

Notes:

- All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.
- This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING

CONSTRUCTION

MAINTENANCE / CLEANING

DECOMMISSIONING / DEMOLITION

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT

Notes

- Design speed taken to be 30mph/60kph
- In geometry in accordance with CD 123

Key

- Proposed Carriageway
- Proposed Verge

Rev	Date	Description	By	Ckd
P1	25.08.23	First Issue	CJH	AJC

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Client :

newlands developments

Project Title:

RED HILL LANE/BARNSELY ROAD

Drawing Title:

GENERAL ARRANGEMENT

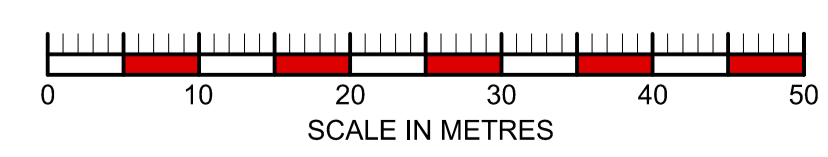
Drawing Status:

DRAFT - FOR DISCUSSION

Hydrock Job No: **C23451**

Drawn	Checked	Scale @ A1	Date	Issue Date
CJH	AJC	1:500	25.08.2023	25.08.2023

Drawing Number: **23451-HYD-A-XX-DR-D-0001** Revision: **P1**



Appendix P

Junctions10 Output - A635 / Blacksmiths Lane

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.0.2.1574 © Copyright TRL Software Limited, 2021
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
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Filename: 2023-11-15_A635_Blacksmiths Lane Junction.j10
Path: G:\Shared drives\Jobs3000\3465 Employment Site at Goldthorpe\Junction Models\A635_Blcksmths Ln
Report generation date: 30/11/2023 16:07:00

- »2022 Base, AM
- »2022 Base, PM
- »2028 Do Minimum, AM
- »2028 Do Minimum, PM
- »2028 With Development, AM
- »2028 With Development, PM
- »2022 Base + Dev, AM
- »2022 Base + Dev, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2022 Base						
Stream B-AC	3.4	74.86	0.82	2.6	64.99	0.77
Stream C-AB	0.1	3.84	0.07	0.1	5.14	0.05
2028 Do Minimum						
Stream B-AC	10.1	223.29	1.06	8.3	181.09	1.07
Stream C-AB	0.2	3.60	0.09	0.1	4.84	0.06
2028 With Development						
Stream B-AC	21.7	466.28	1.26	15.1	325.37	1.27
Stream C-AB	0.2	3.58	0.10	0.1	4.62	0.06
2022 Base + Dev						
Stream B-AC	5.7	129.05	0.93	4.0	97.12	0.87
Stream C-AB	0.2	3.81	0.08	0.1	4.89	0.05

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	A635-Blacksmiths Lane
Location	
Site number	
Date	15/11/2023
Version	
Status	Existing
Identifier	
Client	Equites Newlands (Goldthorpe) Ltd
Jobnumber	
Enumerator	Fore Consulting Ltd
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically	Relationship type	Relationship
D1	2022 Base	AM	DIRECT	07:00	08:30	90	15	✓		
D2	2022 Base	PM	DIRECT	16:15	17:45	90	15	✓		
D3	2028 Do Minimum	AM	DIRECT	07:00	08:30	90	15	✓		
D4	2028 Do Minimum	PM	DIRECT	16:15	17:45	90	15	✓		
D5	2028 With Development	AM	DIRECT	07:00	08:30	90	15	✓		
D6	2028 With Development	PM	DIRECT	16:15	17:45	90	15	✓		
D7	2022 Base + Dev	AM	DIRECT	07:00	08:30	90	15	✓	Simple	D1 + D5 - D3
D8	2022 Base + Dev	PM	DIRECT	16:15	17:45	90	15	✓	Simple	D2 + D6 - D4

Analysis Set Details

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

2022 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A635 / Blacksmiths Lane Junction	T-Junction	Two-way	Two-way	Two-way		5.40	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.40	A

Arms

Arms

Arm	Name	Description	Arm type
A	A635 (E)		Major
B	Blacksmiths Lane		Minor
C	A635 (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A635 (W)	6.75			250.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Blacksmiths Lane	One lane	4.75	65	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/TS)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	161.183	0.114	0.287	0.181	0.410
B-C	201.809	0.120	0.303	-	-
C-B	179.685	0.269	0.269	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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 period length (min)	Time segment length (min)	Run automatically
D1	2022 Base	AM	DIRECT	07:00	08:30	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - A635 (E)		DIRECT	✓	100.000
B - Blacksmiths Lane		DIRECT	✓	100.000
C - A635 (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
07:00 - 07:15	From	A - A635 (E)	0.00	26.00
		B - Blacksmiths Lane	28.00	0.00
		C - A635 (W)	290.00	0.00

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
07:15 - 07:30	From	A - A635 (E)	0.00	43.00
		B - Blacksmiths Lane	33.00	0.00
		C - A635 (W)	257.00	1.00

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
07:30 - 07:45	From	A - A635 (E)	0.00	45.00
		B - Blacksmiths Lane	32.00	0.00
		C - A635 (W)	232.00	4.00

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
07:45 - 08:00	From	A - A635 (E)	0.00	47.00
		B - Blacksmiths Lane	44.00	0.00
		C - A635 (W)	233.00	0.00

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
08:00 - 08:15	From	A - A635 (E)	0.00	66.00
		B - Blacksmiths Lane	42.00	0.00
		C - A635 (W)	221.00	1.00

Demand (PCU/TS)

08:15 - 08:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0.00	60.00	183.00
	B - Blacksmiths Lane	40.00	0.00	0.00
	C - A635 (W)	216.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	0	22
	B - Blacksmiths Lane	0	0	0
	C - A635 (W)	12	0	0

Heavy Vehicle Percentages

07:15 - 07:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	0	17
	B - Blacksmiths Lane	3	0	0
	C - A635 (W)	8	0	0

Heavy Vehicle Percentages

07:30 - 07:45

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	5	22
	B - Blacksmiths Lane	6	0	0
	C - A635 (W)	12	33	0

Heavy Vehicle Percentages

07:45 - 08:00

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	0	16
	B - Blacksmiths Lane	10	0	0
	C - A635 (W)	16	0	0

Heavy Vehicle Percentages

08:00 - 08:15

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	3	17
	B - Blacksmiths Lane	7	0	0
	C - A635 (W)	15	0	0

Heavy Vehicle Percentages

08:15 - 08:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	0	15
	B - Blacksmiths Lane	5	0	0
	C - A635 (W)	18	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/TS)	Total Junction Arrivals (PCU)
B-AC	0.82	74.86	3.4	F	36.83	221.00
C-AB	0.07	3.84	0.1	A	6.17	37.05
C-A					236.49	1418.95
A-B					47.83	287.00
A-C					187.50	1125.00

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28.00	28.00	66.22	0.423	27.30	0.0	0.7	22.746	C
C-AB	0.00	0.00	135.51	0.000	0.00	0.0	0.0	0.000	A
C-A	290.00	290.00			290.00				
A-B	26.00	26.00			26.00				
A-C	138.00	138.00			138.00				

07:15 - 07:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33.00	33.00	56.06	0.589	32.39	0.7	1.3	37.071	E
C-AB	6.08	6.08	307.61	0.020	6.05	0.0	0.0	3.180	A
C-A	251.92	251.92			251.92				
A-B	43.00	43.00			43.00				
A-C	186.00	186.00			186.00				

07:30 - 07:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33.00	33.00	54.03	0.611	32.81	1.3	1.5	42.916	E
C-AB	21.15	21.15	286.18	0.074	21.03	0.0	0.1	3.841	A
C-A	214.85	214.85			214.85				
A-B	45.00	45.00			45.00				
A-C	207.00	207.00			207.00				

07:45 - 08:00

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44.00	44.00	53.74	0.819	42.17	1.5	3.3	70.897	F
C-AB	0.12	0.12	286.48	0.000	0.27	0.1	0.0	3.631	A
C-A	232.88	232.88			232.88				
A-B	47.00	47.00			47.00				
A-C	209.00	209.00			209.00				

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43.00	43.00	56.06	0.767	42.96	3.3	3.4	74.858	F
C-AB	5.04	5.04	275.70	0.018	5.02	0.0	0.0	3.715	A
C-A	216.96	216.96			216.96				
A-B	66.00	66.00			66.00				
A-C	202.00	202.00			202.00				

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40.00	40.00	62.45	0.641	41.24	3.4	2.1	47.823	E
C-AB	4.65	4.65	275.41	0.017	4.66	0.0	0.0	3.744	A
C-A	212.35	212.35			212.35				
A-B	60.00	60.00			60.00				
A-C	183.00	183.00			183.00				

2022 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A635 / Blacksmiths Lane Junction	T-Junction	Two-way	Two-way	Two-way		4.44	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.44	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2022 Base	PM	DIRECT	16:15	17:45	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - A635 (E)		DIRECT	✓	100.000
B - Blacksmiths Lane		DIRECT	✓	100.000
C - A635 (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (PCU/TS)

16:15 - 16:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0.00	67.00	250.00
	B - Blacksmiths Lane	25.00	0.00	1.00
	C - A635 (W)	157.00	0.00	0.00

Demand (PCU/TS)

16:30 - 16:45

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0.00	79.00	241.00
	B - Blacksmiths Lane	27.00	0.00	3.00
	C - A635 (W)	158.00	3.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:45 - 17:00	From	A - A635 (E)	0.00	65.00	224.00
		B - Blacksmiths Lane	32.00	0.00	0.00
		C - A635 (W)	168.00	2.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:00 - 17:15	From	A - A635 (E)	0.00	61.00	234.00
		B - Blacksmiths Lane	36.00	0.00	0.00
		C - A635 (W)	159.00	0.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:15 - 17:30	From	A - A635 (E)	0.00	60.00	229.00
		B - Blacksmiths Lane	39.00	0.00	0.00
		C - A635 (W)	204.00	2.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:30 - 17:45	From	A - A635 (E)	0.00	57.00	219.00
		B - Blacksmiths Lane	37.00	0.00	2.00
		C - A635 (W)	152.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:15 - 16:30	From	A - A635 (E)	0	1	11
		B - Blacksmiths Lane	13	0	0
		C - A635 (W)	11	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:30 - 16:45	From	A - A635 (E)	0	1	8
		B - Blacksmiths Lane	8	0	50
		C - A635 (W)	10	50	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:45 - 17:00	From	A - A635 (E)	0	5	8
		B - Blacksmiths Lane	6	0	0
		C - A635 (W)	8	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:00 - 17:15	From	A - A635 (E)	0	3	9
		B - Blacksmiths Lane	3	0	0
		C - A635 (W)	5	0	0

Heavy Vehicle Percentages

17:15 - 17:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	7	8
	B - Blacksmiths Lane	5	0	0
	C - A635 (W)	6	0	0

Heavy Vehicle Percentages

17:30 - 17:45

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	3	7
	B - Blacksmiths Lane	3	0	0
	C - A635 (W)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/TS)	Total Junction Arrivals (PCU)
B-AC	0.77	64.99	2.6	F	33.67	202.00
C-AB	0.05	5.14	0.1	A	5.11	30.68
C-A					162.55	975.32
A-B					64.83	389.00
A-C					232.83	1397.00

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26.00	26.00	54.58	0.476	25.05	0.0	1.0	33.319	D
C-AB	0.00	0.00	94.29	0.000	0.00	0.0	0.0	0.000	A
C-A	157.00	157.00			157.00				
A-B	67.00	67.00			67.00				
A-C	250.00	250.00			250.00				

16:30 - 16:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	30.00	30.00	56.30	0.533	29.76	1.0	1.2	37.638	E
C-AB	10.81	10.81	218.66	0.049	10.73	0.0	0.1	5.141	A
C-A	150.19	150.19			150.19				
A-B	79.00	79.00			79.00				
A-C	241.00	241.00			241.00				

16:45 - 17:00

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32.00	32.00	58.41	0.548	31.92	1.2	1.3	37.469	E
C-AB	7.33	7.33	231.86	0.032	7.37	0.1	0.0	4.548	A
C-A	162.67	162.67			162.67				
A-B	65.00	65.00			65.00				
A-C	224.00	224.00			224.00				

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36.00	36.00	58.33	0.617	35.70	1.3	1.6	41.505	E
C-AB	0.00	0.00	100.21	0.000	0.05	0.0	0.0	0.000	A
C-A	159.00	159.00			159.00				
A-B	61.00	61.00			61.00				
A-C	234.00	234.00			234.00				

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39.00	39.00	50.94	0.766	37.93	1.6	2.6	64.985	F
C-AB	9.33	9.33	259.67	0.036	9.28	0.0	0.1	3.778	A
C-A	196.67	196.67			196.67				
A-B	60.00	60.00			60.00				
A-C	229.00	229.00			229.00				

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39.00	39.00	65.53	0.595	39.96	2.6	1.7	38.329	E
C-AB	3.20	3.20	221.79	0.014	3.24	0.1	0.0	4.305	A
C-A	149.80	149.80			149.80				
A-B	57.00	57.00			57.00				
A-C	219.00	219.00			219.00				

2028 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A635 / Blacksmiths Lane Junction	T-Junction	Two-way	Two-way	Two-way		14.86	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.86	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2028 Do Minimum	AM	DIRECT	07:00	08:30	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - A635 (E)		DIRECT	✓	100.000
B - Blacksmiths Lane		DIRECT	✓	100.000
C - A635 (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
07:00 - 07:15	From			
	A - A635 (E)	0.00	27.00	155.00
	B - Blacksmiths Lane	29.00	0.00	0.00
	C - A635 (W)	324.00	0.00	0.00

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
07:15 - 07:30	From			
	A - A635 (E)	0.00	44.00	205.00
	B - Blacksmiths Lane	34.00	0.00	0.00
	C - A635 (W)	290.00	1.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:30 - 07:45	From	A - A635 (E)	0.00	46.00	226.00
		B - Blacksmiths Lane	33.00	0.00	1.00
		C - A635 (W)	264.00	4.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:45 - 08:00	From	A - A635 (E)	0.00	48.00	228.00
		B - Blacksmiths Lane	45.00	0.00	0.00
		C - A635 (W)	265.00	0.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
08:00 - 08:15	From	A - A635 (E)	0.00	67.00	221.00
		B - Blacksmiths Lane	42.00	0.00	1.00
		C - A635 (W)	254.00	1.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
08:15 - 08:30	From	A - A635 (E)	0.00	61.00	201.00
		B - Blacksmiths Lane	41.00	0.00	0.00
		C - A635 (W)	248.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:00 - 07:15	From	A - A635 (E)	0	0	20
		B - Blacksmiths Lane	0	0	0
		C - A635 (W)	10	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:15 - 07:30	From	A - A635 (E)	0	0	16
		B - Blacksmiths Lane	3	0	0
		C - A635 (W)	8	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:30 - 07:45	From	A - A635 (E)	0	5	20
		B - Blacksmiths Lane	6	0	0
		C - A635 (W)	11	33	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:45 - 08:00	From	A - A635 (E)	0	0	15
		B - Blacksmiths Lane	10	0	0
		C - A635 (W)	14	0	0

Heavy Vehicle Percentages

08:00 - 08:15

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	3	16
	B - Blacksmiths Lane	7	0	0
	C - A635 (W)	14	0	0

Heavy Vehicle Percentages

08:15 - 08:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	0	14
	B - Blacksmiths Lane	5	0	0
	C - A635 (W)	16	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/TS)	Total Junction Arrivals (PCU)
B-AC	1.06	223.29	10.1	F	37.67	226.00
C-AB	0.09	3.60	0.2	A	8.21	49.25
C-A					267.12	1602.75
A-B					48.83	293.00
A-C					206.00	1236.00

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29.00	29.00	55.08	0.526	27.97	0.0	1.0	32.125	D
C-AB	0.00	0.00	130.66	0.000	0.00	0.0	0.0	0.000	A
C-A	324.00	324.00			324.00				
A-B	27.00	27.00			27.00				
A-C	155.00	155.00			155.00				

07:15 - 07:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34.00	34.00	44.53	0.764	32.59	1.0	2.4	67.514	F
C-AB	8.24	8.24	330.04	0.025	8.21	0.0	0.0	2.990	A
C-A	282.76	282.76			282.76				
A-B	44.00	44.00			44.00				
A-C	205.00	205.00			205.00				

07:30 - 07:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34.00	34.00	42.52	0.800	33.34	2.4	3.1	90.041	F
C-AB	28.04	28.04	308.01	0.091	27.87	0.0	0.2	3.597	A
C-A	239.96	239.96			239.96				
A-B	46.00	46.00			46.00				
A-C	226.00	226.00			226.00				

07:45 - 08:00

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45.00	45.00	42.41	1.061	39.59	3.1	8.5	169.586	F
C-AB	0.18	0.18	308.44	0.001	0.37	0.2	0.0	3.322	A
C-A	264.82	264.82			264.82				
A-B	48.00	48.00			48.00				
A-C	228.00	228.00			228.00				

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43.00	43.00	44.39	0.969	41.40	8.5	10.1	223.288	F
C-AB	6.71	6.71	298.47	0.022	6.68	0.0	0.0	3.445	A
C-A	248.29	248.29			248.29				
A-B	67.00	67.00			67.00				
A-C	221.00	221.00			221.00				

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41.00	41.00	51.47	0.797	45.35	10.1	5.8	158.237	F
C-AB	6.09	6.09	297.00	0.021	6.09	0.0	0.0	3.473	A
C-A	242.91	242.91			242.91				
A-B	61.00	61.00			61.00				
A-C	201.00	201.00			201.00				

2028 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A635 / Blacksmiths Lane Junction	T-Junction	Two-way	Two-way	Two-way		11.29	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.29	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	2028 Do Minimum	PM	DIRECT	16:15	17:45	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - A635 (E)		DIRECT	✓	100.000
B - Blacksmiths Lane		DIRECT	✓	100.000
C - A635 (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
16:15 - 16:30	From			
	A - A635 (E)	0.00	68.00	282.00
	B - Blacksmiths Lane	25.00	0.00	1.00
	C - A635 (W)	178.00	0.00	0.00

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
16:30 - 16:45	From			
	A - A635 (E)	0.00	80.00	272.00
	B - Blacksmiths Lane	28.00	0.00	3.00
	C - A635 (W)	178.00	3.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:45 - 17:00	From	A - A635 (E)	0.00	66.00	255.00
		B - Blacksmiths Lane	33.00	0.00	0.00
		C - A635 (W)	189.00	2.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:00 - 17:15	From	A - A635 (E)	0.00	63.00	266.00
		B - Blacksmiths Lane	36.00	0.00	0.00
		C - A635 (W)	180.00	0.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:15 - 17:30	From	A - A635 (E)	0.00	62.00	261.00
		B - Blacksmiths Lane	40.00	0.00	0.00
		C - A635 (W)	226.00	2.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:30 - 17:45	From	A - A635 (E)	0.00	59.00	250.00
		B - Blacksmiths Lane	38.00	0.00	2.00
		C - A635 (W)	172.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:15 - 16:30	From	A - A635 (E)	0	1	10
		B - Blacksmiths Lane	13	0	0
		C - A635 (W)	10	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:30 - 16:45	From	A - A635 (E)	0	1	7
		B - Blacksmiths Lane	8	0	50
		C - A635 (W)	9	50	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:45 - 17:00	From	A - A635 (E)	0	5	7
		B - Blacksmiths Lane	6	0	0
		C - A635 (W)	8	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:00 - 17:15	From	A - A635 (E)	0	3	8
		B - Blacksmiths Lane	3	0	0
		C - A635 (W)	4	0	0

Heavy Vehicle Percentages

17:15 - 17:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	7	7
	B - Blacksmiths Lane	5	0	0
	C - A635 (W)	6	0	0

