

ANNEX 16: HOBSON WAY/ SOUTH MARSH ROAD (EAST) MODELLING OUTPUTS

Junctions 9															
PICADY 9 - Priority Intersection Module															
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Filename: Junction 1 - Hobson Way South Marsh Lane Operational.j9

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Report generation date: 13/01/2020 09:32:26

- »2023 Operational, Base Adj + Com Dev AM
- »2023 Operational, Base Adj + Com Dev PM
- »2024 Operational, Base Adj + Com Dev AM
- »2024 Operational, Base Adj + Com Dev PM
- »2030 Operational, Base Adj + Com Dev AM
- »2030 Operational, Base Adj + Com Dev PM
- »2023 Operational, Base Adj + Com Dev + Dev AM
- »2023 Operational, Base Adj + Com Dev + Dev PM
- »2024 Operational, Base Adj + Com Dev + Dev AM
- »2024 Operational, Base Adj + Com Dev + Dev PM
- »2030 Operational, Base Adj + Com Dev + Dev AM
- »2030 Operational, Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2023 Operational																
Stream B-C	0.0	0.00	0.00	A	0.0	9.86	0.00	A	0.0	0.00	0.00	A	0.0	10.06	0.00	B
Stream B-A	0.0	7.61	0.04	A	0.1	7.09	0.12	A	0.3	13.08	0.17	B	0.2	8.91	0.17	A
Stream C-B	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	5.30	0.01	A	0.0	0.00	0.00	A
2024 Operational																
Stream B-C	0.0	0.00	0.00	A	0.0	9.87	0.00	A	0.0	0.00	0.00	A	0.0	10.07	0.00	B
Stream B-A	0.0	7.61	0.04	A	0.1	7.10	0.12	A	0.4	15.23	0.19	C	0.2	8.93	0.17	A
Stream C-B	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	5.79	0.01	A	0.0	0.00	0.00	A
2030 Operational																
Stream B-C	0.0	0.00	0.00	A	0.0	9.89	0.00	A	0.0	0.00	0.00	A	0.0	10.16	0.01	B
Stream B-A	0.0	7.66	0.04	A	0.1	7.15	0.12	A	0.3	13.10	0.17	B	0.3	8.92	0.18	A
Stream C-B	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	5.33	0.01	A	0.0	0.00	0.00	A

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

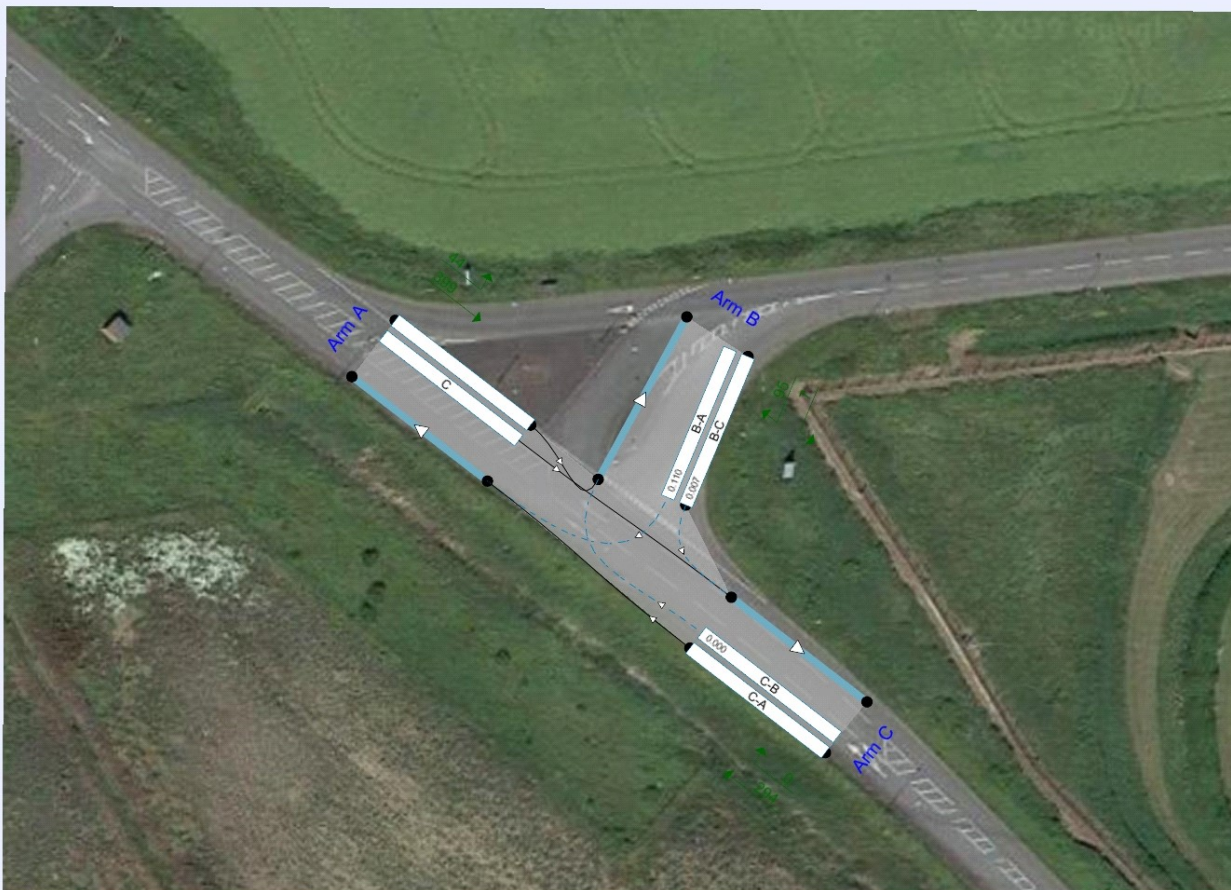
File summary

File Description

Title	Hobson Way / South Marsh Road (East of Hobson Way) - Operational
Location	
Site number	
Date	19/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D14	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓
D15	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D16	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓
D19	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D20	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓
D21	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D22	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓
D23	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D24	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2023 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hobson Way SB		Major
B	South Marsh Lane		Minor
C	Hobson way NB		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	10.50		✓	3.60	250.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	9.90	9.80	9.75	9.00		3.00	200	200

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	780	0.114	0.289	0.182	0.413
1	B-C	877	0.108	0.273	-	-
1	C-B	828	0.258	0.258	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	424	100.000
B		ONE HOUR	✓	18	100.000
C		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	109	315
	B	18	0	0
	C	535	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	5	4
	B	14	0	0
	C	3	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	0.00	0.00	0.0	A	0	0
B-A	0.04	7.61	0.0	A	17	25
C-A					491	736
C-B	0.00	0.00	0.0	A	0	0
A-B					100	150
A-C					289	434

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	799	0.000	0	0.0	0.0	0.000	A
B-A	14	3	629	0.022	13	0.0	0.0	6.666	A
C-A	403	101			403				
C-B	0	0	746	0.000	0	0.0	0.0	0.000	A
A-B	82	21			82				
A-C	237	59			237				

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)	LOS
B-C	0	0	783	0.000	0	0.0	0.0	0.000	A
B-A	16	4	600	0.027	16	0.0	0.0	7.031	A
C-A	481	120			481				
C-B	0	0	730	0.000	0	0.0	0.0	0.000	A
A-B	98	24			98				
A-C	283	71			283				

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)	LOS
B-C	0	0	762	0.000	0	0.0	0.0	0.000	A
B-A	20	5	559	0.035	20	0.0	0.0	7.607	A
C-A	589	147			589				
C-B	0	0	708	0.000	0	0.0	0.0	0.000	A
A-B	120	30			120				
A-C	347	87			347				

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)	LOS
B-C	0	0	762	0.000	0	0.0	0.0	0.000	A
B-A	20	5	559	0.035	20	0.0	0.0	7.607	A
C-A	589	147			589				
C-B	0	0	708	0.000	0	0.0	0.0	0.000	A
A-B	120	30			120				
A-C	347	87			347				

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)	LOS
B-C	0	0	783	0.000	0	0.0	0.0	0.000	A
B-A	16	4	600	0.027	16	0.0	0.0	7.035	A
C-A	481	120			481				
C-B	0	0	730	0.000	0	0.0	0.0	0.000	A
A-B	98	24			98				
A-C	283	71			283				

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)	LOS
B-C	0	0	799	0.000	0	0.0	0.0	0.000	A
B-A	14	3	629	0.022	14	0.0	0.0	6.669	A
C-A	403	101			403				
C-B	0	0	746	0.000	0	0.0	0.0	0.000	A
A-B	82	21			82				
A-C	237	59			237				

2023 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	416	100.000
B		ONE HOUR	✓	65	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	17	399
	B	63	0	2
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	60	3
	B	3	0	100
	C	4	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	0.00	9.86	0.0	A	2	3
B-A	0.12	7.09	0.1	A	58	87
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					16	23
A-C					366	549

Main Results for each time segment

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)	LOS
B-C	2	0.38	779	0.002	1	0.0	0.0	9.262	A
B-A	47	12	652	0.073	47	0.0	0.1	6.129	A
C-A	221	55			221				
C-B	0	0	747	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	300	75			300				

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)	LOS
B-C	2	0.45	759	0.002	2	0.0	0.0	9.505	A
B-A	57	14	627	0.090	57	0.1	0.1	6.500	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	15	4			15				
A-C	359	90			359				

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)	LOS
B-C	2	0.55	732	0.003	2	0.0	0.0	9.864	A
B-A	69	17	593	0.117	69	0.1	0.1	7.084	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	439	110			439				

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)	LOS
B-C	2	0.55	732	0.003	2	0.0	0.0	9.865	A
B-A	69	17	593	0.117	69	0.1	0.1	7.087	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	439	110			439				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.45	759	0.002	2	0.0	0.0	9.506	A
B-A	57	14	627	0.090	57	0.1	0.1	6.506	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	15	4			15				
A-C	359	90			359				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.38	779	0.002	2	0.0	0.0	9.266	A
B-A	47	12	652	0.073	48	0.1	0.1	6.135	A
C-A	221	55			221				
C-B	0	0	747	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	300	75			300				

2024 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	426	100.000
B		ONE HOUR	✓	18	100.000
C		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	110	316
	B	18	0	0
	C	535	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	5	4
	B	14	0	0
	C	3	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	0.00	0.00	0.0	A	0	0
B-A	0.04	7.61	0.0	A	17	25
C-A					491	736
C-B	0.00	0.00	0.0	A	0	0
A-B					101	151
A-C					290	435

