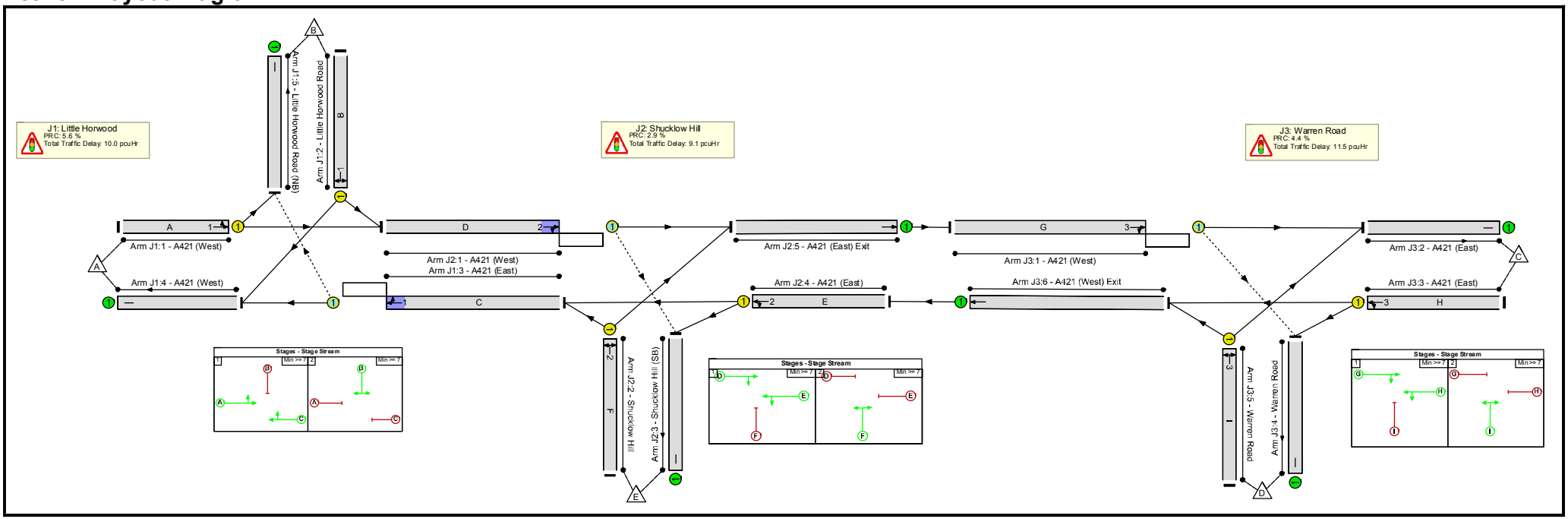
Signal Timings Diagram



Full Input Data And Results

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: Signalisation of Little Horwood Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.4%**
J1: Little Horwood	-	-	**N/A**	-	-		-	-	-	-	-	-	**85.3%**
1/1	A421 (West) Ahead Left	U	1	N/A	A		1	70	-	1321	1964	1549	85.3%
2/1	Little Horwood Road Left Right	U	1	N/A	B		1	7	-	50	1885	168	29.8%
3/1	A421 (East) Ahead Right	O	1	N/A	C		1	72	-	1325	1920	1557	85.1%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	1275	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	55	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.4%**
1/1	A421 (West) Right Ahead	O	2	N/A	D		1	71	-	1366	1953	1562	87.4%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	82	1921	171	48.0%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	54	Inf	Inf	0.0%
4/1	A421 (East) Ahead Left	U	2	N/A	E		1	71	-	1260	1935	1548	81.4%
5/1	A421 (East) Exit Ahead	U	N/A	N/A	-		-	-	-	1329	Inf	Inf	0.0%
J3: Warren Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.2%**
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	70	-	1329	1954	1541	86.2%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1433	Inf	Inf	0.0%
3/1	A421 (East) Left Ahead	U	3	N/A	H		1	70	-	1336	1980	1562	85.5%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	84	Inf	Inf	0.0%

Full Input Data And Results

5/1	Warren Road Right Left	U	3	N/A	I		1	7	-	112	1934	172	65.1%
6/1	A421 (West) Exit Ahead	U	N/A	N/A	-		-	-	-	1260	Inf	Inf	0.0%

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: Signalisation of Little Horwood Junction	**-**	**-**	**11**	**0**	**94**	**10.6**	**18.6**	**1.5**	**30.6**	**-**	**-**	**-**	**-**
J1: Little Horwood	**-**	**-**	**0**	**0**	**51**	**3.5**	**5.8**	**0.7**	**10.0**	**-**	**-**	**-**	**-**
1/1	1321	1321	-	-	-	2.2	2.8	-	5.1	13.8	21.3	2.8	24.1
2/1	50	50	-	-	-	0.5	0.2	-	0.7	53.7	1.2	0.2	1.4
3/1	1325	1325	0	0	51	0.7	2.8	0.7	4.2	11.4	5.1	2.8	7.8
4/1	1275	1275	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	55	55	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Shucklow Hill	**-**	**-**	**11**	**0**	**40**	**2.4**	**6.0**	**0.7**	**9.1**	**-**	**-**	**-**	**-**
1/1	1366	1366	11	0	40	0.7	3.4	0.7	4.7	12.5	4.4	3.4	7.7
2/1	82	82	-	-	-	0.9	0.5	-	1.3	59.1	1.9	0.5	2.4
3/1	54	54	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	1260	1260	-	-	-	0.9	2.2	-	3.0	8.6	10.8	2.2	13.0
5/1	1329	1329	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Warren Road	**-**	**-**	**0**	**0**	**3**	**4.7**	**6.8**	**0.0**	**11.5**	**-**	**-**	**-**	**-**
1/1	1329	1329	0	0	3	1.2	3.0	0.0	4.2	11.4	13.7	3.0	16.7
2/1	1433	1433	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1336	1336	-	-	-	2.3	2.9	-	5.2	13.9	21.5	2.9	24.4
4/1	84	84	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	112	112	-	-	-	1.2	0.9	-	2.1	68.8	2.7	0.9	3.6
6/1	1260	1260	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	5.6	Total Delay for Signalled Lanes (pcuHr):	10.02	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	2.9	Total Delay for Signalled Lanes (pcuHr):	9.10	Cycle Time (s): 90
C1	Stream: 3 PRC for Signalled Lanes (%):	4.4	Total Delay for Signalled Lanes (pcuHr):	11.54	Cycle Time (s): 90
	PRC Over All Lanes (%):	2.9	Total Delay Over All Lanes(pcuHr):	30.65	

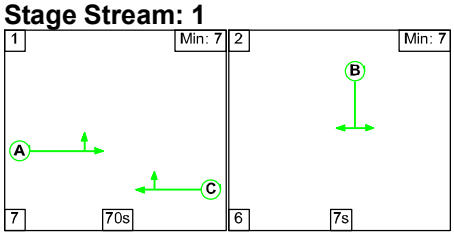
Full Input Data And Results

Full Input Data And Results

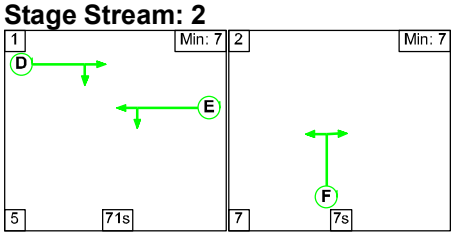
Scenario 2: '2033 Base + CD + D PM' (FG2: '2033 Base + CD + Dev PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

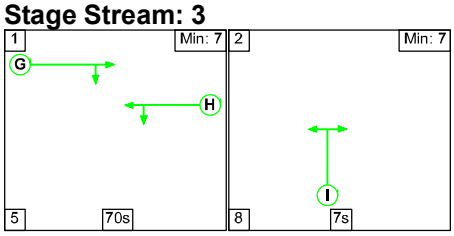
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	70	7
Change Point	0	77

Stage Stream: 2

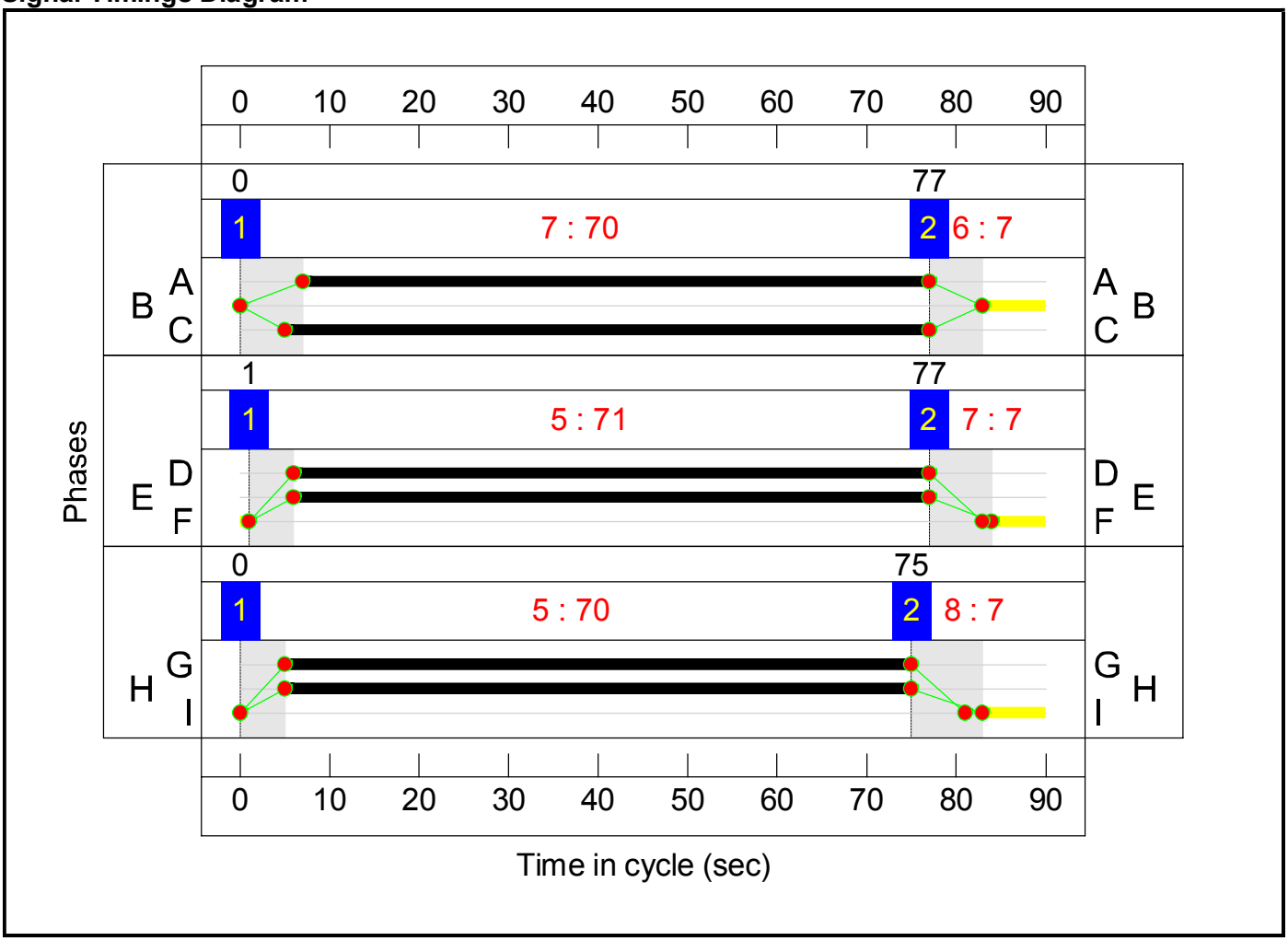
Stage	1	2
Duration	71	7
Change Point	1	77

Stage Stream: 3

Stage	1	2
Duration	70	7
Change Point	0	75

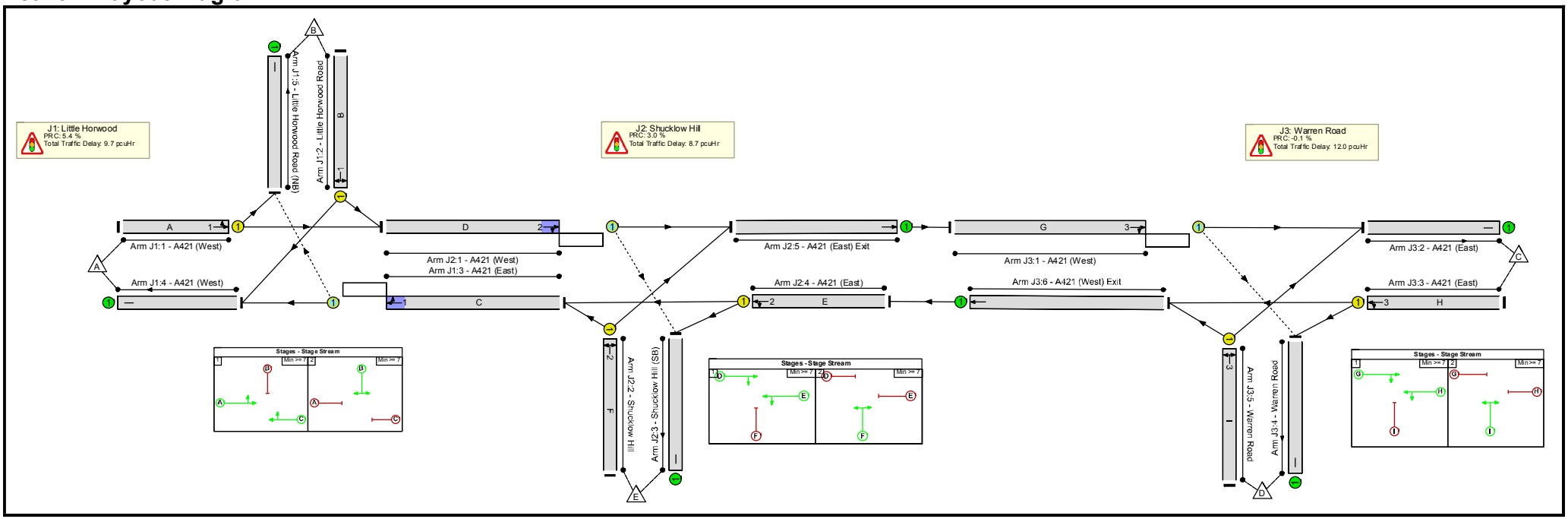
Full Input Data And Results

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: Signalisation of Little Horwood Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.1%**
J1: Little Horwood	-	-	**N/A**	-	-		-	-	-	-	-	-	**85.4%**
1/1	A421 (West) Ahead Left	U	1	N/A	A		1	70	-	1324	1965	1550	85.4%
2/1	Little Horwood Road Left Right	U	1	N/A	B		1	7	-	45	1885	168	26.9%
3/1	A421 (East) Ahead Right	O	1	N/A	C		1	72	-	1329	1925	1561	85.1%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	1294	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	36	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.4%**
1/1	A421 (West) Right Ahead	O	2	N/A	D		1	71	-	1368	1957	1566	87.4%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	50	1918	170	29.3%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	40	Inf	Inf	0.0%
4/1	A421 (East) Ahead Left	U	2	N/A	E		1	71	-	1297	1934	1547	83.8%
5/1	A421 (East) Exit Ahead	U	N/A	N/A	-		-	-	-	1346	Inf	Inf	0.0%
J3: Warren Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.1%**
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	70	-	1346	1955	1542	87.3%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1378	Inf	Inf	0.0%
3/1	A421 (East) Left Ahead	U	3	N/A	H		1	70	-	1404	1976	1559	90.1%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	110	Inf	Inf	0.0%

Full Input Data And Results

5/1	Warren Road Right Left	U	3	N/A	I		1	7	-	35	1935	172	20.3%
6/1	A421 (West) Exit Ahead	U	N/A	N/A	-		-	-	-	1297	Inf	Inf	0.0%

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: Signalisation of Little Horwood Junction	**-**	**-**	**12**	**0**	**58**	**9.8**	**19.7**	**0.9**	**30.4**	**-**	**-**	**-**	**-**
J1: Little Horwood	**-**	**-**	**0**	**0**	**35**	**3.4**	**5.8**	**0.5**	**9.7**	**-**	**-**	**-**	**-**
1/1	1324	1324	-	-	-	2.3	2.9	-	5.1	13.9	21.3	2.9	24.2
2/1	45	45	-	-	-	0.5	0.2	-	0.7	52.9	1.1	0.2	1.2
3/1	1329	1329	0	0	35	0.6	2.8	0.5	3.9	10.5	4.1	2.8	6.9
4/1	1294	1294	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	36	36	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Shucklow Hill	**-**	**-**	**12**	**0**	**22**	**2.1**	**6.1**	**0.4**	**8.7**	**-**	**-**	**-**	**-**
1/1	1368	1368	12	0	22	0.7	3.3	0.4	4.5	11.7	4.1	3.3	7.4
2/1	50	50	-	-	-	0.5	0.2	-	0.7	53.3	1.2	0.2	1.4
3/1	40	40	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	1297	1297	-	-	-	0.9	2.5	-	3.5	9.6	11.9	2.5	14.5
5/1	1346	1346	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Warren Road	**-**	**-**	**0**	**0**	**1**	**4.3**	**7.7**	**0.0**	**12.0**	**-**	**-**	**-**	**-**
1/1	1346	1346	0	0	1	1.2	3.3	0.0	4.5	12.1	13.7	3.3	17.0
2/1	1378	1378	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1404	1404	-	-	-	2.7	4.3	-	7.0	17.9	25.4	4.3	29.6
4/1	110	110	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	35	35	-	-	-	0.4	0.1	-	0.5	51.2	0.8	0.1	0.9
6/1	1297	1297	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	5.4	Total Delay for Signalled Lanes (pcuHr):	9.66	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	3.0	Total Delay for Signalled Lanes (pcuHr):	8.67	Cycle Time (s): 90
C1	Stream: 3 PRC for Signalled Lanes (%):	-0.1	Total Delay for Signalled Lanes (pcuHr):	12.03	Cycle Time (s): 90
	PRC Over All Lanes (%):	-0.1	Total Delay Over All Lanes(pcuHr):	30.37	