Heavy Vehicle Percentages

17:30 - 17:45

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	3	7
	B - Blacksmiths Lane	3	0	0
	C - A635 (W)	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/TS)	Total Junction Arrivals (PCU)
B-AC	1.07	181.09	8.3	F	34.33	206.00
C-AB	0.06	4.84	0.1	A	6.37	38.21
C-A					182.13	1092.79
A-B					66.33	398.00
A-C					264.33	1586.00

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26.00	26.00	41.33	0.629	24.38	0.0	1.6	55.631	F
C-AB	0.00	0.00	85.40	0.000	0.00	0.0	0.0	0.000	A
C-A	178.00	178.00			178.00				
A-B	68.00	68.00			68.00				
A-C	282.00	282.00			282.00				

16:30 - 16:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31.00	31.00	43.17	0.718	30.26	1.6	2.4	73.785	F
C-AB	13.41	13.41	229.29	0.058	13.30	0.0	0.1	4.837	A
C-A	167.59	167.59			167.59				
A-B	80.00	80.00			80.00				
A-C	272.00	272.00			272.00				

16:45 - 17:00

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33.00	33.00	45.66	0.723	32.79	2.4	2.6	75.822	F
C-AB	9.08	9.08	243.13	0.037	9.13	0.1	0.1	4.312	A
C-A	181.92	181.92			181.92				
A-B	66.00	66.00			66.00				
A-C	255.00	255.00			255.00				

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36.00	36.00	45.12	0.798	35.28	2.6	3.3	89.703	F
C-AB	0.00	0.00	91.06	0.000	0.06	0.1	0.0	0.000	A
C-A	180.00	180.00			180.00				
A-B	63.00	63.00			63.00				
A-C	266.00	266.00			266.00				

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40.00	40.00	37.55	1.065	35.01	3.3	8.3	181.092	F
C-AB	11.80	11.80	272.13	0.043	11.73	0.0	0.1	3.645	A
C-A	216.20	216.20			216.20				
A-B	62.00	62.00			62.00				
A-C	261.00	261.00			261.00				

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40.00	40.00	52.44	0.763	43.89	8.3	4.4	121.356	F
C-AB	3.92	3.92	231.62	0.017	3.96	0.1	0.0	4.143	A
C-A	169.08	169.08			169.08				
A-B	59.00	59.00			59.00				
A-C	250.00	250.00			250.00				

2028 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A635 / Blacksmiths Lane Junction	T-Junction	Two-way	Two-way	Two-way		29.57	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	29.57	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D5	2028 With Development	AM	DIRECT	07:00	08:30	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - A635 (E)		DIRECT	✓	100.000
B - Blacksmiths Lane		DIRECT	✓	100.000
C - A635 (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
07:00 - 07:15	From			
	A - A635 (E)	0.00	27.00	171.00
	B - Blacksmiths Lane	29.00	0.00	0.00
	C - A635 (W)	334.00	0.00	0.00

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
07:15 - 07:30	From			
	A - A635 (E)	0.00	44.00	221.00
	B - Blacksmiths Lane	34.00	0.00	0.00
	C - A635 (W)	301.00	1.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:30 - 07:45	From	A - A635 (E)	0.00	46.00	243.00
		B - Blacksmiths Lane	33.00	0.00	1.00
		C - A635 (W)	275.00	4.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:45 - 08:00	From	A - A635 (E)	0.00	48.00	244.00
		B - Blacksmiths Lane	45.00	0.00	0.00
		C - A635 (W)	276.00	0.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
08:00 - 08:15	From	A - A635 (E)	0.00	67.00	238.00
		B - Blacksmiths Lane	42.00	0.00	1.00
		C - A635 (W)	264.00	1.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
08:15 - 08:30	From	A - A635 (E)	0.00	61.00	218.00
		B - Blacksmiths Lane	41.00	0.00	0.00
		C - A635 (W)	259.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:00 - 07:15	From	A - A635 (E)	0	0	21
		B - Blacksmiths Lane	0	0	0
		C - A635 (W)	11	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:15 - 07:30	From	A - A635 (E)	0	0	17
		B - Blacksmiths Lane	3	0	0
		C - A635 (W)	9	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:30 - 07:45	From	A - A635 (E)	0	5	21
		B - Blacksmiths Lane	6	0	0
		C - A635 (W)	12	33	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:45 - 08:00	From	A - A635 (E)	0	0	16
		B - Blacksmiths Lane	10	0	0
		C - A635 (W)	15	0	0

Heavy Vehicle Percentages

08:00 - 08:15

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	3	17
	B - Blacksmiths Lane	7	0	0
	C - A635 (W)	15	0	0

Heavy Vehicle Percentages

08:15 - 08:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	0	16
	B - Blacksmiths Lane	5	0	0
	C - A635 (W)	18	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/TS)	Total Junction Arrivals (PCU)
B-AC	1.26	466.28	21.7	F	37.67	226.00
C-AB	0.10	3.58	0.2	A	9.31	55.83
C-A					276.69	1660.17
A-B					48.83	293.00
A-C					222.50	1335.00

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29.00	29.00	48.68	0.596	27.68	0.0	1.3	40.733	E
C-AB	0.00	0.00	126.35	0.000	0.00	0.0	0.0	0.000	A
C-A	334.00	334.00			334.00				
A-B	27.00	27.00			27.00				
A-C	171.00	171.00			171.00				

07:15 - 07:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34.00	34.00	37.95	0.896	31.39	1.3	3.9	105.930	F
C-AB	9.39	9.39	336.86	0.028	9.36	0.0	0.0	2.966	A
C-A	292.61	292.61			292.61				
A-B	44.00	44.00			44.00				
A-C	221.00	221.00			221.00				

07:30 - 07:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	34.00	34.00	35.53	0.957	31.98	3.9	5.9	171.840	F
C-AB	31.81	31.81	314.63	0.101	31.61	0.0	0.2	3.582	A
C-A	247.19	247.19			247.19				
A-B	46.00	46.00			46.00				
A-C	243.00	243.00			243.00				

07:45 - 08:00

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45.00	45.00	35.85	1.255	35.22	5.9	15.7	319.356	F
C-AB	0.21	0.21	315.22	0.001	0.45	0.2	0.0	3.271	A
C-A	275.79	275.79			275.79				
A-B	48.00	48.00			48.00				
A-C	244.00	244.00			244.00				

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43.00	43.00	37.58	1.144	36.99	15.7	21.7	466.282	F
C-AB	7.55	7.55	304.31	0.025	7.52	0.0	0.0	3.420	A
C-A	257.45	257.45			257.45				
A-B	67.00	67.00			67.00				
A-C	238.00	238.00			238.00				

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	41.00	41.00	44.69	0.917	42.85	21.7	19.9	443.451	F
C-AB	6.87	6.87	303.39	0.023	6.87	0.0	0.0	3.452	A
C-A	253.13	253.13			253.13				
A-B	61.00	61.00			61.00				
A-C	218.00	218.00			218.00				

2028 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A635 / Blacksmiths Lane Junction	T-Junction	Two-way	Two-way	Two-way		19.27	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	19.27	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	2028 With Development	PM	DIRECT	16:15	17:45	90	15	✓

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - A635 (E)		DIRECT	✓	100.000
B - Blacksmiths Lane		DIRECT	✓	100.000
C - A635 (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (PCU/TS)

16:15 - 16:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0.00	68.00	293.00
	B - Blacksmiths Lane	25.00	0.00	1.00
	C - A635 (W)	194.00	0.00	0.00

Demand (PCU/TS)

16:30 - 16:45

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0.00	80.00	284.00
	B - Blacksmiths Lane	28.00	0.00	3.00
	C - A635 (W)	195.00	3.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:45 - 17:00	From	A - A635 (E)	0.00	66.00	267.00
		B - Blacksmiths Lane	33.00	0.00	0.00
		C - A635 (W)	205.00	2.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:00 - 17:15	From	A - A635 (E)	0.00	63.00	277.00
		B - Blacksmiths Lane	36.00	0.00	0.00
		C - A635 (W)	197.00	0.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:15 - 17:30	From	A - A635 (E)	0.00	62.00	272.00
		B - Blacksmiths Lane	40.00	0.00	0.00
		C - A635 (W)	242.00	2.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:30 - 17:45	From	A - A635 (E)	0.00	59.00	262.00
		B - Blacksmiths Lane	38.00	0.00	2.00
		C - A635 (W)	189.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:15 - 16:30	From	A - A635 (E)	0	1	12
		B - Blacksmiths Lane	13	0	0
		C - A635 (W)	12	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:30 - 16:45	From	A - A635 (E)	0	1	8
		B - Blacksmiths Lane	8	0	50
		C - A635 (W)	10	50	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:45 - 17:00	From	A - A635 (E)	0	5	9
		B - Blacksmiths Lane	6	0	0
		C - A635 (W)	10	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:00 - 17:15	From	A - A635 (E)	0	3	10
		B - Blacksmiths Lane	3	0	0
		C - A635 (W)	6	0	0

Heavy Vehicle Percentages

17:15 - 17:30

		To		
From		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
	A - A635 (E)	0	7	9
	B - Blacksmiths Lane	5	0	0
	C - A635 (W)	7	0	0

Heavy Vehicle Percentages

17:30 - 17:45

		To		
From		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
	A - A635 (E)	0	3	8
	B - Blacksmiths Lane	3	0	0
	C - A635 (W)	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/TS)	Total Junction Arrivals (PCU)
B-AC	1.27	325.37	15.1	F	34.33	206.00
C-AB	0.06	4.62	0.1	A	7.39	44.33
C-A					197.61	1185.67
A-B					66.33	398.00
A-C					275.83	1655.00

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26.00	26.00	35.20	0.739	23.69	0.0	2.3	77.691	F
C-AB	0.00	0.00	82.43	0.000	0.00	0.0	0.0	0.000	A
C-A	194.00	194.00			194.00				
A-B	68.00	68.00			68.00				
A-C	293.00	293.00			293.00				

16:30 - 16:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31.00	31.00	36.39	0.852	29.44	2.3	3.9	121.958	F
C-AB	15.65	15.65	241.26	0.065	15.52	0.0	0.1	4.622	A
C-A	182.35	182.35			182.35				
A-B	80.00	80.00			80.00				
A-C	284.00	284.00			284.00				

16:45 - 17:00

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33.00	33.00	39.40	0.837	32.50	3.9	4.4	131.247	F
C-AB	10.47	10.47	254.07	0.041	10.53	0.1	0.1	4.169	A
C-A	196.53	196.53			196.53				
A-B	66.00	66.00			66.00				
A-C	267.00	267.00			267.00				

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36.00	36.00	38.89	0.926	34.39	4.4	6.0	166.238	F
C-AB	0.00	0.00	88.09	0.000	0.07	0.1	0.0	0.000	A
C-A	197.00	197.00			197.00				
A-B	63.00	63.00			63.00				
A-C	277.00	277.00			277.00				

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40.00	40.00	31.51	1.270	30.85	6.0	15.1	325.365	F
C-AB	13.67	13.67	283.47	0.048	13.60	0.0	0.1	3.562	A
C-A	230.33	230.33			230.33				
A-B	62.00	62.00			62.00				
A-C	272.00	272.00			272.00				

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40.00	40.00	45.70	0.875	43.48	15.1	11.7	294.588	F
C-AB	4.54	4.54	243.11	0.019	4.59	0.1	0.0	4.000	A
C-A	185.46	185.46			185.46				
A-B	59.00	59.00			59.00				
A-C	262.00	262.00			262.00				

2022 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A635 / Blacksmiths Lane Junction	T-Junction	Two-way	Two-way	Two-way		8.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically	Relationship type	Relationship
D7	2022 Base + Dev	AM	DIRECT	07:00	08:30	90	15	✓	Simple	D1 + D5 - D3

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - A635 (E)		DIRECT	✓	100.000
B - Blacksmiths Lane		DIRECT	✓	100.000
C - A635 (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:00 - 07:15	From	A - A635 (E)	0.00	26.00	154.00
		B - Blacksmiths Lane	28.00	0.00	0.00
		C - A635 (W)	300.00	0.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:15 - 07:30	From	A - A635 (E)	0.00	43.00	202.00
		B - Blacksmiths Lane	33.00	0.00	0.00
		C - A635 (W)	268.00	1.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:30 - 07:45	From	A - A635 (E)	0.00	45.00	224.00
		B - Blacksmiths Lane	32.00	0.00	1.00
		C - A635 (W)	243.00	4.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:45 - 08:00	From	A - A635 (E)	0.00	47.00	225.00
		B - Blacksmiths Lane	44.00	0.00	0.00
		C - A635 (W)	244.00	0.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
08:00 - 08:15	From	A - A635 (E)	0.00	66.00	219.00
		B - Blacksmiths Lane	42.00	0.00	1.00
		C - A635 (W)	231.00	1.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
08:15 - 08:30	From	A - A635 (E)	0.00	60.00	200.00
		B - Blacksmiths Lane	40.00	0.00	0.00
		C - A635 (W)	227.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:00 - 07:15	From	A - A635 (E)	0	0	23
		B - Blacksmiths Lane	0	0	0
		C - A635 (W)	13	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:15 - 07:30	From	A - A635 (E)	0	0	18
		B - Blacksmiths Lane	3	0	0
		C - A635 (W)	9	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:30 - 07:45	From	A - A635 (E)	0	5	23
		B - Blacksmiths Lane	6	0	0
		C - A635 (W)	13	33	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
07:45 - 08:00	From	A - A635 (E)	0	0	17
		B - Blacksmiths Lane	10	0	0
		C - A635 (W)	17	0	0

Heavy Vehicle Percentages

08:00 - 08:15

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	3	18
	B - Blacksmiths Lane	7	0	0
	C - A635 (W)	16	0	0

Heavy Vehicle Percentages

08:15 - 08:30

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
From	A - A635 (E)	0	0	17
	B - Blacksmiths Lane	5	0	0
	C - A635 (W)	20	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/TS)	Total Junction Arrivals (PCU)
B-AC	0.93	129.05	5.7	F	36.83	221.00
C-AB	0.08	3.81	0.2	A	6.92	41.51
C-A					246.41	1478.49
A-B					47.83	287.00
A-C					204.00	1224.00

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28.00	28.00	59.82	0.468	27.17	0.0	0.8	26.946	D
C-AB	0.00	0.00	131.19	0.000	0.00	0.0	0.0	0.000	A
C-A	300.00	300.00			300.00				
A-B	26.00	26.00			26.00				
A-C	154.00	154.00			154.00				

07:15 - 07:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33.00	33.00	49.48	0.667	32.11	0.8	1.7	49.146	E
C-AB	6.83	6.83	313.98	0.022	6.80	0.0	0.0	3.154	A
C-A	262.17	262.17			262.17				
A-B	43.00	43.00			43.00				
A-C	202.00	202.00			202.00				

07:30 - 07:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33.00	33.00	47.08	0.701	32.64	1.7	2.1	61.223	F
C-AB	23.73	23.73	292.34	0.081	23.59	0.0	0.2	3.814	A
C-A	223.27	223.27			223.27				
A-B	45.00	45.00			45.00				
A-C	224.00	224.00			224.00				

07:45 - 08:00

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44.00	44.00	47.17	0.933	40.89	2.1	5.2	109.188	F
C-AB	0.14	0.14	292.82	0.000	0.31	0.2	0.0	3.574	A
C-A	243.86	243.86			243.86				
A-B	47.00	47.00			47.00				
A-C	225.00	225.00			225.00				

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43.00	43.00	49.30	0.872	42.49	5.2	5.7	129.055	F
C-AB	5.61	5.61	281.08	0.020	5.59	0.0	0.0	3.690	A
C-A	226.39	226.39			226.39				
A-B	66.00	66.00			66.00				
A-C	219.00	219.00			219.00				

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	40.00	40.00	55.61	0.719	42.42	5.7	3.3	80.755	F
C-AB	5.20	5.20	281.35	0.018	5.20	0.0	0.0	3.721	A
C-A	222.80	222.80			222.80				
A-B	60.00	60.00			60.00				
A-C	200.00	200.00			200.00				

2022 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A635 / Blacksmiths Lane Junction	T-Junction	Two-way	Two-way	Two-way		6.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.26	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically	Relationship type	Relationship
D8	2022 Base + Dev	PM	DIRECT	16:15	17:45	90	15	✓	Simple	D2 + D6 - D4

Vehicle mix varies over time	Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
✓	✓	✓	HV Percentages	2.00	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A - A635 (E)		DIRECT	✓	100.000
B - Blacksmiths Lane		DIRECT	✓	100.000
C - A635 (W)		DIRECT	✓	100.000

Origin-Destination Data

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
16:15 - 16:30	From			
	A - A635 (E)	0.00	67.00	261.00
	B - Blacksmiths Lane	25.00	0.00	1.00
	C - A635 (W)	173.00	0.00	0.00

Demand (PCU/TS)

		To		
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
16:30 - 16:45	From			
	A - A635 (E)	0.00	79.00	253.00
	B - Blacksmiths Lane	27.00	0.00	3.00
	C - A635 (W)	175.00	3.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:45 - 17:00	From	A - A635 (E)	0.00	65.00	236.00
		B - Blacksmiths Lane	32.00	0.00	0.00
		C - A635 (W)	184.00	2.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:00 - 17:15	From	A - A635 (E)	0.00	61.00	245.00
		B - Blacksmiths Lane	36.00	0.00	0.00
		C - A635 (W)	176.00	0.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:15 - 17:30	From	A - A635 (E)	0.00	60.00	240.00
		B - Blacksmiths Lane	39.00	0.00	0.00
		C - A635 (W)	220.00	2.00	0.00

Demand (PCU/TS)

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:30 - 17:45	From	A - A635 (E)	0.00	57.00	231.00
		B - Blacksmiths Lane	37.00	0.00	2.00
		C - A635 (W)	169.00	1.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:15 - 16:30	From	A - A635 (E)	0	1	13
		B - Blacksmiths Lane	13	0	0
		C - A635 (W)	13	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:30 - 16:45	From	A - A635 (E)	0	1	9
		B - Blacksmiths Lane	8	0	50
		C - A635 (W)	11	50	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
16:45 - 17:00	From	A - A635 (E)	0	5	10
		B - Blacksmiths Lane	6	0	0
		C - A635 (W)	10	0	0

Heavy Vehicle Percentages

		To			
		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)	
17:00 - 17:15	From	A - A635 (E)	0	3	11
		B - Blacksmiths Lane	3	0	0
		C - A635 (W)	7	0	0

Heavy Vehicle Percentages

17:15 - 17:30

		To		
From		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
	A - A635 (E)	0	7	10
	B - Blacksmiths Lane	5	0	0
	C - A635 (W)	7	0	0

Heavy Vehicle Percentages

17:30 - 17:45

		To		
From		A - A635 (E)	B - Blacksmiths Lane	C - A635 (W)
	A - A635 (E)	0	3	8
	B - Blacksmiths Lane	3	0	0
	C - A635 (W)	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/TS)	Total Junction Arrivals (PCU)
B-AC	0.87	97.12	4.0	F	33.67	202.00
C-AB	0.05	4.89	0.1	A	5.88	35.30
C-A					178.28	1069.70
A-B					64.83	389.00
A-C					244.33	1466.00

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	26.00	26.00	48.48	0.536	24.82	0.0	1.2	41.056	E
C-AB	0.00	0.00	91.32	0.000	0.00	0.0	0.0	0.000	A
C-A	173.00	173.00			173.00				
A-B	67.00	67.00			67.00				
A-C	261.00	261.00			261.00				

16:30 - 16:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	30.00	30.00	49.61	0.605	29.63	1.2	1.6	49.474	E
C-AB	12.52	12.52	230.15	0.054	12.42	0.0	0.1	4.894	A
C-A	165.48	165.48			165.48				
A-B	79.00	79.00			79.00				
A-C	253.00	253.00			253.00				