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	798	0.000	0	0.0	0.0	0.000	A
B-A	14	3	629	0.022	13	0.0	0.0	6.669	A
C-A	403	101			403				
C-B	0	0	745	0.000	0	0.0	0.0	0.000	A
A-B	83	21			83				
A-C	238	59			238				

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)	LOS
B-C	0	0	783	0.000	0	0.0	0.0	0.000	A
B-A	16	4	599	0.027	16	0.0	0.0	7.035	A
C-A	481	120			481				
C-B	0	0	729	0.000	0	0.0	0.0	0.000	A
A-B	99	25			99				
A-C	284	71			284				

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)	LOS
B-C	0	0	762	0.000	0	0.0	0.0	0.000	A
B-A	20	5	559	0.035	20	0.0	0.0	7.613	A
C-A	589	147			589				
C-B	0	0	707	0.000	0	0.0	0.0	0.000	A
A-B	121	30			121				
A-C	348	87			348				

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)	LOS
B-C	0	0	762	0.000	0	0.0	0.0	0.000	A
B-A	20	5	559	0.035	20	0.0	0.0	7.613	A
C-A	589	147			589				
C-B	0	0	707	0.000	0	0.0	0.0	0.000	A
A-B	121	30			121				
A-C	348	87			348				

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)	LOS
B-C	0	0	783	0.000	0	0.0	0.0	0.000	A
B-A	16	4	599	0.027	16	0.0	0.0	7.039	A
C-A	481	120			481				
C-B	0	0	729	0.000	0	0.0	0.0	0.000	A
A-B	99	25			99				
A-C	284	71			284				

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)	LOS
B-C	0	0	798	0.000	0	0.0	0.0	0.000	A
B-A	14	3	629	0.022	14	0.0	0.0	6.670	A
C-A	403	101			403				
C-B	0	0	745	0.000	0	0.0	0.0	0.000	A
A-B	83	21			83				
A-C	238	59			238				

2024 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	416	100.000
B		ONE HOUR	✓	66	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	17	399
	B	64	0	2
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	35	3
	B	3	0	100
	C	4	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	0.00	9.87	0.0	A	2	3
B-A	0.12	7.10	0.1	A	59	88
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					16	23
A-C					366	549

Main Results for each time segment

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)	LOS
B-C	2	0.38	779	0.002	1	0.0	0.0	9.265	A
B-A	48	12	652	0.074	48	0.0	0.1	6.136	A
C-A	221	55			221				
C-B	0	0	747	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	300	75			300				

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)	LOS
B-C	2	0.45	759	0.002	2	0.0	0.0	9.508	A
B-A	58	14	627	0.092	57	0.1	0.1	6.511	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	15	4			15				
A-C	359	90			359				

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)	LOS
B-C	2	0.55	732	0.003	2	0.0	0.0	9.869	A
B-A	70	18	593	0.119	70	0.1	0.1	7.099	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	439	110			439				

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)	LOS
B-C	2	0.55	732	0.003	2	0.0	0.0	9.870	A
B-A	70	18	593	0.119	70	0.1	0.1	7.101	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	439	110			439				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.45	759	0.002	2	0.0	0.0	9.511	A
B-A	58	14	627	0.092	58	0.1	0.1	6.514	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	15	4			15				
A-C	359	90			359				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.38	778	0.002	2	0.0	0.0	9.267	A
B-A	48	12	652	0.074	48	0.1	0.1	6.145	A
C-A	221	55			221				
C-B	0	0	747	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	300	75			300				

2030 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	435	100.000
B		ONE HOUR	✓	19	100.000
C		ONE HOUR	✓	536	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	116	319
	B	19	0	0
	C	536	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	5	4
	B	14	0	0
	C	3	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	0.00	0.00	0.0	A	0	0
B-A	0.04	7.66	0.0	A	17	26
C-A					492	738
C-B	0.00	0.00	0.0	A	0	0
A-B					106	160
A-C					293	439

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	797	0.000	0	0.0	0.0	0.000	A
B-A	14	4	627	0.023	14	0.0	0.0	6.692	A
C-A	404	101			404				
C-B	0	0	744	0.000	0	0.0	0.0	0.000	A
A-B	87	22			87				
A-C	240	60			240				

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)	LOS
B-C	0	0	781	0.000	0	0.0	0.0	0.000	A
B-A	17	4	598	0.029	17	0.0	0.0	7.065	A
C-A	482	120			482				
C-B	0	0	727	0.000	0	0.0	0.0	0.000	A
A-B	104	26			104				
A-C	287	72			287				

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)	LOS
B-C	0	0	760	0.000	0	0.0	0.0	0.000	A
B-A	21	5	557	0.038	21	0.0	0.0	7.656	A
C-A	590	148			590				
C-B	0	0	705	0.000	0	0.0	0.0	0.000	A
A-B	128	32			128				
A-C	351	88			351				

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)	LOS
B-C	0	0	760	0.000	0	0.0	0.0	0.000	A
B-A	21	5	557	0.038	21	0.0	0.0	7.656	A
C-A	590	148			590				
C-B	0	0	705	0.000	0	0.0	0.0	0.000	A
A-B	128	32			128				
A-C	351	88			351				

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)	LOS
B-C	0	0	781	0.000	0	0.0	0.0	0.000	A
B-A	17	4	598	0.029	17	0.0	0.0	7.069	A
C-A	482	120			482				
C-B	0	0	727	0.000	0	0.0	0.0	0.000	A
A-B	104	26			104				
A-C	287	72			287				

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)	LOS
B-C	0	0	797	0.000	0	0.0	0.0	0.000	A
B-A	14	4	627	0.023	14	0.0	0.0	6.692	A
C-A	404	101			404				
C-B	0	0	744	0.000	0	0.0	0.0	0.000	A
A-B	87	22			87				
A-C	240	60			240				

2030 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	417	100.000
B		ONE HOUR	✓	69	100.000
C		ONE HOUR	✓	294	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	18	399
	B	67	0	2
	C	294	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	60	3
	B	3	0	100
	C	4	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	0.00	9.89	0.0	A	2	3
B-A	0.12	7.15	0.1	A	61	92
C-A					270	405
C-B	0.00	0.00	0.0	A	0	0
A-B					17	25
A-C					366	549

Main Results for each time segment

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)	LOS
B-C	2	0.38	778	0.002	1	0.0	0.0	9.275	A
B-A	50	13	652	0.077	50	0.0	0.1	6.162	A
C-A	221	55			221				
C-B	0	0	747	0.000	0	0.0	0.0	0.000	A
A-B	14	3			14				
A-C	300	75			300				

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)	LOS
B-C	2	0.45	758	0.002	2	0.0	0.0	9.520	A
B-A	60	15	627	0.096	60	0.1	0.1	6.545	A
C-A	264	66			264				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	16	4			16				
A-C	359	90			359				

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)	LOS
B-C	2	0.55	730	0.003	2	0.0	0.0	9.886	A
B-A	74	18	592	0.125	74	0.1	0.1	7.148	A
C-A	324	81			324				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	439	110			439				

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)	LOS
B-C	2	0.55	730	0.003	2	0.0	0.0	9.887	A
B-A	74	18	592	0.125	74	0.1	0.1	7.151	A
C-A	324	81			324				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	439	110			439				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.45	758	0.002	2	0.0	0.0	9.522	A
B-A	60	15	627	0.096	60	0.1	0.1	6.551	A
C-A	264	66			264				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	16	4			16				
A-C	359	90			359				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.38	778	0.002	2	0.0	0.0	9.278	A
B-A	50	13	652	0.077	51	0.1	0.1	6.169	A
C-A	221	55			221				
C-B	0	0	747	0.000	0	0.0	0.0	0.000	A
A-B	14	3			14				
A-C	300	75			300				

2023 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	1.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	496	100.000
B		ONE HOUR	✓	84	100.000
C		ONE HOUR	✓	543	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	181	315
	B	84	0	0
	C	535	8	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	26	4
	B	65	0	0
	C	3	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	0.00	0.00	0.0	A	0	0
B-A	0.17	13.08	0.3	B	77	116
C-A					491	736
C-B	0.01	5.30	0.0	A	7	11
A-B					166	249
A-C					289	434

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	777	0.000	0	0.0	0.0	0.000	A
B-A	63	16	620	0.102	63	0.0	0.2	10.633	B
C-A	403	101			403				
C-B	6	2	732	0.008	6	0.0	0.0	4.959	A
A-B	136	34			136				
A-C	237	59			237				

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)	LOS
B-C	0	0	756	0.000	0	0.0	0.0	0.000	A
B-A	76	19	589	0.128	75	0.2	0.2	11.549	B
C-A	481	120			481				
C-B	7	2	713	0.010	7	0.0	0.0	5.098	A
A-B	163	41			163				
A-C	283	71			283				

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)	LOS
B-C	0	0	728	0.000	0	0.0	0.0	0.000	A
B-A	92	23	547	0.169	92	0.2	0.3	13.061	B
C-A	589	147			589				
C-B	9	2	687	0.013	9	0.0	0.0	5.305	A
A-B	199	50			199				
A-C	347	87			347				

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)	LOS
B-C	0	0	728	0.000	0	0.0	0.0	0.000	A
B-A	92	23	547	0.169	92	0.3	0.3	13.082	B
C-A	589	147			589				
C-B	9	2	687	0.013	9	0.0	0.0	5.305	A
A-B	199	50			199				
A-C	347	87			347				

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)	LOS
B-C	0	0	756	0.000	0	0.0	0.0	0.000	A
B-A	76	19	589	0.128	76	0.3	0.2	11.576	B
C-A	481	120			481				
C-B	7	2	713	0.010	7	0.0	0.0	5.098	A
A-B	163	41			163				
A-C	283	71			283				

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)	LOS
B-C	0	0	777	0.000	0	0.0	0.0	0.000	A
B-A	63	16	620	0.102	63	0.2	0.2	10.671	B
C-A	403	101			403				
C-B	6	2	732	0.008	6	0.0	0.0	4.961	A
A-B	136	34			136				
A-C	237	59			237				

2023 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	1.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	442	100.000
B		ONE HOUR	✓	93	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	43	399
	B	91	0	2
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	82	3
	B	21	0	100
	C	4	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	0.00	10.06	0.0	B	2	3
B-A	0.17	8.91	0.2	A	84	125
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					39	59
A-C					366	549