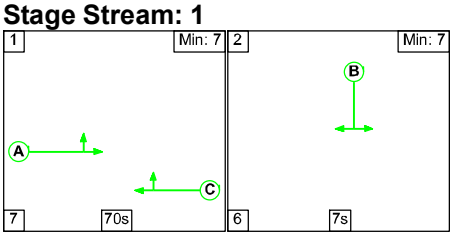
Full Input Data And Results

Full Input Data And Results

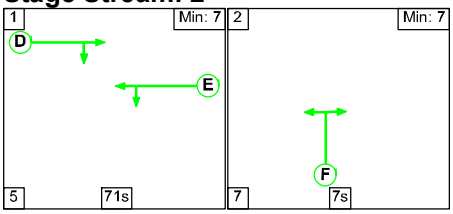
Scenario 3: '2033 Base + CD + D with TP AM' (FG3: '2033 Base + CD + Dev with TP AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

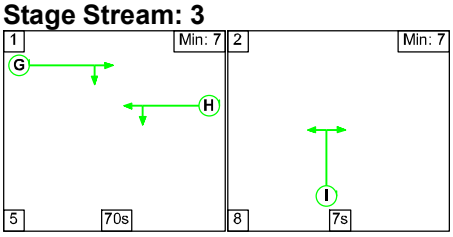
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	70	7
Change Point	0	77

Stage Stream: 2

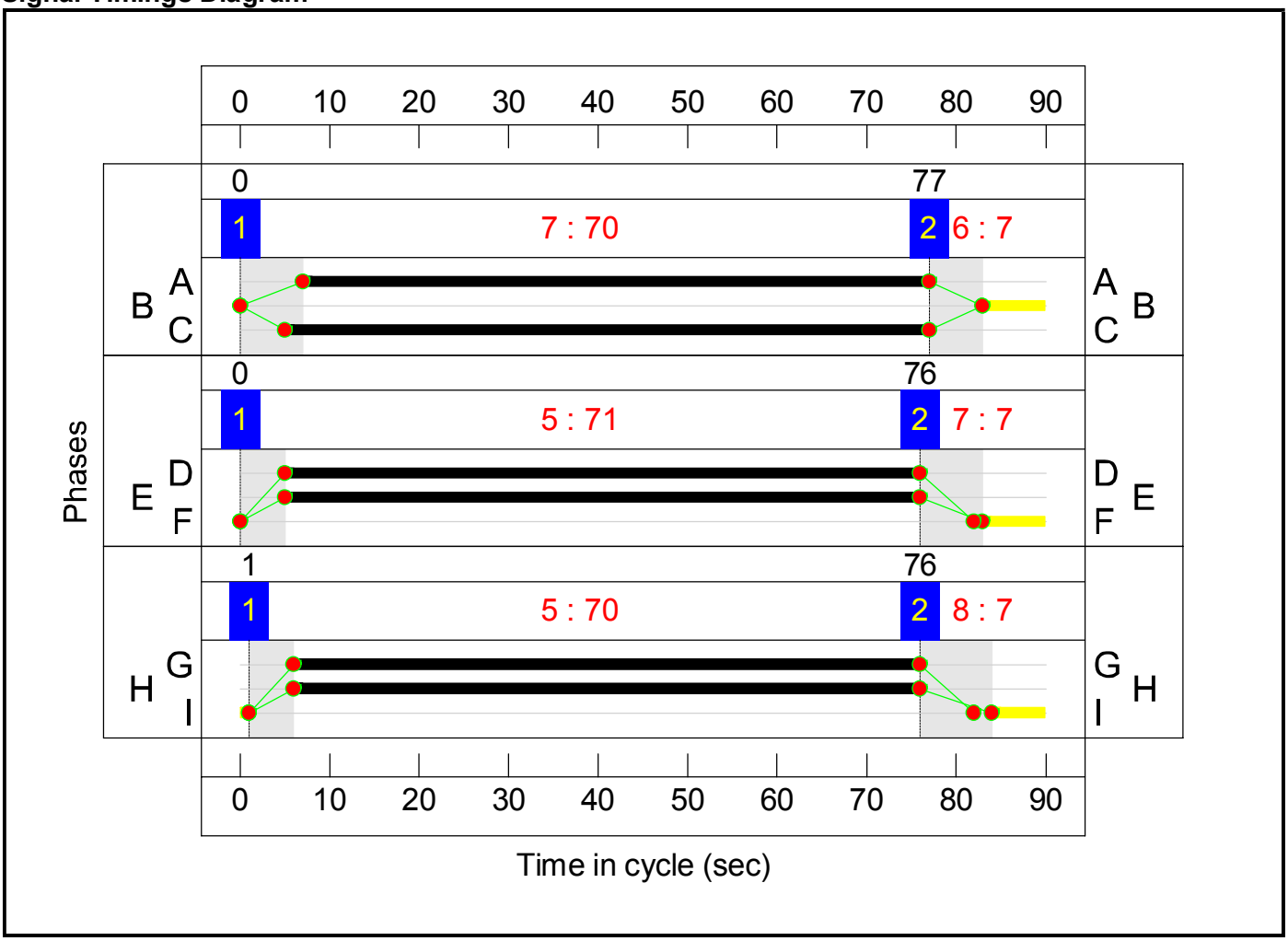
Stage	1	2
Duration	71	7
Change Point	0	76

Stage Stream: 3

Stage	1	2
Duration	70	7
Change Point	1	76

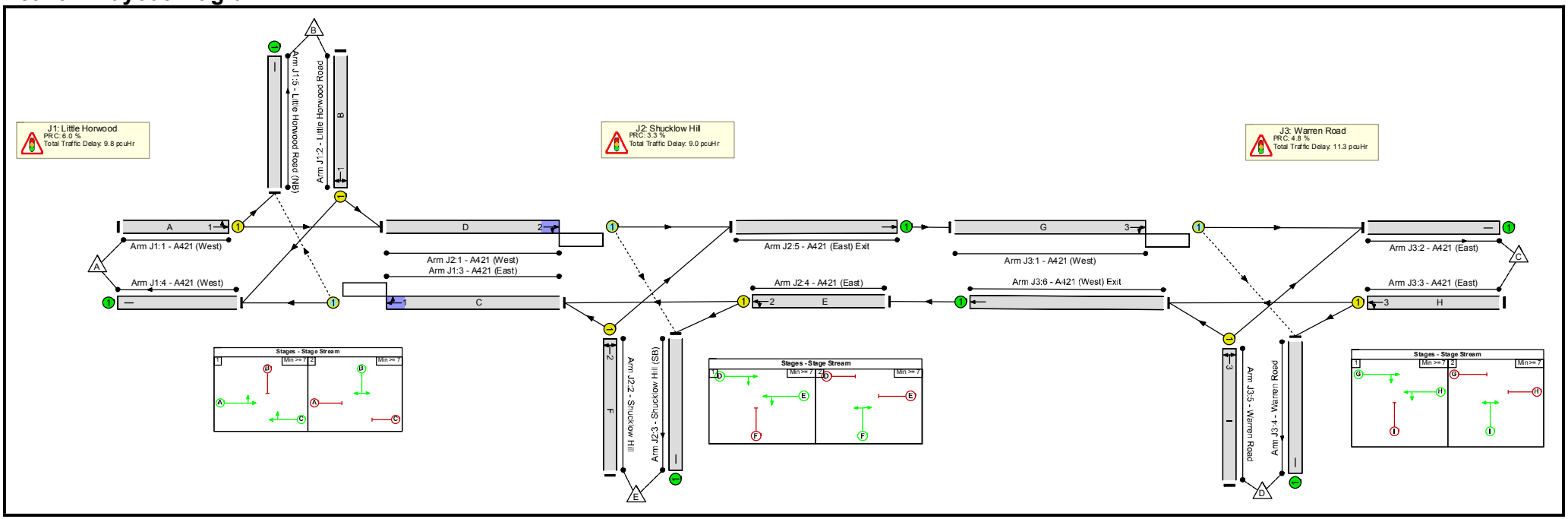
Full Input Data And Results

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: Signalisation of Little Horwood Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.1%**
J1: Little Horwood	-	-	**N/A**	-	-		-	-	-	-	-	-	**84.9%**
1/1	A421 (West) Ahead Left	U	1	N/A	A		1	70	-	1316	1964	1549	84.9%
2/1	Little Horwood Road Left Right	U	1	N/A	B		1	7	-	50	1885	168	29.8%
3/1	A421 (East) Ahead Right	O	1	N/A	C		1	72	-	1319	1920	1557	84.7%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	1269	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	55	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.1%**
1/1	A421 (West) Right Ahead	O	2	N/A	D		1	71	-	1361	1953	1562	87.1%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	82	1921	171	48.0%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	54	Inf	Inf	0.0%
4/1	A421 (East) Ahead Left	U	2	N/A	E		1	71	-	1254	1935	1548	81.0%
5/1	A421 (East) Exit Ahead	U	N/A	N/A	-		-	-	-	1324	Inf	Inf	0.0%
J3: Warren Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**85.9%**
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	70	-	1324	1954	1541	85.9%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1427	Inf	Inf	0.0%
3/1	A421 (East) Left Ahead	U	3	N/A	H		1	70	-	1330	1980	1562	85.1%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	84	Inf	Inf	0.0%

Full Input Data And Results

5/1	Warren Road Right Left	U	3	N/A	I		1	7	-	111	1934	172	64.6%
6/1	A421 (West) Exit Ahead	U	N/A	N/A	-		-	-	-	1254	Inf	Inf	0.0%

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: Signalisation of Little Horwood Junction	**-**	**-**	**13**	**0**	**92**	**10.5**	**18.2**	**1.4**	**30.1**	**-**	**-**	**-**	**-**
J1: Little Horwood	**-**	**-**	**2**	**0**	**49**	**3.4**	**5.7**	**0.7**	**9.8**	**-**	**-**	**-**	**-**
1/1	1316	1316	-	-	-	2.2	2.8	-	5.0	13.6	20.8	2.8	23.6
2/1	50	50	-	-	-	0.5	0.2	-	0.7	53.7	1.2	0.2	1.4
3/1	1319	1319	2	0	49	0.6	2.7	0.7	4.1	11.1	4.9	2.7	7.6
4/1	1269	1269	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	55	55	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Shucklow Hill	**-**	**-**	**12**	**0**	**39**	**2.5**	**5.8**	**0.7**	**9.0**	**-**	**-**	**-**	**-**
1/1	1361	1361	12	0	39	0.7	3.3	0.7	4.7	12.4	4.5	3.3	7.8
2/1	82	82	-	-	-	0.9	0.5	-	1.3	59.1	1.9	0.5	2.4
3/1	54	54	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	1254	1254	-	-	-	0.9	2.1	-	3.0	8.5	10.8	2.1	12.9
5/1	1324	1324	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Warren Road	**-**	**-**	**0**	**0**	**3**	**4.6**	**6.6**	**0.0**	**11.3**	**-**	**-**	**-**	**-**
1/1	1324	1324	0	0	3	1.1	3.0	0.0	4.1	11.2	13.1	3.0	16.1
2/1	1427	1427	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1330	1330	-	-	-	2.3	2.8	-	5.1	13.7	21.1	2.8	23.9
4/1	84	84	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	111	111	-	-	-	1.2	0.9	-	2.1	68.3	2.7	0.9	3.5
6/1	1254	1254	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	6.0	Total Delay for Signalled Lanes (pcuHr):	9.79	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	3.3	Total Delay for Signalled Lanes (pcuHr):	8.99	Cycle Time (s): 90
C1	Stream: 3 PRC for Signalled Lanes (%):	4.8	Total Delay for Signalled Lanes (pcuHr):	11.30	Cycle Time (s): 90
	PRC Over All Lanes (%):	3.3	Total Delay Over All Lanes(pcuHr):	30.08	

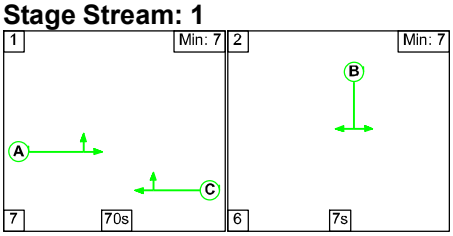
Full Input Data And Results

Full Input Data And Results

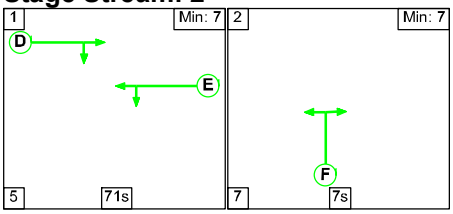
Scenario 4: '2033 Base + CD + D with TP PM' (FG4: '2033 Base + CD + Dev with TP PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

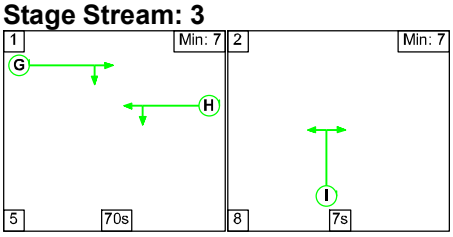
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	70	7
Change Point	0	77

Stage Stream: 2

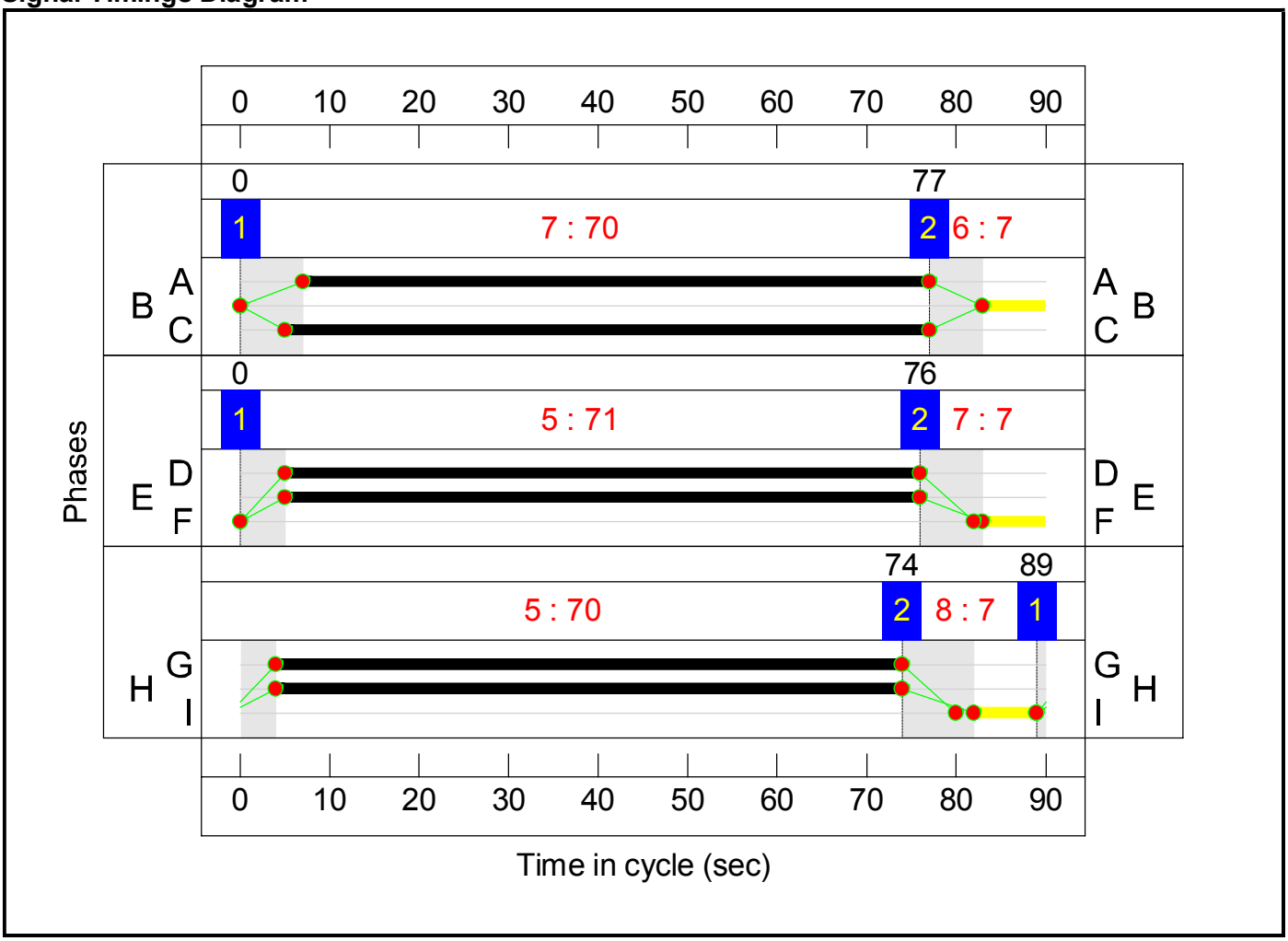
Stage	1	2
Duration	71	7
Change Point	0	76