16:45 - 17:00

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32.00	32.00	52.09	0.614	31.90	1.6	1.6	49.136	E
C-AB	8.39	8.39	242.34	0.035	8.44	0.1	0.1	4.389	A
C-A	177.61	177.61			177.61				
A-B	65.00	65.00			65.00				
A-C	236.00	236.00			236.00				

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	36.00	36.00	52.10	0.691	35.56	1.6	2.1	56.025	F
C-AB	0.00	0.00	97.25	0.000	0.05	0.1	0.0	0.000	A
C-A	176.00	176.00			176.00				
A-B	61.00	61.00			61.00				
A-C	245.00	245.00			245.00				

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39.00	39.00	44.90	0.869	37.13	2.1	4.0	97.117	F
C-AB	10.71	10.71	270.53	0.040	10.65	0.0	0.1	3.690	A
C-A	211.29	211.29			211.29				
A-B	60.00	60.00			60.00				
A-C	240.00	240.00			240.00				

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Junction Arrivals (PCU)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	39.00	39.00	58.91	0.662	40.62	4.0	2.3	55.494	F
C-AB	3.68	3.68	232.79	0.016	3.72	0.1	0.0	4.156	A
C-A	166.32	166.32			166.32				
A-B	57.00	57.00			57.00				
A-C	231.00	231.00			231.00				

Appendix Q

Junctions10 Output - A635 / Church Lane

Junctions 10
PICADY 10 - Priority Intersection Module
Version: 10.0.2.1574 © Copyright TRL Software Limited, 2021
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Filename: 2023-11-16_A635_Church Ln.j10
Path: G:\Shared drives\Jobs3000\3465 Employment Site at Goldthorpe\Junction Models\A635_Church Ln
Report generation date: 30/11/2023 16:12:09

- »Existing Layout - 2022 Base, AM
- »Existing Layout - 2022 Base, PM
- »Existing Layout - 2028 Do Minimum, AM
- »Existing Layout - 2028 Do Minimum, PM
- »Existing Layout - 2028 With Development, AM
- »Existing Layout - 2028 With Development, PM
- »Existing Layout - 2022 Base + Dev, AM
- »Existing Layout - 2022 Base + Dev, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Existing Layout - 2022 Base						
Stream B-C	0.2	17.69	0.14	0.1	9.61	0.07
Stream B-A	1.7	112.84	0.64	0.9	52.63	0.47
Stream C-AB	1.1	4.47	0.24	0.2	3.46	0.10
Existing Layout - 2028 Do Minimum						
Stream B-C	6.2	472.89	1.36	0.1	17.84	0.13
Stream B-A	10.0	533.05	1.34	2.0	121.56	0.70
Stream C-AB	1.8	4.70	0.31	0.4	3.31	0.15
Existing Layout - 2028 With Development						
Stream B-C	11.2	2489.94	2.51	2.6	283.36	1.03
Stream B-A	19.2	2367.41	2.51	4.4	259.20	0.94
Stream C-AB	2.6	4.94	0.36	0.6	3.30	0.18
Existing Layout - 2022 Base + Dev						
Stream B-C	1.6	181.51	0.73	0.1	11.91	0.09
Stream B-A	3.2	212.39	0.84	1.3	77.99	0.57
Stream C-AB	1.4	4.53	0.27	0.3	3.45	0.12

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	A635 / Church Lane
Location	
Site number	
Date	15/11/2023
Version	
Status	Existing
Identifier	
Client	Equites Newlands (Goldthorpe) Ltd
Jobnumber	
Enumerator	Fore Consulting Limited
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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	Relationship type	Relationship
D1	2022 Base	AM	ONE HOUR	07:00	08:30	15	✓		
D2	2022 Base	PM	ONE HOUR	16:15	17:45	15	✓		
D3	2028 Do Minimum	AM	ONE HOUR	07:00	08:30	15	✓		
D4	2028 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓		
D5	2028 With Development	AM	ONE HOUR	07:00	08:30	15	✓		
D6	2028 With Development	PM	ONE HOUR	16:15	17:45	15	✓		
D7	2022 Base + Dev	AM	ONE HOUR	07:00	08:30	15	✓	Simple	D1 + D5 - D3
D8	2022 Base + Dev	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D2 + D6 - D4

Analysis Set Details

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

Existing Layout - 2022 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Church Lane - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	Two-way	Two-way		3.40	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.40	A

Arms

Arms

Arm	Name	Description	Arm type
A	A635 (West)		Major
B	Church Lane		Minor
C	A635 (East)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - A635 (East)	7.23			200.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Church Lane	One lane plus flare	10.00	4.25	2.50	2.50	2.50	✓	1.00	20	20

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	511	0.088	0.223	0.140	0.319
B-C	764	0.111	0.280	-	-
C-B	690	0.253	0.253	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

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)	Run automatically
D1	2022 Base	AM	ONE HOUR	07:00	08:30	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 (PCU/hr)	Scaling Factor (%)
A - A635 (West)		ONE HOUR	✓	1103	100.000
B - Church Lane		ONE HOUR	✓	84	100.000
C - A635 (East)		ONE HOUR	✓	982	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	67	1036
	B - Church Lane	53	0	31
	C - A635 (East)	948	34	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	6	12
	B - Church Lane	8	0	3
	C - A635 (East)	15	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.14	17.69	0.2	C	28	43
B-A	0.64	112.84	1.7	F	49	73
C-AB	0.24	4.47	1.1	A	173	259
C-A					728	1092
A-B					61	92
A-C					951	1426

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	513	0.045	23	0.0	0.0	7.558	A
B-A	40	10	224	0.178	39	0.0	0.2	20.873	C
C-AB	89	22	1003	0.088	88	0.0	0.2	4.415	A
C-A	651	163			651				
A-B	50	13			50				
A-C	780	195			780				

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	451	0.062	28	0.0	0.1	8.766	A
B-A	48	12	169	0.283	47	0.2	0.4	31.790	D
C-AB	144	36	1084	0.133	143	0.2	0.4	4.318	A
C-A	739	185			739				
A-B	60	15			60				
A-C	931	233			931				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	9	271	0.126	34	0.1	0.1	15.626	C
B-A	58	15	91	0.641	54	0.4	1.5	96.373	F
C-AB	283	71	1205	0.235	280	0.4	1.1	4.426	A
C-A	798	200			798				
A-B	74	18			74				
A-C	1141	285			1141				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	9	244	0.140	34	0.1	0.2	17.688	C
B-A	58	15	91	0.644	58	1.5	1.7	112.837	F
C-AB	285	71	1207	0.236	285	1.1	1.1	4.468	A
C-A	796	199			796				
A-B	74	18			74				
A-C	1141	285			1141				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	442	0.063	28	0.2	0.1	8.963	A
B-A	48	12	168	0.284	53	1.7	0.4	34.933	D
C-AB	146	36	1086	0.134	149	1.1	0.4	4.380	A
C-A	737	184			737				
A-B	60	15			60				
A-C	931	233			931				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	512	0.046	23	0.1	0.0	7.594	A
B-A	40	10	224	0.178	41	0.4	0.2	21.295	C
C-AB	90	22	1004	0.089	90	0.4	0.2	4.449	A
C-A	650	162			650				
A-B	50	13			50				
A-C	780	195			780				

Existing Layout - 2022 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Church Lane - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	Two-way	Two-way		1.73	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.73	A

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
D2	2022 Base	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
A - A635 (West)		ONE HOUR	✓	823	100.000
B - Church Lane		ONE HOUR	✓	83	100.000
C - A635 (East)		ONE HOUR	✓	1155	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	38	785
	B - Church Lane	57	0	26
	C - A635 (East)	1142	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	3	7
	B - Church Lane	4	0	0
	C - A635 (East)	7	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.07	9.61	0.1	A	24	36
B-A	0.47	52.63	0.9	F	52	78
C-AB	0.10	3.46	0.2	A	84	126
C-A					976	1464
A-B					35	52
A-C					720	1080

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	568	0.034	19	0.0	0.0	6.564	A
B-A	43	11	253	0.170	42	0.0	0.2	17.680	C
C-AB	40	10	1138	0.035	40	0.0	0.1	3.447	A
C-A	830	207			830				
A-B	29	7			29				
A-C	591	148			591				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	519	0.045	23	0.0	0.0	7.268	A
B-A	51	13	203	0.253	51	0.2	0.3	24.509	C
C-AB	67	17	1243	0.054	67	0.1	0.1	3.231	A
C-A	971	243			971				
A-B	34	9			34				
A-C	706	176			706				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	410	0.070	29	0.0	0.1	9.445	A
B-A	63	16	133	0.470	61	0.3	0.8	50.234	F
C-AB	145	36	1396	0.104	144	0.1	0.2	3.049	A
C-A	1127	282			1127				
A-B	42	10			42				
A-C	864	216			864				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	403	0.071	29	0.1	0.1	9.608	A
B-A	63	16	133	0.471	63	0.8	0.9	52.628	F
C-AB	145	36	1397	0.104	145	0.2	0.2	3.057	A
C-A	1127	282			1127				
A-B	42	10			42				
A-C	864	216			864				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	515	0.045	23	0.1	0.0	7.318	A
B-A	51	13	203	0.253	53	0.9	0.4	25.368	D
C-AB	68	17	1243	0.055	68	0.2	0.1	3.253	A
C-A	971	243			971				
A-B	34	9			34				
A-C	706	176			706				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	567	0.035	20	0.0	0.0	6.584	A
B-A	43	11	253	0.170	44	0.4	0.2	17.922	C
C-AB	40	10	1138	0.035	40	0.1	0.1	3.460	A
C-A	829	207			829				
A-B	29	7			29				
A-C	591	148			591				

Existing Layout - 2028 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Church Lane - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	Two-way	Two-way		19.11	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	19.11	C

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
D3	2028 Do Minimum	AM	ONE HOUR	07:00	08:30	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 (PCU/hr)	Scaling Factor (%)
A - A635 (West)		ONE HOUR	✓	1238	100.000
B - Church Lane		ONE HOUR	✓	87	100.000
C - A635 (East)		ONE HOUR	✓	1061	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	69	1169
	B - Church Lane	55	0	32
	C - A635 (East)	1026	35	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	6	11
	B - Church Lane	8	0	3
	C - A635 (East)	14	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.36	472.89	6.2	F	29	44
B-A	1.34	533.05	10.0	F	50	76
C-AB	0.31	4.70	1.8	A	223	335
C-A					750	1125
A-B					63	95
A-C					1073	1609

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	480	0.050	24	0.0	0.1	8.124	A
B-A	41	10	193	0.214	40	0.0	0.3	25.213	D
C-AB	105	26	1032	0.102	104	0.0	0.2	4.342	A
C-A	694	173			694				
A-B	52	13			52				
A-C	880	220			880				

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	397	0.073	29	0.1	0.1	10.076	B
B-A	49	12	131	0.376	48	0.3	0.6	45.993	E
C-AB	179	45	1122	0.159	177	0.2	0.5	4.283	A
C-A	775	194			775				
A-B	62	16			62				
A-C	1051	263			1051				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	26	1.359	21	0.1	3.8	450.317	F
B-A	61	15	46	1.319	40	0.6	5.8	378.708	F
C-AB	381	95	1259	0.303	376	0.5	1.8	4.627	A
C-A	787	197			787				
A-B	76	19			76				
A-C	1287	322			1287				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	27	1.299	25	3.8	6.2	472.888	F
B-A	61	15	45	1.342	44	5.8	10.0	533.051	F
C-AB	387	97	1263	0.306	387	1.8	1.8	4.700	A
C-A	781	195			781				
A-B	76	19			76				
A-C	1287	322			1287				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	272	0.106	53	6.2	0.1	18.834	C
B-A	49	12	129	0.383	86	10.0	0.8	133.700	F
C-AB	182	45	1126	0.161	187	1.8	0.5	4.367	A
C-A	772	193			772				
A-B	62	16			62				
A-C	1051	263			1051				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	477	0.051	24	0.1	0.1	8.199	A
B-A	41	10	193	0.214	43	0.8	0.3	26.253	D
C-AB	106	27	1033	0.103	107	0.5	0.3	4.379	A
C-A	693	173			693				
A-B	52	13			52				
A-C	880	220			880				

Existing Layout - 2028 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Church Lane - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	Two-way	Two-way		3.49	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.49	A

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
D4	2028 Do Minimum	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
A - A635 (West)		ONE HOUR	✓	909	100.000
B - Church Lane		ONE HOUR	✓	85	100.000
C - A635 (East)		ONE HOUR	✓	1285	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	38	871
	B - Church Lane	58	0	27
	C - A635 (East)	1272	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	3	6
	B - Church Lane	4	0	0
	C - A635 (East)	7	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.13	17.84	0.1	C	25	37
B-A	0.70	121.56	2.0	F	53	80
C-AB	0.15	3.31	0.4	A	120	180
C-A					1059	1589
A-B					35	52
A-C					799	1199

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	546	0.037	20	0.0	0.0	6.849	A
B-A	44	11	225	0.194	43	0.0	0.2	20.446	C
C-AB	49	12	1199	0.040	48	0.0	0.1	3.299	A
C-A	919	230			919				
A-B	29	7			29				
A-C	656	164			656				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	485	0.050	24	0.0	0.1	7.816	A
B-A	52	13	169	0.308	51	0.2	0.4	31.555	D
C-AB	88	22	1320	0.067	88	0.1	0.1	3.091	A
C-A	1067	267			1067				
A-B	34	9			34				
A-C	783	196			783				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	270	0.110	29	0.1	0.1	14.927	B
B-A	64	16	92	0.693	59	0.4	1.7	101.011	F
C-AB	222	56	1498	0.148	221	0.1	0.4	3.001	A
C-A	1192	298			1192				
A-B	42	10			42				
A-C	959	240			959				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	231	0.129	30	0.1	0.1	17.836	C
B-A	64	16	92	0.695	63	1.7	2.0	121.558	F
C-AB	224	56	1499	0.149	224	0.4	0.4	3.011	A
C-A	1191	298			1191				
A-B	42	10			42				
A-C	959	240			959				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	473	0.051	25	0.1	0.1	8.033	A
B-A	52	13	169	0.309	58	2.0	0.5	35.292	E
C-AB	88	22	1321	0.067	90	0.4	0.1	3.117	A
C-A	1067	267			1067				
A-B	34	9			34				
A-C	783	196			783				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	544	0.037	20	0.1	0.0	6.876	A
B-A	44	11	225	0.194	45	0.5	0.3	20.880	C
C-AB	49	12	1200	0.041	49	0.1	0.1	3.312	A
C-A	919	230			919				
A-B	29	7			29				
A-C	656	164			656				

Existing Layout - 2028 With Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Church Lane - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	Two-way	Two-way		84.66	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	84.66	F

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
D5	2028 With Development	AM	ONE HOUR	07:00	08:30	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 (PCU/hr)	Scaling Factor (%)
A - A635 (West)		ONE HOUR	✓	1281	100.000
B - Church Lane		ONE HOUR	✓	87	100.000
C - A635 (East)		ONE HOUR	✓	1128	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	69	1212
	B - Church Lane	55	0	32
	C - A635 (East)	1093	35	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	6	12
	B - Church Lane	8	0	3
	C - A635 (East)	15	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	2.51	2489.94	11.2	F	29	44
B-A	2.51	2367.41	19.2	F	50	76
C-AB	0.36	4.94	2.6	A	264	396
C-A					771	1156
A-B					63	95
A-C					1112	1668

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	468	0.051	24	0.0	0.1	8.337	A
B-A	41	10	179	0.231	40	0.0	0.3	27.747	D
C-AB	116	29	1065	0.109	115	0.0	0.3	4.276	A
C-A	733	183			733				
A-B	52	13			52				
A-C	912	228			912				

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	370	0.078	29	0.1	0.1	10.860	B
B-A	49	12	114	0.432	48	0.3	0.7	56.979	F
C-AB	204	51	1164	0.175	202	0.3	0.6	4.246	A
C-A	810	203			810				
A-B	62	16			62				
A-C	1090	272			1090				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	14	2.495	12	0.1	5.9	933.956	F
B-A	61	15	25	2.401	24	0.7	10.0	879.785	F
C-AB	464	116	1315	0.353	457	0.6	2.5	4.816	A
C-A	778	194			778				
A-B	76	19			76				
A-C	1334	334			1334				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	14	2.506	14	5.9	11.2	2489.943	F
B-A	61	15	24	2.513	24	10.0	19.2	2367.408	F
C-AB	474	119	1321	0.359	474	2.5	2.6	4.938	A
C-A	768	192			768				
A-B	76	19			76				
A-C	1334	334			1334				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	64	0.450	59	11.2	3.8	422.016	F
B-A	49	12	110	0.451	104	19.2	5.6	431.498	F
C-AB	209	52	1171	0.179	217	2.6	0.7	4.356	A
C-A	805	201			805				
A-B	62	16			62				
A-C	1090	272			1090				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	439	0.055	39	3.8	0.1	9.613	A
B-A	41	10	178	0.232	62	5.6	0.3	39.282	E
C-AB	118	29	1067	0.110	119	0.7	0.3	4.318	A
C-A	732	183			732				
A-B	52	13			52				
A-C	912	228			912				

Existing Layout - 2028 With Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Church Lane - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	Two-way	Two-way		9.69	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.69	A

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
D6	2028 With Development	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
A - A635 (West)		ONE HOUR	✓	976	100.000
B - Church Lane		ONE HOUR	✓	85	100.000
C - A635 (East)		ONE HOUR	✓	1332	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	38	938
	B - Church Lane	58	0	27
	C - A635 (East)	1319	13	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A635 (West)	B - Church Lane	C - A635 (East)
From	A - A635 (West)	0	3	8
	B - Church Lane	4	0	0
	C - A635 (East)	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	1.03	283.36	2.6	F	25	37
B-A	0.94	259.20	4.4	F	53	80
C-AB	0.18	3.30	0.6	A	142	213
C-A					1080	1620
A-B					35	52
A-C					861	1291

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	529	0.038	20	0.0	0.0	7.069	A
B-A	44	11	209	0.209	43	0.0	0.3	22.413	C
C-AB	53	13	1219	0.043	53	0.0	0.1	3.284	A
C-A	950	237			950				
A-B	29	7			29				
A-C	706	177			706				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	458	0.053	24	0.0	0.1	8.291	A
B-A	52	13	150	0.348	51	0.3	0.5	37.542	E
C-AB	99	25	1346	0.074	99	0.1	0.1	3.082	A
C-A	1099	275			1099				
A-B	34	9			34				
A-C	843	211			843				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	63	0.475	27	0.1	0.7	95.455	F
B-A	64	16	68	0.935	53	0.5	3.2	186.072	F
C-AB	273	68	1533	0.178	271	0.1	0.6	3.066	A
C-A	1193	298			1193				
A-B	42	10			42				
A-C	1033	258			1033				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	30	7	29	1.025	22	0.7	2.6	283.358	F
B-A	64	16	68	0.939	59	3.2	4.4	259.201	F
C-AB	276	69	1535	0.180	276	0.6	0.6	3.081	A
C-A	1191	298			1191				
A-B	42	10			42				
A-C	1033	258			1033				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	6	420	0.058	34	2.6	0.1	9.566	A
B-A	52	13	149	0.349	68	4.4	0.6	52.891	F
C-AB	100	25	1347	0.074	102	0.6	0.1	3.112	A
C-A	1098	274			1098				
A-B	34	9			34				
A-C	843	211			843				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	527	0.039	20	0.1	0.0	7.110	A
B-A	44	11	209	0.209	45	0.6	0.3	23.048	C
C-AB	53	13	1219	0.044	53	0.1	0.1	3.298	A
C-A	950	237			950				
A-B	29	7			29				
A-C	706	177			706				

Existing Layout - 2022 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Church Lane - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	Two-way	Two-way		7.84	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.84	A

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	Relationship type	Relationship
D7	2022 Base + Dev	AM	ONE HOUR	07:00	08:30	15	✓	Simple	D1 + D5 - D3