Main Results for each time segment

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)	LOS
B-C	2	0.38	770	0.002	1	0.0	0.0	9.368	A
B-A	69	17	650	0.105	68	0.0	0.1	7.483	A
C-A	221	55			221				
C-B	0	0	742	0.000	0	0.0	0.0	0.000	A
A-B	32	8			32				
A-C	300	75			300				

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)	LOS
B-C	2	0.45	748	0.002	2	0.0	0.0	9.643	A
B-A	82	20	624	0.131	82	0.1	0.2	8.025	A
C-A	263	66			263				
C-B	0	0	726	0.000	0	0.0	0.0	0.000	A
A-B	39	10			39				
A-C	359	90			359				

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)	LOS
B-C	2	0.55	718	0.003	2	0.0	0.0	10.059	B
B-A	100	25	589	0.170	100	0.2	0.2	8.898	A
C-A	323	81			323				
C-B	0	0	703	0.000	0	0.0	0.0	0.000	A
A-B	47	12			47				
A-C	439	110			439				

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)	LOS
B-C	2	0.55	718	0.003	2	0.0	0.0	10.060	B
B-A	100	25	589	0.170	100	0.2	0.2	8.906	A
C-A	323	81			323				
C-B	0	0	703	0.000	0	0.0	0.0	0.000	A
A-B	47	12			47				
A-C	439	110			439				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.45	748	0.002	2	0.0	0.0	9.645	A
B-A	82	20	624	0.131	82	0.2	0.2	8.037	A
C-A	263	66			263				
C-B	0	0	726	0.000	0	0.0	0.0	0.000	A
A-B	39	10			39				
A-C	359	90			359				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.38	770	0.002	2	0.0	0.0	9.371	A
B-A	69	17	650	0.105	69	0.2	0.1	7.502	A
C-A	221	55			221				
C-B	0	0	742	0.000	0	0.0	0.0	0.000	A
A-B	32	8			32				
A-C	300	75			300				

2024 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	1.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D21	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	698	100.000
B		ONE HOUR	✓	84	100.000
C		ONE HOUR	✓	543	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	182	516
	B	84	0	0
	C	535	8	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	26	4
	B	65	0	0
	C	3	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	0.00	0.00	0.0	A	0	0
B-A	0.19	15.23	0.4	C	77	116
C-A					491	736
C-B	0.01	5.79	0.0	A	7	11
A-B					167	251
A-C					473	710

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	735	0.000	0	0.0	0.0	0.000	A
B-A	63	16	577	0.110	62	0.0	0.2	11.535	B
C-A	403	101			403				
C-B	6	2	693	0.009	6	0.0	0.0	5.242	A
A-B	137	34			137				
A-C	388	97			388				

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)	LOS
B-C	0	0	706	0.000	0	0.0	0.0	0.000	A
B-A	76	19	537	0.141	75	0.2	0.3	12.856	B
C-A	481	120			481				
C-B	7	2	666	0.011	7	0.0	0.0	5.461	A
A-B	164	41			164				
A-C	464	116			464				

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)	LOS
B-C	0	0	666	0.000	0	0.0	0.0	0.000	A
B-A	92	23	482	0.192	92	0.3	0.4	15.194	C
C-A	589	147			589				
C-B	9	2	630	0.014	9	0.0	0.0	5.795	A
A-B	200	50			200				
A-C	568	142			568				

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)	LOS
B-C	0	0	666	0.000	0	0.0	0.0	0.000	A
B-A	92	23	482	0.192	92	0.4	0.4	15.230	C
C-A	589	147			589				
C-B	9	2	630	0.014	9	0.0	0.0	5.795	A
A-B	200	50			200				
A-C	568	142			568				

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)	LOS
B-C	0	0	706	0.000	0	0.0	0.0	0.000	A
B-A	76	19	537	0.141	76	0.4	0.3	12.893	B
C-A	481	120			481				
C-B	7	2	666	0.011	7	0.0	0.0	5.461	A
A-B	164	41			164				
A-C	464	116			464				

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)	LOS
B-C	0	0	735	0.000	0	0.0	0.0	0.000	A
B-A	63	16	577	0.110	64	0.3	0.2	11.582	B
C-A	403	101			403				
C-B	6	2	693	0.009	6	0.0	0.0	5.242	A
A-B	137	34			137				
A-C	388	97			388				

2024 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	1.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	442	100.000
B		ONE HOUR	✓	94	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	43	399
	B	92	0	2
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	82	3
	B	21	0	100
	C	4	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	0.00	10.07	0.0	B	2	3
B-A	0.17	8.93	0.2	A	84	127
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					39	59
A-C					366	549

Main Results for each time segment

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)	LOS
B-C	2	0.38	770	0.002	1	0.0	0.0	9.371	A
B-A	69	17	650	0.107	69	0.0	0.1	7.493	A
C-A	221	55			221				
C-B	0	0	742	0.000	0	0.0	0.0	0.000	A
A-B	32	8			32				
A-C	300	75			300				

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)	LOS
B-C	2	0.45	748	0.002	2	0.0	0.0	9.647	A
B-A	83	21	624	0.132	83	0.1	0.2	8.038	A
C-A	263	66			263				
C-B	0	0	726	0.000	0	0.0	0.0	0.000	A
A-B	39	10			39				
A-C	359	90			359				

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)	LOS
B-C	2	0.55	718	0.003	2	0.0	0.0	10.064	B
B-A	101	25	589	0.172	101	0.2	0.2	8.918	A
C-A	323	81			323				
C-B	0	0	703	0.000	0	0.0	0.0	0.000	A
A-B	47	12			47				
A-C	439	110			439				

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)	LOS
B-C	2	0.55	717	0.003	2	0.0	0.0	10.066	B
B-A	101	25	589	0.172	101	0.2	0.2	8.926	A
C-A	323	81			323				
C-B	0	0	703	0.000	0	0.0	0.0	0.000	A
A-B	47	12			47				
A-C	439	110			439				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.45	748	0.002	2	0.0	0.0	9.649	A
B-A	83	21	624	0.132	83	0.2	0.2	8.050	A
C-A	263	66			263				
C-B	0	0	726	0.000	0	0.0	0.0	0.000	A
A-B	39	10			39				
A-C	359	90			359				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.38	770	0.002	2	0.0	0.0	9.376	A
B-A	69	17	650	0.107	69	0.2	0.1	7.509	A
C-A	221	55			221				
C-B	0	0	742	0.000	0	0.0	0.0	0.000	A
A-B	32	8			32				
A-C	300	75			300				

2030 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	1.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D23	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	507	100.000
B		ONE HOUR	✓	85	100.000
C		ONE HOUR	✓	544	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	188	319
	B	85	0	0
	C	536	8	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	25	4
	B	64	0	0
	C	3	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	0.00	0.00	0.0	A	0	0
B-A	0.17	13.10	0.3	B	78	117
C-A					492	738
C-B	0.01	5.33	0.0	A	7	11
A-B					173	259
A-C					293	439

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	775	0.000	0	0.0	0.0	0.000	A
B-A	64	16	619	0.103	63	0.0	0.2	10.613	B
C-A	404	101			404				
C-B	6	2	730	0.008	6	0.0	0.0	4.973	A
A-B	142	35			142				
A-C	240	60			240				

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)	LOS
B-C	0	0	754	0.000	0	0.0	0.0	0.000	A
B-A	76	19	587	0.130	76	0.2	0.2	11.542	B
C-A	482	120			482				
C-B	7	2	711	0.010	7	0.0	0.0	5.117	A
A-B	169	42			169				
A-C	287	72			287				

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)	LOS
B-C	0	0	725	0.000	0	0.0	0.0	0.000	A
B-A	94	23	544	0.172	93	0.2	0.3	13.081	B
C-A	590	148			590				
C-B	9	2	684	0.013	9	0.0	0.0	5.329	A
A-B	207	52			207				
A-C	351	88			351				

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)	LOS
B-C	0	0	725	0.000	0	0.0	0.0	0.000	A
B-A	94	23	544	0.172	94	0.3	0.3	13.102	B
C-A	590	148			590				
C-B	9	2	684	0.013	9	0.0	0.0	5.329	A
A-B	207	52			207				
A-C	351	88			351				

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)	LOS
B-C	0	0	754	0.000	0	0.0	0.0	0.000	A
B-A	76	19	587	0.130	77	0.3	0.2	11.568	B
C-A	482	120			482				
C-B	7	2	711	0.010	7	0.0	0.0	5.119	A
A-B	169	42			169				
A-C	287	72			287				

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)	LOS
B-C	0	0	775	0.000	0	0.0	0.0	0.000	A
B-A	64	16	619	0.103	64	0.2	0.2	10.650	B
C-A	404	101			404				
C-B	6	2	730	0.008	6	0.0	0.0	4.975	A
A-B	142	35			142				
A-C	240	60			240				

2030 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	1.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D24	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	443	100.000
B		ONE HOUR	✓	102	100.000
C		ONE HOUR	✓	294	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	44	399
	B	95	0	7
	C	294	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	81	3
	B	20	0	100
	C	4	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	0.01	10.16	0.0	B	6	10
B-A	0.18	8.92	0.3	A	87	131
C-A					270	405
C-B	0.00	0.00	0.0	A	0	0
A-B					40	61
A-C					366	549

Main Results for each time segment

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)	LOS
B-C	5	1	769	0.007	5	0.0	0.0	9.427	A
B-A	72	18	649	0.110	71	0.0	0.1	7.460	A
C-A	221	55			221				
C-B	0	0	742	0.000	0	0.0	0.0	0.000	A
A-B	33	8			33				
A-C	300	75			300				

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)	LOS
B-C	6	2	747	0.008	6	0.0	0.0	9.718	A
B-A	85	21	624	0.137	85	0.1	0.2	8.015	A
C-A	264	66			264				
C-B	0	0	725	0.000	0	0.0	0.0	0.000	A
A-B	40	10			40				
A-C	359	90			359				

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)	LOS
B-C	8	2	716	0.011	8	0.0	0.0	10.161	B
B-A	105	26	589	0.178	104	0.2	0.3	8.910	A
C-A	324	81			324				
C-B	0	0	702	0.000	0	0.0	0.0	0.000	A
A-B	48	12			48				
A-C	439	110			439				