Stage Stream: 3

Stage	1	2
Duration	70	7
Change Point	89	74

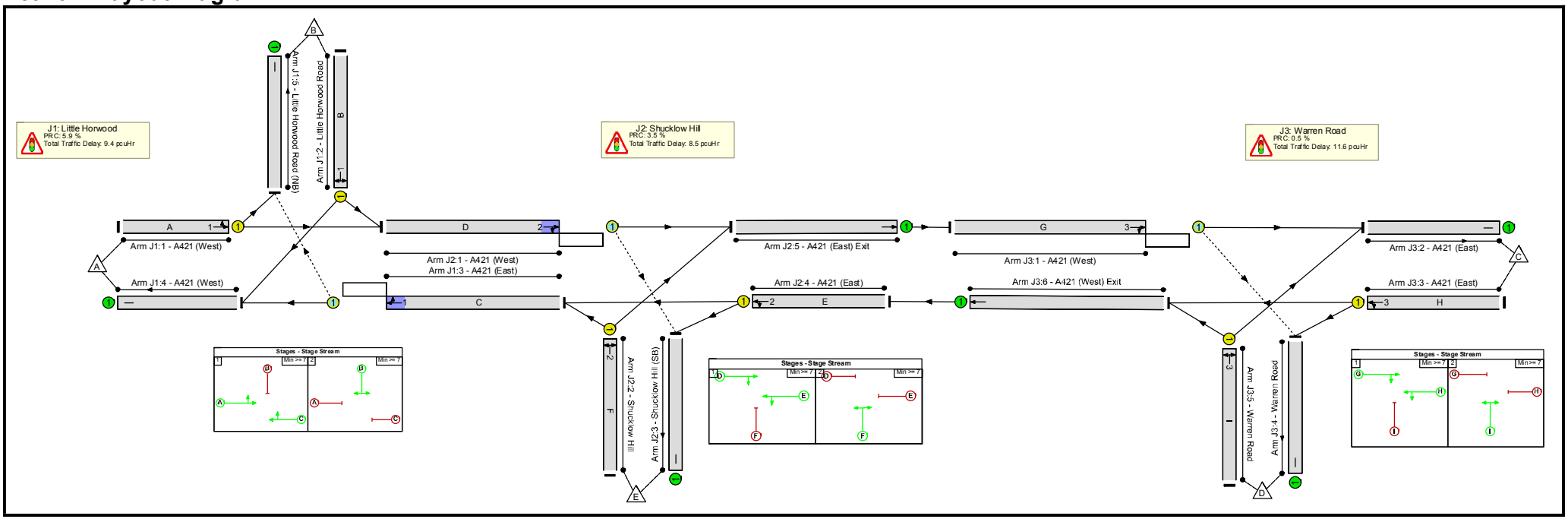
Full Input Data And Results

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: Signalisation of Little Horwood Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**89.6%**
J1: Little Horwood	-	-	**N/A**	-	-		-	-	-	-	-	-	**85.0%**
1/1	A421 (West) Ahead Left	U	1	N/A	A		1	70	-	1317	1965	1550	85.0%
2/1	Little Horwood Road Left Right	U	1	N/A	B		1	7	-	45	1885	168	26.9%
3/1	A421 (East) Ahead Right	O	1	N/A	C		1	72	-	1324	1925	1561	84.8%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	1289	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	36	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.9%**
1/1	A421 (West) Right Ahead	O	2	N/A	D		1	71	-	1361	1957	1566	86.9%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	50	1918	170	29.3%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	40	Inf	Inf	0.0%
4/1	A421 (East) Ahead Left	U	2	N/A	E		1	71	-	1292	1934	1547	83.5%
5/1	A421 (East) Exit Ahead	U	N/A	N/A	-		-	-	-	1339	Inf	Inf	0.0%
J3: Warren Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**89.6%**
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	70	-	1339	1955	1542	86.8%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1370	Inf	Inf	0.0%
3/1	A421 (East) Left Ahead	U	3	N/A	H		1	70	-	1397	1977	1560	89.6%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	108	Inf	Inf	0.0%

Full Input Data And Results

5/1	Warren Road Right Left	U	3	N/A	I		1	7	-	34	1935	172	19.8%
6/1	A421 (West) Exit Ahead	U	N/A	N/A	-		-	-	-	1292	Inf	Inf	0.0%

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: Signalisation of Little Horwood Junction	**-**	**-**	**14**	**0**	**56**	**9.6**	**19.0**	**0.9**	**29.6**	**-**	**-**	**-**	**-**
J1: Little Horwood	**-**	**-**	**1**	**0**	**34**	**3.3**	**5.7**	**0.5**	**9.4**	**-**	**-**	**-**	**-**
1/1	1317	1317	-	-	-	2.2	2.8	-	5.0	13.6	20.9	2.8	23.6
2/1	45	45	-	-	-	0.5	0.2	-	0.7	52.9	1.1	0.2	1.2
3/1	1324	1324	1	0	34	0.6	2.7	0.5	3.8	10.2	3.7	2.7	6.5
4/1	1289	1289	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	36	36	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Shucklow Hill	**-**	**-**	**13**	**0**	**21**	**2.2**	**5.9**	**0.4**	**8.5**	**-**	**-**	**-**	**-**
1/1	1361	1361	13	0	21	0.7	3.2	0.4	4.4	11.6	4.4	3.2	7.7
2/1	50	50	-	-	-	0.5	0.2	-	0.7	53.3	1.2	0.2	1.4
3/1	40	40	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	1292	1292	-	-	-	0.9	2.5	-	3.4	9.5	11.9	2.5	14.4
5/1	1339	1339	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Warren Road	**-**	**-**	**0**	**0**	**1**	**4.2**	**7.4**	**0.0**	**11.6**	**-**	**-**	**-**	**-**
1/1	1339	1339	0	0	1	1.2	3.2	0.0	4.4	11.8	13.1	3.2	16.3
2/1	1370	1370	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1397	1397	-	-	-	2.7	4.1	-	6.7	17.4	24.8	4.1	28.9
4/1	108	108	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	34	34	-	-	-	0.4	0.1	-	0.5	51.1	0.8	0.1	0.9
6/1	1292	1292	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	5.9	Total Delay for Signalled Lanes (pcuHr):	9.40	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	3.5	Total Delay for Signalled Lanes (pcuHr):	8.53	Cycle Time (s): 90
C1	Stream: 3 PRC for Signalled Lanes (%):	0.5	Total Delay for Signalled Lanes (pcuHr):	11.63	Cycle Time (s): 90
	PRC Over All Lanes (%):	0.5	Total Delay Over All Lanes(pcuHr):	29.55	

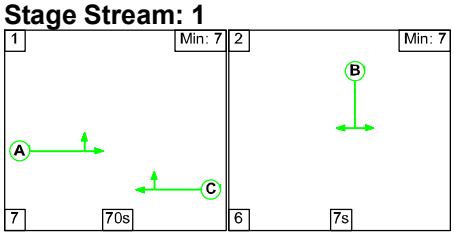
Full Input Data And Results

Full Input Data And Results

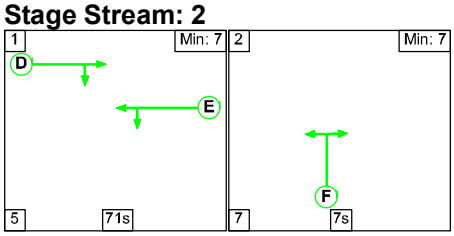
Scenario 5: '2033 Base + CD + D - ST AM' (FG5: '2033 Base + CD + Dev - ST AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

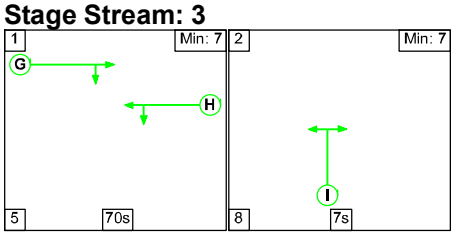
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	70	7
Change Point	0	77

Stage Stream: 2

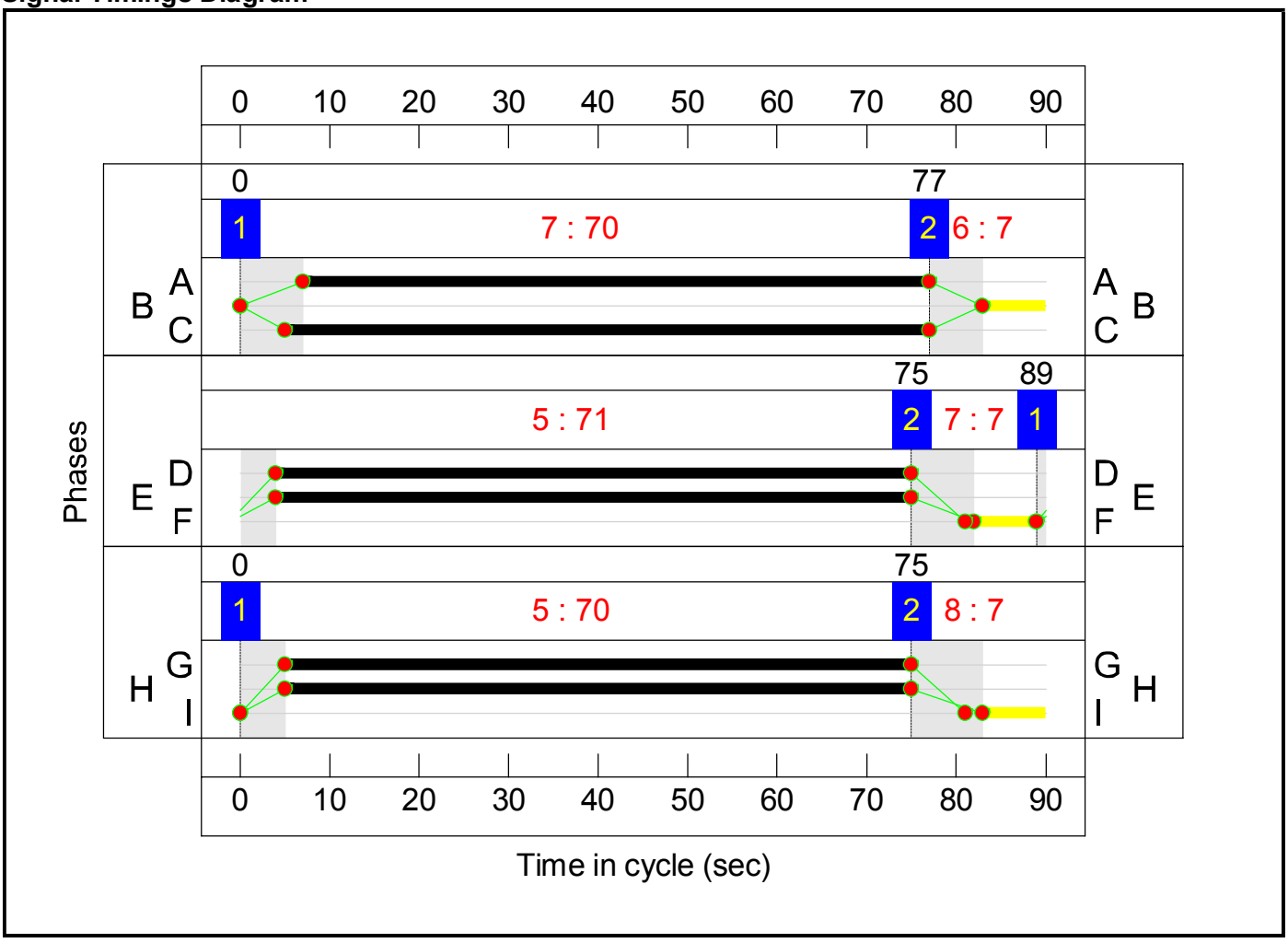
Stage	1	2
Duration	71	7
Change Point	89	75

Stage Stream: 3

Stage	1	2
Duration	70	7
Change Point	0	75

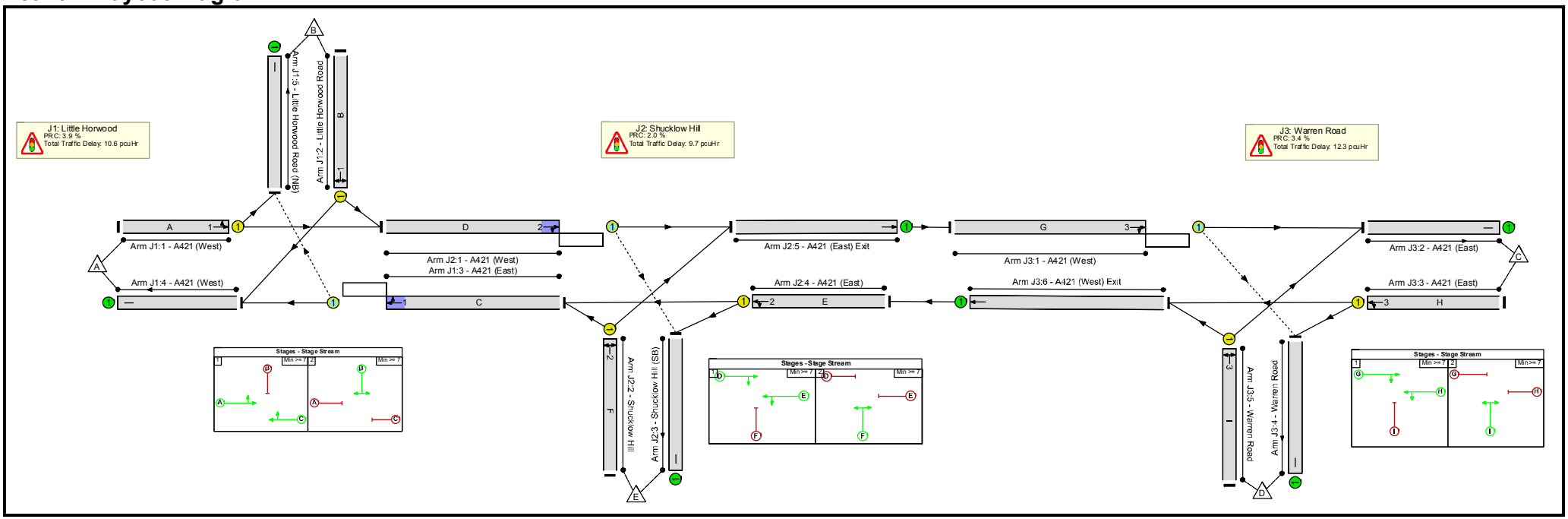
Full Input Data And Results

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: Signalisation of Little Horwood Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.3%**
J1: Little Horwood	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.6%**
1/1	A421 (West) Ahead Left	U	1	N/A	A		1	70	-	1334	1964	1549	86.1%
2/1	Little Horwood Road Left Right	U	1	N/A	B		1	7	-	50	1885	168	29.8%
3/1	A421 (East) Ahead Right	O	1	N/A	C		1	72	-	1349	1920	1557	86.6%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	1299	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	55	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.3%**
1/1	A421 (West) Right Ahead	O	2	N/A	D		1	71	-	1379	1953	1562	88.3%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	82	1921	171	48.0%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	54	Inf	Inf	0.0%
4/1	A421 (East) Ahead Left	U	2	N/A	E		1	71	-	1284	1935	1548	82.9%
5/1	A421 (East) Exit Ahead	U	N/A	N/A	-		-	-	-	1342	Inf	Inf	0.0%
J3: Warren Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.1%**
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	70	-	1342	1954	1541	87.1%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1446	Inf	Inf	0.0%
3/1	A421 (East) Left Ahead	U	3	N/A	H		1	70	-	1360	1981	1563	87.0%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	84	Inf	Inf	0.0%

Full Input Data And Results

5/1	Warren Road Right Left	U	3	N/A	I		1	7	-	112	1934	172	65.1%
6/1	A421 (West) Exit Ahead	U	N/A	N/A	-		-	-	-	1284	Inf	Inf	0.0%