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 (PCU/hr)	Scaling Factor (%)
A - A635 (West)		ONE HOUR	✓	1146	100.000
B - Church Lane		ONE HOUR	✓	84	100.000
C - A635 (East)		ONE HOUR	✓	1049	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A - A635 (West)	B - Church Lane	C - A635 (East)
A - A635 (West)	0	67	1079
B - Church Lane	53	0	31
C - A635 (East)	1015	34	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - A635 (West)	B - Church Lane	C - A635 (East)
A - A635 (West)	0	6	13
B - Church Lane	8	0	3
C - A635 (East)	16	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.73	181.51	1.6	F	28	43
B-A	0.84	212.39	3.2	F	49	73
C-AB	0.27	4.53	1.4	A	201	302
C-A					761	1142
A-B					61	92
A-C					990	1485

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	503	0.046	23	0.0	0.0	7.730	A
B-A	40	10	210	0.190	39	0.0	0.2	22.591	C
C-AB	98	24	1035	0.094	97	0.0	0.2	4.342	A
C-A	692	173			692				
A-B	50	13			50				
A-C	812	203			812				

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	433	0.064	28	0.0	0.1	9.143	A
B-A	48	12	151	0.315	47	0.2	0.5	36.837	E
C-AB	163	41	1125	0.145	163	0.2	0.4	4.258	A
C-A	780	195			780				
A-B	60	15			60				
A-C	970	242			970				

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	9	143	0.239	33	0.1	0.3	33.536	D
B-A	58	15	70	0.833	50	0.5	2.5	160.427	F
C-AB	338	85	1259	0.269	335	0.4	1.4	4.477	A
C-A	817	204			817				
A-B	74	18			74				
A-C	1188	297			1188				

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	9	47	0.734	29	0.3	1.6	181.510	F
B-A	58	15	69	0.843	55	2.5	3.2	212.392	F
C-AB	342	86	1262	0.271	342	1.4	1.4	4.532	A
C-A	813	203			813				
A-B	74	18			74				
A-C	1188	297			1188				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	411	0.068	34	1.6	0.1	9.981	A
B-A	48	12	150	0.317	58	3.2	0.5	46.357	E
C-AB	166	41	1128	0.147	170	1.4	0.5	4.336	A
C-A	777	194			777				
A-B	60	15			60				
A-C	970	242			970				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	501	0.047	23	0.1	0.1	7.771	A
B-A	40	10	210	0.190	41	0.5	0.3	23.174	C
C-AB	99	25	1037	0.095	100	0.5	0.2	4.380	A
C-A	691	173			691				
A-B	50	13			50				
A-C	812	203			812				

Existing Layout - 2022 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	B - Church Lane - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Junction 1	T-Junction	Two-way	Two-way	Two-way		2.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.35	A

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	Relationship type	Relationship
D8	2022 Base + Dev	PM	ONE HOUR	16:15	17:45	15	✓	Simple	D2 + D6 - D4

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 (PCU/hr)	Scaling Factor (%)
A - A635 (West)		ONE HOUR	✓	890	100.000
B - Church Lane		ONE HOUR	✓	83	100.000
C - A635 (East)		ONE HOUR	✓	1202	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To		
	A - A635 (West)	B - Church Lane	C - A635 (East)
A - A635 (West)	0	38	852
B - Church Lane	57	0	26
C - A635 (East)	1189	13	0

Vehicle Mix

Heavy Vehicle Percentages

From	To		
	A - A635 (West)	B - Church Lane	C - A635 (East)
A - A635 (West)	0	3	9
B - Church Lane	4	0	0
C - A635 (East)	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.09	11.91	0.1	B	24	36
B-A	0.57	77.99	1.3	F	52	78
C-AB	0.12	3.45	0.3	A	97	145
C-A					1006	1510
A-B					35	52
A-C					782	1173

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	552	0.035	19	0.0	0.0	6.757	A
B-A	43	11	237	0.181	42	0.0	0.2	19.134	C
C-AB	43	11	1157	0.037	43	0.0	0.1	3.431	A
C-A	862	215			862				
A-B	29	7			29				
A-C	641	160			641				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	497	0.047	23	0.0	0.0	7.606	A
B-A	51	13	183	0.279	51	0.2	0.4	28.032	D
C-AB	75	19	1267	0.059	75	0.1	0.1	3.216	A
C-A	1005	251			1005				
A-B	34	9			34				
A-C	766	191			766				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	346	0.083	28	0.0	0.1	11.323	B
B-A	63	16	110	0.572	60	0.4	1.2	70.937	F
C-AB	171	43	1430	0.119	170	0.1	0.3	3.062	A
C-A	1153	288			1153				
A-B	42	10			42				
A-C	938	235			938				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	331	0.087	29	0.1	0.1	11.912	B
B-A	63	16	110	0.573	62	1.2	1.3	77.990	F
C-AB	171	43	1430	0.120	171	0.3	0.3	3.074	A
C-A	1152	288			1152				
A-B	42	10			42				
A-C	938	235			938				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	491	0.048	24	0.1	0.1	7.709	A
B-A	51	13	183	0.280	55	1.3	0.4	29.780	D
C-AB	75	19	1268	0.060	76	0.3	0.1	3.241	A
C-A	1005	251			1005				
A-B	34	9			34				
A-C	766	191			766				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	5	551	0.036	20	0.1	0.0	6.782	A
B-A	43	11	237	0.181	44	0.4	0.2	19.460	C
C-AB	44	11	1157	0.038	44	0.1	0.1	3.449	A
C-A	861	215			861				
A-B	29	7			29				
A-C	641	160			641				

Appendix R

Junctions10 Output - Cathill Roundabout

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.2.1574 © Copyright TRL Software Limited, 2021
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Filename: 2023-11-15_Cathill Roundabout.j10
Path: G:\Shared drives\Jobs3000\3465 Employment Site at Goldthorpe\Junction Models\Cathill Roundabout
Report generation date: 30/11/2023 15:38:18

- »Existing Layout - 2022 Base, AM
- »Existing Layout - 2022 Base, PM
- »Existing Layout - 2028 Do Minimum, AM
- »Existing Layout - 2028 Do Minimum, PM
- »Existing Layout - 2028 With Development, AM
- »Existing Layout - 2028 With Development, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Existing Layout - 2022 Base						
1 - A6195 (North)	1.0	3.62	0.49	0.8	2.91	0.43
2 - A635 (East)	1.1	3.41	0.49	1.2	3.43	0.54
3 - A6195 (South)	1.0	2.97	0.48	1.3	3.38	0.55
4 - A635 (West)	1.4	6.08	0.57	0.9	4.87	0.45
Existing Layout - 2028 Do Minimum						
1 - A6195 (North)	1.3	4.31	0.56	1.1	3.70	0.52
2 - A635 (East)	1.8	4.57	0.62	1.7	4.29	0.62
3 - A6195 (South)	1.4	3.59	0.56	1.9	4.43	0.65
4 - A635 (West)	2.1	8.41	0.66	1.3	6.57	0.56
Existing Layout - 2028 With Development						
1 - A6195 (North)	1.7	5.36	0.62	1.3	4.07	0.55
2 - A635 (East)	2.2	5.34	0.67	2.8	5.94	0.72
3 - A6195 (South)	1.8	4.29	0.62	2.4	5.43	0.70
4 - A635 (West)	3.2	12.16	0.75	1.6	7.93	0.61

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	Cathill Roundabout
Location	
Site number	
Date	15/11/2023
Version	
Status	Existing
Identifier	
Client	Equites Newlands (Goldthorpe) Ltd
Jobnumber	
Enumerator	Fore Consulting Limited
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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	2022 Base	AM	ONE HOUR	07:00	08:30	15	✓
D2	2022 Base	PM	ONE HOUR	16:00	17:30	15	✓
D3	2028 Do Minimum	AM	ONE HOUR	07:00	08:30	15	✓
D4	2028 Do Minimum	PM	ONE HOUR	16:00	17:30	15	✓
D5	2028 With Development	AM	ONE HOUR	07:00	08:30	15	✓
D6	2028 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

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

Existing Layout - 2022 Base, 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		1, 2, 3, 4	3.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.86	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A6195 (North)		
2	A635 (East)		
3	A6195 (South)		
4	A635 (West)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - A6195 (North)	7.29	11.47	12.0	26.1	80.8	14.5		
2 - A635 (East)	8.25	10.21	13.9	28.3	80.1	19.3		
3 - A6195 (South)	6.92	10.75	18.3	31.4	80.8	6.2		
4 - A635 (West)	3.93	9.63	18.3	22.7	80.5	17.4		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A6195 (North)	0.674	2992
2 - A635 (East)	0.683	3059
3 - A6195 (South)	0.693	3072
4 - A635 (West)	0.549	2158

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
D1	2022 Base	AM	ONE HOUR	07:00	08:30	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	934	100.000
2 - A635 (East)		ONE HOUR	✓	1049	100.000
3 - A6195 (South)		ONE HOUR	✓	1119	100.000
4 - A635 (West)		ONE HOUR	✓	756	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	156	629	149
	2 - A635 (East)	136	0	505	408
	3 - A6195 (South)	481	525	0	113
	4 - A635 (West)	59	519	178	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	14	4	9
	2 - A635 (East)	12	0	15	9
	3 - A6195 (South)	7	10	0	5
	4 - A635 (West)	9	8	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.49	3.62	1.0	A	857	1286
2 - A635 (East)	0.49	3.41	1.1	A	963	1444
3 - A6195 (South)	0.48	2.97	1.0	A	1027	1540
4 - A635 (West)	0.57	6.08	1.4	A	694	1041

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	703	176	917	2374	0.296	701	508	0.0	0.4	2.287	A
2 - A635 (East)	790	197	718	2569	0.307	788	901	0.0	0.5	2.266	A
3 - A6195 (South)	842	211	520	2711	0.311	840	985	0.0	0.5	2.080	A
4 - A635 (West)	569	142	858	1687	0.337	567	503	0.0	0.5	3.446	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	840	210	1097	2252	0.373	839	607	0.4	0.6	2.707	A
2 - A635 (East)	943	236	859	2473	0.381	942	1078	0.5	0.7	2.637	A
3 - A6195 (South)	1006	251	622	2640	0.381	1005	1178	0.5	0.7	2.380	A
4 - A635 (West)	680	170	1026	1595	0.426	679	602	0.5	0.8	4.215	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1028	257	1343	2087	0.493	1027	743	0.6	1.0	3.606	A
2 - A635 (East)	1155	289	1051	2342	0.493	1153	1319	0.7	1.1	3.394	A
3 - A6195 (South)	1232	308	762	2544	0.484	1231	1442	0.7	1.0	2.963	A
4 - A635 (West)	832	208	1256	1468	0.567	830	737	0.8	1.4	6.031	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1028	257	1345	2085	0.493	1028	744	1.0	1.0	3.621	A
2 - A635 (East)	1155	289	1053	2340	0.493	1155	1321	1.1	1.1	3.406	A
3 - A6195 (South)	1232	308	763	2543	0.484	1232	1445	1.0	1.0	2.969	A
4 - A635 (West)	832	208	1257	1467	0.567	832	738	1.4	1.4	6.084	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	840	210	1101	2250	0.373	841	609	1.0	0.6	2.722	A
2 - A635 (East)	943	236	861	2471	0.382	945	1081	1.1	0.7	2.650	A
3 - A6195 (South)	1006	251	624	2639	0.381	1007	1182	1.0	0.7	2.389	A
4 - A635 (West)	680	170	1028	1593	0.427	682	603	1.4	0.8	4.252	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	703	176	921	2371	0.297	704	509	0.6	0.4	2.298	A
2 - A635 (East)	790	197	721	2567	0.308	791	905	0.7	0.5	2.274	A
3 - A6195 (South)	842	211	522	2710	0.311	843	989	0.7	0.5	2.086	A
4 - A635 (West)	569	142	861	1685	0.338	570	505	0.8	0.6	3.470	A

Existing Layout - 2022 Base, 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		1, 2, 3, 4	3.51	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.51	A

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
D2	2022 Base	PM	ONE HOUR	16:00	17:30	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	882	100.000
2 - A635 (East)		ONE HOUR	✓	1179	100.000
3 - A6195 (South)		ONE HOUR	✓	1234	100.000
4 - A635 (West)		ONE HOUR	✓	574	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	161	567	154
	2 - A635 (East)	179	0	549	451
	3 - A6195 (South)	609	469	0	156
	4 - A635 (West)	67	360	147	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	9	3	7
	2 - A635 (East)	12	0	5	4
	3 - A6195 (South)	3	8	0	2
	4 - A635 (West)	8	4	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.43	2.91	0.8	A	809	1214
2 - A635 (East)	0.54	3.43	1.2	A	1082	1623
3 - A6195 (South)	0.55	3.38	1.3	A	1132	1699
4 - A635 (West)	0.45	4.87	0.9	A	527	790

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	664	166	733	2498	0.266	663	642	0.0	0.4	2.052	A
2 - A635 (East)	888	222	652	2614	0.340	885	743	0.0	0.5	2.196	A
3 - A6195 (South)	929	232	589	2664	0.349	927	948	0.0	0.6	2.167	A
4 - A635 (West)	432	108	944	1639	0.264	431	572	0.0	0.4	3.082	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	793	198	877	2401	0.330	792	768	0.4	0.5	2.344	A
2 - A635 (East)	1060	265	780	2527	0.419	1059	889	0.5	0.8	2.589	A
3 - A6195 (South)	1109	277	704	2584	0.429	1108	1134	0.6	0.8	2.554	A
4 - A635 (West)	516	129	1129	1538	0.336	515	684	0.4	0.5	3.648	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	971	243	1073	2269	0.428	970	940	0.5	0.8	2.900	A
2 - A635 (East)	1298	325	954	2407	0.539	1296	1088	0.8	1.2	3.415	A
3 - A6195 (South)	1359	340	862	2474	0.549	1357	1389	0.8	1.3	3.367	A
4 - A635 (West)	632	158	1382	1399	0.452	631	837	0.5	0.8	4.849	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	971	243	1075	2268	0.428	971	941	0.8	0.8	2.907	A
2 - A635 (East)	1298	325	956	2407	0.539	1298	1090	1.2	1.2	3.429	A
3 - A6195 (South)	1359	340	863	2474	0.549	1359	1391	1.3	1.3	3.380	A
4 - A635 (West)	632	158	1384	1398	0.452	632	838	0.8	0.9	4.871	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	793	198	879	2399	0.330	794	770	0.8	0.5	2.351	A
2 - A635 (East)	1060	265	782	2526	0.420	1062	892	1.2	0.8	2.600	A
3 - A6195 (South)	1109	277	706	2583	0.430	1111	1137	1.3	0.8	2.566	A
4 - A635 (West)	516	129	1132	1536	0.336	517	685	0.9	0.5	3.668	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	664	166	736	2496	0.266	665	644	0.5	0.4	2.060	A
2 - A635 (East)	888	222	654	2613	0.340	889	746	0.8	0.5	2.207	A
3 - A6195 (South)	929	232	591	2662	0.349	930	952	0.8	0.6	2.176	A
4 - A635 (West)	432	108	947	1638	0.264	433	573	0.5	0.4	3.100	A

Existing Layout - 2028 Do Minimum, 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		1, 2, 3, 4	4.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.95	A

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
D3	2028 Do Minimum	AM	ONE HOUR	07:00	08:30	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1020	100.000
2 - A635 (East)		ONE HOUR	✓	1285	100.000
3 - A6195 (South)		ONE HOUR	✓	1248	100.000
4 - A635 (West)		ONE HOUR	✓	821	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	169	697	154
	2 - A635 (East)	185	0	622	478
	3 - A6195 (South)	545	586	0	117
	4 - A635 (West)	80	557	184	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	13	4	8
	2 - A635 (East)	9	0	12	8
	3 - A6195 (South)	6	9	0	5
	4 - A635 (West)	7	8	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.56	4.31	1.3	A	936	1404
2 - A635 (East)	0.62	4.57	1.8	A	1179	1769
3 - A6195 (South)	0.56	3.59	1.4	A	1145	1718
4 - A635 (West)	0.66	8.41	2.1	A	753	1130

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	768	192	996	2321	0.331	766	608	0.0	0.5	2.450	A
2 - A635 (East)	967	242	777	2529	0.383	965	985	0.0	0.7	2.528	A
3 - A6195 (South)	940	235	613	2647	0.355	937	1128	0.0	0.6	2.256	A
4 - A635 (West)	618	155	988	1615	0.383	615	562	0.0	0.7	3.850	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	917	229	1191	2189	0.419	916	727	0.5	0.8	2.996	A
2 - A635 (East)	1155	289	929	2425	0.476	1154	1178	0.7	1.0	3.115	A
3 - A6195 (South)	1122	280	734	2563	0.438	1121	1350	0.6	0.8	2.677	A
4 - A635 (West)	738	185	1182	1509	0.489	737	673	0.7	1.0	4.989	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1123	281	1456	2010	0.559	1121	890	0.8	1.3	4.278	A
2 - A635 (East)	1415	354	1137	2283	0.620	1412	1440	1.0	1.8	4.530	A
3 - A6195 (South)	1374	344	898	2450	0.561	1372	1651	0.8	1.4	3.576	A
4 - A635 (West)	904	226	1447	1364	0.663	900	823	1.0	2.1	8.249	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1123	281	1461	2007	0.559	1123	892	1.3	1.3	4.314	A
2 - A635 (East)	1415	354	1139	2281	0.620	1415	1444	1.8	1.8	4.572	A
3 - A6195 (South)	1374	344	899	2448	0.561	1374	1655	1.4	1.4	3.594	A
4 - A635 (West)	904	226	1449	1362	0.664	904	825	2.1	2.1	8.412	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	917	229	1198	2185	0.420	919	730	1.3	0.8	3.020	A
2 - A635 (East)	1155	289	933	2422	0.477	1158	1184	1.8	1.0	3.142	A
3 - A6195 (South)	1122	280	736	2561	0.438	1124	1355	1.4	0.8	2.690	A
4 - A635 (West)	738	185	1185	1507	0.490	742	675	2.1	1.0	5.075	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	768	192	1001	2317	0.331	769	611	0.8	0.5	2.467	A
2 - A635 (East)	967	242	780	2526	0.383	969	989	1.0	0.7	2.546	A
3 - A6195 (South)	940	235	616	2645	0.355	941	1133	0.8	0.6	2.267	A
4 - A635 (West)	618	155	992	1613	0.383	620	565	1.0	0.7	3.891	A

Existing Layout - 2028 Do Minimum, 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		1, 2, 3, 4	4.53	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.53	A

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
D4	2028 Do Minimum	PM	ONE HOUR	16:00	17:30	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1014	100.000
2 - A635 (East)		ONE HOUR	✓	1316	100.000
3 - A6195 (South)		ONE HOUR	✓	1416	100.000
4 - A635 (West)		ONE HOUR	✓	650	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	202	636	176
	2 - A635 (East)	198	0	623	495
	3 - A6195 (South)	674	581	0	161
	4 - A635 (West)	71	427	152	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	7	3	6
	2 - A635 (East)	11	0	5	4
	3 - A6195 (South)	3	7	0	2
	4 - A635 (West)	7	3	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.52	3.70	1.1	A	930	1396
2 - A635 (East)	0.62	4.29	1.7	A	1208	1811
3 - A6195 (South)	0.65	4.43	1.9	A	1299	1949
4 - A635 (West)	0.56	6.57	1.3	A	596	895