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)	LOS
B-C	8	2	716	0.011	8	0.0	0.0	10.163	B
B-A	105	26	589	0.178	105	0.3	0.3	8.919	A
C-A	324	81			324				
C-B	0	0	702	0.000	0	0.0	0.0	0.000	A
A-B	48	12			48				
A-C	439	110			439				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	6	2	747	0.008	6	0.0	0.0	9.721	A
B-A	85	21	624	0.137	86	0.3	0.2	8.029	A
C-A	264	66			264				
C-B	0	0	725	0.000	0	0.0	0.0	0.000	A
A-B	40	10			40				
A-C	359	90			359				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	5	1	769	0.007	5	0.0	0.0	9.432	A
B-A	72	18	649	0.110	72	0.2	0.1	7.482	A
C-A	221	55			221				
C-B	0	0	742	0.000	0	0.0	0.0	0.000	A
A-B	33	8			33				
A-C	300	75			300				

Junctions 9															
PICADY 9 - Priority Intersection Module															
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Filename: Junction 1 - Hobson Way South Marsh Lane Construction.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 1 - Hobson Way South Marsh Lane

Report generation date: 13/01/2020 09:31:30

- »2021 Construction , Base Adj + Com Dev AM
- »2021 Construction , Base Adj + Com Dev PM
- »2021 Construction , Base Adj + Com Dev + Dev AM
- »2021 Construction , Base Adj + Com Dev + Dev PM
- »2022 Construction , Base Adj + Com Dev AM
- »2022 Construction , Base Adj + Com Dev PM
- »2022 Construction , Base Adj + Com Dev + Dev AM
- »2022 Construction , Base Adj + Com Dev + Dev PM
- »2027 Construction , Base Adj + Com Dev AM
- »2027 Construction , Base Adj + Com Dev PM
- »2027 Construction , Base Adj + Com Dev + Dev AM
- »2027 Construction , Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 Construction																
Stream B-C	0.0	0.00	0.00	A	0.0	9.85	0.00	A	0.0	0.00	0.00	A	0.0	5.57	0.03	A
Stream B-A	0.0	7.56	0.04	A	0.1	7.05	0.11	A	0.1	9.27	0.06	A	0.4	8.62	0.26	A
Stream C-B	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	5.55	0.04	A	0.0	0.00	0.00	A
2022 Construction																
Stream B-C	0.0	0.00	0.00	A	0.0	9.86	0.00	A	0.0	0.00	0.00	A	0.0	5.57	0.03	A
Stream B-A	0.0	7.61	0.04	A	0.1	7.07	0.12	A	0.1	9.33	0.06	A	0.4	8.62	0.26	A
Stream C-B	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	5.58	0.04	A	0.0	0.00	0.00	A
2027 Construction																
Stream B-C	0.0	0.00	0.00	A	0.0	9.88	0.00	A	0.0	0.00	0.00	A	0.0	5.59	0.03	A
Stream B-A	0.0	7.58	0.04	A	0.1	7.12	0.12	A	0.1	9.31	0.06	A	0.4	8.72	0.27	A
Stream C-B	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	5.59	0.04	A	0.0	0.00	0.00	A

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

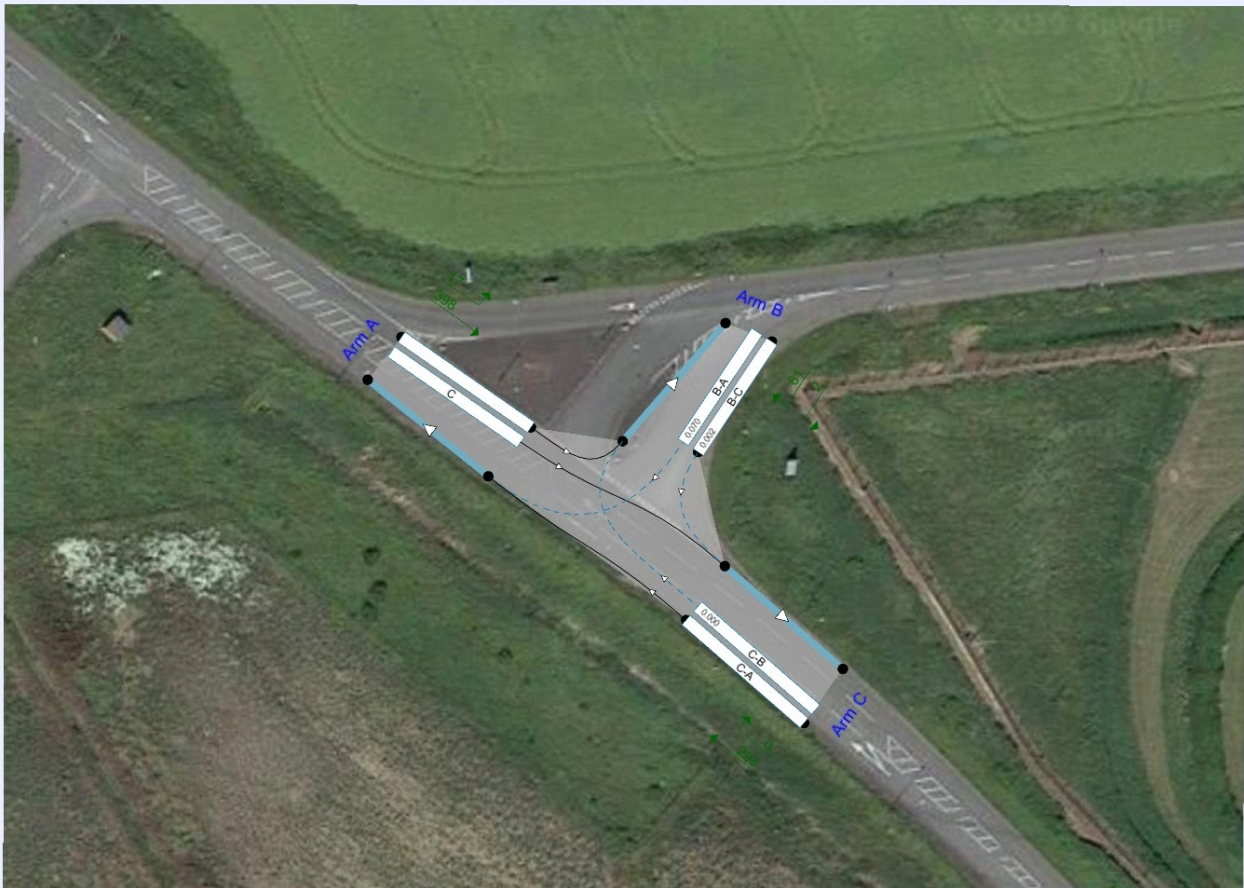
File summary

File Description

Title	Hobson Way / South Marsh Road (East of Hobson Way) - Construction
Location	
Site number	
Date	19/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2021 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hobson Way SB		Major
B	South Marsh Lane		Minor
C	Hobson way NB		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	10.50		✓	3.60	250.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	9.90	9.80	9.75	9.00		3.00	200	200

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	780	0.114	0.289	0.182	0.413
1	B-C	877	0.108	0.273	-	-
1	C-B	828	0.258	0.258	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	411	100.000
B		ONE HOUR	✓	18	100.000
C		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A	B	C
	A	0	106	305
	B	18	0	0
	C	535	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		A	B	C
	A	0	5	4
	B	14	0	0
	C	2	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	0.00	0.00	0.0	A	0	0
B-A	0.04	7.56	0.0	A	17	25
C-A					491	736
C-B	0.00	0.00	0.0	A	0	0
A-B					97	146
A-C					280	420

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	801	0.000	0	0.0	0.0	0.000	A
B-A	14	3	632	0.021	13	0.0	0.0	6.640	A
C-A	403	101			403				
C-B	0	0	748	0.000	0	0.0	0.0	0.000	A
A-B	80	20			80				
A-C	230	57			230				

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)	LOS
B-C	0	0	786	0.000	0	0.0	0.0	0.000	A
B-A	16	4	603	0.027	16	0.0	0.0	6.996	A
C-A	481	120			481				
C-B	0	0	733	0.000	0	0.0	0.0	0.000	A
A-B	95	24			95				
A-C	274	69			274				

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)	LOS
B-C	0	0	766	0.000	0	0.0	0.0	0.000	A
B-A	20	5	563	0.035	20	0.0	0.0	7.557	A
C-A	589	147			589				
C-B	0	0	711	0.000	0	0.0	0.0	0.000	A
A-B	117	29			117				
A-C	336	84			336				

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)	LOS
B-C	0	0	766	0.000	0	0.0	0.0	0.000	A
B-A	20	5	563	0.035	20	0.0	0.0	7.557	A
C-A	589	147			589				
C-B	0	0	711	0.000	0	0.0	0.0	0.000	A
A-B	117	29			117				
A-C	336	84			336				

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)	LOS
B-C	0	0	786	0.000	0	0.0	0.0	0.000	A
B-A	16	4	603	0.027	16	0.0	0.0	7.000	A
C-A	481	120			481				
C-B	0	0	733	0.000	0	0.0	0.0	0.000	A
A-B	95	24			95				
A-C	274	69			274				

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)	LOS
B-C	0	0	801	0.000	0	0.0	0.0	0.000	A
B-A	14	3	632	0.021	14	0.0	0.0	6.643	A
C-A	403	101			403				
C-B	0	0	748	0.000	0	0.0	0.0	0.000	A
A-B	80	20			80				
A-C	230	57			230				

2021 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	415	100.000
B		ONE HOUR	✓	63	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	17	398
	B	61	0	2
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	35	3
	B	3	0	100
	C	4	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	0.00	9.85	0.0	A	2	3
B-A	0.11	7.05	0.1	A	56	84
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					16	23
A-C					365	548

Main Results for each time segment

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)	LOS
B-C	2	0.38	779	0.002	1	0.0	0.0	9.254	A
B-A	46	11	652	0.070	46	0.0	0.1	6.111	A
C-A	221	55			221				
C-B	0	0	748	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	300	75			300				

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)	LOS
B-C	2	0.45	760	0.002	2	0.0	0.0	9.494	A
B-A	55	14	627	0.087	55	0.1	0.1	6.477	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	15	4			15				
A-C	358	89			358				

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)	LOS
B-C	2	0.55	733	0.003	2	0.0	0.0	9.850	A
B-A	67	17	593	0.113	67	0.1	0.1	7.050	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	438	110			438				