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: Signalisation of Little Horwood Junction	**-**	**-**	**9**	**0**	**96**	**10.9**	**20.2**	**1.5**	**32.6**	**-**	**-**	**-**	**-**
J1: Little Horwood	**-**	**-**	**0**	**0**	**51**	**3.4**	**6.4**	**0.7**	**10.6**	**-**	**-**	**-**	**-**
1/1	1334	1334	-	-	-	2.3	3.0	-	5.3	14.4	21.9	3.0	24.9
2/1	50	50	-	-	-	0.5	0.2	-	0.7	53.7	1.2	0.2	1.4
3/1	1349	1349	0	0	51	0.6	3.1	0.7	4.5	12.0	5.4	3.1	8.6
4/1	1299	1299	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	55	55	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Shucklow Hill	**-**	**-**	**9**	**0**	**42**	**2.6**	**6.5**	**0.7**	**9.7**	**-**	**-**	**-**	**-**
1/1	1379	1379	9	0	42	0.8	3.6	0.7	5.1	13.3	4.9	3.6	8.6
2/1	82	82	-	-	-	0.9	0.5	-	1.3	59.1	1.9	0.5	2.4
3/1	54	54	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	1284	1284	-	-	-	0.9	2.4	-	3.3	9.2	11.4	2.4	13.7
5/1	1342	1342	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Warren Road	**-**	**-**	**0**	**0**	**3**	**4.8**	**7.4**	**0.0**	**12.3**	**-**	**-**	**-**	**-**
1/1	1342	1342	0	0	3	1.2	3.3	0.0	4.5	12.0	13.7	3.3	16.9
2/1	1446	1446	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1360	1360	-	-	-	2.4	3.2	-	5.7	15.0	22.7	3.2	25.9
4/1	84	84	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	112	112	-	-	-	1.2	0.9	-	2.1	68.8	2.7	0.9	3.6
6/1	1284	1284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	3.9	Total Delay for Signalled Lanes (pcuHr):	10.56	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	2.0	Total Delay for Signalled Lanes (pcuHr):	9.74	Cycle Time (s): 90
C1	Stream: 3 PRC for Signalled Lanes (%):	3.4	Total Delay for Signalled Lanes (pcuHr):	12.29	Cycle Time (s): 90
	PRC Over All Lanes (%):	2.0	Total Delay Over All Lanes(pcuHr):	32.58	

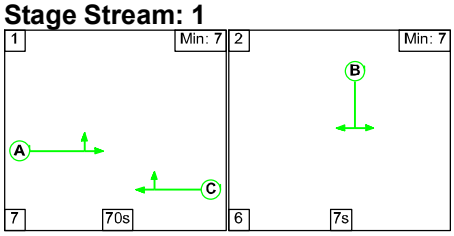
Full Input Data And Results

Full Input Data And Results

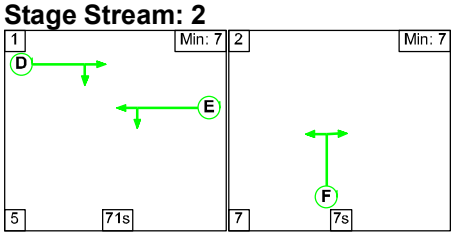
Scenario 6: '2033 Base + CD + D - ST PM' (FG6: '2033 Base + CD + Dev - ST PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

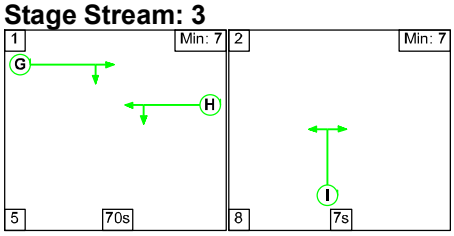
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	70	7
Change Point	0	77

Stage Stream: 2

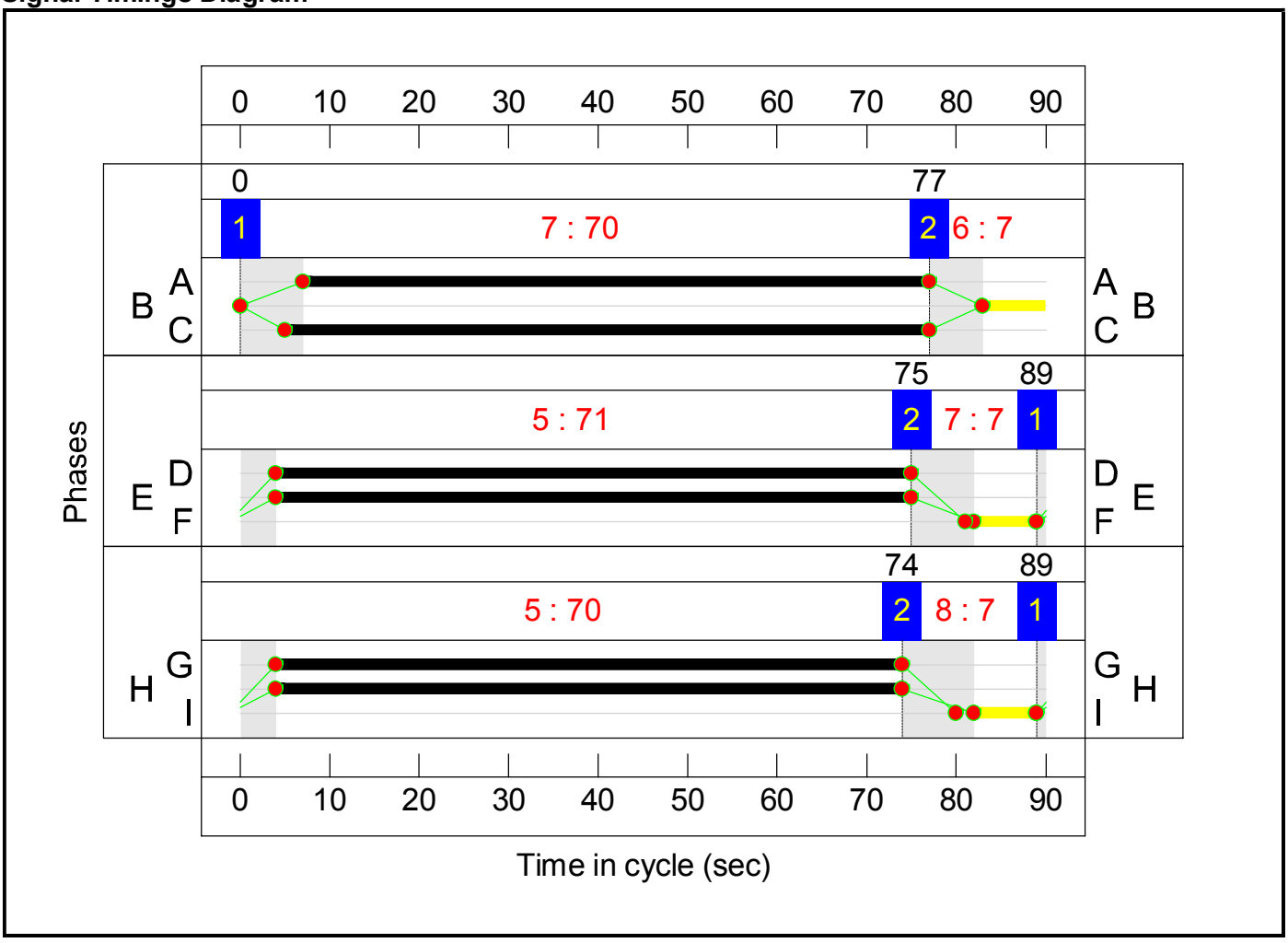
Stage	1	2
Duration	71	7
Change Point	89	75

Stage Stream: 3

Stage	1	2
Duration	70	7
Change Point	89	74

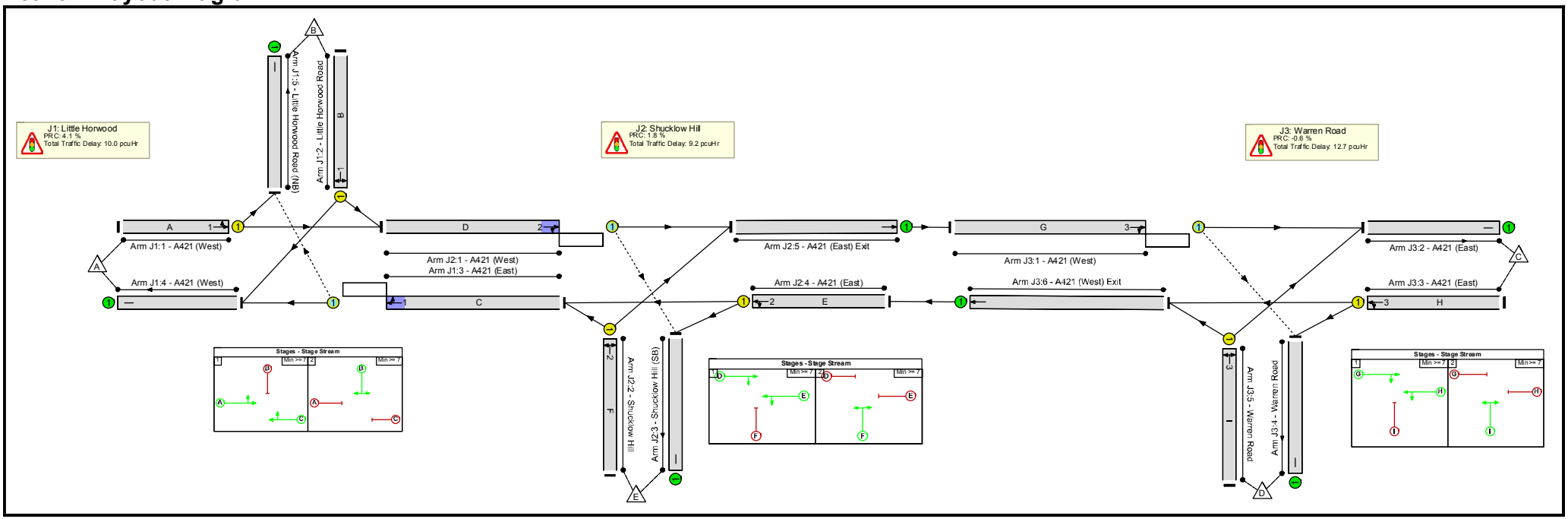
Full Input Data And Results

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: Signalisation of Little Horwood Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.6%**
J1: Little Horwood	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.4%**
1/1	A421 (West) Ahead Left	U	1	N/A	A		1	70	-	1340	1965	1550	86.4%
2/1	Little Horwood Road Left Right	U	1	N/A	B		1	7	-	45	1885	168	26.9%
3/1	A421 (East) Ahead Right	O	1	N/A	C		1	72	-	1337	1925	1561	85.6%
4/1	A421 (West)	U	N/A	N/A	-		-	-	-	1302	Inf	Inf	0.0%
5/1	Little Horwood Road (NB)	U	N/A	N/A	-		-	-	-	36	Inf	Inf	0.0%
J2: Shucklow Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.4%**
1/1	A421 (West) Right Ahead	O	2	N/A	D		1	71	-	1384	1957	1566	88.4%
2/1	Shucklow Hill Left Right	U	2	N/A	F		1	7	-	50	1918	170	29.3%
3/1	Shucklow Hill (SB)	U	N/A	N/A	-		-	-	-	40	Inf	Inf	0.0%
4/1	A421 (East) Ahead Left	U	2	N/A	E		1	71	-	1305	1934	1547	84.3%
5/1	A421 (East) Exit Ahead	U	N/A	N/A	-		-	-	-	1362	Inf	Inf	0.0%
J3: Warren Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.6%**
1/1	A421 (West) Ahead Right	O	3	N/A	G		1	70	-	1362	1955	1542	88.3%
2/1	A421 (East)	U	N/A	N/A	-		-	-	-	1394	Inf	Inf	0.0%
3/1	A421 (East) Left Ahead	U	3	N/A	H		1	70	-	1412	1976	1559	90.6%
4/1	Warren Road	U	N/A	N/A	-		-	-	-	110	Inf	Inf	0.0%

Full Input Data And Results

5/1	Warren Road Right Left	U	3	N/A	I		1	7	-	35	1935	172	20.3%
6/1	A421 (West) Exit Ahead	U	N/A	N/A	-		-	-	-	1305	Inf	Inf	0.0%

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: Signalisation of Little Horwood Junction	**-**	**-**	**8**	**0**	**62**	**10.0**	**21.0**	**0.9**	**31.9**	**-**	**-**	**-**	**-**
J1: Little Horwood	**-**	**-**	**0**	**0**	**35**	**3.3**	**6.2**	**0.5**	**10.0**	**-**	**-**	**-**	**-**
1/1	1340	1340	-	-	-	2.3	3.1	-	5.4	14.6	22.0	3.1	25.1
2/1	45	45	-	-	-	0.5	0.2	-	0.7	52.9	1.1	0.2	1.2
3/1	1337	1337	0	0	35	0.5	2.9	0.5	3.9	10.5	3.5	2.9	6.4
4/1	1302	1302	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	36	36	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Shucklow Hill	**-**	**-**	**8**	**0**	**26**	**2.3**	**6.5**	**0.4**	**9.2**	**-**	**-**	**-**	**-**
1/1	1384	1384	8	0	26	0.8	3.7	0.4	4.9	12.8	4.9	3.7	8.5
2/1	50	50	-	-	-	0.5	0.2	-	0.7	53.3	1.2	0.2	1.4
3/1	40	40	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	1305	1305	-	-	-	0.9	2.6	-	3.6	9.9	11.9	2.6	14.5
5/1	1362	1362	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Warren Road	**-**	**-**	**0**	**0**	**1**	**4.4**	**8.3**	**0.0**	**12.7**	**-**	**-**	**-**	**-**
1/1	1362	1362	0	0	1	1.3	3.6	0.0	4.9	12.9	14.2	3.6	17.9
2/1	1394	1394	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	1412	1412	-	-	-	2.8	4.5	-	7.3	18.6	25.9	4.5	30.4
4/1	110	110	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	35	35	-	-	-	0.4	0.1	-	0.5	51.2	0.8	0.1	0.9
6/1	1305	1305	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	4.1	Total Delay for Signalled Lanes (pcuHr):	10.01	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	1.8	Total Delay for Signalled Lanes (pcuHr):	9.22	Cycle Time (s): 90
C1	Stream: 3 PRC for Signalled Lanes (%):	-0.6	Total Delay for Signalled Lanes (pcuHr):	12.68	Cycle Time (s): 90
	PRC Over All Lanes (%):	-0.6	Total Delay Over All Lanes(pcuHr):	31.91	

Full Input Data And Results

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: J10 - Post Calibration Miti.j9
Path: \\uk.wspgroup.com\central data\Projects\700694xx\70069442 - SWMK - 2020\03 WIP\TP Transport Planning\Analysis\September 2020 Junction Modelling\Mitigation\J10
Report generation date: 18/12/2020 17:48:03

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2033 Base + CD + D									
A - A421 (East)	D15	2.1	6.00	0.68	A	D16	2.3	6.14	0.70	A
B - B4033 Nash Road		70.1	561.95	1.42	F		12.9	147.20	1.01	F
C - A421 (West)		8.6	30.52	0.91	D		17.1	52.81	0.97	F
D - Winslow Rd		0.2	6.83	0.18	A		0.2	7.21	0.19	A
	2033 Base + CD + D with TP									
A - A421 (East)	D17	2.1	5.94	0.68	A	D18	2.3	6.08	0.70	A
B - B4033 Nash Road		67.8	541.72	1.40	F		11.8	137.61	1.00	F
C - A421 (West)		8.4	29.79	0.91	D		16.0	50.05	0.97	F
D - Winslow Rd		0.2	6.80	0.18	A		0.2	7.17	0.19	A
	2033 Base + CD + D - ST									
A - A421 (East)	D19	2.3	6.26	0.70	A	D20	2.4	6.23	0.71	A
B - B4033 Nash Road		77.7	632.19	1.48	F		14.5	162.18	1.03	F
C - A421 (West)		9.0	31.68	0.91	D		19.7	59.27	0.98	F
D - Winslow Rd		0.2	6.86	0.18	A		0.2	7.29	0.20	A

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	A421 Nash Road/ Windslow Road
Location	51°58'59.42"N, 0°52'6.64"W
Site number	10
Date	02/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Will Forster
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				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)	Run automatically
D1	2020 Base	AM	ONE HOUR	07:30	09:00	15	✓
D2	2020 Base	PM	ONE HOUR	16:45	18:15	15	✓
D13	2033 Base	AM	ONE HOUR	07:30	09:00	15	✓
D14	2033 Base	PM	ONE HOUR	16:45	18:15	15	✓
D15	2033 Base + CD + D	AM	ONE HOUR	07:30	09:00	15	✓
D16	2033 Base + CD + D	PM	ONE HOUR	16:45	18:15	15	✓
D17	2033 Base + CD + D with TP	AM	ONE HOUR	07:30	09:00	15	✓
D18	2033 Base + CD + D with TP	PM	ONE HOUR	16:45	18:15	15	✓
D19	2033 Base + CD + D - ST	AM	ONE HOUR	07:30	09:00	15	✓
D20	2033 Base + CD + D - ST	PM	ONE HOUR	16:45	18:15	15	✓
D21	2033 Base + CD + SP (ST)	AM	ONE HOUR	07:30	09:00	15	✓
D22	2033 Base + CD + SP (ST)	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	✓	D15,D16,D17,D18,D19,D20	100.000	100.000