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	763	191	870	2405	0.317	761	708	0.0	0.5	2.282	A
2 - A635 (East)	991	248	724	2565	0.386	988	908	0.0	0.7	2.404	A
3 - A6195 (South)	1066	267	653	2620	0.407	1063	1059	0.0	0.7	2.413	A
4 - A635 (West)	489	122	1091	1559	0.314	487	625	0.0	0.5	3.453	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	912	228	1041	2290	0.398	911	847	0.5	0.7	2.721	A
2 - A635 (East)	1183	296	866	2468	0.479	1182	1086	0.7	1.0	2.949	A
3 - A6195 (South)	1273	318	780	2531	0.503	1272	1267	0.7	1.1	2.984	A
4 - A635 (West)	584	146	1305	1441	0.405	583	747	0.5	0.7	4.315	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1116	279	1274	2133	0.523	1115	1036	0.7	1.1	3.679	A
2 - A635 (East)	1449	362	1059	2336	0.620	1446	1329	1.0	1.7	4.254	A
3 - A6195 (South)	1559	390	955	2410	0.647	1556	1550	1.1	1.9	4.385	A
4 - A635 (West)	716	179	1596	1281	0.559	713	914	0.7	1.3	6.496	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1116	279	1277	2131	0.524	1116	1038	1.1	1.1	3.699	A
2 - A635 (East)	1449	362	1061	2334	0.621	1449	1332	1.7	1.7	4.287	A
3 - A6195 (South)	1559	390	957	2409	0.647	1559	1553	1.9	1.9	4.427	A
4 - A635 (West)	716	179	1600	1280	0.559	716	916	1.3	1.3	6.571	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	912	228	1046	2287	0.399	913	850	1.1	0.7	2.736	A
2 - A635 (East)	1183	296	869	2466	0.480	1186	1091	1.7	1.0	2.972	A
3 - A6195 (South)	1273	318	783	2529	0.503	1276	1272	1.9	1.1	3.009	A
4 - A635 (West)	584	146	1310	1439	0.406	587	750	1.3	0.7	4.362	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	763	191	875	2402	0.318	764	711	0.7	0.5	2.292	A
2 - A635 (East)	991	248	727	2563	0.387	992	912	1.0	0.7	2.420	A
3 - A6195 (South)	1066	267	655	2618	0.407	1067	1064	1.1	0.7	2.427	A
4 - A635 (West)	489	122	1095	1556	0.314	490	627	0.7	0.5	3.480	A

Existing Layout - 2028 With 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		1, 2, 3, 4	6.31	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.31	A

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
D5	2028 With Development	AM	ONE HOUR	07:00	08:30	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1057	100.000
2 - A635 (East)		ONE HOUR	✓	1384	100.000
3 - A6195 (South)		ONE HOUR	✓	1372	100.000
4 - A635 (West)		ONE HOUR	✓	872	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	206	697	154
	2 - A635 (East)	200	0	684	500
	3 - A6195 (South)	545	710	0	117
	4 - A635 (West)	80	608	184	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	14	4	8
	2 - A635 (East)	12	0	15	9
	3 - A6195 (South)	6	11	0	5
	4 - A635 (West)	7	9	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.62	5.36	1.7	A	970	1455
2 - A635 (East)	0.67	5.34	2.2	A	1270	1905
3 - A6195 (South)	0.62	4.29	1.8	A	1259	1888
4 - A635 (West)	0.75	12.16	3.2	B	800	1200

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	796	199	1127	2233	0.356	793	619	0.0	0.6	2.656	A
2 - A635 (East)	1042	260	777	2529	0.412	1039	1143	0.0	0.8	2.708	A
3 - A6195 (South)	1033	258	641	2628	0.393	1030	1174	0.0	0.7	2.439	A
4 - A635 (West)	656	164	1092	1558	0.421	653	579	0.0	0.8	4.281	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	950	238	1348	2083	0.456	949	741	0.6	0.9	3.373	A
2 - A635 (East)	1244	311	929	2425	0.513	1243	1368	0.8	1.2	3.416	A
3 - A6195 (South)	1233	308	767	2540	0.486	1232	1405	0.7	1.0	2.981	A
4 - A635 (West)	784	196	1307	1440	0.544	782	692	0.8	1.3	5.883	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1164	291	1646	1883	0.618	1161	906	0.9	1.7	5.280	A
2 - A635 (East)	1524	381	1135	2284	0.667	1520	1671	1.2	2.2	5.263	A
3 - A6195 (South)	1511	378	938	2422	0.624	1508	1717	1.0	1.8	4.255	A
4 - A635 (West)	960	240	1599	1280	0.750	953	847	1.3	3.1	11.625	B

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1164	291	1653	1878	0.620	1164	908	1.7	1.7	5.363	A
2 - A635 (East)	1524	381	1139	2281	0.668	1524	1678	2.2	2.2	5.337	A
3 - A6195 (South)	1511	378	940	2420	0.624	1511	1723	1.8	1.8	4.291	A
4 - A635 (West)	960	240	1602	1278	0.751	960	849	3.1	3.2	12.163	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	950	238	1359	2076	0.458	953	744	1.7	0.9	3.420	A
2 - A635 (East)	1244	311	935	2421	0.514	1248	1377	2.2	1.2	3.459	A
3 - A6195 (South)	1233	308	770	2538	0.486	1236	1413	1.8	1.0	3.008	A
4 - A635 (West)	784	196	1311	1438	0.545	791	695	3.2	1.3	6.079	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	796	199	1133	2228	0.357	797	622	0.9	0.6	2.680	A
2 - A635 (East)	1042	260	781	2526	0.412	1044	1150	1.2	0.8	2.732	A
3 - A6195 (South)	1033	258	644	2626	0.393	1034	1180	1.0	0.7	2.456	A
4 - A635 (West)	656	164	1097	1556	0.422	659	581	1.3	0.8	4.341	A

Existing Layout - 2028 With 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		1, 2, 3, 4	5.66	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.66	A

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
D6	2028 With Development	PM	ONE HOUR	16:00	17:30	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1031	100.000
2 - A635 (East)		ONE HOUR	✓	1532	100.000
3 - A6195 (South)		ONE HOUR	✓	1485	100.000
4 - A635 (West)		ONE HOUR	✓	674	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	219	636	176
	2 - A635 (East)	236	0	748	548
	3 - A6195 (South)	674	650	0	161
	4 - A635 (West)	71	451	152	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A6195 (North)	2 - A635 (East)	3 - A6195 (South)	4 - A635 (West)
From	1 - A6195 (North)	0	10	3	6
	2 - A635 (East)	12	0	7	5
	3 - A6195 (South)	3	11	0	2
	4 - A635 (West)	7	5	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.55	4.07	1.3	A	946	1419
2 - A635 (East)	0.72	5.94	2.8	A	1406	2109
3 - A6195 (South)	0.70	5.43	2.4	A	1363	2044
4 - A635 (West)	0.61	7.93	1.6	A	618	928

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	776	194	940	2358	0.329	774	736	0.0	0.5	2.381	A
2 - A635 (East)	1153	288	724	2565	0.450	1150	991	0.0	0.9	2.715	A
3 - A6195 (South)	1118	279	721	2572	0.435	1115	1153	0.0	0.8	2.618	A
4 - A635 (West)	507	127	1171	1515	0.335	505	664	0.0	0.5	3.710	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	927	232	1125	2234	0.415	926	881	0.5	0.7	2.887	A
2 - A635 (East)	1377	344	866	2468	0.558	1375	1185	0.9	1.3	3.519	A
3 - A6195 (South)	1335	334	862	2474	0.540	1333	1379	0.8	1.2	3.347	A
4 - A635 (West)	606	151	1401	1389	0.436	605	795	0.5	0.8	4.781	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1135	284	1375	2065	0.550	1133	1077	0.7	1.3	4.042	A
2 - A635 (East)	1687	422	1059	2336	0.722	1681	1449	1.3	2.7	5.834	A
3 - A6195 (South)	1635	409	1054	2341	0.698	1630	1686	1.2	2.4	5.344	A
4 - A635 (West)	742	186	1713	1218	0.609	739	972	0.8	1.6	7.791	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1135	284	1379	2062	0.550	1135	1080	1.3	1.3	4.074	A
2 - A635 (East)	1687	422	1061	2334	0.723	1687	1453	2.7	2.8	5.942	A
3 - A6195 (South)	1635	409	1057	2339	0.699	1635	1691	2.4	2.4	5.428	A
4 - A635 (West)	742	186	1717	1215	0.611	742	974	1.6	1.6	7.935	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	927	232	1131	2229	0.416	929	885	1.3	0.8	2.911	A
2 - A635 (East)	1377	344	869	2466	0.559	1383	1191	2.8	1.4	3.573	A
3 - A6195 (South)	1335	334	866	2471	0.540	1340	1386	2.4	1.3	3.395	A
4 - A635 (West)	606	151	1407	1385	0.437	609	798	1.6	0.8	4.856	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	776	194	945	2355	0.330	777	740	0.8	0.5	2.395	A
2 - A635 (East)	1153	288	727	2563	0.450	1155	995	1.4	0.9	2.741	A
3 - A6195 (South)	1118	279	724	2570	0.435	1120	1158	1.3	0.8	2.639	A
4 - A635 (West)	507	127	1176	1512	0.336	509	667	0.8	0.5	3.747	A

Appendix S

Junctions10 Output - Broomhill Roundabout

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.2.1574 © Copyright TRL Software Limited, 2021
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Filename: 2023-11-15_Broomhill Roundabout.j10
Path: G:\Shared drives\Jobs3000\3465 Employment Site at Goldthorpe\Junction Models\Broomhill Roundabout
Report generation date: 30/11/2023 15:41:04

- »Existing Layout - 2022 Base, AM
- »Existing Layout - 2022 Base, PM
- »Existing Layout - 2028 Do Minimum, AM
- »Existing Layout - 2028 Do Minimum, PM
- »Existing Layout - 2028 With Development, AM
- »Existing Layout - 2028 With Development, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Existing Layout - 2022 Base						
1 - Pontefract Road	0.0	3.71	0.03	0.0	4.10	0.04
2 - A6195 (North)	0.6	1.63	0.37	0.7	1.65	0.39
3 - A633 Manvers Way	1.9	5.87	0.65	2.2	6.39	0.68
4 - A6195 (South)	0.9	2.66	0.46	1.2	3.07	0.54
Existing Layout - 2028 Do Minimum						
1 - Pontefract Road	0.0	4.06	0.05	0.1	4.83	0.05
2 - A6195 (North)	0.8	1.80	0.43	0.8	1.82	0.44
3 - A633 Manvers Way	2.7	7.69	0.72	3.5	9.43	0.78
4 - A6195 (South)	1.1	2.96	0.50	1.6	3.75	0.61
Existing Layout - 2028 With Development						
1 - Pontefract Road	0.1	4.41	0.05	0.1	5.11	0.06
2 - A6195 (North)	0.9	1.88	0.45	0.9	1.97	0.48
3 - A633 Manvers Way	3.4	9.13	0.76	4.3	11.31	0.81
4 - A6195 (South)	1.3	3.31	0.55	1.8	4.11	0.64

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	Broomhill Roundabout
Location	
Site number	
Date	15/11/2023
Version	
Status	Existing
Identifier	
Client	Equites Newlands (Goldthorpe) Ltd
Jobnumber	
Enumerator	Fore Consulting Limited
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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	2022 Base	AM	ONE HOUR	07:15	08:45	15	✓
D2	2022 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2028 Do Minimum	AM	ONE HOUR	07:15	08:45	15	✓
D4	2028 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D5	2028 With Development	AM	ONE HOUR	07:15	08:45	15	✓
D6	2028 With Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

Existing Layout - 2022 Base, 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		1, 2, 3, 4	3.29	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.29	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Pontefract Road		
2	A6195 (North)		
3	A633 Manvers Way		
4	A6195 (South)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Pontefract Road	3.75	10.51	15.6	26.4	76.2	20.3		
2 - A6195 (North)	10.59	15.65	18.7	66.2	79.5	21.7		
3 - A633 Manvers Way	4.33	9.73	21.9	37.1	84.9	28.5		
4 - A6195 (South)	7.97	10.13	22.6	43.2	76.8	16.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Pontefract Road	0.551	2086
2 - A6195 (North)	0.868	4286
3 - A633 Manvers Way	0.553	2288
4 - A6195 (South)	0.712	3135

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
D1	2022 Base	AM	ONE HOUR	07:15	08:45	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 (PCU/hr)	Scaling Factor (%)
1 - Pontefract Road		ONE HOUR	✓	31	100.000
2 - A6195 (North)		ONE HOUR	✓	1279	100.000
3 - A633 Manvers Way		ONE HOUR	✓	1088	100.000
4 - A6195 (South)		ONE HOUR	✓	1114	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	12	8	11
	2 - A6195 (North)	4	3	583	689
	3 - A633 Manvers Way	10	565	0	513
	4 - A6195 (South)	5	612	497	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	9	0	10
	2 - A6195 (North)	0	0	9	7
	3 - A633 Manvers Way	0	9	0	6
	4 - A6195 (South)	25	9	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Pontefract Road	0.03	3.71	0.0	A	28	43
2 - A6195 (North)	0.37	1.63	0.6	A	1174	1760
3 - A633 Manvers Way	0.65	5.87	1.9	A	998	1498
4 - A6195 (South)	0.46	2.66	0.9	A	1022	1533

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	23	6	1259	1393	0.017	23	14	0.0	0.0	2.808	A
2 - A6195 (North)	963	241	388	3949	0.244	962	895	0.0	0.3	1.299	A
3 - A633 Manvers Way	819	205	531	1994	0.411	816	818	0.0	0.7	3.278	A
4 - A6195 (South)	839	210	437	2824	0.297	837	911	0.0	0.5	1.941	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	28	7	1506	1257	0.022	28	17	0.0	0.0	3.129	A
2 - A6195 (North)	1150	287	464	3883	0.296	1149	1071	0.3	0.5	1.419	A
3 - A633 Manvers Way	978	245	635	1936	0.505	977	978	0.7	1.1	4.027	A
4 - A6195 (South)	1001	250	522	2763	0.362	1001	1090	0.5	0.6	2.191	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	34	9	1844	1071	0.032	34	21	0.0	0.0	3.708	A
2 - A6195 (North)	1408	352	568	3793	0.371	1407	1310	0.5	0.6	1.627	A
3 - A633 Manvers Way	1198	299	778	1857	0.645	1195	1197	1.1	1.9	5.810	A
4 - A6195 (South)	1227	307	639	2680	0.458	1225	1334	0.6	0.9	2.651	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	34	9	1846	1070	0.032	34	21	0.0	0.0	3.714	A
2 - A6195 (North)	1408	352	568	3793	0.371	1408	1312	0.6	0.6	1.627	A
3 - A633 Manvers Way	1198	299	778	1857	0.645	1198	1198	1.9	1.9	5.867	A
4 - A6195 (South)	1227	307	641	2679	0.458	1227	1336	0.9	0.9	2.658	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	28	7	1510	1255	0.022	28	17	0.0	0.0	3.138	A
2 - A6195 (North)	1150	287	464	3883	0.296	1151	1074	0.6	0.5	1.421	A
3 - A633 Manvers Way	978	245	636	1936	0.505	981	979	1.9	1.1	4.067	A
4 - A6195 (South)	1001	250	525	2761	0.363	1003	1092	0.9	0.6	2.196	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	23	6	1264	1390	0.017	23	14	0.0	0.0	2.815	A
2 - A6195 (North)	963	241	389	3948	0.244	963	898	0.5	0.3	1.300	A
3 - A633 Manvers Way	819	205	533	1993	0.411	821	820	1.1	0.8	3.303	A
4 - A6195 (South)	839	210	439	2822	0.297	839	914	0.6	0.5	1.947	A

Existing Layout - 2022 Base, 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		1, 2, 3, 4	3.59	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.59	A

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
D2	2022 Base	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
1 - Pontefract Road		ONE HOUR	✓	35	100.000
2 - A6195 (North)		ONE HOUR	✓	1292	100.000
3 - A633 Manvers Way		ONE HOUR	✓	1123	100.000
4 - A6195 (South)		ONE HOUR	✓	1290	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	15	11	9
	2 - A6195 (North)	7	0	531	754
	3 - A633 Manvers Way	30	608	0	485
	4 - A6195 (South)	11	651	628	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	0	0	13
	2 - A6195 (North)	0	0	3	3
	3 - A633 Manvers Way	0	4	0	3
	4 - A6195 (South)	0	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Pontefract Road	0.04	4.10	0.0	A	32	48
2 - A6195 (North)	0.39	1.65	0.7	A	1186	1778
3 - A633 Manvers Way	0.68	6.39	2.2	A	1030	1546
4 - A6195 (South)	0.54	3.07	1.2	A	1184	1776

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	26	7	1417	1306	0.020	26	36	0.0	0.0	2.898	A
2 - A6195 (North)	973	243	487	3863	0.252	971	956	0.0	0.3	1.282	A
3 - A633 Manvers Way	845	211	579	1967	0.430	842	879	0.0	0.8	3.303	A
4 - A6195 (South)	971	243	484	2790	0.348	969	937	0.0	0.5	2.032	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	31	8	1695	1153	0.027	31	43	0.0	0.0	3.306	A
2 - A6195 (North)	1161	290	582	3780	0.307	1161	1144	0.3	0.5	1.415	A
3 - A633 Manvers Way	1010	252	692	1905	0.530	1008	1051	0.8	1.2	4.146	A
4 - A6195 (South)	1160	290	579	2723	0.426	1159	1121	0.5	0.8	2.369	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	39	10	2074	944	0.041	38	53	0.0	0.0	4.095	A
2 - A6195 (North)	1423	356	713	3667	0.388	1422	1400	0.5	0.7	1.650	A
3 - A633 Manvers Way	1236	309	847	1819	0.680	1232	1287	1.2	2.2	6.309	A
4 - A6195 (South)	1420	355	708	2631	0.540	1419	1372	0.8	1.2	3.054	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	39	10	2078	942	0.041	39	53	0.0	0.0	4.104	A
2 - A6195 (North)	1423	356	713	3666	0.388	1423	1403	0.7	0.7	1.651	A
3 - A633 Manvers Way	1236	309	848	1819	0.680	1236	1288	2.2	2.2	6.394	A
4 - A6195 (South)	1420	355	710	2629	0.540	1420	1374	1.2	1.2	3.065	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	31	8	1700	1150	0.027	32	43	0.0	0.0	3.316	A
2 - A6195 (North)	1161	290	583	3779	0.307	1162	1148	0.7	0.5	1.418	A
3 - A633 Manvers Way	1010	252	693	1904	0.530	1014	1053	2.2	1.2	4.198	A
4 - A6195 (South)	1160	290	582	2720	0.426	1161	1124	1.2	0.8	2.381	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	26	7	1422	1303	0.020	26	36	0.0	0.0	2.907	A
2 - A6195 (North)	973	243	488	3862	0.252	973	960	0.5	0.3	1.283	A
3 - A633 Manvers Way	845	211	580	1967	0.430	847	881	1.2	0.8	3.329	A
4 - A6195 (South)	971	243	486	2788	0.348	972	941	0.8	0.6	2.041	A

Existing Layout - 2028 Do Minimum, 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		1, 2, 3, 4	3.97	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.97	A

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
D3	2028 Do Minimum	AM	ONE HOUR	07:15	08:45	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 (PCU/hr)	Scaling Factor (%)
1 - Pontefract Road		ONE HOUR	✓	40	100.000
2 - A6195 (North)		ONE HOUR	✓	1468	100.000
3 - A633 Manvers Way		ONE HOUR	✓	1183	100.000
4 - A6195 (South)		ONE HOUR	✓	1207	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	14	11	15
	2 - A6195 (North)	5	3	687	773
	3 - A633 Manvers Way	11	623	0	549
	4 - A6195 (South)	6	680	521	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	8	0	7
	2 - A6195 (North)	0	0	8	7
	3 - A633 Manvers Way	0	8	0	6
	4 - A6195 (South)	17	9	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Pontefract Road	0.05	4.06	0.0	A	37	55
2 - A6195 (North)	0.43	1.80	0.8	A	1347	2021
3 - A633 Manvers Way	0.72	7.69	2.7	A	1086	1628
4 - A6195 (South)	0.50	2.96	1.1	A	1108	1661