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)	LOS
B-C	2	0.55	733	0.003	2	0.0	0.0	9.850	A
B-A	67	17	593	0.113	67	0.1	0.1	7.053	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	438	110			438				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.45	760	0.002	2	0.0	0.0	9.497	A
B-A	55	14	627	0.087	55	0.1	0.1	6.483	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	15	4			15				
A-C	358	89			358				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.38	779	0.002	2	0.0	0.0	9.258	A
B-A	46	11	652	0.070	46	0.1	0.1	6.118	A
C-A	221	55			221				
C-B	0	0	748	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	300	75			300				

2021 Construction , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	534	100.000
B		ONE HOUR	✓	28	100.000
C		ONE HOUR	✓	560	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	229	305
	B	28	0	0
	C	535	25	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	5	4
	B	30	0	0
	C	2	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	0.00	0.00	0.0	A	0	0
B-A	0.06	9.27	0.1	A	26	39
C-A					491	736
C-B	0.04	5.55	0.0	A	23	34
A-B					210	315
A-C					280	420

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	789	0.000	0	0.0	0.0	0.000	A
B-A	21	5	613	0.034	21	0.0	0.0	7.899	A
C-A	403	101			403				
C-B	19	5	724	0.026	19	0.0	0.0	5.100	A
A-B	172	43			172				
A-C	230	57			230				

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)	LOS
B-C	0	0	771	0.000	0	0.0	0.0	0.000	A
B-A	25	6	581	0.043	25	0.0	0.1	8.423	A
C-A	481	120			481				
C-B	22	6	704	0.032	22	0.0	0.0	5.278	A
A-B	206	51			206				
A-C	274	69			274				

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)	LOS
B-C	0	0	747	0.000	0	0.0	0.0	0.000	A
B-A	31	8	536	0.058	31	0.1	0.1	9.263	A
C-A	589	147			589				
C-B	28	7	677	0.041	27	0.0	0.0	5.546	A
A-B	252	63			252				
A-C	336	84			336				

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)	LOS
B-C	0	0	747	0.000	0	0.0	0.0	0.000	A
B-A	31	8	536	0.058	31	0.1	0.1	9.265	A
C-A	589	147			589				
C-B	28	7	677	0.041	28	0.0	0.0	5.546	A
A-B	252	63			252				
A-C	336	84			336				

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)	LOS
B-C	0	0	771	0.000	0	0.0	0.0	0.000	A
B-A	25	6	581	0.043	25	0.1	0.1	8.426	A
C-A	481	120			481				
C-B	22	6	704	0.032	23	0.0	0.0	5.279	A
A-B	206	51			206				
A-C	274	69			274				

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)	LOS
B-C	0	0	788	0.000	0	0.0	0.0	0.000	A
B-A	21	5	613	0.034	21	0.1	0.0	7.907	A
C-A	403	101			403				
C-B	19	5	724	0.026	19	0.0	0.0	5.101	A
A-B	172	43			172				
A-C	230	57			230				

2021 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	1.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	425	100.000
B		ONE HOUR	✓	156	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	27	398
	B	139	0	17
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	73	3
	B	5	0	6
	C	4	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	0.03	5.57	0.0	A	16	23
B-A	0.26	8.62	0.4	A	128	191
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					25	37
A-C					365	548

Main Results for each time segment

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)	LOS
B-C	13	3	761	0.017	13	0.0	0.0	5.101	A
B-A	105	26	651	0.161	104	0.0	0.2	6.896	A
C-A	221	55			221				
C-B	0	0	746	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	300	75			300				

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)	LOS
B-C	15	4	737	0.021	15	0.0	0.0	5.286	A
B-A	125	31	626	0.200	125	0.2	0.3	7.534	A
C-A	263	66			263				
C-B	0	0	730	0.000	0	0.0	0.0	0.000	A
A-B	24	6			24				
A-C	358	89			358				

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)	LOS
B-C	19	5	704	0.027	19	0.0	0.0	5.569	A
B-A	153	38	592	0.259	153	0.3	0.4	8.604	A
C-A	323	81			323				
C-B	0	0	707	0.000	0	0.0	0.0	0.000	A
A-B	30	7			30				
A-C	438	110			438				

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)	LOS
B-C	19	5	704	0.027	19	0.0	0.0	5.571	A
B-A	153	38	592	0.259	153	0.4	0.4	8.619	A
C-A	323	81			323				
C-B	0	0	707	0.000	0	0.0	0.0	0.000	A
A-B	30	7			30				
A-C	438	110			438				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	15	4	737	0.021	15	0.0	0.0	5.288	A
B-A	125	31	626	0.200	125	0.4	0.3	7.555	A
C-A	263	66			263				
C-B	0	0	730	0.000	0	0.0	0.0	0.000	A
A-B	24	6			24				
A-C	358	89			358				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	13	3	760	0.017	13	0.0	0.0	5.104	A
B-A	105	26	651	0.161	105	0.3	0.2	6.924	A
C-A	221	55			221				
C-B	0	0	746	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	300	75			300				

2022 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	423	100.000
B		ONE HOUR	✓	18	100.000
C		ONE HOUR	✓	535	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	108	315
	B	18	0	0
	C	535	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	5	4
	B	14	0	0
	C	2	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	0.00	0.00	0.0	A	0	0
B-A	0.04	7.61	0.0	A	17	25
C-A					491	736
C-B	0.00	0.00	0.0	A	0	0
A-B					99	149
A-C					289	434

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	799	0.000	0	0.0	0.0	0.000	A
B-A	14	3	629	0.022	13	0.0	0.0	6.665	A
C-A	403	101			403				
C-B	0	0	746	0.000	0	0.0	0.0	0.000	A
A-B	81	20			81				
A-C	237	59			237				

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)	LOS
B-C	0	0	784	0.000	0	0.0	0.0	0.000	A
B-A	16	4	600	0.027	16	0.0	0.0	7.030	A
C-A	481	120			481				
C-B	0	0	730	0.000	0	0.0	0.0	0.000	A
A-B	97	24			97				
A-C	283	71			283				

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)	LOS
B-C	0	0	762	0.000	0	0.0	0.0	0.000	A
B-A	20	5	559	0.035	20	0.0	0.0	7.605	A
C-A	589	147			589				
C-B	0	0	708	0.000	0	0.0	0.0	0.000	A
A-B	119	30			119				
A-C	347	87			347				

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)	LOS
B-C	0	0	762	0.000	0	0.0	0.0	0.000	A
B-A	20	5	559	0.035	20	0.0	0.0	7.605	A
C-A	589	147			589				
C-B	0	0	708	0.000	0	0.0	0.0	0.000	A
A-B	119	30			119				
A-C	347	87			347				

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)	LOS
B-C	0	0	783	0.000	0	0.0	0.0	0.000	A
B-A	16	4	600	0.027	16	0.0	0.0	7.033	A
C-A	481	120			481				
C-B	0	0	730	0.000	0	0.0	0.0	0.000	A
A-B	97	24			97				
A-C	283	71			283				

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)	LOS
B-C	0	0	799	0.000	0	0.0	0.0	0.000	A
B-A	14	3	629	0.022	14	0.0	0.0	6.668	A
C-A	403	101			403				
C-B	0	0	746	0.000	0	0.0	0.0	0.000	A
A-B	81	20			81				
A-C	237	59			237				

2022 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.59	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	415	100.000
B		ONE HOUR	✓	64	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	17	398
	B	62	0	2
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	55	3
	B	3	0	100
	C	4	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	0.00	9.86	0.0	A	2	3
B-A	0.12	7.07	0.1	A	57	85
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					16	23
A-C					365	548

Main Results for each time segment

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)	LOS
B-C	2	0.38	779	0.002	1	0.0	0.0	9.257	A
B-A	47	12	652	0.072	46	0.0	0.1	6.119	A
C-A	221	55			221				
C-B	0	0	748	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	300	75			300				

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)	LOS
B-C	2	0.45	760	0.002	2	0.0	0.0	9.498	A
B-A	56	14	627	0.089	56	0.1	0.1	6.487	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	15	4			15				
A-C	358	89			358				

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)	LOS
B-C	2	0.55	733	0.003	2	0.0	0.0	9.855	A
B-A	68	17	593	0.115	68	0.1	0.1	7.065	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	438	110			438				

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)	LOS
B-C	2	0.55	733	0.003	2	0.0	0.0	9.855	A
B-A	68	17	593	0.115	68	0.1	0.1	7.067	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	19	5			19				
A-C	438	110			438				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.45	760	0.002	2	0.0	0.0	9.499	A
B-A	56	14	627	0.089	56	0.1	0.1	6.490	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	15	4			15				
A-C	358	89			358				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.38	779	0.002	2	0.0	0.0	9.259	A
B-A	47	12	652	0.072	47	0.1	0.1	6.126	A
C-A	221	55			221				
C-B	0	0	748	0.000	0	0.0	0.0	0.000	A
A-B	13	3			13				
A-C	300	75			300				

2022 Construction , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	546	100.000
B		ONE HOUR	✓	28	100.000
C		ONE HOUR	✓	560	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	231	315
	B	28	0	0
	C	535	25	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	4	4
	B	30	0	0
	C	2	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	0.00	0.00	0.0	A	0	0
B-A	0.06	9.33	0.1	A	26	39
C-A					491	736
C-B	0.04	5.58	0.0	A	23	34
A-B					212	318
A-C					289	434

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	786	0.000	0	0.0	0.0	0.000	A
B-A	21	5	611	0.035	21	0.0	0.0	7.930	A
C-A	403	101			403				
C-B	19	5	722	0.026	19	0.0	0.0	5.117	A
A-B	174	43			174				
A-C	237	59			237				

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)	LOS
B-C	0	0	768	0.000	0	0.0	0.0	0.000	A
B-A	25	6	578	0.044	25	0.0	0.1	8.466	A
C-A	481	120			481				
C-B	22	6	702	0.032	22	0.0	0.0	5.300	A
A-B	208	52			208				
A-C	283	71			283				

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)	LOS
B-C	0	0	743	0.000	0	0.0	0.0	0.000	A
B-A	31	8	532	0.058	31	0.1	0.1	9.327	A
C-A	589	147			589				
C-B	28	7	673	0.041	27	0.0	0.0	5.575	A
A-B	254	64			254				
A-C	347	87			347				