2033 Base + CD + D, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J10	A421 Nash Road/ Windslow Road	Standard Roundabout		A, B, C, D	96.98	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	A421 (East)	
B	B4033 Nash Road	
C	A421 (West)	
D	Winslow Rd	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A - A421 (East)	3.80	9.80	17.4	35.0	50.1	22.0	
B - B4033 Nash Road	3.40	7.10	17.5	13.9	50.1	52.0	
C - A421 (West)	3.80	8.74	12.2	45.6	50.1	35.0	
D - Winslow Rd	3.40	7.20	6.7	20.1	50.1	42.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
A - A421 (East)	None		
B - B4033 Nash Road	Direct	For consistency with base model	-535
C - A421 (West)	Direct	For consistency with base model	-370
D - Winslow Rd	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A - A421 (East)	0.700	2114
B - B4033 Nash Road	0.548	998
C - A421 (West)	0.634	1452
D - Winslow Rd	0.536	1380

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)	Run automatically
D15	2033 Base + CD + D	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A421 (East)		ONE HOUR	✓	1178	100.000
B - B4033 Nash Road		ONE HOUR	✓	404	100.000
C - A421 (West)		ONE HOUR	✓	982	100.000
D - Winslow Rd		ONE HOUR	✓	104	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	2	156	1008	13
	B - B4033 Nash Road	242	0	57	106
	C - A421 (West)	934	30	1	17
	D - Winslow Rd	8	64	32	0

Proportions

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0.00	0.13	0.86	0.01
	B - B4033 Nash Road	0.60	0.00	0.14	0.26
	C - A421 (West)	0.95	0.03	0.00	0.02
	D - Winslow Rd	0.08	0.62	0.31	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0	5	6	9
	B - B4033 Nash Road	3	0	4	2
	C - A421 (West)	7	8	0	0
	D - Winslow Rd	14	5	0	0

Average PCU Per Veh

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	1.000	1.054	1.061	1.091
	B - B4033 Nash Road	1.025	1.000	1.040	1.022
	C - A421 (West)	1.066	1.077	1.000	1.000
	D - Winslow Rd	1.143	1.054	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - A421 (East)	887	941
	B - B4033 Nash Road	304	313
	C - A421 (West)	739	788
	D - Winslow Rd	79	82
07:45-08:00	A - A421 (East)	1059	1123
	B - B4033 Nash Road	364	373
	C - A421 (West)	883	940
	D - Winslow Rd	94	98
08:00-08:15	A - A421 (East)	1297	1376
	B - B4033 Nash Road	445	457
	C - A421 (West)	1081	1152
	D - Winslow Rd	115	120
08:15-08:30	A - A421 (East)	1297	1376
	B - B4033 Nash Road	445	457
	C - A421 (West)	1081	1152
	D - Winslow Rd	115	120
08:30-08:45	A - A421 (East)	1059	1123
	B - B4033 Nash Road	364	373
	C - A421 (West)	883	940
	D - Winslow Rd	94	98
08:45-09:00	A - A421 (East)	887	941
	B - B4033 Nash Road	304	313
	C - A421 (West)	739	788
	D - Winslow Rd	79	82

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - A421 (East)	0.68	6.00	2.1	A	1081	1622
B - B4033 Nash Road	1.42	561.95	70.1	F	371	557
C - A421 (West)	0.91	30.52	8.6	D	901	1352
D - Winslow Rd	0.18	6.83	0.2	A	96	144

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	887	222	95	1928	0.460	884	884	0.0	0.8	3.436	A
B - B4033 Nash Road	304	76	792	524	0.581	299	187	0.0	1.3	15.674	C
C - A421 (West)	739	185	268	1199	0.617	733	823	0.0	1.6	7.625	A
D - Winslow Rd	79	20	901	832	0.094	78	100	0.0	0.1	4.771	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1059	265	114	1915	0.553	1058	1055	0.8	1.2	4.192	A
B - B4033 Nash Road	364	91	948	436	0.835	353	224	1.3	4.0	39.349	E
C - A421 (West)	883	221	316	1170	0.755	877	984	1.6	2.9	12.096	B
D - Winslow Rd	94	23	1075	738	0.127	94	119	0.1	0.1	5.587	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1297	324	139	1898	0.684	1294	1208	1.2	2.1	5.928	A
B - B4033 Nash Road	445	111	1159	316	1.410	312	274	4.0	37.3	261.255	F
C - A421 (West)	1081	270	284	1189	0.909	1062	1187	2.9	7.7	25.191	D
D - Winslow Rd	115	29	1233	651	0.177	115	114	0.1	0.2	6.708	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1297	324	140	1897	0.684	1297	1224	2.1	2.1	6.001	A
B - B4033 Nash Road	445	111	1162	314	1.417	314	275	37.3	70.1	561.955	F
C - A421 (West)	1081	270	286	1188	0.910	1078	1190	7.7	8.6	30.524	D
D - Winslow Rd	115	29	1249	642	0.179	115	115	0.2	0.2	6.826	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1059	265	115	1914	0.553	1063	1122	2.1	1.3	4.248	A
B - B4033 Nash Road	364	91	952	433	0.840	427	226	70.1	54.3	503.175	F
C - A421 (West)	883	221	380	1131	0.781	902	999	8.6	3.8	16.855	C
D - Winslow Rd	94	23	1143	701	0.134	94	139	0.2	0.2	5.932	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	887	222	96	1927	0.460	889	1023	1.3	0.9	3.473	A
B - B4033 Nash Road	304	76	796	521	0.584	512	189	54.3	2.5	209.430	F
C - A421 (West)	739	185	450	1088	0.680	746	858	3.8	2.2	10.713	B
D - Winslow Rd	79	20	1040	759	0.104	79	156	0.2	0.1	5.294	A

2033 Base + CD + D, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J10	A421 Nash Road/ Windslow Road	Standard Roundabout		A, B, C, D	39.46	E

Junction Network Options

Driving side	Lighting
Left	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)	Run automatically
D16	2033 Base + CD + D	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A421 (East)		ONE HOUR	✓	1262	100.000
B - B4033 Nash Road		ONE HOUR	✓	287	100.000
C - A421 (West)		ONE HOUR	✓	1101	100.000
D - Winslow Rd		ONE HOUR	✓	110	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	2	190	1057	13
	B - B4033 Nash Road	178	0	57	52
	C - A421 (West)	1050	33	0	17
	D - Winslow Rd	13	65	32	0

Proportions

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0.00	0.15	0.84	0.01
	B - B4033 Nash Road	0.62	0.00	0.20	0.18
	C - A421 (West)	0.95	0.03	0.00	0.02
	D - Winslow Rd	0.12	0.59	0.29	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0	0	2	0
	B - B4033 Nash Road	1	0	2	2
	C - A421 (West)	4	0	0	0
	D - Winslow Rd	9	0	0	0

Average PCU Per Veh

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	1.000	1.000	1.023	1.000
	B - B4033 Nash Road	1.007	1.000	1.020	1.022
	C - A421 (West)	1.035	1.000	1.000	1.000
	D - Winslow Rd	1.091	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - A421 (East)	950	968
	B - B4033 Nash Road	216	218
	C - A421 (West)	829	856
	D - Winslow Rd	83	83
17:00-17:15	A - A421 (East)	1135	1156
	B - B4033 Nash Road	258	261
	C - A421 (West)	990	1023
	D - Winslow Rd	99	100
17:15-17:30	A - A421 (East)	1390	1416
	B - B4033 Nash Road	316	319
	C - A421 (West)	1212	1252
	D - Winslow Rd	121	122
17:30-17:45	A - A421 (East)	1390	1416
	B - B4033 Nash Road	316	319
	C - A421 (West)	1212	1252
	D - Winslow Rd	121	122
17:45-18:00	A - A421 (East)	1135	1156
	B - B4033 Nash Road	258	261
	C - A421 (West)	990	1023
	D - Winslow Rd	99	100
18:00-18:15	A - A421 (East)	950	968
	B - B4033 Nash Road	216	218
	C - A421 (West)	829	856
	D - Winslow Rd	83	83

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - A421 (East)	0.70	6.14	2.3	A	1158	1737
B - B4033 Nash Road	1.01	147.20	12.9	F	263	394
C - A421 (West)	0.97	52.81	17.1	F	1010	1515
D - Winslow Rd	0.19	7.21	0.2	A	101	151

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	950	238	98	2007	0.473	947	927	0.0	0.9	3.384	A
B - B4033 Nash Road	216	54	828	527	0.410	213	216	0.0	0.7	11.377	B
C - A421 (West)	829	207	182	1292	0.642	822	859	0.0	1.7	7.551	A
D - Winslow Rd	83	21	943	850	0.097	82	61	0.0	0.1	4.684	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1135	284	117	1994	0.569	1133	1110	0.9	1.3	4.175	A
B - B4033 Nash Road	258	64	992	437	0.590	255	258	0.7	1.4	19.523	C
C - A421 (West)	990	247	218	1270	0.779	983	1028	1.7	3.3	12.296	B
D - Winslow Rd	99	25	1128	749	0.132	98	73	0.1	0.2	5.529	A

17:15 - 17:30

Arm	Total Demand	Junction Arrivals	Circulating flow	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(Veh/hr)	(Veh)	(Veh/hr)	(Veh/hr)		(Veh/hr)	(Veh/hr)	(Veh)	(Veh)	(s)	service
A - A421 (East)	1390	347	142	1976	0.703	1386	1313	1.3	2.3	6.053	A
B - B4033 Nash Road	316	79	1213	314	1.005	286	315	1.4	8.8	87.928	F
C - A421 (West)	1212	303	246	1252	0.968	1173	1253	3.3	13.0	34.965	D
D - Winslow Rd	121	30	1335	636	0.190	120	84	0.2	0.2	6.976	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1390	347	143	1976	0.703	1389	1343	2.3	2.3	6.139	A
B - B4033 Nash Road	316	79	1216	312	1.011	299	316	8.8	12.9	147.199	F
C - A421 (West)	1212	303	257	1246	0.973	1196	1259	13.0	17.1	52.810	F
D - Winslow Rd	121	30	1365	620	0.195	121	87	0.2	0.2	7.213	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1135	284	119	1992	0.570	1139	1195	2.3	1.3	4.238	A
B - B4033 Nash Road	258	64	997	434	0.594	303	261	12.9	1.6	36.015	E
C - A421 (West)	990	247	257	1246	0.794	1041	1043	17.1	4.2	21.147	C
D - Winslow Rd	99	25	1215	702	0.140	99	83	0.2	0.2	5.972	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	950	238	99	2006	0.474	952	947	1.3	0.9	3.419	A
B - B4033 Nash Road	216	54	833	524	0.412	219	217	1.6	0.7	11.926	B
C - A421 (West)	829	207	187	1289	0.643	838	865	4.2	1.8	8.145	A
D - Winslow Rd	83	21	963	840	0.098	83	62	0.2	0.1	4.757	A

2033 Base + CD + D with TP, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J10	A421 Nash Road/ Windslow Road	Standard Roundabout		A, B, C, D	93.74	F

Junction Network Options

Driving side	Lighting
Left	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)	Run automatically
D17	2033 Base + CD + D with TP	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A421 (East)		ONE HOUR	✓	1173	100.000
B - B4033 Nash Road		ONE HOUR	✓	403	100.000
C - A421 (West)		ONE HOUR	✓	978	100.000
D - Winslow Rd		ONE HOUR	✓	104	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	2	155	1003	13
	B - B4033 Nash Road	240	0	57	106
	C - A421 (West)	930	30	1	17
	D - Winslow Rd	8	64	32	0

Proportions

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0.00	0.13	0.86	0.01
	B - B4033 Nash Road	0.60	0.00	0.14	0.26
	C - A421 (West)	0.95	0.03	0.00	0.02
	D - Winslow Rd	0.08	0.62	0.31	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0	5	6	9
	B - B4033 Nash Road	3	0	4	2
	C - A421 (West)	7	8	0	0
	D - Winslow Rd	14	5	0	0

Average PCU Per Veh

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	1.000	1.054	1.061	1.091
	B - B4033 Nash Road	1.025	1.000	1.040	1.022
	C - A421 (West)	1.066	1.077	1.000	1.000
	D - Winslow Rd	1.143	1.054	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - A421 (East)	883	936
	B - B4033 Nash Road	303	311
	C - A421 (West)	736	784
	D - Winslow Rd	79	82
07:45-08:00	A - A421 (East)	1054	1118
	B - B4033 Nash Road	362	372
	C - A421 (West)	879	936
	D - Winslow Rd	94	98
08:00-08:15	A - A421 (East)	1291	1369
	B - B4033 Nash Road	444	455
	C - A421 (West)	1077	1147
	D - Winslow Rd	115	120
08:15-08:30	A - A421 (East)	1291	1369
	B - B4033 Nash Road	444	455
	C - A421 (West)	1077	1147
	D - Winslow Rd	115	120
08:30-08:45	A - A421 (East)	1054	1118
	B - B4033 Nash Road	362	372
	C - A421 (West)	879	936
	D - Winslow Rd	94	98
08:45-09:00	A - A421 (East)	883	936
	B - B4033 Nash Road	303	311
	C - A421 (West)	736	784
	D - Winslow Rd	79	82

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - A421 (East)	0.68	5.94	2.1	A	1076	1614
B - B4033 Nash Road	1.40	541.72	67.8	F	370	555
C - A421 (West)	0.91	29.79	8.4	D	897	1346
D - Winslow Rd	0.18	6.80	0.2	A	96	144

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	883	221	95	1928	0.458	880	879	0.0	0.8	3.422	A
B - B4033 Nash Road	303	76	788	526	0.577	298	186	0.0	1.3	15.473	C
C - A421 (West)	736	184	267	1200	0.613	730	820	0.0	1.6	7.564	A
D - Winslow Rd	79	20	896	835	0.094	78	100	0.0	0.1	4.756	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1054	264	114	1915	0.551	1053	1050	0.8	1.2	4.169	A
B - B4033 Nash Road	362	91	944	438	0.827	352	223	1.3	3.8	38.120	E
C - A421 (West)	879	220	315	1170	0.751	874	980	1.6	2.9	11.926	B
D - Winslow Rd	94	23	1070	740	0.127	94	119	0.1	0.1	5.564	A

08:00 - 08:15

Arm	Total Demand	Junction Arrivals	Circulating flow	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(Veh/hr)	(Veh)	(Veh/hr)	(Veh/hr)		(Veh/hr)	(Veh/hr)	(Veh)	(Veh)	(s)	service
A - A421 (East)	1291	323	139	1898	0.680	1288	1205	1.2	2.1	5.869	A
B - B4033 Nash Road	444	111	1154	319	1.391	315	273	3.8	36.0	251.455	F
C - A421 (West)	1077	269	286	1188	0.906	1058	1183	2.9	7.5	24.725	C
D - Winslow Rd	115	29	1229	653	0.176	115	115	0.1	0.2	6.686	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1291	323	140	1897	0.681	1291	1220	2.1	2.1	5.939	A
B - B4033 Nash Road	444	111	1157	317	1.399	317	274	36.0	67.8	541.722	F
C - A421 (West)	1077	269	288	1187	0.907	1073	1186	7.5	8.4	29.793	D
D - Winslow Rd	115	29	1245	644	0.178	115	116	0.2	0.2	6.801	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1054	264	115	1914	0.551	1058	1118	2.1	1.2	4.220	A
B - B4033 Nash Road	362	91	948	435	0.832	429	225	67.8	51.0	479.977	F
C - A421 (West)	879	220	381	1130	0.778	897	996	8.4	3.7	16.543	C
D - Winslow Rd	94	23	1139	704	0.133	94	140	0.2	0.2	5.908	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	883	221	96	1927	0.458	884	1012	1.2	0.9	3.459	A
B - B4033 Nash Road	303	76	793	523	0.580	500	188	51.0	1.8	185.379	F
C - A421 (West)	736	184	440	1094	0.673	743	853	3.7	2.1	10.420	B
D - Winslow Rd	79	20	1029	765	0.103	79	154	0.2	0.1	5.251	A

2033 Base + CD + D with TP, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J10	A421 Nash Road/ Windslow Road	Standard Roundabout		A, B, C, D	37.33	E

Junction Network Options

Driving side	Lighting
Left	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)	Run automatically
D18	2033 Base + CD + D with TP	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A421 (East)		ONE HOUR	✓	1257	100.000
B - B4033 Nash Road		ONE HOUR	✓	285	100.000
C - A421 (West)		ONE HOUR	✓	1095	100.000
D - Winslow Rd		ONE HOUR	✓	110	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	2	189	1053	13
	B - B4033 Nash Road	177	0	57	52
	C - A421 (West)	1044	33	0	17
	D - Winslow Rd	13	65	32	0

Proportions

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0.00	0.15	0.84	0.01
	B - B4033 Nash Road	0.62	0.00	0.20	0.18
	C - A421 (West)	0.95	0.03	0.00	0.02
	D - Winslow Rd	0.12	0.59	0.29	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0	0	2	0
	B - B4033 Nash Road	1	0	2	2
	C - A421 (West)	4	0	0	0
	D - Winslow Rd	9	0	0	0