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	30	8	1372	1331	0.023	30	17	0.0	0.0	2.913	A
2 - A6195 (North)	1105	276	411	3929	0.281	1104	991	0.0	0.4	1.368	A
3 - A633 Manvers Way	891	223	598	1957	0.455	887	916	0.0	0.9	3.589	A
4 - A6195 (South)	909	227	481	2792	0.325	907	1004	0.0	0.5	2.046	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	36	9	1641	1183	0.030	36	20	0.0	0.0	3.305	A
2 - A6195 (North)	1320	330	491	3859	0.342	1319	1185	0.4	0.6	1.522	A
3 - A633 Manvers Way	1063	266	715	1892	0.562	1062	1095	0.9	1.4	4.628	A
4 - A6195 (South)	1085	271	576	2725	0.398	1084	1201	0.5	0.7	2.353	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	44	11	2007	981	0.045	44	24	0.0	0.0	4.046	A
2 - A6195 (North)	1616	404	602	3764	0.429	1615	1450	0.6	0.8	1.800	A
3 - A633 Manvers Way	1303	326	876	1803	0.722	1297	1341	1.4	2.7	7.533	A
4 - A6195 (South)	1329	332	704	2634	0.505	1327	1469	0.7	1.1	2.954	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	44	11	2011	979	0.045	44	24	0.0	0.0	4.056	A
2 - A6195 (North)	1616	404	602	3763	0.430	1616	1453	0.8	0.8	1.800	A
3 - A633 Manvers Way	1303	326	876	1803	0.723	1302	1342	2.7	2.7	7.689	A
4 - A6195 (South)	1329	332	707	2632	0.505	1329	1472	1.1	1.1	2.963	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	36	9	1647	1179	0.030	36	20	0.0	0.0	3.315	A
2 - A6195 (North)	1320	330	492	3858	0.342	1321	1190	0.8	0.6	1.523	A
3 - A633 Manvers Way	1063	266	716	1891	0.562	1069	1097	2.7	1.4	4.712	A
4 - A6195 (South)	1085	271	580	2722	0.399	1087	1205	1.1	0.7	2.365	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	30	8	1377	1328	0.023	30	17	0.0	0.0	2.923	A
2 - A6195 (North)	1105	276	412	3928	0.281	1106	995	0.6	0.4	1.372	A
3 - A633 Manvers Way	891	223	600	1956	0.455	893	918	1.4	0.9	3.627	A
4 - A6195 (South)	909	227	484	2790	0.326	909	1008	0.7	0.5	2.054	A

Existing Layout - 2028 Do Minimum, 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		1, 2, 3, 4	4.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.80	A

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
D4	2028 Do Minimum	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
1 - Pontefract Road		ONE HOUR	✓	40	100.000
2 - A6195 (North)		ONE HOUR	✓	1442	100.000
3 - A633 Manvers Way		ONE HOUR	✓	1250	100.000
4 - A6195 (South)		ONE HOUR	✓	1414	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	16	13	11
	2 - A6195 (North)	9	3	600	830
	3 - A633 Manvers Way	34	708	0	508
	4 - A6195 (South)	16	732	666	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	0	0	10
	2 - A6195 (North)	0	0	3	3
	3 - A633 Manvers Way	0	3	0	3
	4 - A6195 (South)	0	3	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Pontefract Road	0.05	4.83	0.1	A	37	55
2 - A6195 (North)	0.44	1.82	0.8	A	1323	1985
3 - A633 Manvers Way	0.78	9.43	3.5	A	1147	1721
4 - A6195 (South)	0.61	3.75	1.6	A	1298	1946

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	30	8	1583	1215	0.025	30	44	0.0	0.0	3.116	A
2 - A6195 (North)	1086	271	518	3836	0.283	1084	1095	0.0	0.4	1.347	A
3 - A633 Manvers Way	941	235	641	1933	0.487	937	961	0.0	1.0	3.708	A
4 - A6195 (South)	1065	266	565	2732	0.390	1062	1013	0.0	0.7	2.219	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	36	9	1894	1044	0.034	36	53	0.0	0.0	3.663	A
2 - A6195 (North)	1296	324	620	3748	0.346	1296	1310	0.4	0.5	1.511	A
3 - A633 Manvers Way	1124	281	766	1864	0.603	1121	1149	1.0	1.5	4.977	A
4 - A6195 (South)	1271	318	676	2653	0.479	1270	1211	0.7	0.9	2.677	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	44	11	2315	811	0.054	44	65	0.0	0.1	4.811	A
2 - A6195 (North)	1588	397	758	3627	0.438	1587	1601	0.5	0.8	1.816	A
3 - A633 Manvers Way	1376	344	939	1768	0.778	1369	1407	1.5	3.5	9.098	A
4 - A6195 (South)	1557	389	826	2547	0.611	1554	1482	0.9	1.6	3.724	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	44	11	2322	808	0.055	44	65	0.1	0.1	4.834	A
2 - A6195 (North)	1588	397	760	3626	0.438	1588	1606	0.8	0.8	1.817	A
3 - A633 Manvers Way	1376	344	939	1768	0.778	1376	1408	3.5	3.5	9.429	A
4 - A6195 (South)	1557	389	830	2544	0.612	1557	1485	1.6	1.6	3.754	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	36	9	1903	1038	0.035	36	53	0.1	0.0	3.683	A
2 - A6195 (North)	1296	324	622	3746	0.346	1297	1317	0.8	0.5	1.513	A
3 - A633 Manvers Way	1124	281	767	1863	0.603	1132	1151	3.5	1.6	5.118	A
4 - A6195 (South)	1271	318	682	2649	0.480	1274	1216	1.6	1.0	2.700	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	30	8	1590	1211	0.025	30	45	0.0	0.0	3.129	A
2 - A6195 (North)	1086	271	520	3834	0.283	1086	1100	0.5	0.4	1.348	A
3 - A633 Manvers Way	941	235	643	1932	0.487	943	964	1.6	1.0	3.758	A
4 - A6195 (South)	1065	266	569	2730	0.390	1066	1017	1.0	0.7	2.230	A

Existing Layout - 2028 With 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		1, 2, 3, 4	4.53	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.53	A

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
D5	2028 With Development	AM	ONE HOUR	07:15	08:45	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 (PCU/hr)	Scaling Factor (%)
1 - Pontefract Road		ONE HOUR	✓	40	100.000
2 - A6195 (North)		ONE HOUR	✓	1531	100.000
3 - A633 Manvers Way		ONE HOUR	✓	1227	100.000
4 - A6195 (South)		ONE HOUR	✓	1288	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	14	11	15
	2 - A6195 (North)	5	3	699	824
	3 - A633 Manvers Way	11	667	0	549
	4 - A6195 (South)	6	761	521	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	8	0	7
	2 - A6195 (North)	0	0	8	9
	3 - A633 Manvers Way	0	8	0	6
	4 - A6195 (South)	17	11	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Pontefract Road	0.05	4.41	0.1	A	37	55
2 - A6195 (North)	0.45	1.88	0.9	A	1405	2107
3 - A633 Manvers Way	0.76	9.13	3.4	A	1126	1689
4 - A6195 (South)	0.55	3.31	1.3	A	1182	1773

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	30	8	1465	1279	0.024	30	17	0.0	0.0	3.033	A
2 - A6195 (North)	1153	288	411	3929	0.293	1151	1084	0.0	0.4	1.406	A
3 - A633 Manvers Way	924	231	637	1935	0.477	920	925	0.0	1.0	3.780	A
4 - A6195 (South)	970	242	514	2769	0.350	967	1042	0.0	0.6	2.166	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	36	9	1753	1121	0.032	36	20	0.0	0.0	3.492	A
2 - A6195 (North)	1376	344	491	3859	0.357	1376	1297	0.4	0.6	1.572	A
3 - A633 Manvers Way	1103	276	761	1867	0.591	1101	1106	1.0	1.5	5.017	A
4 - A6195 (South)	1158	289	615	2697	0.429	1157	1246	0.6	0.8	2.536	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	44	11	2143	906	0.049	44	24	0.0	0.1	4.398	A
2 - A6195 (North)	1686	421	601	3764	0.448	1685	1586	0.6	0.9	1.878	A
3 - A633 Manvers Way	1351	338	932	1772	0.762	1344	1354	1.5	3.3	8.854	A
4 - A6195 (South)	1418	355	751	2600	0.545	1416	1524	0.8	1.3	3.294	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	44	11	2149	903	0.049	44	24	0.1	0.1	4.414	A
2 - A6195 (North)	1686	421	602	3763	0.448	1686	1591	0.9	0.9	1.879	A
3 - A633 Manvers Way	1351	338	933	1772	0.763	1351	1355	3.3	3.4	9.135	A
4 - A6195 (South)	1418	355	755	2597	0.546	1418	1528	1.3	1.3	3.312	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	36	9	1761	1117	0.032	36	20	0.1	0.0	3.507	A
2 - A6195 (North)	1376	344	493	3858	0.357	1377	1304	0.9	0.6	1.574	A
3 - A633 Manvers Way	1103	276	762	1866	0.591	1110	1108	3.4	1.6	5.146	A
4 - A6195 (South)	1158	289	621	2693	0.430	1160	1252	1.3	0.8	2.550	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	30	8	1472	1276	0.024	30	17	0.0	0.0	3.045	A
2 - A6195 (North)	1153	288	412	3928	0.293	1153	1090	0.6	0.5	1.409	A
3 - A633 Manvers Way	924	231	638	1935	0.477	926	927	1.6	1.0	3.827	A
4 - A6195 (South)	970	242	518	2766	0.351	971	1046	0.8	0.6	2.176	A

Existing Layout - 2028 With 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		1, 2, 3, 4	5.44	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.44	A

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
D6	2028 With Development	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
1 - Pontefract Road		ONE HOUR	✓	40	100.000
2 - A6195 (North)		ONE HOUR	✓	1568	100.000
3 - A633 Manvers Way		ONE HOUR	✓	1264	100.000
4 - A6195 (South)		ONE HOUR	✓	1469	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	16	13	11
	2 - A6195 (North)	9	3	646	910
	3 - A633 Manvers Way	34	722	0	508
	4 - A6195 (South)	16	787	666	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Pontefract Road	2 - A6195 (North)	3 - A633 Manvers Way	4 - A6195 (South)
From	1 - Pontefract Road	0	0	0	10
	2 - A6195 (North)	0	0	3	5
	3 - A633 Manvers Way	0	4	0	3
	4 - A6195 (South)	0	6	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Pontefract Road	0.06	5.11	0.1	A	37	55
2 - A6195 (North)	0.48	1.97	0.9	A	1439	2158
3 - A633 Manvers Way	0.81	11.31	4.3	B	1160	1740
4 - A6195 (South)	0.64	4.11	1.8	A	1348	2022

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	30	8	1635	1186	0.025	30	44	0.0	0.0	3.193	A
2 - A6195 (North)	1180	295	518	3836	0.308	1179	1146	0.0	0.5	1.411	A
3 - A633 Manvers Way	952	238	701	1900	0.501	947	995	0.0	1.0	3.897	A
4 - A6195 (South)	1106	276	576	2725	0.406	1103	1073	0.0	0.7	2.317	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	36	9	1955	1010	0.036	36	53	0.0	0.0	3.791	A
2 - A6195 (North)	1410	352	620	3748	0.376	1409	1371	0.5	0.6	1.602	A
3 - A633 Manvers Way	1136	284	838	1824	0.623	1134	1190	1.0	1.7	5.378	A
4 - A6195 (South)	1321	330	689	2644	0.499	1319	1283	0.7	1.0	2.838	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	44	11	2389	771	0.057	44	65	0.0	0.1	5.082	A
2 - A6195 (North)	1726	432	758	3628	0.476	1725	1675	0.6	0.9	1.969	A
3 - A633 Manvers Way	1392	348	1026	1720	0.809	1382	1457	1.7	4.1	10.728	B
4 - A6195 (South)	1617	404	840	2537	0.638	1614	1569	1.0	1.8	4.065	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	44	11	2398	766	0.058	44	65	0.1	0.1	5.114	A
2 - A6195 (North)	1726	432	760	3626	0.476	1726	1682	0.9	0.9	1.972	A
3 - A633 Manvers Way	1392	348	1027	1719	0.809	1391	1459	4.1	4.3	11.309	B
4 - A6195 (South)	1617	404	845	2533	0.639	1617	1573	1.8	1.8	4.110	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	36	9	1967	1003	0.036	36	53	0.1	0.0	3.817	A
2 - A6195 (North)	1410	352	622	3746	0.376	1411	1381	0.9	0.6	1.605	A
3 - A633 Manvers Way	1136	284	840	1823	0.623	1146	1193	4.3	1.7	5.583	A
4 - A6195 (South)	1321	330	696	2639	0.500	1324	1289	1.8	1.1	2.869	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Pontefract Road	30	8	1643	1182	0.025	30	45	0.0	0.0	3.208	A
2 - A6195 (North)	1180	295	520	3834	0.308	1181	1153	0.6	0.5	1.412	A
3 - A633 Manvers Way	952	238	703	1899	0.501	954	998	1.7	1.0	3.957	A
4 - A6195 (South)	1106	276	580	2722	0.406	1107	1077	1.1	0.7	2.334	A

Appendix T

Junctions10 Output - Wath Road Roundabout

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.2.1574 © Copyright TRL Software Limited, 2021
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Filename: 2023-11-15_Wath Road Roundabout.j10

Path: G:\Shared drives\Jobs3000\3465 Employment Site at Goldthorpe\Junction Models\Wath Road Roundabout

Report generation date: 30/11/2023 15:43:49

- »Existing Layout - 2022 Base, AM
- »Existing Layout - 2022 Base, PM
- »Existing Layout - 2028 Do Minimum, AM
- »Existing Layout - 2028 Do Minimum, PM
- »Existing Layout - 2028 With Development, AM
- »Existing Layout - 2028 With Development, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Existing Layout - 2022 Base						
1 - Newlands Way	0.1	5.20	0.05	0.2	6.22	0.18
2 - A6195 (East)	0.8	2.15	0.43	0.9	2.41	0.47
3 - Wath Road	0.4	3.68	0.29	0.6	4.10	0.36
4 - A6195 (West)	0.8	2.72	0.44	1.8	3.92	0.63
5 - A633 Wath Road	0.9	4.87	0.46	1.3	6.43	0.56
Existing Layout - 2028 Do Minimum						
1 - Newlands Way	0.1	5.63	0.06	0.3	7.29	0.21
2 - A6195 (East)	1.0	2.36	0.48	1.1	2.67	0.51
3 - Wath Road	0.5	4.11	0.32	0.6	4.62	0.39
4 - A6195 (West)	1.0	2.95	0.48	2.3	4.72	0.69
5 - A633 Wath Road	1.2	5.64	0.53	1.9	8.44	0.65
Existing Layout - 2028 With Development						
1 - Newlands Way	0.1	5.93	0.06	0.3	7.72	0.22
2 - A6195 (East)	1.1	2.48	0.50	1.2	2.86	0.54
3 - Wath Road	0.5	4.26	0.32	0.7	4.93	0.41
4 - A6195 (West)	1.1	3.18	0.51	2.6	5.18	0.71
5 - A633 Wath Road	1.3	6.11	0.55	2.1	9.19	0.67

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	Wath Road Roundabout
Location	
Site number	
Date	15/11/2023
Version	
Status	Existing
Identifier	
Client	Equites Newlands (Goldthorpe) Ltd
Jobnumber	
Enumerator	Fore Consulting Limited
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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	2022 Base	AM	ONE HOUR	07:30	09:00	15	✓
D2	2022 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2028 Do Minimum	AM	ONE HOUR	07:30	09:00	15	✓
D4	2028 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D5	2028 With Development	AM	ONE HOUR	07:30	09:00	15	✓
D6	2028 With Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

Existing Layout - 2022 Base, 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		1, 2, 3, 4, 5	3.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.06	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Newlands Way		
2	A6195 (East)		
3	Wath Road		
4	A6195 (West)		
5	A633 Wath Road		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Newlands Way	3.62	6.47	16.6	16.0	85.6	19.6		
2 - A6195 (East)	7.55	15.06	21.1	23.2	84.4	22.2		
3 - Wath Road	4.83	12.36	9.3	91.7	84.5	14.0		
4 - A6195 (West)	6.87	10.54	14.1	52.5	85.9	8.7		
5 - A633 Wath Road	3.97	9.47	14.7	18.5	84.7	18.8		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Newlands Way	0.466	1695
2 - A6195 (East)	0.725	3462
3 - Wath Road	0.570	2296
4 - A6195 (West)	0.666	2969
5 - A633 Wath Road	0.518	2029

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
D1	2022 Base	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 (PCU/hr)	Scaling Factor (%)
1 - Newlands Way		ONE HOUR	✓	45	100.000
2 - A6195 (East)		ONE HOUR	✓	1222	100.000
3 - Wath Road		ONE HOUR	✓	371	100.000
4 - A6195 (West)		ONE HOUR	✓	1021	100.000
5 - A633 Wath Road		ONE HOUR	✓	617	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	10	4	24	7
	2 - A6195 (East)	26	0	22	822	352
	3 - Wath Road	14	38	0	213	106
	4 - A6195 (West)	44	729	135	0	113
	5 - A633 Wath Road	22	351	88	156	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	38	0	39	0
	2 - A6195 (East)	18	0	0	7	6
	3 - Wath Road	0	3	0	5	3
	4 - A6195 (West)	8	10	6	0	10
	5 - A633 Wath Road	5	5	10	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Newlands Way	0.05	5.20	0.1	A	41	62
2 - A6195 (East)	0.43	2.15	0.8	A	1121	1682
3 - Wath Road	0.29	3.68	0.4	A	340	511
4 - A6195 (West)	0.44	2.72	0.8	A	937	1405
5 - A633 Wath Road	0.46	4.87	0.9	A	566	849

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	34	8	1124	1171	0.029	34	80	0.0	0.0	4.011	A
2 - A6195 (East)	920	230	311	3237	0.284	918	847	0.0	0.4	1.658	A
3 - Wath Road	279	70	1042	1702	0.164	278	187	0.0	0.2	2.629	A
4 - A6195 (West)	769	192	408	2697	0.285	767	913	0.0	0.4	2.037	A
5 - A633 Wath Road	465	116	741	1646	0.282	463	434	0.0	0.4	3.242	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	40	10	1345	1068	0.038	40	95	0.0	0.0	4.439	A
2 - A6195 (East)	1099	275	372	3192	0.344	1098	1013	0.4	0.6	1.835	A
3 - Wath Road	334	83	1246	1586	0.210	333	224	0.2	0.3	2.989	A
4 - A6195 (West)	918	229	488	2644	0.347	917	1092	0.4	0.6	2.280	A
5 - A633 Wath Road	555	139	886	1571	0.353	554	519	0.4	0.6	3.776	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	50	12	1646	928	0.053	49	117	0.0	0.1	5.195	A
2 - A6195 (East)	1345	336	455	3132	0.430	1344	1240	0.6	0.8	2.149	A
3 - Wath Road	408	102	1526	1427	0.286	408	274	0.3	0.4	3.674	A
4 - A6195 (West)	1124	281	597	2571	0.437	1123	1336	0.6	0.8	2.717	A
5 - A633 Wath Road	679	170	1085	1468	0.463	678	636	0.6	0.9	4.856	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	50	12	1648	927	0.053	50	117	0.1	0.1	5.201	A
2 - A6195 (East)	1345	336	456	3131	0.430	1345	1242	0.8	0.8	2.152	A
3 - Wath Road	408	102	1527	1426	0.286	408	274	0.4	0.4	3.679	A
4 - A6195 (West)	1124	281	598	2571	0.437	1124	1338	0.8	0.8	2.720	A
5 - A633 Wath Road	679	170	1086	1467	0.463	679	636	0.9	0.9	4.874	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	40	10	1348	1066	0.038	41	95	0.1	0.1	4.448	A
2 - A6195 (East)	1099	275	373	3192	0.344	1100	1016	0.8	0.6	1.840	A
3 - Wath Road	334	83	1248	1585	0.210	334	224	0.4	0.3	2.997	A
4 - A6195 (West)	918	229	489	2644	0.347	919	1094	0.8	0.6	2.283	A
5 - A633 Wath Road	555	139	887	1570	0.353	556	520	0.9	0.6	3.795	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	34	8	1128	1169	0.029	34	80	0.1	0.0	4.020	A
2 - A6195 (East)	920	230	312	3236	0.284	921	850	0.6	0.4	1.660	A
3 - Wath Road	279	70	1045	1700	0.164	280	188	0.3	0.2	2.635	A
4 - A6195 (West)	769	192	409	2697	0.285	769	915	0.6	0.4	2.043	A
5 - A633 Wath Road	465	116	743	1645	0.282	465	435	0.6	0.4	3.259	A