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)	LOS
B-C	0	0	743	0.000	0	0.0	0.0	0.000	A
B-A	31	8	532	0.058	31	0.1	0.1	9.329	A
C-A	589	147			589				
C-B	28	7	673	0.041	28	0.0	0.0	5.575	A
A-B	254	64			254				
A-C	347	87			347				

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)	LOS
B-C	0	0	768	0.000	0	0.0	0.0	0.000	A
B-A	25	6	578	0.044	25	0.1	0.1	8.470	A
C-A	481	120			481				
C-B	22	6	702	0.032	23	0.0	0.0	5.303	A
A-B	208	52			208				
A-C	283	71			283				

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)	LOS
B-C	0	0	786	0.000	0	0.0	0.0	0.000	A
B-A	21	5	611	0.035	21	0.1	0.0	7.937	A
C-A	403	101			403				
C-B	19	5	722	0.026	19	0.0	0.0	5.118	A
A-B	174	43			174				
A-C	237	59			237				

2022 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	1.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	425	100.000
B		ONE HOUR	✓	156	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	27	398
	B	139	0	17
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	69	3
	B	5	0	6
	C	4	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	0.03	5.57	0.0	A	16	23
B-A	0.26	8.62	0.4	A	128	191
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					25	37
A-C					365	548

Main Results for each time segment

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)	LOS
B-C	13	3	761	0.017	13	0.0	0.0	5.101	A
B-A	105	26	651	0.161	104	0.0	0.2	6.896	A
C-A	221	55			221				
C-B	0	0	746	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	300	75			300				

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)	LOS
B-C	15	4	737	0.021	15	0.0	0.0	5.286	A
B-A	125	31	626	0.200	125	0.2	0.3	7.534	A
C-A	263	66			263				
C-B	0	0	730	0.000	0	0.0	0.0	0.000	A
A-B	24	6			24				
A-C	358	89			358				

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)	LOS
B-C	19	5	704	0.027	19	0.0	0.0	5.569	A
B-A	153	38	592	0.259	153	0.3	0.4	8.604	A
C-A	323	81			323				
C-B	0	0	707	0.000	0	0.0	0.0	0.000	A
A-B	30	7			30				
A-C	438	110			438				

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)	LOS
B-C	19	5	704	0.027	19	0.0	0.0	5.571	A
B-A	153	38	592	0.259	153	0.4	0.4	8.619	A
C-A	323	81			323				
C-B	0	0	707	0.000	0	0.0	0.0	0.000	A
A-B	30	7			30				
A-C	438	110			438				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	15	4	737	0.021	15	0.0	0.0	5.288	A
B-A	125	31	626	0.200	125	0.4	0.3	7.555	A
C-A	263	66			263				
C-B	0	0	730	0.000	0	0.0	0.0	0.000	A
A-B	24	6			24				
A-C	358	89			358				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	13	3	760	0.017	13	0.0	0.0	5.104	A
B-A	105	26	651	0.161	105	0.3	0.2	6.924	A
C-A	221	55			221				
C-B	0	0	746	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	300	75			300				

2027 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	431	100.000
B		ONE HOUR	✓	19	100.000
C		ONE HOUR	✓	536	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	113	318
	B	19	0	0
	C	536	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	5	4
	B	13	0	0
	C	2	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	0.00	0.00	0.0	A	0	0
B-A	0.04	7.58	0.0	A	17	26
C-A					492	738
C-B	0.00	0.00	0.0	A	0	0
A-B					104	156
A-C					292	438

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	798	0.000	0	0.0	0.0	0.000	A
B-A	14	4	628	0.023	14	0.0	0.0	6.628	A
C-A	404	101			404				
C-B	0	0	745	0.000	0	0.0	0.0	0.000	A
A-B	85	21			85				
A-C	239	60			239				

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)	LOS
B-C	0	0	782	0.000	0	0.0	0.0	0.000	A
B-A	17	4	598	0.029	17	0.0	0.0	6.996	A
C-A	482	120			482				
C-B	0	0	728	0.000	0	0.0	0.0	0.000	A
A-B	102	25			102				
A-C	286	71			286				

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)	LOS
B-C	0	0	760	0.000	0	0.0	0.0	0.000	A
B-A	21	5	558	0.038	21	0.0	0.0	7.579	A
C-A	590	148			590				
C-B	0	0	706	0.000	0	0.0	0.0	0.000	A
A-B	124	31			124				
A-C	350	88			350				

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)	LOS
B-C	0	0	760	0.000	0	0.0	0.0	0.000	A
B-A	21	5	558	0.038	21	0.0	0.0	7.579	A
C-A	590	148			590				
C-B	0	0	706	0.000	0	0.0	0.0	0.000	A
A-B	124	31			124				
A-C	350	88			350				

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)	LOS
B-C	0	0	782	0.000	0	0.0	0.0	0.000	A
B-A	17	4	598	0.029	17	0.0	0.0	7.000	A
C-A	482	120			482				
C-B	0	0	728	0.000	0	0.0	0.0	0.000	A
A-B	102	25			102				
A-C	286	71			286				

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)	LOS
B-C	0	0	798	0.000	0	0.0	0.0	0.000	A
B-A	14	4	628	0.023	14	0.0	0.0	6.628	A
C-A	404	101			404				
C-B	0	0	745	0.000	0	0.0	0.0	0.000	A
A-B	85	21			85				
A-C	239	60			239				

2027 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.62	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	417	100.000
B		ONE HOUR	✓	67	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	18	399
	B	65	0	2
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	64	3
	B	3	0	100
	C	4	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	0.00	9.88	0.0	A	2	3
B-A	0.12	7.12	0.1	A	60	89
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					17	25
A-C					366	549

Main Results for each time segment

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)	LOS
B-C	2	0.38	778	0.002	1	0.0	0.0	9.269	A
B-A	49	12	652	0.075	49	0.0	0.1	6.145	A
C-A	221	55			221				
C-B	0	0	747	0.000	0	0.0	0.0	0.000	A
A-B	14	3			14				
A-C	300	75			300				

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)	LOS
B-C	2	0.45	759	0.002	2	0.0	0.0	9.513	A
B-A	58	15	627	0.093	58	0.1	0.1	6.522	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	16	4			16				
A-C	359	90			359				

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)	LOS
B-C	2	0.55	731	0.003	2	0.0	0.0	9.876	A
B-A	72	18	592	0.121	71	0.1	0.1	7.115	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	439	110			439				

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)	LOS
B-C	2	0.55	731	0.003	2	0.0	0.0	9.876	A
B-A	72	18	592	0.121	72	0.1	0.1	7.118	A
C-A	323	81			323				
C-B	0	0	710	0.000	0	0.0	0.0	0.000	A
A-B	20	5			20				
A-C	439	110			439				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.45	759	0.002	2	0.0	0.0	9.514	A
B-A	58	15	627	0.093	59	0.1	0.1	6.528	A
C-A	263	66			263				
C-B	0	0	732	0.000	0	0.0	0.0	0.000	A
A-B	16	4			16				
A-C	359	90			359				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	2	0.38	778	0.002	2	0.0	0.0	9.271	A
B-A	49	12	652	0.075	49	0.1	0.1	6.152	A
C-A	221	55			221				
C-B	0	0	747	0.000	0	0.0	0.0	0.000	A
A-B	14	3			14				
A-C	300	75			300				

2027 Construction , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	0.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	554	100.000
B		ONE HOUR	✓	29	100.000
C		ONE HOUR	✓	561	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	236	318
	B	29	0	0
	C	536	25	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	5	4
	B	29	0	0
	C	2	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	0.00	0.00	0.0	A	0	0
B-A	0.06	9.31	0.1	A	27	40
C-A					492	738
C-B	0.04	5.59	0.0	A	23	34
A-B					217	325
A-C					292	438

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	0	0	785	0.000	0	0.0	0.0	0.000	A
B-A	22	5	610	0.036	22	0.0	0.0	7.896	A
C-A	404	101			404				
C-B	19	5	721	0.026	19	0.0	0.0	5.129	A
A-B	178	44			178				
A-C	239	60			239				

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)	LOS
B-C	0	0	767	0.000	0	0.0	0.0	0.000	A
B-A	26	7	576	0.045	26	0.0	0.1	8.437	A
C-A	482	120			482				
C-B	22	6	700	0.032	22	0.0	0.0	5.315	A
A-B	212	53			212				
A-C	286	71			286				

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)	LOS
B-C	0	0	742	0.000	0	0.0	0.0	0.000	A
B-A	32	8	531	0.060	32	0.1	0.1	9.308	A
C-A	590	148			590				
C-B	28	7	671	0.041	27	0.0	0.0	5.595	A
A-B	260	65			260				
A-C	350	88			350				

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)	LOS
B-C	0	0	742	0.000	0	0.0	0.0	0.000	A
B-A	32	8	531	0.060	32	0.1	0.1	9.311	A
C-A	590	148			590				
C-B	28	7	671	0.041	28	0.0	0.0	5.595	A
A-B	260	65			260				
A-C	350	88			350				

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)	LOS
B-C	0	0	767	0.000	0	0.0	0.0	0.000	A
B-A	26	7	576	0.045	26	0.1	0.1	8.441	A
C-A	482	120			482				
C-B	22	6	700	0.032	23	0.0	0.0	5.315	A
A-B	212	53			212				
A-C	286	71			286				

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)	LOS
B-C	0	0	785	0.000	0	0.0	0.0	0.000	A
B-A	22	5	610	0.036	22	0.1	0.0	7.904	A
C-A	404	101			404				
C-B	19	5	721	0.026	19	0.0	0.0	5.129	A
A-B	178	44			178				
A-C	239	60			239				

2027 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (East of Hobson Way)	T-Junction	Two-way	1.52	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	427	100.000
B		ONE HOUR	✓	160	100.000
C		ONE HOUR	✓	293	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	28	399
	B	143	0	17
	C	293	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	75	3
	B	5	0	6
	C	4	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	0.03	5.59	0.0	A	16	23
B-A	0.27	8.72	0.4	A	131	197
C-A					269	403
C-B	0.00	0.00	0.0	A	0	0
A-B					26	39
A-C					366	549

Main Results for each time segment

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)	LOS
B-C	13	3	759	0.017	13	0.0	0.0	5.110	A
B-A	108	27	651	0.165	107	0.0	0.2	6.938	A
C-A	221	55			221				
C-B	0	0	745	0.000	0	0.0	0.0	0.000	A
A-B	21	5			21				
A-C	300	75			300				