Average PCU Per Veh

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	1.000	1.000	1.023	1.000
	B - B4033 Nash Road	1.007	1.000	1.020	1.022
	C - A421 (West)	1.035	1.000	1.000	1.000
	D - Winslow Rd	1.091	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - A421 (East)	946	965
	B - B4033 Nash Road	215	217
	C - A421 (West)	824	852
	D - Winslow Rd	83	83
17:00-17:15	A - A421 (East)	1130	1152
	B - B4033 Nash Road	257	260
	C - A421 (West)	984	1017
	D - Winslow Rd	99	100
17:15-17:30	A - A421 (East)	1384	1411
	B - B4033 Nash Road	314	318
	C - A421 (West)	1205	1246
	D - Winslow Rd	121	122
17:30-17:45	A - A421 (East)	1384	1411
	B - B4033 Nash Road	314	318
	C - A421 (West)	1205	1246
	D - Winslow Rd	121	122
17:45-18:00	A - A421 (East)	1130	1152
	B - B4033 Nash Road	257	260
	C - A421 (West)	984	1017
	D - Winslow Rd	99	100
18:00-18:15	A - A421 (East)	946	965
	B - B4033 Nash Road	215	217
	C - A421 (West)	824	852
	D - Winslow Rd	83	83

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - A421 (East)	0.70	6.08	2.3	A	1153	1730
B - B4033 Nash Road	1.00	137.61	11.8	F	262	393
C - A421 (West)	0.97	50.05	16.0	F	1005	1507
D - Winslow Rd	0.19	7.17	0.2	A	101	151

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	946	237	98	2007	0.472	943	922	0.0	0.9	3.372	A
B - B4033 Nash Road	215	54	825	529	0.406	212	215	0.0	0.7	11.282	B
C - A421 (West)	824	206	181	1292	0.638	817	856	0.0	1.7	7.474	A
D - Winslow Rd	83	21	938	853	0.097	82	61	0.0	0.1	4.666	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1130	283	117	1994	0.567	1128	1104	0.9	1.3	4.153	A
B - B4033 Nash Road	257	64	988	439	0.585	254	258	0.7	1.3	19.198	C
C - A421 (West)	984	246	217	1270	0.775	978	1025	1.7	3.3	12.066	B
D - Winslow Rd	99	25	1122	753	0.131	98	73	0.1	0.1	5.501	A

17:15 - 17:30

Arm	Total Demand	Junction Arrivals	Circulating flow	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(Veh/hr)	(Veh)	(Veh/hr)	(Veh/hr)		(Veh/hr)	(Veh/hr)	(Veh)	(Veh)	(s)	service
A - A421 (East)	1384	346	142	1976	0.700	1380	1309	1.3	2.3	5.997	A
B - B4033 Nash Road	314	79	1208	317	0.992	287	314	1.3	8.2	83.976	F
C - A421 (West)	1205	301	246	1252	0.963	1169	1248	3.3	12.4	33.746	D
D - Winslow Rd	121	30	1331	639	0.189	120	85	0.1	0.2	6.942	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1384	346	143	1976	0.701	1384	1338	2.3	2.3	6.081	A
B - B4033 Nash Road	314	79	1211	315	0.998	300	316	8.2	11.8	137.615	F
C - A421 (West)	1205	301	257	1246	0.968	1191	1254	12.4	16.0	50.054	F
D - Winslow Rd	121	30	1360	622	0.194	121	87	0.2	0.2	7.174	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1130	283	119	1992	0.567	1134	1182	2.3	1.3	4.215	A
B - B4033 Nash Road	257	64	993	436	0.588	298	260	11.8	1.5	33.108	D
C - A421 (West)	984	246	252	1248	0.788	1032	1038	16.0	4.0	19.683	C
D - Winslow Rd	99	25	1203	709	0.139	99	82	0.2	0.2	5.905	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	946	237	99	2006	0.472	948	941	1.3	0.9	3.409	A
B - B4033 Nash Road	215	54	830	526	0.408	218	217	1.5	0.7	11.809	B
C - A421 (West)	824	206	186	1289	0.639	833	862	4.0	1.8	8.034	A
D - Winslow Rd	83	21	957	843	0.098	83	62	0.2	0.1	4.736	A

2033 Base + CD + D - ST, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J10	A421 Nash Road/ Windslow Road	Standard Roundabout		A, B, C, D	107.17	F

Junction Network Options

Driving side	Lighting
Left	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)	Run automatically
D19	2033 Base + CD + D - ST	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A421 (East)		ONE HOUR	✓	1201	100.000
B - B4033 Nash Road		ONE HOUR	✓	407	100.000
C - A421 (West)		ONE HOUR	✓	992	100.000
D - Winslow Rd		ONE HOUR	✓	104	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	2	159	1027	13
	B - B4033 Nash Road	244	0	57	106
	C - A421 (West)	944	30	1	17
	D - Winslow Rd	8	64	32	0

Proportions

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0.00	0.13	0.86	0.01
	B - B4033 Nash Road	0.60	0.00	0.14	0.26
	C - A421 (West)	0.95	0.03	0.00	0.02
	D - Winslow Rd	0.08	0.62	0.31	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0	5	6	9
	B - B4033 Nash Road	3	0	4	2
	C - A421 (West)	7	8	0	0
	D - Winslow Rd	14	5	0	0

Average PCU Per Veh

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	1.000	1.054	1.061	1.091
	B - B4033 Nash Road	1.025	1.000	1.040	1.022
	C - A421 (West)	1.066	1.077	1.000	1.000
	D - Winslow Rd	1.143	1.054	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A - A421 (East)	904	959
	B - B4033 Nash Road	306	314
	C - A421 (West)	747	796
	D - Winslow Rd	79	82
07:45-08:00	A - A421 (East)	1080	1145
	B - B4033 Nash Road	366	375
	C - A421 (West)	892	950
	D - Winslow Rd	94	98
08:00-08:15	A - A421 (East)	1322	1402
	B - B4033 Nash Road	448	460
	C - A421 (West)	1093	1164
	D - Winslow Rd	115	120
08:15-08:30	A - A421 (East)	1322	1402
	B - B4033 Nash Road	448	460
	C - A421 (West)	1093	1164
	D - Winslow Rd	115	120
08:30-08:45	A - A421 (East)	1080	1145
	B - B4033 Nash Road	366	375
	C - A421 (West)	892	950
	D - Winslow Rd	94	98
08:45-09:00	A - A421 (East)	904	959
	B - B4033 Nash Road	306	314
	C - A421 (West)	747	796
	D - Winslow Rd	79	82

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - A421 (East)	0.70	6.26	2.3	A	1102	1653
B - B4033 Nash Road	1.48	632.19	77.7	F	373	560
C - A421 (West)	0.91	31.68	9.0	D	911	1366
D - Winslow Rd	0.18	6.86	0.2	A	96	144

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	904	226	95	1928	0.469	901	893	0.0	0.9	3.493	A
B - B4033 Nash Road	306	77	806	516	0.594	301	190	0.0	1.4	16.347	C
C - A421 (West)	747	187	269	1198	0.623	741	837	0.0	1.6	7.761	A
D - Winslow Rd	79	20	910	828	0.095	78	100	0.0	0.1	4.802	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1080	270	114	1915	0.564	1078	1064	0.9	1.3	4.293	A
B - B4033 Nash Road	366	91	965	426	0.859	353	227	1.4	4.5	43.731	E
C - A421 (West)	892	223	317	1169	0.763	886	1002	1.6	3.0	12.469	B
D - Winslow Rd	94	23	1085	732	0.128	94	118	0.1	0.1	5.634	A

08:00 - 08:15

Arm	Total Demand	Junction Arrivals	Circulating flow	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(Veh/hr)	(Veh)	(Veh/hr)	(Veh/hr)		(Veh/hr)	(Veh/hr)	(Veh)	(Veh)	(s)	service
A - A421 (East)	1322	331	139	1898	0.697	1318	1212	1.3	2.2	6.172	A
B - B4033 Nash Road	448	112	1180	304	1.473	301	277	4.5	41.2	296.814	F
C - A421 (West)	1093	273	275	1195	0.915	1073	1206	3.0	8.0	25.959	D
D - Winslow Rd	115	29	1237	648	0.177	115	111	0.1	0.2	6.741	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1322	331	140	1897	0.697	1322	1228	2.2	2.3	6.258	A
B - B4033 Nash Road	448	112	1184	302	1.483	302	278	41.2	77.7	632.192	F
C - A421 (West)	1093	273	276	1194	0.915	1089	1210	8.0	9.0	31.684	D
D - Winslow Rd	115	29	1253	640	0.180	115	111	0.2	0.2	6.859	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1080	270	115	1914	0.564	1083	1128	2.3	1.3	4.353	A
B - B4033 Nash Road	366	91	970	423	0.864	418	229	77.7	64.7	580.493	F
C - A421 (West)	892	223	372	1136	0.786	912	1015	9.0	3.9	17.371	C
D - Winslow Rd	94	23	1149	698	0.134	94	136	0.2	0.2	5.961	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	904	226	96	1927	0.469	906	1028	1.3	0.9	3.528	A
B - B4033 Nash Road	306	77	811	513	0.597	505	191	64.7	15.0	290.557	F
C - A421 (West)	747	187	445	1091	0.685	754	871	3.9	2.2	10.877	B
D - Winslow Rd	79	20	1045	756	0.104	79	154	0.2	0.1	5.319	A

2033 Base + CD + D - ST, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J10	A421 Nash Road/ Windslow Road	Standard Roundabout		A, B, C, D	43.68	E

Junction Network Options

Driving side	Lighting
Left	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)	Run automatically
D20	2033 Base + CD + D - ST	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - A421 (East)		ONE HOUR	✓	1270	100.000
B - B4033 Nash Road		ONE HOUR	✓	288	100.000
C - A421 (West)		ONE HOUR	✓	1114	100.000
D - Winslow Rd		ONE HOUR	✓	110	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	2	191	1064	13
	B - B4033 Nash Road	180	0	57	52
	C - A421 (West)	1063	33	0	17
	D - Winslow Rd	13	65	32	0

Proportions

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0.00	0.15	0.84	0.01
	B - B4033 Nash Road	0.62	0.00	0.20	0.18
	C - A421 (West)	0.95	0.03	0.00	0.02
	D - Winslow Rd	0.12	0.59	0.29	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	0	0	2	0
	B - B4033 Nash Road	1	0	2	2
	C - A421 (West)	4	0	0	0
	D - Winslow Rd	9	0	0	0

Average PCU Per Veh

		To			
		A - A421 (East)	B - B4033 Nash Road	C - A421 (West)	D - Winslow Rd
From	A - A421 (East)	1.000	1.000	1.023	1.000
	B - B4033 Nash Road	1.007	1.000	1.020	1.022
	C - A421 (West)	1.035	1.000	1.000	1.000
	D - Winslow Rd	1.091	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - A421 (East)	956	974
	B - B4033 Nash Road	217	220
	C - A421 (West)	839	867
	D - Winslow Rd	83	83
17:00-17:15	A - A421 (East)	1142	1164
	B - B4033 Nash Road	259	262
	C - A421 (West)	1001	1035
	D - Winslow Rd	99	100
17:15-17:30	A - A421 (East)	1398	1425
	B - B4033 Nash Road	317	321
	C - A421 (West)	1226	1267
	D - Winslow Rd	121	122
17:30-17:45	A - A421 (East)	1398	1425
	B - B4033 Nash Road	317	321
	C - A421 (West)	1226	1267
	D - Winslow Rd	121	122
17:45-18:00	A - A421 (East)	1142	1164
	B - B4033 Nash Road	259	262
	C - A421 (West)	1001	1035
	D - Winslow Rd	99	100
18:00-18:15	A - A421 (East)	956	974
	B - B4033 Nash Road	217	220
	C - A421 (West)	839	867
	D - Winslow Rd	83	83

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A - A421 (East)	0.71	6.23	2.4	A	1165	1748
B - B4033 Nash Road	1.03	162.18	14.5	F	264	397
C - A421 (West)	0.98	59.27	19.7	F	1022	1533
D - Winslow Rd	0.20	7.29	0.2	A	101	151

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	956	239	98	2007	0.476	952	938	0.0	0.9	3.403	A
B - B4033 Nash Road	217	54	834	524	0.414	214	216	0.0	0.7	11.517	B
C - A421 (West)	839	210	183	1291	0.649	831	864	0.0	1.8	7.712	A
D - Winslow Rd	83	21	954	845	0.098	82	61	0.0	0.1	4.719	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1142	285	117	1994	0.573	1140	1122	0.9	1.3	4.208	A
B - B4033 Nash Road	259	65	998	433	0.598	256	259	0.7	1.4	20.006	C
C - A421 (West)	1001	250	219	1269	0.789	994	1035	1.8	3.5	12.801	B
D - Winslow Rd	99	25	1141	742	0.133	98	73	0.1	0.2	5.588	A

17:15 - 17:30

Arm	Total Demand	Junction Arrivals	Circulating flow	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	Unsignalised level of

	(Veh/hr)	(Veh)	(Veh/hr)	(Veh/hr)		(Veh/hr)	(Veh/hr)	(Veh)	(Veh)	(s)	service
A - A421 (East)	1398	350	142	1976	0.707	1394	1323	1.3	2.4	6.137	A
B - B4033 Nash Road	317	79	1220	310	1.023	285	316	1.4	9.5	94.033	F
C - A421 (West)	1226	307	245	1253	0.979	1183	1260	3.5	14.4	37.734	E
D - Winslow Rd	121	30	1344	631	0.191	120	84	0.2	0.2	7.043	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1398	350	143	1976	0.708	1398	1352	2.4	2.4	6.229	A
B - B4033 Nash Road	317	79	1224	308	1.030	297	317	9.5	14.5	162.182	F
C - A421 (West)	1226	307	256	1246	0.984	1205	1266	14.4	19.7	59.274	F
D - Winslow Rd	121	30	1375	615	0.196	121	86	0.2	0.2	7.288	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	1142	285	119	1992	0.573	1146	1220	2.4	1.4	4.274	A
B - B4033 Nash Road	259	65	1003	430	0.602	310	262	14.5	1.6	41.303	E
C - A421 (West)	1001	250	263	1242	0.806	1062	1050	19.7	4.6	24.966	C
D - Winslow Rd	99	25	1241	688	0.143	99	84	0.2	0.2	6.114	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A - A421 (East)	956	239	99	2006	0.477	958	959	1.4	0.9	3.441	A
B - B4033 Nash Road	217	54	838	521	0.416	220	218	1.6	0.7	12.097	B
C - A421 (West)	839	210	189	1288	0.651	849	870	4.6	1.9	8.392	A
D - Winslow Rd	83	21	975	833	0.099	83	63	0.2	0.1	4.800	A

Appendix F

SITE ACCESS CAPACITY ASSESSMENTS

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.1.7462

Filename: Buckingham Access 4 Arm 201204_WF.j9
Path: \\uk.wspgroup.com\central data\Projects\700694xx\70069442 - SWMK - 2020\03 WIP\TP Transport Planning\Analysis\September 2020 Junction Modelling\Buckingham Acccess
Report generation date: 18/12/2020 19:33:29

»2033 Base + Committed Development + Development, AM
»2033 Base + Committed Development + Development, PM
»2033 Base + Committed Development + Development with Travel Planning, AM
»2033 Base + Committed Development + Development with Travel Planning, PM
»2033 Base + Committed Development + Development - Sensitivity Test, AM
»2033 Base + Committed Development + Development - Sensitivity Test, PM

Summary of junction performance

	AM						PM					
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Network Residual Capacity
	2033 Base + Committed Development + Development											
Arm A	D7	0.5	3.83	0.34	A	51 % [Arm D]	D8	1.5	6.58	0.61	A	38 % [Arm D]
Arm B		0.2	4.24	0.13	A			0.1	5.37	0.09	A	
Arm C		0.9	6.56	0.46	A			1.0	8.04	0.50	A	
Arm D		1.4	7.09	0.59	A			2.0	8.36	0.66	A	
	2033 Base + Committed Development + Development with Travel Planning											
Arm A	D9	0.5	3.73	0.33	A	58 % [Arm D]	D10	1.4	6.08	0.58	A	45 % [Arm D]
Arm B		0.2	4.15	0.13	A			0.1	4.93	0.06	A	
Arm C		0.6	5.73	0.38	A			0.8	6.99	0.43	A	
Arm D		1.3	6.68	0.57	A			1.7	7.58	0.63	A	
	2033 Base + Committed Development + Development - Sensitivity Test											
Arm A	D11	0.6	3.90	0.36	A	41 % [Arm D]	D12	1.8	7.32	0.65	A	33 % [Arm D]
Arm B		0.2	4.32	0.14	A			0.1	5.84	0.10	A	
Arm C		0.9	6.73	0.47	A			1.1	8.62	0.52	A	
Arm D		1.8	8.04	0.64	A			2.2	9.00	0.69	A	