Existing Layout - 2022 Base, 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		1, 2, 3, 4, 5	3.96	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.96	A

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
D2	2022 Base	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
1 - Newlands Way		ONE HOUR	✓	123	100.000
2 - A6195 (East)		ONE HOUR	✓	1235	100.000
3 - Wath Road		ONE HOUR	✓	445	100.000
4 - A6195 (West)		ONE HOUR	✓	1475	100.000
5 - A633 Wath Road		ONE HOUR	✓	656	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	43	20	37	23
	2 - A6195 (East)	14	0	28	866	327
	3 - Wath Road	5	28	0	267	145
	4 - A6195 (West)	17	914	310	0	234
	5 - A633 Wath Road	34	306	116	200	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	2	5	6	0
	2 - A6195 (East)	0	0	12	3	3
	3 - Wath Road	0	0	0	0	3
	4 - A6195 (West)	6	3	5	0	2
	5 - A633 Wath Road	0	3	3	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Newlands Way	0.18	6.22	0.2	A	113	169
2 - A6195 (East)	0.47	2.41	0.9	A	1133	1700
3 - Wath Road	0.36	4.10	0.6	A	408	613
4 - A6195 (West)	0.63	3.92	1.8	A	1353	2030
5 - A633 Wath Road	0.56	6.43	1.3	A	602	903

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	93	23	1407	1039	0.089	92	53	0.0	0.1	3.924	A
2 - A6195 (East)	930	232	530	3078	0.302	928	969	0.0	0.4	1.725	A
3 - Wath Road	335	84	1102	1668	0.201	334	356	0.0	0.3	2.723	A
4 - A6195 (West)	1110	278	407	2698	0.412	1108	1029	0.0	0.7	2.334	A
5 - A633 Wath Road	494	123	967	1528	0.323	492	547	0.0	0.5	3.545	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	111	28	1683	910	0.121	110	63	0.1	0.1	4.645	A
2 - A6195 (East)	1110	278	634	3002	0.370	1110	1159	0.4	0.6	1.962	A
3 - Wath Road	400	100	1318	1545	0.259	400	426	0.3	0.4	3.173	A
4 - A6195 (West)	1326	331	487	2645	0.501	1325	1231	0.7	1.0	2.814	A
5 - A633 Wath Road	590	147	1157	1430	0.412	589	655	0.5	0.7	4.369	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	135	34	2059	735	0.184	135	77	0.1	0.2	6.190	A
2 - A6195 (East)	1360	340	775	2900	0.469	1359	1418	0.6	0.9	2.407	A
3 - Wath Road	490	122	1613	1377	0.356	489	521	0.4	0.6	4.091	A
4 - A6195 (West)	1624	406	596	2572	0.631	1621	1506	1.0	1.7	3.898	A
5 - A633 Wath Road	722	181	1416	1296	0.557	720	802	0.7	1.3	6.364	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	135	34	2063	733	0.185	135	77	0.2	0.2	6.219	A
2 - A6195 (East)	1360	340	777	2898	0.469	1360	1421	0.9	0.9	2.412	A
3 - Wath Road	490	122	1615	1376	0.356	490	522	0.6	0.6	4.103	A
4 - A6195 (West)	1624	406	597	2572	0.631	1624	1508	1.7	1.8	3.923	A
5 - A633 Wath Road	722	181	1418	1295	0.558	722	803	1.3	1.3	6.426	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	111	28	1689	907	0.122	111	63	0.2	0.1	4.669	A
2 - A6195 (East)	1110	278	637	3000	0.370	1111	1164	0.9	0.6	1.966	A
3 - Wath Road	400	100	1321	1543	0.259	401	427	0.6	0.4	3.185	A
4 - A6195 (West)	1326	331	488	2644	0.501	1329	1234	1.8	1.0	2.834	A
5 - A633 Wath Road	590	147	1160	1428	0.413	592	656	1.3	0.7	4.411	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	93	23	1413	1036	0.089	93	53	0.1	0.1	3.940	A
2 - A6195 (East)	930	232	532	3076	0.302	930	973	0.6	0.4	1.730	A
3 - Wath Road	335	84	1105	1666	0.201	335	357	0.4	0.3	2.731	A
4 - A6195 (West)	1110	278	408	2697	0.412	1112	1032	1.0	0.7	2.346	A
5 - A633 Wath Road	494	123	971	1527	0.324	495	549	0.7	0.5	3.572	A

Existing Layout - 2028 Do Minimum, 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		1, 2, 3, 4, 5	3.41	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.41	A

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
D3	2028 Do Minimum	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 (PCU/hr)	Scaling Factor (%)
1 - Newlands Way		ONE HOUR	✓	46	100.000
2 - A6195 (East)		ONE HOUR	✓	1348	100.000
3 - Wath Road		ONE HOUR	✓	383	100.000
4 - A6195 (West)		ONE HOUR	✓	1096	100.000
5 - A633 Wath Road		ONE HOUR	✓	685	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	11	4	24	7
	2 - A6195 (East)	27	0	23	898	400
	3 - Wath Road	14	38	0	218	113
	4 - A6195 (West)	45	784	138	0	129
	5 - A633 Wath Road	23	389	93	180	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	38	0	39	0
	2 - A6195 (East)	18	0	0	7	5
	3 - Wath Road	0	3	0	5	3
	4 - A6195 (West)	8	9	6	0	9
	5 - A633 Wath Road	4	5	10	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Newlands Way	0.06	5.63	0.1	A	42	63
2 - A6195 (East)	0.48	2.36	1.0	A	1237	1855
3 - Wath Road	0.32	4.11	0.5	A	351	527
4 - A6195 (West)	0.48	2.95	1.0	A	1006	1509
5 - A633 Wath Road	0.53	5.64	1.2	A	629	943

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	35	9	1218	1127	0.031	34	82	0.0	0.0	4.182	A
2 - A6195 (East)	1015	254	335	3219	0.315	1013	917	0.0	0.5	1.735	A
3 - Wath Road	288	72	1154	1638	0.176	287	194	0.0	0.2	2.770	A
4 - A6195 (West)	825	206	450	2670	0.309	823	991	0.0	0.5	2.115	A
5 - A633 Wath Road	516	129	786	1622	0.318	514	488	0.0	0.5	3.449	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	41	10	1457	1016	0.041	41	98	0.0	0.1	4.689	A
2 - A6195 (East)	1212	303	400	3172	0.382	1211	1098	0.5	0.7	1.955	A
3 - Wath Road	344	86	1380	1510	0.228	344	232	0.2	0.3	3.212	A
4 - A6195 (West)	985	246	538	2611	0.377	985	1186	0.5	0.7	2.402	A
5 - A633 Wath Road	616	154	940	1543	0.399	615	583	0.5	0.7	4.125	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	51	13	1783	864	0.059	51	120	0.1	0.1	5.619	A
2 - A6195 (East)	1484	371	490	3107	0.478	1483	1343	0.7	1.0	2.360	A
3 - Wath Road	422	105	1689	1333	0.316	421	284	0.3	0.5	4.102	A
4 - A6195 (West)	1207	302	659	2530	0.477	1205	1452	0.7	1.0	2.947	A
5 - A633 Wath Road	754	189	1150	1433	0.526	752	714	0.7	1.2	5.606	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	51	13	1786	862	0.059	51	120	0.1	0.1	5.629	A
2 - A6195 (East)	1484	371	491	3106	0.478	1484	1345	1.0	1.0	2.363	A
3 - Wath Road	422	105	1691	1332	0.316	422	284	0.5	0.5	4.111	A
4 - A6195 (West)	1207	302	660	2530	0.477	1207	1453	1.0	1.0	2.953	A
5 - A633 Wath Road	754	189	1152	1433	0.526	754	715	1.2	1.2	5.643	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	41	10	1461	1014	0.041	41	98	0.1	0.1	4.702	A
2 - A6195 (East)	1212	303	402	3171	0.382	1213	1101	1.0	0.7	1.959	A
3 - Wath Road	344	86	1383	1508	0.228	345	232	0.5	0.3	3.220	A
4 - A6195 (West)	985	246	539	2610	0.377	987	1188	1.0	0.7	2.409	A
5 - A633 Wath Road	616	154	942	1542	0.399	618	584	1.2	0.7	4.153	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	35	9	1223	1125	0.031	35	82	0.1	0.0	4.193	A
2 - A6195 (East)	1015	254	336	3218	0.315	1016	921	0.7	0.5	1.742	A
3 - Wath Road	288	72	1157	1636	0.176	289	194	0.3	0.2	2.778	A
4 - A6195 (West)	825	206	451	2669	0.309	826	995	0.7	0.5	2.121	A
5 - A633 Wath Road	516	129	788	1621	0.318	517	489	0.7	0.5	3.469	A

Existing Layout - 2028 Do Minimum, 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		1, 2, 3, 4, 5	4.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.79	A

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
D4	2028 Do Minimum	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
1 - Newlands Way		ONE HOUR	✓	126	100.000
2 - A6195 (East)		ONE HOUR	✓	1337	100.000
3 - Wath Road		ONE HOUR	✓	461	100.000
4 - A6195 (West)		ONE HOUR	✓	1590	100.000
5 - A633 Wath Road		ONE HOUR	✓	738	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	44	21	37	24
	2 - A6195 (East)	14	0	29	930	364
	3 - Wath Road	5	29	0	274	153
	4 - A6195 (West)	17	991	317	0	265
	5 - A633 Wath Road	36	351	124	227	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	2	5	6	0
	2 - A6195 (East)	0	0	12	3	3
	3 - Wath Road	0	0	0	0	3
	4 - A6195 (West)	6	3	5	0	2
	5 - A633 Wath Road	0	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Newlands Way	0.21	7.29	0.3	A	116	173
2 - A6195 (East)	0.51	2.67	1.1	A	1227	1840
3 - Wath Road	0.39	4.62	0.6	A	423	635
4 - A6195 (West)	0.69	4.72	2.3	A	1459	2189
5 - A633 Wath Road	0.65	8.44	1.9	A	677	1016

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	95	24	1530	982	0.097	94	54	0.0	0.1	4.187	A
2 - A6195 (East)	1007	252	563	3054	0.330	1005	1062	0.0	0.5	1.809	A
3 - Wath Road	347	87	1199	1613	0.215	346	368	0.0	0.3	2.866	A
4 - A6195 (West)	1197	299	442	2675	0.448	1194	1102	0.0	0.8	2.505	A
5 - A633 Wath Road	556	139	1031	1495	0.372	553	605	0.0	0.6	3.878	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	113	28	1830	842	0.135	113	65	0.1	0.2	5.100	A
2 - A6195 (East)	1202	300	673	2974	0.404	1201	1270	0.5	0.7	2.093	A
3 - Wath Road	414	104	1434	1479	0.280	414	441	0.3	0.4	3.410	A
4 - A6195 (West)	1429	357	529	2617	0.546	1428	1318	0.8	1.2	3.122	A
5 - A633 Wath Road	663	166	1233	1391	0.477	662	724	0.6	0.9	5.017	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	139	35	2238	652	0.213	138	79	0.2	0.3	7.234	A
2 - A6195 (East)	1472	368	823	2865	0.514	1471	1553	0.7	1.1	2.660	A
3 - Wath Road	508	127	1754	1296	0.392	507	539	0.4	0.6	4.597	A
4 - A6195 (West)	1751	438	648	2538	0.690	1747	1613	1.2	2.3	4.673	A
5 - A633 Wath Road	813	203	1508	1248	0.651	809	886	0.9	1.8	8.266	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	139	35	2245	648	0.214	139	79	0.3	0.3	7.290	A
2 - A6195 (East)	1472	368	826	2863	0.514	1472	1558	1.1	1.1	2.668	A
3 - Wath Road	508	127	1757	1295	0.392	508	541	0.6	0.6	4.617	A
4 - A6195 (West)	1751	438	648	2537	0.690	1751	1616	2.3	2.3	4.724	A
5 - A633 Wath Road	813	203	1512	1246	0.652	812	887	1.8	1.9	8.436	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	113	28	1840	837	0.135	114	65	0.3	0.2	5.142	A
2 - A6195 (East)	1202	300	677	2971	0.405	1203	1277	1.1	0.7	2.102	A
3 - Wath Road	414	104	1438	1477	0.281	415	443	0.6	0.4	3.427	A
4 - A6195 (West)	1429	357	530	2616	0.546	1433	1323	2.3	1.3	3.156	A
5 - A633 Wath Road	663	166	1238	1388	0.478	667	726	1.9	0.9	5.105	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	95	24	1538	978	0.097	95	54	0.2	0.1	4.210	A
2 - A6195 (East)	1007	252	566	3052	0.330	1007	1067	0.7	0.5	1.818	A
3 - Wath Road	347	87	1203	1611	0.216	348	370	0.4	0.3	2.880	A
4 - A6195 (West)	1197	299	444	2674	0.448	1199	1106	1.3	0.8	2.522	A
5 - A633 Wath Road	556	139	1035	1493	0.372	557	607	0.9	0.6	3.918	A

Existing Layout - 2028 With 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		1, 2, 3, 4, 5	3.62	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.62	A

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
D5	2028 With 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 (PCU/hr)	Scaling Factor (%)
1 - Newlands Way		ONE HOUR	✓	46	100.000
2 - A6195 (East)		ONE HOUR	✓	1399	100.000
3 - Wath Road		ONE HOUR	✓	383	100.000
4 - A6195 (West)		ONE HOUR	✓	1163	100.000
5 - A633 Wath Road		ONE HOUR	✓	698	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	11	4	24	7
	2 - A6195 (East)	27	0	23	942	407
	3 - Wath Road	14	38	0	218	113
	4 - A6195 (West)	45	851	138	0	129
	5 - A633 Wath Road	23	402	93	180	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	38	0	39	0
	2 - A6195 (East)	18	0	0	9	6
	3 - Wath Road	0	3	0	5	3
	4 - A6195 (West)	8	11	6	0	9
	5 - A633 Wath Road	4	5	10	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Newlands Way	0.06	5.93	0.1	A	42	63
2 - A6195 (East)	0.50	2.48	1.1	A	1284	1926
3 - Wath Road	0.32	4.26	0.5	A	351	527
4 - A6195 (West)	0.51	3.18	1.1	A	1067	1601
5 - A633 Wath Road	0.55	6.11	1.3	A	640	961

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	35	9	1277	1099	0.032	34	82	0.0	0.0	4.291	A
2 - A6195 (East)	1053	263	335	3219	0.327	1051	977	0.0	0.5	1.793	A
3 - Wath Road	288	72	1192	1617	0.178	287	194	0.0	0.2	2.816	A
4 - A6195 (West)	876	219	455	2666	0.328	873	1024	0.0	0.5	2.207	A
5 - A633 Wath Road	525	131	836	1596	0.329	523	493	0.0	0.5	3.563	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	41	10	1528	982	0.042	41	98	0.0	0.1	4.856	A
2 - A6195 (East)	1258	314	400	3172	0.397	1257	1169	0.5	0.7	2.033	A
3 - Wath Road	344	86	1426	1484	0.232	344	232	0.2	0.3	3.285	A
4 - A6195 (West)	1046	261	544	2607	0.401	1045	1225	0.5	0.7	2.535	A
5 - A633 Wath Road	627	157	1000	1512	0.415	627	589	0.5	0.7	4.323	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	51	13	1870	823	0.062	51	120	0.1	0.1	5.916	A
2 - A6195 (East)	1540	385	490	3107	0.496	1539	1431	0.7	1.1	2.480	A
3 - Wath Road	422	105	1745	1302	0.324	421	284	0.3	0.5	4.248	A
4 - A6195 (West)	1280	320	666	2525	0.507	1279	1500	0.7	1.1	3.174	A
5 - A633 Wath Road	769	192	1224	1395	0.551	766	721	0.7	1.3	6.067	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	51	13	1874	821	0.062	51	120	0.1	0.1	5.929	A
2 - A6195 (East)	1540	385	491	3106	0.496	1540	1433	1.1	1.1	2.485	A
3 - Wath Road	422	105	1747	1300	0.324	422	284	0.5	0.5	4.260	A
4 - A6195 (West)	1280	320	667	2525	0.507	1280	1502	1.1	1.1	3.182	A
5 - A633 Wath Road	769	192	1225	1395	0.551	768	722	1.3	1.3	6.115	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	41	10	1534	980	0.042	41	98	0.1	0.1	4.869	A
2 - A6195 (East)	1258	314	402	3170	0.397	1259	1173	1.1	0.7	2.038	A
3 - Wath Road	344	86	1429	1482	0.232	345	232	0.5	0.3	3.295	A
4 - A6195 (West)	1046	261	546	2606	0.401	1047	1228	1.1	0.7	2.545	A
5 - A633 Wath Road	627	157	1002	1510	0.415	630	591	1.3	0.8	4.358	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	35	9	1283	1097	0.032	35	82	0.1	0.0	4.304	A
2 - A6195 (East)	1053	263	336	3218	0.327	1054	981	0.7	0.5	1.800	A
3 - Wath Road	288	72	1196	1615	0.179	289	194	0.3	0.2	2.826	A
4 - A6195 (West)	876	219	457	2665	0.329	876	1028	0.7	0.5	2.215	A
5 - A633 Wath Road	525	131	839	1595	0.329	526	494	0.8	0.5	3.588	A

Existing Layout - 2028 With 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		1, 2, 3, 4, 5	5.16	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.16	A

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
D6	2028 With Development	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
1 - Newlands Way		ONE HOUR	✓	126	100.000
2 - A6195 (East)		ONE HOUR	✓	1416	100.000
3 - Wath Road		ONE HOUR	✓	461	100.000
4 - A6195 (West)		ONE HOUR	✓	1637	100.000
5 - A633 Wath Road		ONE HOUR	✓	746	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	44	21	37	24
	2 - A6195 (East)	14	0	29	996	377
	3 - Wath Road	5	29	0	274	153
	4 - A6195 (West)	17	1038	317	0	265
	5 - A633 Wath Road	36	359	124	227	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - Newlands Way	2 - A6195 (East)	3 - Wath Road	4 - A6195 (West)	5 - A633 Wath Road
From	1 - Newlands Way	0	2	5	6	0
	2 - A6195 (East)	0	0	12	4	3
	3 - Wath Road	0	0	0	0	3
	4 - A6195 (West)	6	5	5	0	2
	5 - A633 Wath Road	0	3	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Newlands Way	0.22	7.72	0.3	A	116	173
2 - A6195 (East)	0.54	2.86	1.2	A	1299	1949
3 - Wath Road	0.41	4.93	0.7	A	423	635
4 - A6195 (West)	0.71	5.18	2.6	A	1502	2253
5 - A633 Wath Road	0.67	9.19	2.1	A	685	1027