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)	LOS
B-C	15	4	736	0.021	15	0.0	0.0	5.297	A
B-A	129	32	626	0.205	128	0.2	0.3	7.594	A
C-A	263	66			263				
C-B	0	0	729	0.000	0	0.0	0.0	0.000	A
A-B	25	6			25				
A-C	359	90			359				

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)	LOS
B-C	19	5	702	0.027	19	0.0	0.0	5.586	A
B-A	157	39	591	0.266	157	0.3	0.4	8.698	A
C-A	323	81			323				
C-B	0	0	707	0.000	0	0.0	0.0	0.000	A
A-B	31	8			31				
A-C	439	110			439				

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)	LOS
B-C	19	5	702	0.027	19	0.0	0.0	5.587	A
B-A	157	39	591	0.266	157	0.4	0.4	8.715	A
C-A	323	81			323				
C-B	0	0	707	0.000	0	0.0	0.0	0.000	A
A-B	31	8			31				
A-C	439	110			439				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	15	4	735	0.021	15	0.0	0.0	5.301	A
B-A	129	32	626	0.205	129	0.4	0.3	7.613	A
C-A	263	66			263				
C-B	0	0	729	0.000	0	0.0	0.0	0.000	A
A-B	25	6			25				
A-C	359	90			359				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
B-C	13	3	759	0.017	13	0.0	0.0	5.114	A
B-A	108	27	651	0.165	108	0.3	0.2	6.966	A
C-A	221	55			221				
C-B	0	0	745	0.000	0	0.0	0.0	0.000	A
A-B	21	5			21				
A-C	300	75			300				

ANNEX 17: HOBSON WAY/ SOUTH MARSH ROAD (WEST) MODELLING OUTPUTS

Junctions 9															
PICADY 9 - Priority Intersection Module															
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020															
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk															
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Filename: Junction 2 - South Marsh Road Hobson Way Operational.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 2 - South Marsh Road Hobson Way

Report generation date: 13/01/2020 09:34:11

- »2023 Operational, Base Adj + Com Dev AM
- »2023 Operational, Base Adj + Com Dev PM
- »2024 Operational, Base Adj + Com Dev AM
- »2024 Operational, Base Adj + Com Dev PM
- »2030 Operational, Base Adj + Com Dev AM
- »2030 Operational, Base Adj + Com Dev PM
- »2023 Operational, Base Adj + Com Dev + Dev AM
- »2023 Operational, Base Adj + Com Dev + Dev PM
- »2024 Operational, Base Adj + Com Dev + Dev AM
- »2024 Operational, Base Adj + Com Dev + Dev PM
- »2030 Operational, Base Adj + Com Dev + Dev AM
- »2030 Operational, Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2023 Operational																
Stream B-C	0.2	6.81	0.15	A	0.0	5.59	0.01	A	0.2	7.10	0.15	A	0.0	5.65	0.01	A
Stream B-A	0.2	9.42	0.15	A	0.0	9.02	0.01	A	0.2	10.18	0.17	B	0.0	9.25	0.01	A
Stream C-B	0.0	5.39	0.01	A	0.2	6.09	0.19	A	0.0	5.54	0.01	A	0.2	6.16	0.19	A
2024 Operational																
Stream B-C	0.2	6.83	0.15	A	0.0	5.59	0.01	A	0.2	7.12	0.16	A	0.0	5.65	0.01	A
Stream B-A	0.2	9.46	0.15	A	0.0	9.04	0.01	A	0.2	10.22	0.17	B	0.0	9.26	0.01	A
Stream C-B	0.0	5.39	0.01	A	0.2	6.10	0.19	A	0.0	5.54	0.01	A	0.2	6.18	0.19	A
2030 Operational																
Stream B-C	0.2	6.92	0.16	A	0.0	5.69	0.01	A	0.2	7.21	0.17	A	0.0	5.75	0.01	A
Stream B-A	0.2	9.58	0.16	A	0.0	8.97	0.01	A	0.2	10.37	0.18	B	0.0	9.20	0.01	A
Stream C-B	0.0	5.40	0.01	A	0.2	6.18	0.20	A	0.0	5.55	0.01	A	0.2	6.26	0.20	A

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

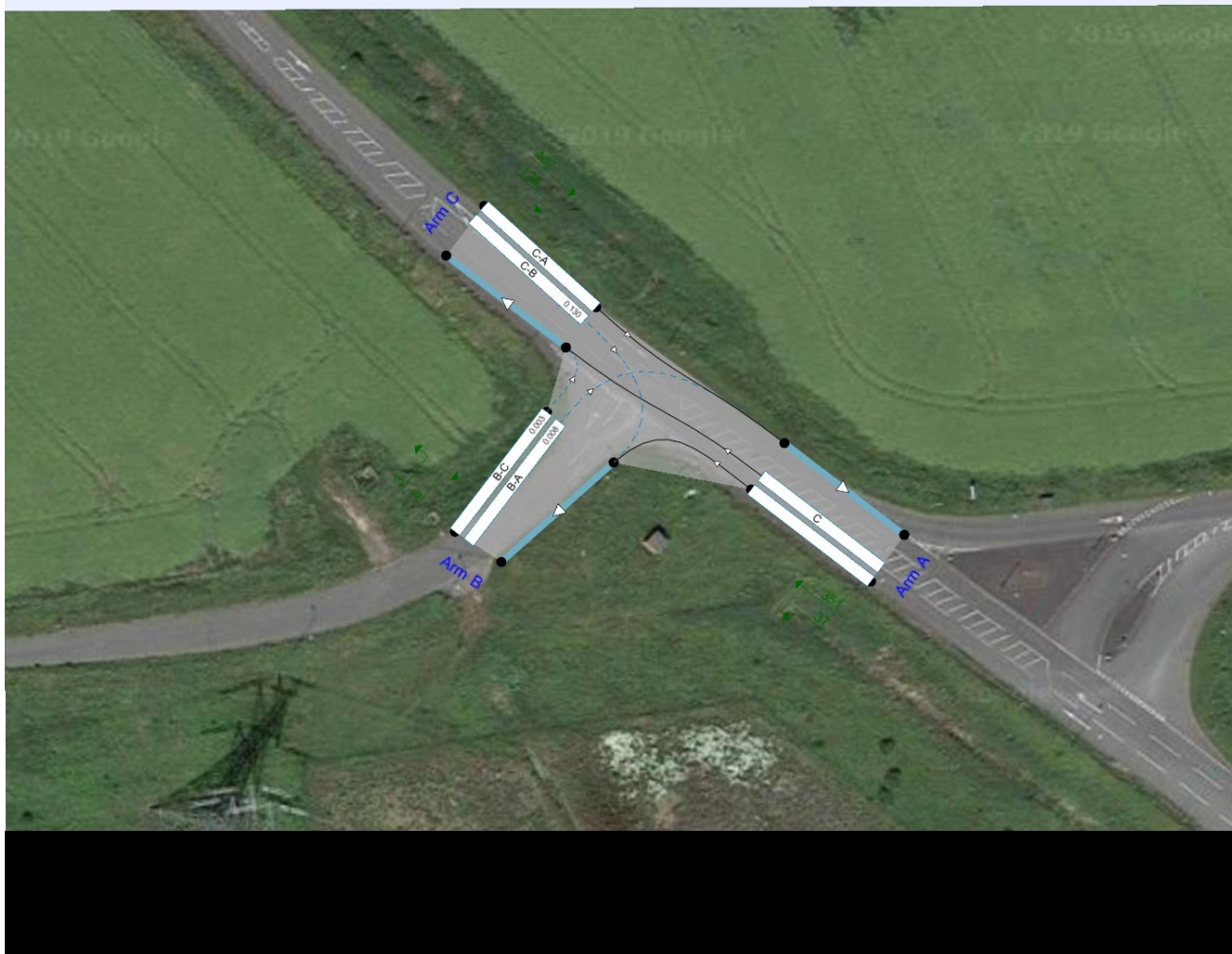
File summary

File Description

Title	Hobson Way / South Marsh Road (West of Hobson Way) - Operational
Location	
Site number	
Date	19/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D13	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D14	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D15	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D16	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D19	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D20	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D21	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D22	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D23	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D24	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.12	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hobson Way NB		Major
B	South Marsh Road EB		Minor
C	Hobson Way SB		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	11.50		✓	3.50	250.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	7.50	5.00	3.50	3.50		3.50	250	140

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	664	0.092	0.233	0.146	0.332
1	B-C	787	0.092	0.232	-	-
1	C-B	820	0.242	0.242	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D13	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	553	100.000
B		✓	147	100.000
C		✓	366	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	2	551
	B	63	0	84
	C	361	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	3
	B	3	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.15	6.81	0.2	A
B-A	0.15	9.42	0.2	A
C-A				
C-B	0.01	5.39	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	63	675	0.094	63	0.1	5.878	A
B-A	47	526	0.090	47	0.1	7.729	A
C-A	272			272			
C-B	4	720	0.005	4	0.0	5.027	A
A-B	2			2			
A-C	415			415			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	76	652	0.116	75	0.1	6.239	A
B-A	57	500	0.113	57	0.1	8.364	A
C-A	325			325			
C-B	4	700	0.006	4	0.0	5.173	A
A-B	2			2			
A-C	495			495			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	92	621	0.149	92	0.2	6.803	A
B-A	69	463	0.150	69	0.2	9.414	A
C-A	397			397			
C-B	6	673	0.008	5	0.0	5.391	A
A-B	2			2			
A-C	607			607			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	92	621	0.149	92	0.2	6.807	A
B-A	69	463	0.150	69	0.2	9.422	A
C-A	397			397			
C-B	6	673	0.008	6	0.0	5.391	A
A-B	2			2			
A-C	607			607			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	76	652	0.116	76	0.1	6.245	A
B-A	57	500	0.113	57	0.1	8.374	A
C-A	325			325			
C-B	4	700	0.006	5	0.0	5.174	A
A-B	2			2			
A-C	495			495			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	63	675	0.094	63	0.1	5.893	A
B-A	47	527	0.090	48	0.1	7.743	A
C-A	272			272			
C-B	4	720	0.005	4	0.0	5.029	A
A-B	2			2			
A-C	415			415			