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	
Location	
Site number	
Date	04/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CORP\UKWGF001
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	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)	Run automatically
D7	2033 Base + Committed Development + Development	AM	ONE HOUR	07:30	09:00	15	✓
D8	2033 Base + Committed Development + Development	PM	ONE HOUR	16:45	18:15	15	✓
D9	2033 Base + Committed Development + Development with Travel Planning	AM	ONE HOUR	07:30	09:00	15	✓
D10	2033 Base + Committed Development + Development with Travel Planning	PM	ONE HOUR	16:45	18:15	15	✓
D11	2033 Base + Committed Development + Development - Sensitivity Test	AM	ONE HOUR	07:30	09:00	15	✓
D12	2033 Base + Committed Development + Development - Sensitivity Test	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2033 Base + Committed Development + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	5.89	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	51	Arm D

Arms

Arms

Arm	Name	Description
A	Buckingham Road (E)	
B	Grid Road Reserve	
C	Site Access	
D	Buckingham Road (W)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	3.67	6.34	10.9	12.5	44.0	22.0	
B	3.70	4.49	13.7	40.0	44.0	28.0	
C	3.59	5.18	4.2	20.0	44.0	19.0	
D	3.65	5.10	5.2	24.0	44.0	28.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.604	1563
B	0.575	1365
C	0.575	1354
D	0.568	1357

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)	Run automatically
D7	2033 Base + Committed Development + Development	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)

✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	442	100.000
B		ONE HOUR	✓	120	100.000
C		ONE HOUR	✓	429	100.000
D		ONE HOUR	✓	674	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	13	68	361
	B	19	0	0	101
	C	98	0	0	331
	D	522	28	124	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	6	6	1
	B	2	0	0	2
	C	2	0	0	2
	D	2	6	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.34	3.83	0.5	A	406	608
B	0.13	4.24	0.2	A	110	165
C	0.46	6.56	0.9	A	394	590
D	0.59	7.09	1.4	A	618	928

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	333	83	114	1460	0.228	332	479	0.0	0.3	3.186	A
B	90	23	415	1093	0.083	90	31	0.0	0.1	3.587	A
C	323	81	361	1117	0.289	321	144	0.0	0.4	4.515	A
D	507	127	88	1273	0.399	505	595	0.0	0.7	4.673	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	397	99	136	1446	0.275	397	574	0.3	0.4	3.431	A
B	108	27	497	1046	0.103	108	37	0.1	0.1	3.835	A

C	386	96	432	1076	0.358	385	172	0.4	0.6	5.202	A
D	606	151	105	1263	0.480	605	712	0.7	0.9	5.463	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	487	122	167	1427	0.341	486	702	0.4	0.5	3.823	A
B	132	33	608	982	0.135	132	45	0.1	0.2	4.235	A
C	472	118	529	1021	0.462	471	211	0.6	0.8	6.528	A
D	742	186	129	1249	0.594	740	872	0.9	1.4	7.037	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	487	122	167	1427	0.341	487	704	0.5	0.5	3.827	A
B	132	33	609	981	0.135	132	45	0.2	0.2	4.238	A
C	472	118	530	1021	0.463	472	211	0.8	0.9	6.561	A
D	742	186	129	1249	0.594	742	873	1.4	1.4	7.095	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	397	99	137	1446	0.275	398	576	0.5	0.4	3.438	A
B	108	27	498	1045	0.103	108	37	0.2	0.1	3.842	A
C	386	96	433	1076	0.358	387	173	0.9	0.6	5.232	A
D	606	151	105	1262	0.480	608	714	1.4	0.9	5.519	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	333	83	115	1460	0.228	333	482	0.4	0.3	3.197	A
B	90	23	417	1092	0.083	90	31	0.1	0.1	3.593	A
C	323	81	362	1116	0.289	324	145	0.6	0.4	4.545	A
D	507	127	88	1272	0.399	508	598	0.9	0.7	4.721	A

2033 Base + Committed Development + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	7.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	38	Arm D

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)	Run automatically
D8	2033 Base + Committed Development + Development	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	773	100.000
B		ONE HOUR	✓	62	100.000
C		ONE HOUR	✓	405	100.000
D		ONE HOUR	✓	775	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	12	118	643
	B	13	0	0	49
	C	77	0	0	328
	D	537	34	204	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	2	2	0
	B	2	0	0	2
	C	2	0	0	2

	D	1	2	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.61	6.58	1.5	A	709	1064
B	0.09	5.37	0.1	A	57	85
C	0.50	8.04	1.0	A	372	557
D	0.66	8.36	2.0	A	711	1066

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	582	145	178	1449	0.402	579	469	0.0	0.7	4.125	A
B	47	12	723	932	0.050	46	34	0.0	0.1	4.064	A
C	305	76	528	1034	0.295	303	241	0.0	0.4	4.917	A
D	583	146	67	1301	0.448	580	764	0.0	0.8	4.970	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	695	174	214	1428	0.487	694	562	0.7	0.9	4.898	A
B	56	14	866	851	0.066	56	41	0.1	0.1	4.529	A
C	364	91	633	975	0.374	363	289	0.4	0.6	5.884	A
D	696	174	81	1294	0.538	695	915	0.8	1.1	5.995	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	851	213	261	1399	0.609	849	687	0.9	1.5	6.517	A
B	68	17	1059	741	0.092	68	50	0.1	0.1	5.354	A
C	446	111	774	895	0.498	444	353	0.6	1.0	7.968	A
D	853	213	99	1283	0.665	850	1120	1.1	1.9	8.243	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	851	213	262	1398	0.609	851	690	1.5	1.5	6.578	A
B	68	17	1062	739	0.092	68	51	0.1	0.1	5.368	A
C	446	111	776	893	0.499	446	354	1.0	1.0	8.042	A
D	853	213	99	1283	0.665	853	1123	1.9	2.0	8.359	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	695	174	215	1427	0.487	697	566	1.5	1.0	4.948	A
B	56	14	871	848	0.066	56	42	0.1	0.1	4.545	A
C	364	91	636	973	0.374	366	291	1.0	0.6	5.942	A
D	696	174	81	1293	0.538	699	920	2.0	1.2	6.094	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	582	145	180	1449	0.402	583	473	1.0	0.7	4.166	A
B	47	12	728	929	0.050	47	35	0.1	0.1	4.080	A
C	305	76	532	1032	0.296	306	243	0.6	0.4	4.961	A
D	583	146	68	1301	0.448	585	769	1.2	0.8	5.037	A

2033 Base + Committed Development + Development with Travel Planning, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	5.45	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	58	Arm D

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)	Run automatically
D9	2033 Base + Committed Development + Development with Travel Planning	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	432	100.000
B		ONE HOUR	✓	120	100.000
C		ONE HOUR	✓	353	100.000
D		ONE HOUR	✓	655	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	13	58	361
	B	19	0	0	101
	C	81	0	0	272
	D	522	28	105	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	6	6	1
	B	2	0	0	2

	C	3	0	0	3
	D	2	6	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.33	3.73	0.5	A	396	595
B	0.13	4.15	0.2	A	110	165
C	0.38	5.73	0.6	A	324	486
D	0.57	6.68	1.3	A	601	901

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	325	81	100	1470	0.221	324	466	0.0	0.3	3.139	A
B	90	23	393	1106	0.082	90	31	0.0	0.1	3.543	A
C	266	66	361	1113	0.239	265	122	0.0	0.3	4.238	A
D	493	123	75	1280	0.385	490	550	0.0	0.6	4.546	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	388	97	119	1457	0.267	388	558	0.3	0.4	3.367	A
B	108	27	471	1061	0.102	108	37	0.1	0.1	3.774	A
C	317	79	432	1072	0.296	317	146	0.3	0.4	4.764	A
D	589	147	90	1272	0.463	588	659	0.6	0.9	5.256	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	476	119	146	1440	0.330	475	683	0.4	0.5	3.727	A
B	132	33	576	1000	0.132	132	45	0.1	0.2	4.145	A
C	389	97	529	1017	0.382	388	179	0.4	0.6	5.712	A
D	721	180	110	1260	0.572	719	807	0.9	1.3	6.631	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	476	119	146	1440	0.330	476	685	0.5	0.5	3.731	A
B	132	33	577	1000	0.132	132	45	0.2	0.2	4.147	A
C	389	97	530	1017	0.382	389	179	0.6	0.6	5.728	A
D	721	180	110	1260	0.572	721	808	1.3	1.3	6.677	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	388	97	120	1457	0.267	389	561	0.5	0.4	3.371	A
B	108	27	472	1061	0.102	108	37	0.2	0.1	3.781	A
C	317	79	433	1072	0.296	318	147	0.6	0.4	4.782	A
D	589	147	90	1271	0.463	590	661	1.3	0.9	5.302	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	325	81	100	1469	0.221	326	469	0.4	0.3	3.150	A
B	90	23	395	1105	0.082	90	31	0.1	0.1	3.547	A
C	266	66	362	1112	0.239	266	123	0.4	0.3	4.259	A
D	493	123	75	1280	0.385	494	553	0.9	0.6	4.588	A

2033 Base + Committed Development + Development with Travel Planning, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	6.82	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	45	Arm D

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)	Run automatically
D10	2033 Base + Committed Development + Development with Travel Planning	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	752	100.000
B		ONE HOUR	✓	41	100.000
C		ONE HOUR	✓	355	100.000
D		ONE HOUR	✓	742	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	12	97	643
	B	8	0	0	33
	C	68	0	0	287
	D	537	38	167	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	2	2	0
	B	2	0	0	2

	C	2	0	0	2
	D	1	2	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.58	6.08	1.4	A	690	1035
B	0.06	4.93	0.1	A	38	56
C	0.43	6.99	0.8	A	326	489
D	0.63	7.58	1.7	A	681	1021

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	566	142	154	1464	0.387	564	459	0.0	0.6	3.987	A
B	31	8	680	956	0.032	31	37	0.0	0.0	3.889	A
C	267	67	513	1042	0.257	266	198	0.0	0.3	4.634	A
D	558	140	57	1306	0.427	555	722	0.0	0.7	4.777	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	676	169	184	1445	0.468	675	550	0.6	0.9	4.668	A
B	37	9	814	880	0.042	37	45	0.0	0.0	4.270	A
C	319	80	614	984	0.324	319	237	0.3	0.5	5.403	A
D	667	167	68	1300	0.513	666	864	0.7	1.0	5.665	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	828	207	225	1420	0.583	826	672	0.9	1.4	6.039	A
B	45	11	996	776	0.058	45	55	0.0	0.1	4.923	A
C	391	98	751	907	0.431	390	290	0.5	0.7	6.951	A
D	817	204	83	1291	0.632	814	1058	1.0	1.7	7.504	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	828	207	226	1420	0.583	828	674	1.4	1.4	6.084	A
B	45	11	999	775	0.058	45	55	0.1	0.1	4.933	A
C	391	98	753	906	0.432	391	291	0.7	0.8	6.992	A
D	817	204	84	1291	0.633	816	1060	1.7	1.7	7.583	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	676	169	185	1445	0.468	678	553	1.4	0.9	4.708	A
B	37	9	818	878	0.042	37	45	0.1	0.0	4.281	A
C	319	80	617	983	0.325	320	238	0.8	0.5	5.441	A
D	667	167	69	1300	0.513	669	868	1.7	1.1	5.733	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	566	142	155	1463	0.387	567	462	0.9	0.6	4.021	A
B	31	8	684	954	0.032	31	38	0.0	0.0	3.902	A
C	267	67	516	1040	0.257	268	199	0.5	0.3	4.668	A
D	558	140	57	1306	0.428	560	726	1.1	0.8	4.832	A

2033 Base + Committed Development + Development - Sensitivity Test, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	6.36	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	41	Arm D

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)	Run automatically
D11	2033 Base + Committed Development + Development - Sensitivity Test	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	471	100.000
B		ONE HOUR	✓	120	100.000
C		ONE HOUR	✓	428	100.000
D		ONE HOUR	✓	736	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	13	68	390
	B	19	0	0	101
	C	97	0	0	331
	D	584	28	124	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	6	6	0
	B	2	0	0	2

	C	2	0	0	2
	D	1	6	6	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.36	3.90	0.6	A	432	648
B	0.14	4.32	0.2	A	110	165
C	0.47	6.73	0.9	A	393	589
D	0.64	8.04	1.8	A	675	1013

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	355	89	114	1476	0.240	353	524	0.0	0.3	3.205	A
B	90	23	436	1083	0.083	90	31	0.0	0.1	3.625	A
C	322	81	383	1107	0.291	321	144	0.0	0.4	4.570	A
D	554	139	87	1281	0.433	551	616	0.0	0.8	4.914	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	423	106	136	1461	0.290	423	628	0.3	0.4	3.467	A
B	108	27	523	1034	0.104	108	37	0.1	0.1	3.887	A
C	385	96	458	1064	0.362	384	172	0.4	0.6	5.290	A
D	662	165	104	1271	0.521	660	738	0.8	1.1	5.884	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	519	130	167	1442	0.360	518	768	0.4	0.6	3.893	A
B	132	33	640	967	0.137	132	45	0.1	0.2	4.311	A
C	471	118	561	1006	0.468	470	211	0.6	0.9	6.701	A
D	810	203	127	1258	0.644	808	903	1.1	1.8	7.947	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	519	130	167	1442	0.360	519	771	0.6	0.6	3.899	A
B	132	33	641	966	0.137	132	45	0.2	0.2	4.315	A
C	471	118	562	1006	0.469	471	211	0.9	0.9	6.734	A
D	810	203	128	1258	0.644	810	905	1.8	1.8	8.045	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	423	106	137	1461	0.290	424	632	0.6	0.4	3.473	A
B	108	27	524	1033	0.104	108	37	0.2	0.1	3.894	A
C	385	96	459	1063	0.362	386	173	0.9	0.6	5.324	A
D	662	165	105	1271	0.521	664	741	1.8	1.1	5.963	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	355	89	115	1475	0.240	355	528	0.4	0.3	3.214	A
B	90	23	439	1082	0.084	90	31	0.1	0.1	3.631	A
C	322	81	384	1106	0.291	323	145	0.6	0.4	4.603	A
D	554	139	87	1281	0.433	555	620	1.1	0.8	4.973	A

2033 Base + Committed Development + Development - Sensitivity Test, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	8.18	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	33	Arm D

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)	Run automatically
D12	2033 Base + Committed Development + Development - Sensitivity Test	PM	ONE HOUR	16:45	18:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	821	100.000
B		ONE HOUR	✓	62	100.000
C		ONE HOUR	✓	405	100.000
D		ONE HOUR	✓	803	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	3	127	691
	B	13	0	0	49
	C	77	0	0	328
	D	561	9	233	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	2	2	0
	B	2	0	0	2

	C	2	0	0	2
	D	1	2	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.65	7.32	1.8	A	753	1130
B	0.10	5.84	0.1	A	57	85
C	0.52	8.62	1.1	A	372	557
D	0.69	9.00	2.2	A	737	1105

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	618	155	181	1448	0.427	615	487	0.0	0.7	4.309	A
B	47	12	787	895	0.052	46	9	0.0	0.1	4.240	A
C	305	76	564	1013	0.301	303	270	0.0	0.4	5.056	A
D	604	151	67	1301	0.464	601	800	0.0	0.9	5.116	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	738	185	217	1426	0.518	737	584	0.7	1.1	5.215	A
B	56	14	943	807	0.069	56	11	0.1	0.1	4.794	A
C	364	91	676	950	0.383	363	323	0.4	0.6	6.125	A
D	722	180	81	1294	0.558	720	958	0.9	1.2	6.260	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	904	226	265	1396	0.647	901	714	1.1	1.8	7.225	A
B	68	17	1153	687	0.099	68	13	0.1	0.1	5.814	A
C	446	111	826	865	0.516	444	395	0.6	1.0	8.521	A
D	884	221	99	1283	0.689	880	1172	1.2	2.1	8.848	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	904	226	266	1396	0.648	904	716	1.8	1.8	7.318	A
B	68	17	1157	685	0.100	68	13	0.1	0.1	5.837	A
C	446	111	829	864	0.516	446	396	1.0	1.1	8.616	A
D	884	221	99	1283	0.689	884	1176	2.1	2.2	9.002	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	738	185	219	1425	0.518	741	588	1.8	1.1	5.287	A
B	56	14	949	803	0.069	56	11	0.1	0.1	4.816	A
C	364	91	680	948	0.384	366	325	1.1	0.6	6.198	A
D	722	180	81	1293	0.558	725	964	2.2	1.3	6.375	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	618	155	183	1447	0.427	619	491	1.1	0.8	4.358	A
B	47	12	793	892	0.052	47	9	0.1	0.1	4.259	A
C	305	76	568	1011	0.302	306	272	0.6	0.4	5.109	A
D	604	151	68	1301	0.465	606	806	1.3	0.9	5.191	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

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Filename: Whaddon Access Adjustedment 201204.j9
Path: \\uk.wspgroup.com\central data\Projects\700694xx\70069442 - SWMK - 2020\03 WIP\TP Transport Planning\Analysis\September 2020 Junction Modelling\Whaddon Access - Latest
Report generation date: 18/12/2020 18:29:53