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	95	24	1571	962	0.099	94	54	0.0	0.1	4.280	A
2 - A6195 (East)	1066	267	562	3054	0.349	1064	1103	0.0	0.6	1.876	A
3 - Wath Road	347	87	1258	1579	0.220	346	368	0.0	0.3	2.945	A
4 - A6195 (West)	1232	308	452	2668	0.462	1229	1152	0.0	0.9	2.607	A
5 - A633 Wath Road	562	140	1066	1477	0.380	559	615	0.0	0.6	3.980	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	113	28	1880	819	0.138	113	65	0.1	0.2	5.266	A
2 - A6195 (East)	1273	318	673	2974	0.428	1272	1320	0.6	0.8	2.195	A
3 - Wath Road	414	104	1504	1439	0.288	414	441	0.3	0.4	3.545	A
4 - A6195 (West)	1472	368	541	2609	0.564	1470	1378	0.9	1.3	3.296	A
5 - A633 Wath Road	671	168	1275	1369	0.490	669	736	0.6	1.0	5.224	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	139	35	2297	624	0.222	138	79	0.2	0.3	7.644	A
2 - A6195 (East)	1559	390	823	2866	0.544	1557	1613	0.8	1.2	2.853	A
3 - Wath Road	508	127	1841	1247	0.407	506	539	0.4	0.7	4.901	A
4 - A6195 (West)	1802	451	662	2528	0.713	1798	1686	1.3	2.5	5.114	A
5 - A633 Wath Road	821	205	1559	1222	0.672	817	900	1.0	2.0	8.962	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	139	35	2305	620	0.224	139	79	0.3	0.3	7.718	A
2 - A6195 (East)	1559	390	826	2863	0.544	1559	1618	1.2	1.2	2.865	A
3 - Wath Road	508	127	1844	1245	0.408	508	541	0.7	0.7	4.927	A
4 - A6195 (West)	1802	451	663	2528	0.713	1802	1689	2.5	2.6	5.184	A
5 - A633 Wath Road	821	205	1563	1220	0.673	821	902	2.0	2.1	9.188	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	113	28	1891	814	0.139	114	65	0.3	0.2	5.314	A
2 - A6195 (East)	1273	318	678	2971	0.428	1275	1327	1.2	0.8	2.206	A
3 - Wath Road	414	104	1509	1436	0.289	416	443	0.7	0.4	3.567	A
4 - A6195 (West)	1472	368	542	2608	0.564	1476	1382	2.6	1.4	3.340	A
5 - A633 Wath Road	671	168	1281	1366	0.491	675	738	2.1	1.0	5.334	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Newlands Way	95	24	1579	959	0.099	95	54	0.2	0.1	4.304	A
2 - A6195 (East)	1066	267	566	3052	0.349	1067	1109	0.8	0.6	1.886	A
3 - Wath Road	347	87	1262	1577	0.220	348	370	0.4	0.3	2.960	A
4 - A6195 (West)	1232	308	454	2667	0.462	1234	1156	1.4	0.9	2.630	A
5 - A633 Wath Road	562	140	1071	1475	0.381	563	617	1.0	0.6	4.024	A

Appendix U

Junctions10 Output - Cortonwood Roundabout

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 2023-11-15_Cortonwood Roundabout.j10

Path: G:\Shared drives\Jobs3000\3465 Employment Site at Goldthorpe\Junction Models\Cortonwood Roundabout

Report generation date: 30/11/2023 15:48:13

- »Existing Layout - 2022 Base, AM
- »Existing Layout - 2022 Base, PM
- »Existing Layout - 2028 Do Minimum, AM
- »Existing Layout - 2028 Do Minimum, PM
- »Existing Layout - 2028 With Development, AM
- »Existing Layout - 2028 With Development, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Existing Layout - 2022 Base						
1 - A6195 (North)	1.9	5.01	0.63	2.8	6.78	0.73
2 - Corton Wood	0.3	2.89	0.22	1.9	6.25	0.65
3 - A6195 (West)	1.3	3.82	0.54	2.3	6.27	0.69
Existing Layout - 2028 Do Minimum						
1 - A6195 (North)	2.4	6.03	0.69	3.8	8.65	0.79
2 - Corton Wood	0.3	3.06	0.24	2.5	7.80	0.71
3 - A6195 (West)	1.5	4.24	0.58	3.1	8.05	0.75
Existing Layout - 2028 With Development						
1 - A6195 (North)	2.7	6.56	0.72	4.8	10.51	0.83
2 - Corton Wood	0.3	3.14	0.24	2.7	8.68	0.73
3 - A6195 (West)	1.7	4.64	0.61	3.7	9.17	0.78

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	Cortonwood Roundabout
Location	
Site number	
Date	15/11/2023
Version	
Status	Existing
Identifier	
Client	Equites Newlands (Goldthorpe) Ltd
Jobnumber	
Enumerator	Fore Consulting Limited
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

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	2022 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2022 Base	PM	ONE HOUR	16:15	17:45	15	✓
D3	2028 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	2028 Do Minimum	PM	ONE HOUR	16:15	17:45	15	✓
D5	2028 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D6	2028 With Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

Existing Layout - 2022 Base, 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		1, 2, 3	4.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.26	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A6195 (North)		
2	Corton Wood		
3	A6195 (West)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - A6195 (North)	7.17	7.40	0.6	18.4	60.8	16.2		
2 - Corton Wood	7.47	7.83	0.0	14.9	60.8	24.5		
3 - A6195 (West)	7.30	7.69	1.2	23.9	59.9	18.2		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A6195 (North)	0.666	2298
2 - Corton Wood	0.651	2268
3 - A6195 (West)	0.688	2382

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
D1	2022 Base	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1220	100.000
2 - Corton Wood		ONE HOUR	✓	329	100.000
3 - A6195 (West)		ONE HOUR	✓	1084	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	5	374	841
	2 - Corton Wood	204	1	124
	3 - A6195 (West)	841	242	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	0	2	11
	2 - Corton Wood	4	0	5
	3 - A6195 (West)	11	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.63	5.01	1.9	A	1119	1679
2 - Corton Wood	0.22	2.89	0.3	A	302	453
3 - A6195 (West)	0.54	3.82	1.3	A	995	1492

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	918	230	183	2176	0.422	915	788	0.0	0.8	3.078	A
2 - Corton Wood	248	62	635	1855	0.134	247	463	0.0	0.2	2.335	A
3 - A6195 (West)	816	204	158	2273	0.359	814	725	0.0	0.6	2.692	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1097	274	219	2152	0.510	1095	943	0.8	1.1	3.677	A
2 - Corton Wood	296	74	761	1773	0.167	296	554	0.2	0.2	2.542	A
3 - A6195 (West)	974	244	189	2252	0.433	974	867	0.6	0.8	3.078	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1343	336	268	2119	0.634	1340	1155	1.1	1.8	4.975	A
2 - Corton Wood	362	91	931	1663	0.218	362	678	0.2	0.3	2.888	A
3 - A6195 (West)	1194	298	231	2223	0.537	1192	1061	0.8	1.3	3.812	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1343	336	269	2119	0.634	1343	1156	1.8	1.9	5.014	A
2 - Corton Wood	362	91	933	1661	0.218	362	679	0.3	0.3	2.891	A
3 - A6195 (West)	1194	298	231	2222	0.537	1193	1064	1.3	1.3	3.824	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1097	274	220	2151	0.510	1100	945	1.9	1.1	3.707	A
2 - Corton Wood	296	74	763	1771	0.167	296	556	0.3	0.2	2.548	A
3 - A6195 (West)	974	244	189	2251	0.433	976	871	1.3	0.8	3.090	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	918	230	184	2175	0.422	920	791	1.1	0.8	3.103	A
2 - Corton Wood	248	62	639	1853	0.134	248	465	0.2	0.2	2.342	A
3 - A6195 (West)	816	204	158	2273	0.359	817	728	0.8	0.6	2.705	A

Existing Layout - 2022 Base, 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		1, 2, 3	6.46	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.46	A

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
D2	2022 Base	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1365	100.000
2 - Corton Wood		ONE HOUR	✓	990	100.000
3 - A6195 (West)		ONE HOUR	✓	1196	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	6	539	820
	2 - Corton Wood	605	3	382
	3 - A6195 (West)	855	340	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	0	1	3
	2 - Corton Wood	1	0	3
	3 - A6195 (West)	5	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.73	6.78	2.8	A	1253	1879
2 - Corton Wood	0.65	6.25	1.9	A	908	1363
3 - A6195 (West)	0.69	6.27	2.3	A	1097	1646

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1028	257	258	2126	0.483	1024	1100	0.0	0.9	3.328	A
2 - Corton Wood	745	186	620	1865	0.400	743	662	0.0	0.7	3.256	A
3 - A6195 (West)	900	225	461	2065	0.436	897	902	0.0	0.8	3.213	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1227	307	309	2092	0.587	1225	1316	0.9	1.4	4.235	A
2 - Corton Wood	890	222	742	1785	0.499	889	792	0.7	1.0	4.080	A
3 - A6195 (West)	1075	269	551	2002	0.537	1074	1080	0.8	1.2	4.042	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1503	376	378	2046	0.735	1498	1609	1.4	2.8	6.644	A
2 - Corton Wood	1090	273	907	1678	0.650	1087	968	1.0	1.9	6.160	A
3 - A6195 (West)	1317	329	674	1918	0.687	1313	1320	1.2	2.2	6.170	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1503	376	379	2045	0.735	1503	1614	2.8	2.8	6.775	A
2 - Corton Wood	1090	273	910	1676	0.650	1090	971	1.9	1.9	6.250	A
3 - A6195 (West)	1317	329	676	1916	0.687	1317	1324	2.2	2.3	6.268	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1227	307	310	2091	0.587	1232	1323	2.8	1.5	4.311	A
2 - Corton Wood	890	222	747	1782	0.499	893	796	1.9	1.0	4.137	A
3 - A6195 (West)	1075	269	554	2000	0.538	1079	1086	2.3	1.2	4.102	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1028	257	259	2125	0.484	1030	1106	1.5	1.0	3.364	A
2 - Corton Wood	745	186	624	1862	0.400	747	665	1.0	0.7	3.289	A
3 - A6195 (West)	900	225	463	2063	0.437	902	907	1.2	0.8	3.244	A

Existing Layout - 2028 Do Minimum, 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		1, 2, 3	4.93	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.93	A

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
D3	2028 Do Minimum	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1326	100.000
2 - Corton Wood		ONE HOUR	✓	346	100.000
3 - A6195 (West)		ONE HOUR	✓	1169	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	5	398	923
	2 - Corton Wood	214	1	131
	3 - A6195 (West)	907	261	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	0	2	11
	2 - Corton Wood	3	0	5
	3 - A6195 (West)	11	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.69	6.03	2.4	A	1217	1825
2 - Corton Wood	0.24	3.06	0.3	A	317	476
3 - A6195 (West)	0.58	4.24	1.5	A	1073	1609

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	998	250	197	2166	0.461	995	845	0.0	0.9	3.312	A
2 - Corton Wood	260	65	697	1815	0.144	260	495	0.0	0.2	2.400	A
3 - A6195 (West)	880	220	165	2268	0.388	877	791	0.0	0.7	2.824	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1192	298	236	2140	0.557	1190	1011	0.9	1.3	4.088	A
2 - Corton Wood	311	78	834	1726	0.180	311	593	0.2	0.2	2.639	A
3 - A6195 (West)	1051	263	198	2246	0.468	1050	947	0.7	1.0	3.289	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1460	365	289	2105	0.694	1456	1238	1.3	2.4	5.953	A
2 - Corton Wood	381	95	1020	1605	0.237	381	725	0.2	0.3	3.051	A
3 - A6195 (West)	1287	322	242	2215	0.581	1285	1159	1.0	1.5	4.221	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1460	365	290	2105	0.694	1460	1240	2.4	2.4	6.031	A
2 - Corton Wood	381	95	1023	1603	0.238	381	727	0.3	0.3	3.056	A
3 - A6195 (West)	1287	322	242	2215	0.581	1287	1162	1.5	1.5	4.242	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1192	298	237	2140	0.557	1196	1014	2.4	1.4	4.141	A
2 - Corton Wood	311	78	838	1723	0.181	311	595	0.3	0.2	2.646	A
3 - A6195 (West)	1051	263	198	2245	0.468	1053	951	1.5	1.0	3.306	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	998	250	198	2166	0.461	1000	849	1.4	0.9	3.342	A
2 - Corton Wood	260	65	701	1812	0.144	261	498	0.2	0.2	2.406	A
3 - A6195 (West)	880	220	166	2267	0.388	881	796	1.0	0.7	2.843	A

Existing Layout - 2028 Do Minimum, 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		1, 2, 3	8.21	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.21	A

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
D4	2028 Do Minimum	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1462	100.000
2 - Corton Wood		ONE HOUR	✓	1050	100.000
3 - A6195 (West)		ONE HOUR	✓	1295	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	5	565	892
	2 - Corton Wood	640	1	409
	3 - A6195 (West)	936	358	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	0	1	3
	2 - Corton Wood	1	0	3
	3 - A6195 (West)	5	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.79	8.65	3.8	A	1342	2012
2 - Corton Wood	0.71	7.80	2.5	A	963	1445
3 - A6195 (West)	0.75	8.05	3.1	A	1188	1782

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1101	275	270	2118	0.520	1096	1186	0.0	1.1	3.588	A
2 - Corton Wood	790	198	673	1830	0.432	787	693	0.0	0.8	3.503	A
3 - A6195 (West)	975	244	484	2048	0.476	971	976	0.0	0.9	3.480	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1314	329	323	2082	0.631	1312	1419	1.1	1.7	4.759	A
2 - Corton Wood	944	236	806	1744	0.541	942	829	0.8	1.2	4.561	A
3 - A6195 (West)	1164	291	580	1983	0.587	1162	1168	0.9	1.5	4.570	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1610	402	395	2035	0.791	1602	1733	1.7	3.7	8.346	A
2 - Corton Wood	1156	289	984	1628	0.710	1151	1012	1.2	2.4	7.604	A
3 - A6195 (West)	1426	356	708	1894	0.753	1419	1427	1.5	3.1	7.816	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1610	402	396	2034	0.792	1609	1740	3.7	3.8	8.653	A
2 - Corton Wood	1156	289	989	1625	0.711	1156	1017	2.4	2.5	7.802	A
3 - A6195 (West)	1426	356	711	1892	0.754	1426	1433	3.1	3.1	8.050	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1314	329	325	2081	0.632	1322	1429	3.8	1.8	4.903	A
2 - Corton Wood	944	236	812	1740	0.543	949	836	2.5	1.2	4.661	A
3 - A6195 (West)	1164	291	584	1980	0.588	1171	1177	3.1	1.5	4.685	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1101	275	272	2117	0.520	1103	1193	1.8	1.1	3.642	A
2 - Corton Wood	790	198	678	1827	0.433	792	697	1.2	0.8	3.544	A
3 - A6195 (West)	975	244	487	2046	0.477	977	983	1.5	1.0	3.523	A

Existing Layout - 2028 With 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		1, 2, 3	5.36	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.36	A

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
D5	2028 With Development	AM	ONE HOUR	07:45	09:15	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1370	100.000
2 - Corton Wood		ONE HOUR	✓	346	100.000
3 - A6195 (West)		ONE HOUR	✓	1235	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	5	398	967
	2 - Corton Wood	214	1	131
	3 - A6195 (West)	973	261	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	0	2	12
	2 - Corton Wood	3	0	5
	3 - A6195 (West)	12	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.72	6.56	2.7	A	1257	1886
2 - Corton Wood	0.24	3.14	0.3	A	317	476
3 - A6195 (West)	0.61	4.64	1.7	A	1133	1700

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1031	258	197	2166	0.476	1027	895	0.0	1.0	3.430	A
2 - Corton Wood	260	65	730	1793	0.145	260	495	0.0	0.2	2.433	A
3 - A6195 (West)	930	232	165	2268	0.410	927	824	0.0	0.8	2.952	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1232	308	236	2140	0.575	1230	1070	1.0	1.5	4.295	A
2 - Corton Wood	311	78	873	1700	0.183	311	593	0.2	0.2	2.688	A
3 - A6195 (West)	1110	278	198	2246	0.494	1109	987	0.8	1.1	3.487	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1508	377	289	2105	0.717	1503	1310	1.5	2.7	6.461	A
2 - Corton Wood	381	95	1068	1573	0.242	381	725	0.2	0.3	3.131	A
3 - A6195 (West)	1360	340	242	2215	0.614	1357	1206	1.1	1.7	4.610	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1508	377	290	2105	0.717	1508	1312	2.7	2.7	6.565	A
2 - Corton Wood	381	95	1071	1571	0.242	381	727	0.3	0.3	3.137	A
3 - A6195 (West)	1360	340	242	2215	0.614	1360	1210	1.7	1.7	4.639	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1232	308	237	2140	0.576	1237	1074	2.7	1.5	4.362	A
2 - Corton Wood	311	78	878	1697	0.183	311	595	0.3	0.2	2.695	A
3 - A6195 (West)	1110	278	198	2245	0.494	1113	992	1.7	1.1	3.510	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1031	258	198	2166	0.476	1033	899	1.5	1.0	3.469	A
2 - Corton Wood	260	65	734	1791	0.145	261	498	0.2	0.2	2.442	A
3 - A6195 (West)	930	232	166	2267	0.410	931	829	1.1	0.8	2.972	A

Existing Layout - 2028 With 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		1, 2, 3	9.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.56	A

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
D6	2028 With Development	PM	ONE HOUR	16:15	17:45	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 (PCU/hr)	Scaling Factor (%)
1 - A6195 (North)		ONE HOUR	✓	1529	100.000
2 - Corton Wood		ONE HOUR	✓	1050	100.000
3 - A6195 (West)		ONE HOUR	✓	1342	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	5	565	959
	2 - Corton Wood	640	1	409
	3 - A6195 (West)	983	358	1

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - A6195 (North)	2 - Corton Wood	3 - A6195 (West)
From	1 - A6195 (North)	0	1	4
	2 - Corton Wood	1	0	3
	3 - A6195 (West)	7	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A6195 (North)	0.83	10.51	4.8	B	1403	2105
2 - Corton Wood	0.73	8.68	2.7	A	963	1445
3 - A6195 (West)	0.78	9.17	3.7	A	1231	1847

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1151	288	270	2118	0.544	1146	1221	0.0	1.2	3.793	A
2 - Corton Wood	790	198	723	1798	0.440	787	693	0.0	0.8	3.617	A
3 - A6195 (West)	1010	253	484	2048	0.493	1006	1026	0.0	1.0	3.646	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1375	344	323	2082	0.660	1372	1461	1.2	2.0	5.187	A
2 - Corton Wood	944	236	866	1705	0.554	942	829	0.8	1.2	4.790	A
3 - A6195 (West)	1206	302	580	1983	0.609	1204	1228	1.0	1.6	4.882	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1683	421	394	2035	0.827	1673	1783	2.0	4.6	9.940	A
2 - Corton Wood	1156	289	1056	1581	0.731	1150	1011	1.2	2.7	8.393	A
3 - A6195 (West)	1478	369	708	1894	0.780	1470	1498	1.6	3.6	8.815	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1683	421	396	2034	0.828	1683	1792	4.6	4.8	10.509	B
2 - Corton Wood	1156	289	1062	1577	0.733	1156	1017	2.7	2.7	8.684	A
3 - A6195 (West)	1478	369	711	1892	0.781	1477	1507	3.6	3.7	9.168	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1375	344	326	2081	0.661	1386	1473	4.8	2.0	5.408	A
2 - Corton Wood	944	236	874	1699	0.556	950	837	2.7	1.3	4.924	A
3 - A6195 (West)	1206	302	584	1979	0.610	1214	1240	3.7	1.7	5.035	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A6195 (North)	1151	288	272	2117	0.544	1154	1229	2.0	1.2	3.860	A
2 - Corton Wood	790	198	729	1794	0.441	792	697	1.3	0.8	3.663	A
3 - A6195 (West)	1010	253	488	2046	0.494	1013	1033	1.7	1.0	3.701	A

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