»(Default Analysis Set) - 2033 Base + Committed Development + Development, AM
»(Default Analysis Set) - 2033 Base + Committed Development + Development, PM
»(Default Analysis Set) - 2033 Base + Committed Development + Development with Travel Planning, AM
»(Default Analysis Set) - 2033 Base + Committed Development + Development with Travel Planning, PM
»(Default Analysis Set) - 2033 Base + Committed Development + Development – Sensitivity Test, AM
»(Default Analysis Set) - 2033 Base + Committed Development + Development – Sensitivity Test, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	A1 - 2033 Base + Committed Development + Development									
Stream B-C	D7	0.1	5.89	0.10	A	D8	0.1	5.82	0.08	A
Stream B-A		0.5	10.71	0.33	B		0.2	9.05	0.19	A
Stream C-B		0.1	6.34	0.09	A		0.1	6.95	0.12	A
	A1 - 2033 Base + Committed Development + Development with Travel Planning									
Stream B-C	D9	0.1	5.74	0.08	A	D10	0.1	5.61	0.07	A
Stream B-A		0.4	9.88	0.28	A		0.2	8.42	0.15	A
Stream C-B		0.1	6.28	0.08	A		0.1	6.48	0.10	A
	A1 - 2033 Base + Committed Development + Development – Sensitivity Test									
Stream B-C	D11	0.1	5.97	0.10	A	D12	0.1	5.76	0.08	A
Stream B-A		0.5	11.05	0.34	B		0.2	8.97	0.19	A
Stream C-B		0.1	6.41	0.09	A		0.1	6.64	0.11	A

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	(untitled)
Location	
Site number	
Date	04/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	

Enumerator	Will Forster
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		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)
D7	2033 Base + Committed Development + Development	AM	ONE HOUR	07:30	09:00	15
D8	2033 Base + Committed Development + Development	PM	ONE HOUR	16:45	18:15	15
D9	2033 Base + Committed Development + Development with Travel Planning	AM	ONE HOUR	07:30	09:00	15
D10	2033 Base + Committed Development + Development with Travel Planning	PM	ONE HOUR	16:45	18:15	15
D11	2033 Base + Committed Development + Development – Sensitivity Test	AM	ONE HOUR	07:30	09:00	15
D12	2033 Base + Committed Development + Development – Sensitivity Test	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	(Default Analysis Set)	100.000

(Default Analysis Set) - 2033 Base + Committed Development + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way		2.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Whaddon Road (North)		Major
B	Development Access		Minor
C	Whaddon Road (South)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.30		✓	3.50	180.0		-

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 (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes	5.00	5.00	240	180

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	785	0.135	0.341	0.214	0.487
B-C	885	0.128	0.323	-	-
C-B	774	0.283	0.283	-	-

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 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)
D7	2033 Base + Committed Development + Development	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 (Veh/hr)	Scaling Factor (%)
A		✓	357	100.000
B		✓	212	100.000
C		✓	478	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	10	347
	B	153	0	59
	C	428	50	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	2	0	2
	C	2	6	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A	269	278
	B	160	163
	C	360	370
07:45-08:00	A	321	332
	B	191	195
	C	430	442
08:00-08:15	A	393	407
	B	233	239
	C	526	541
08:15-08:30	A	393	407
	B	233	239
	C	526	541
08:30-08:45	A	321	332
	B	191	195
	C	430	442
08:45-09:00	A	269	278
	B	160	163
	C	360	370

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.10	5.89	0.1	A
B-A	0.33	10.71	0.5	B
C-A				
C-B	0.09	6.34	0.1	A
A-B				
A-C				

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	740	0.060	44	0.1	5.175	A
B-A	115	587	0.196	114	0.2	7.591	A
C-A	322			322			
C-B	38	657	0.057	37	0.1	5.813	A
A-B	8			8			
A-C	261			261			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	53	713	0.074	53	0.1	5.451	A
B-A	138	553	0.249	137	0.3	8.659	A
C-A	385			385			
C-B	45	642	0.070	45	0.1	6.026	A
A-B	9			9			
A-C	312			312			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	65	676	0.096	65	0.1	5.892	A
B-A	168	505	0.334	168	0.5	10.669	B
C-A	471			471			
C-B	55	622	0.088	55	0.1	6.345	A
A-B	11			11			
A-C	382			382			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	65	676	0.096	65	0.1	5.895	A
B-A	168	504	0.334	168	0.5	10.710	B
C-A	471			471			
C-B	55	622	0.088	55	0.1	6.345	A
A-B	11			11			
A-C	382			382			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	53	713	0.074	53	0.1	5.455	A
B-A	138	553	0.249	138	0.3	8.703	A
C-A	385			385			
C-B	45	642	0.070	45	0.1	6.030	A
A-B	9			9			

A-C	312			312			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	739	0.060	44	0.1	5.183	A
B-A	115	587	0.196	116	0.2	7.638	A
C-A	322			322			
C-B	38	657	0.057	38	0.1	5.817	A
A-B	8			8			
A-C	261			261			

(Default Analysis Set) - 2033 Base + Committed Development + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way		1.51	A

Junction Network Options

Driving side	Lighting
Left	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)
D8	2033 Base + Committed Development + Development	PM	ONE HOUR	16:45	18:15	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 (Veh/hr)	Scaling Factor (%)
A		✓	472	100.000
B		✓	133	100.000
C		✓	379	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	56	416
	B	84	0	49
	C	316	63	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	3
	B	2	0	2

	C	2	6	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	355	368
	B	100	103
	C	285	294
17:00-17:15	A	424	440
	B	120	122
	C	341	351
17:15-17:30	A	520	539
	B	146	150
	C	417	430
17:30-17:45	A	520	539
	B	146	150
	C	417	430
17:45-18:00	A	424	440
	B	120	122
	C	341	351
18:00-18:15	A	355	368
	B	100	103
	C	285	294

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.08	5.82	0.1	A
B-A	0.19	9.05	0.2	A
C-A				
C-B	0.12	6.95	0.1	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	736	0.050	37	0.1	5.150	A
B-A	63	578	0.109	63	0.1	6.982	A
C-A	238			238			
C-B	47	633	0.075	47	0.1	6.146	A
A-B	42			42			
A-C	313			313			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	710	0.062	44	0.1	5.409	A
B-A	76	541	0.140	75	0.2	7.726	A
C-A	284			284			

C-B	57	613	0.092	57	0.1	6.464	A
A-B	50			50			
A-C	374			374			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	673	0.080	54	0.1	5.816	A
B-A	92	490	0.189	92	0.2	9.032	A
C-A	348			348			
C-B	69	587	0.118	69	0.1	6.950	A
A-B	62			62			
A-C	458			458			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	673	0.080	54	0.1	5.817	A
B-A	92	490	0.189	92	0.2	9.046	A
C-A	348			348			
C-B	69	587	0.118	69	0.1	6.953	A
A-B	62			62			
A-C	458			458			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	709	0.062	44	0.1	5.413	A
B-A	76	541	0.140	76	0.2	7.741	A
C-A	284			284			
C-B	57	613	0.092	57	0.1	6.467	A
A-B	50			50			
A-C	374			374			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	735	0.050	37	0.1	5.156	A
B-A	63	578	0.109	63	0.1	7.003	A
C-A	238			238			
C-B	47	633	0.075	48	0.1	6.155	A
A-B	42			42			
A-C	313			313			

(Default Analysis Set) - 2033 Base + Committed Development + Development with Travel Planning, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way		1.83	A

Junction Network Options

Driving side	Lighting
Left	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)
D9	2033 Base + Committed Development + Development with Travel Planning	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 (Veh/hr)	Scaling Factor (%)
A		✓	356	100.000
B		✓	180	100.000
C		✓	472	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	9	347
	B	129	0	51
	C	428	44	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
	A	0	6	3

From	B	3	0	3
	C	2	6	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A	268	277
	B	136	139
	C	355	365
07:45-08:00	A	320	331
	B	162	166
	C	424	436
08:00-08:15	A	392	406
	B	198	204
	C	520	534
08:15-08:30	A	392	406
	B	198	204
	C	520	534
08:30-08:45	A	320	331
	B	162	166
	C	424	436
08:45-09:00	A	268	277
	B	136	139
	C	355	365

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.08	5.74	0.1	A
B-A	0.28	9.88	0.4	A
C-A				
C-B	0.08	6.28	0.1	A
A-B				
A-C				

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	38	744	0.052	38	0.1	5.102	A
B-A	97	588	0.165	96	0.2	7.308	A
C-A	322			322			
C-B	33	656	0.051	33	0.1	5.779	A
A-B	7			7			
A-C	261			261			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	46	719	0.064	46	0.1	5.347	A
B-A	116	554	0.209	116	0.3	8.212	A

C-A	385			385			
C-B	40	641	0.062	40	0.1	5.981	A
A-B	8			8			
A-C	312			312			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	56	684	0.082	56	0.1	5.734	A
B-A	142	506	0.280	142	0.4	9.851	A
C-A	471			471			
C-B	48	621	0.078	48	0.1	6.281	A
A-B	10			10			
A-C	382			382			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	56	684	0.082	56	0.1	5.735	A
B-A	142	506	0.280	142	0.4	9.878	A
C-A	471			471			
C-B	48	621	0.078	48	0.1	6.281	A
A-B	10			10			
A-C	382			382			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	46	719	0.064	46	0.1	5.353	A
B-A	116	554	0.209	116	0.3	8.242	A
C-A	385			385			
C-B	40	641	0.062	40	0.1	5.983	A
A-B	8			8			
A-C	312			312			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	38	743	0.052	38	0.1	5.107	A
B-A	97	588	0.165	97	0.2	7.344	A
C-A	322			322			
C-B	33	656	0.051	33	0.1	5.785	A
A-B	7			7			
A-C	261			261			

(Default Analysis Set) - 2033 Base + Committed Development + Development with Travel Planning, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way		1.25	A

Junction Network Options

Driving side	Lighting
Left	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)
D10	2033 Base + Committed Development + Development with Travel Planning	PM	ONE HOUR	16:45	18:15	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 (Veh/hr)	Scaling Factor (%)
A		✓	464	100.000
B		✓	113	100.000
C		✓	369	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	48	416
	B	71	0	42
	C	316	53	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C

From	A	0	2	1
	B	2	0	2
	C	1	2	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	349	355
	B	85	87
	C	278	282
17:00-17:15	A	417	423
	B	102	103
	C	332	337
17:15-17:30	A	511	518
	B	124	127
	C	406	412
17:30-17:45	A	511	518
	B	124	127
	C	406	412
17:45-18:00	A	417	423
	B	102	103
	C	332	337
18:00-18:15	A	349	355
	B	85	87
	C	278	282

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.07	5.61	0.1	A
B-A	0.15	8.42	0.2	A
C-A				
C-B	0.10	6.48	0.1	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	32	747	0.042	31	0.0	5.028	A
B-A	53	590	0.091	53	0.1	6.700	A
C-A	238			238			
C-B	40	659	0.061	40	0.1	5.806	A
A-B	36			36			
A-C	313			313			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	38	722	0.052	38	0.1	5.257	A

B-A	64	555	0.115	64	0.1	7.330	A
C-A	284			284			
C-B	48	640	0.074	48	0.1	6.073	A
A-B	43			43			
A-C	374			374			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	46	688	0.067	46	0.1	5.611	A
B-A	78	506	0.155	78	0.2	8.409	A
C-A	348			348			
C-B	58	614	0.095	58	0.1	6.478	A
A-B	53			53			
A-C	458			458			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	46	688	0.067	46	0.1	5.611	A
B-A	78	506	0.155	78	0.2	8.418	A
C-A	348			348			
C-B	58	614	0.095	58	0.1	6.478	A
A-B	53			53			
A-C	458			458			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	38	722	0.052	38	0.1	5.259	A
B-A	64	555	0.115	64	0.1	7.343	A
C-A	284			284			
C-B	48	640	0.074	48	0.1	6.075	A
A-B	43			43			
A-C	374			374			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	32	747	0.042	32	0.0	5.034	A
B-A	53	590	0.091	54	0.1	6.713	A
C-A	238			238			
C-B	40	659	0.061	40	0.1	5.814	A
A-B	36			36			
A-C	313			313			

(Default Analysis Set) - 2033 Base + Committed Development + Development – Sensitivity Test, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way		2.19	A

Junction Network Options

Driving side	Lighting
Left	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)
D11	2033 Base + Committed Development + Development – Sensitivity Test	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 (Veh/hr)	Scaling Factor (%)
A		✓	377	100.000
B		✓	212	100.000
C		✓	489	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	10	367
	B	153	0	59
	C	439	50	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
	A	0	6	4

From	B	2	0	2
	C	2	6	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
07:30-07:45	A	284	294
	B	160	163
	C	368	378
07:45-08:00	A	339	351
	B	191	195
	C	440	452
08:00-08:15	A	415	430
	B	233	239
	C	538	553
08:15-08:30	A	415	430
	B	233	239
	C	538	553
08:30-08:45	A	339	351
	B	191	195
	C	440	452
08:45-09:00	A	284	294
	B	160	163
	C	368	378

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.10	5.97	0.1	A
B-A	0.34	11.05	0.5	B
C-A				
C-B	0.09	6.41	0.1	A
A-B				
A-C				

Main Results for each time segment

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	734	0.060	44	0.1	5.214	A
B-A	115	580	0.198	114	0.2	7.705	A
C-A	331			331			
C-B	38	652	0.058	37	0.1	5.848	A
A-B	8			8			
A-C	276			276			

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	53	707	0.075	53	0.1	5.504	A
B-A	138	544	0.253	137	0.3	8.836	A

C-A	395			395			
C-B	45	637	0.071	45	0.1	6.077	A
A-B	9			9			
A-C	330			330			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	65	668	0.097	65	0.1	5.970	A
B-A	168	494	0.341	168	0.5	11.003	B
C-A	483			483			
C-B	55	616	0.089	55	0.1	6.415	A
A-B	11			11			
A-C	404			404			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	65	668	0.097	65	0.1	5.973	A
B-A	168	494	0.341	168	0.5	11.049	B
C-A	483			483			
C-B	55	616	0.089	55	0.1	6.415	A
A-B	11			11			
A-C	404			404			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	53	707	0.075	53	0.1	5.509	A
B-A	138	544	0.253	138	0.3	8.885	A
C-A	395			395			
C-B	45	637	0.071	45	0.1	6.081	A
A-B	9			9			
A-C	330			330			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	734	0.061	44	0.1	5.221	A
B-A	115	580	0.199	116	0.3	7.754	A
C-A	331			331			
C-B	38	652	0.058	38	0.1	5.857	A
A-B	8			8			
A-C	276			276			

(Default Analysis Set) - 2033 Base + Committed Development + Development – Sensitivity Test, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way		1.45	A

Junction Network Options

Driving side	Lighting
Left	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)
D12	2033 Base + Committed Development + Development – Sensitivity Test	PM	ONE HOUR	16:45	18:15	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 (Veh/hr)	Scaling Factor (%)
A		✓	479	100.000
B		✓	133	100.000
C		✓	393	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	56	423
	B	84	0	49
	C	330	63	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
	A	0	2	1

From	B	2	0	2
	C	1	2	0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A	361	366
	B	100	102
	C	296	300
17:00-17:15	A	431	437
	B	120	121
	C	353	358
17:15-17:30	A	527	535
	B	146	149
	C	433	439
17:30-17:45	A	527	535
	B	146	149
	C	433	439
17:45-18:00	A	431	437
	B	120	121
	C	353	358
18:00-18:15	A	361	366
	B	100	102
	C	296	300

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.08	5.76	0.1	A
B-A	0.19	8.97	0.2	A
C-A				
C-B	0.11	6.64	0.1	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	742	0.050	37	0.1	5.102	A
B-A	63	582	0.109	63	0.1	6.925	A
C-A	248			248			
C-B	47	659	0.072	47	0.1	5.883	A
A-B	42			42			
A-C	318			318			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	716	0.062	44	0.1	5.357	A
B-A	76	545	0.139	75	0.2	7.662	A

C-A	297			297			
C-B	57	639	0.089	57	0.1	6.180	A
A-B	50			50			
A-C	380			380			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	679	0.079	54	0.1	5.758	A
B-A	92	494	0.187	92	0.2	8.954	A
C-A	363			363			
C-B	69	612	0.113	69	0.1	6.634	A
A-B	62			62			
A-C	466			466			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	54	679	0.079	54	0.1	5.758	A
B-A	92	494	0.187	92	0.2	8.967	A
C-A	363			363			
C-B	69	612	0.113	69	0.1	6.636	A
A-B	62			62			
A-C	466			466			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	44	716	0.062	44	0.1	5.362	A
B-A	76	545	0.139	76	0.2	7.675	A
C-A	297			297			
C-B	57	639	0.089	57	0.1	6.185	A
A-B	50			50			
A-C	380			380			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	37	742	0.050	37	0.1	5.109	A
B-A	63	582	0.109	63	0.1	6.942	A
C-A	248			248			
C-B	47	659	0.072	48	0.1	5.891	A
A-B	42			42			
A-C	318			318			

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