2023 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D14	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	356	100.000
B		✓	8	100.000
C		✓	532	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	35	321
	B	5	0	3
	C	410	122	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	5
	B	25	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.59	0.0	A
B-A	0.01	9.02	0.0	A
C-A				
C-B	0.19	6.09	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	673	0.003	2	0.0	5.365	A
B-A	4	571	0.007	4	0.0	7.929	A
C-A	309			309			
C-B	92	756	0.122	91	0.1	5.414	A
A-B	26			26			
A-C	242			242			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	662	0.004	3	0.0	5.457	A
B-A	4	543	0.008	4	0.0	8.355	A
C-A	369			369			
C-B	110	743	0.148	110	0.2	5.681	A
A-B	31			31			
A-C	289			289			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	647	0.005	3	0.0	5.589	A
B-A	6	504	0.011	5	0.0	9.024	A
C-A	451			451			
C-B	134	726	0.185	134	0.2	6.084	A
A-B	39			39			
A-C	353			353			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	647	0.005	3	0.0	5.590	A
B-A	6	504	0.011	6	0.0	9.024	A
C-A	451			451			
C-B	134	726	0.185	134	0.2	6.087	A
A-B	39			39			
A-C	353			353			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	662	0.004	3	0.0	5.461	A
B-A	4	543	0.008	5	0.0	8.356	A
C-A	369			369			
C-B	110	743	0.148	110	0.2	5.687	A
A-B	31			31			
A-C	289			289			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	673	0.003	2	0.0	5.367	A
B-A	4	571	0.007	4	0.0	7.932	A
C-A	309			309			
C-B	92	756	0.122	92	0.1	5.425	A
A-B	26			26			
A-C	242			242			

2024 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.13	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D15	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	554	100.000
B		✓	149	100.000
C		✓	368	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	2	552
	B	64	0	85
	C	363	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	3
	B	3	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.15	6.83	0.2	A
B-A	0.15	9.46	0.2	A
C-A				
C-B	0.01	5.39	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	64	674	0.095	64	0.1	5.892	A
B-A	48	526	0.092	48	0.1	7.744	A
C-A	273			273			
C-B	4	720	0.005	4	0.0	5.028	A
A-B	2			2			
A-C	416			416			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	76	652	0.117	76	0.1	6.254	A
B-A	58	499	0.115	57	0.1	8.386	A
C-A	326			326			
C-B	4	700	0.006	4	0.0	5.175	A
A-B	2			2			
A-C	496			496			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	94	620	0.151	93	0.2	6.828	A
B-A	70	462	0.152	70	0.2	9.450	A
C-A	400			400			
C-B	6	673	0.008	5	0.0	5.393	A
A-B	2			2			
A-C	608			608			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	94	620	0.151	94	0.2	6.833	A
B-A	70	462	0.152	70	0.2	9.458	A
C-A	400			400			
C-B	6	673	0.008	6	0.0	5.393	A
A-B	2			2			
A-C	608			608			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	76	651	0.117	77	0.1	6.263	A
B-A	58	500	0.115	58	0.1	8.395	A
C-A	326			326			
C-B	4	700	0.006	5	0.0	5.175	A
A-B	2			2			
A-C	496			496			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	64	674	0.095	64	0.1	5.906	A
B-A	48	526	0.092	48	0.1	7.758	A
C-A	273			273			
C-B	4	720	0.005	4	0.0	5.030	A
A-B	2			2			
A-C	416			416			

2024 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D16	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	357	100.000
B		✓	8	100.000
C		✓	534	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	36	321
	B	5	0	3
	C	411	123	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	5
	B	25	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.59	0.0	A
B-A	0.01	9.04	0.0	A
C-A				
C-B	0.19	6.10	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	673	0.003	2	0.0	5.365	A
B-A	4	571	0.007	4	0.0	7.935	A
C-A	309			309			
C-B	93	755	0.123	92	0.1	5.422	A
A-B	27			27			
A-C	242			242			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	662	0.004	3	0.0	5.458	A
B-A	4	542	0.008	4	0.0	8.364	A
C-A	369			369			
C-B	111	743	0.149	110	0.2	5.691	A
A-B	32			32			
A-C	289			289			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	647	0.005	3	0.0	5.590	A
B-A	6	503	0.011	5	0.0	9.036	A
C-A	453			453			
C-B	135	725	0.187	135	0.2	6.099	A
A-B	40			40			
A-C	353			353			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	647	0.005	3	0.0	5.590	A
B-A	6	503	0.011	6	0.0	9.037	A
C-A	453			453			
C-B	135	725	0.187	135	0.2	6.101	A
A-B	40			40			
A-C	353			353			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	662	0.004	3	0.0	5.459	A
B-A	4	542	0.008	5	0.0	8.366	A
C-A	369			369			
C-B	111	743	0.149	111	0.2	5.697	A
A-B	32			32			
A-C	289			289			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	673	0.003	2	0.0	5.367	A
B-A	4	571	0.007	4	0.0	7.937	A
C-A	309			309			
C-B	93	755	0.123	93	0.1	5.432	A
A-B	27			27			
A-C	242			242			

2030 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	555	100.000
B		✓	157	100.000
C		✓	373	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	2	553
	B	67	0	90
	C	367	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	3
	B	3	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.16	6.92	0.2	A
B-A	0.16	9.58	0.2	A
C-A				
C-B	0.01	5.40	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	68	674	0.101	67	0.1	5.931	A
B-A	50	525	0.096	50	0.1	7.803	A
C-A	276			276			
C-B	5	719	0.006	4	0.0	5.035	A
A-B	2			2			
A-C	416			416			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81	651	0.124	81	0.1	6.309	A
B-A	60	498	0.121	60	0.1	8.467	A
C-A	330			330			
C-B	5	700	0.008	5	0.0	5.183	A
A-B	2			2			
A-C	497			497			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	99	620	0.160	99	0.2	6.912	A
B-A	74	461	0.160	74	0.2	9.574	A
C-A	404			404			
C-B	7	673	0.010	7	0.0	5.404	A
A-B	2			2			
A-C	609			609			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	99	620	0.160	99	0.2	6.916	A
B-A	74	461	0.160	74	0.2	9.583	A
C-A	404			404			
C-B	7	673	0.010	7	0.0	5.404	A
A-B	2			2			
A-C	609			609			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81	651	0.124	81	0.1	6.320	A
B-A	60	498	0.121	60	0.1	8.478	A
C-A	330			330			
C-B	5	700	0.008	5	0.0	5.184	A
A-B	2			2			
A-C	497			497			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	68	674	0.101	68	0.1	5.943	A
B-A	50	525	0.096	51	0.1	7.820	A
C-A	276			276			
C-B	5	719	0.006	5	0.0	5.035	A
A-B	2			2			
A-C	416			416			

2030 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	360	100.000
B		✓	9	100.000
C		✓	540	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	37	323
	B	6	0	3
	C	411	129	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	5
	B	25	0	0
	C	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.69	0.0	A
B-A	0.01	8.97	0.0	A
C-A				
C-B	0.20	6.18	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	661	0.003	2	0.0	5.463	A
B-A	5	577	0.008	4	0.0	7.853	A
C-A	309			309			
C-B	97	755	0.129	97	0.1	5.463	A
A-B	28			28			
A-C	243			243			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	650	0.004	3	0.0	5.558	A
B-A	5	548	0.010	5	0.0	8.288	A
C-A	369			369			
C-B	116	742	0.156	116	0.2	5.746	A
A-B	33			33			
A-C	290			290			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	635	0.005	3	0.0	5.694	A
B-A	7	508	0.013	7	0.0	8.973	A
C-A	453			453			
C-B	142	725	0.196	142	0.2	6.174	A
A-B	41			41			
A-C	356			356			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	635	0.005	3	0.0	5.694	A
B-A	7	508	0.013	7	0.0	8.974	A
C-A	453			453			
C-B	142	725	0.196	142	0.2	6.179	A
A-B	41			41			
A-C	356			356			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	650	0.004	3	0.0	5.561	A
B-A	5	548	0.010	5	0.0	8.292	A
C-A	369			369			
C-B	116	742	0.156	116	0.2	5.752	A
A-B	33			33			
A-C	290			290			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	661	0.003	2	0.0	5.466	A
B-A	5	577	0.008	5	0.0	7.858	A
C-A	309			309			
C-B	97	755	0.129	97	0.1	5.474	A
A-B	28			28			
A-C	243			243			

2023 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D19	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	619	100.000
B		✓	150	100.000
C		✓	435	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	2	617
	B	66	0	84
	C	430	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	9
	B	3	0	0
	C	12	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.15	7.10	0.2	A
B-A	0.17	10.18	0.2	B
C-A				
C-B	0.01	5.54	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	63	659	0.096	63	0.1	6.029	A
B-A	50	510	0.098	49	0.1	8.048	A
C-A	324			324			
C-B	4	708	0.005	4	0.0	5.113	A
A-B	2			2			
A-C	465			465			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	76	635	0.119	75	0.1	6.436	A
B-A	59	479	0.124	59	0.1	8.828	A
C-A	387			387			
C-B	4	686	0.007	4	0.0	5.282	A
A-B	2			2			
A-C	555			555			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	92	600	0.154	92	0.2	7.090	A
B-A	73	437	0.166	72	0.2	10.170	B
C-A	473			473			
C-B	6	656	0.008	5	0.0	5.536	A
A-B	2			2			
A-C	679			679			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	92	600	0.154	92	0.2	7.095	A
B-A	73	437	0.166	73	0.2	10.181	B
C-A	473			473			
C-B	6	656	0.008	6	0.0	5.536	A
A-B	2			2			
A-C	679			679			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	76	634	0.119	76	0.1	6.445	A
B-A	59	479	0.124	60	0.1	8.843	A
C-A	387			387			
C-B	4	686	0.007	5	0.0	5.283	A
A-B	2			2			
A-C	555			555			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	63	659	0.096	63	0.1	6.045	A
B-A	50	510	0.097	50	0.1	8.066	A
C-A	324			324			
C-B	4	708	0.005	4	0.0	5.115	A
A-B	2			2			
A-C	465			465			

2023 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D20	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	384	100.000
B		✓	8	100.000
C		✓	558	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	35	349
	B	5	0	3
	C	436	122	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	9
	B	25	0	0
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.65	0.0	A
B-A	0.01	9.25	0.0	A
C-A				
C-B	0.19	6.16	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	669	0.003	2	0.0	5.401	A
B-A	4	563	0.007	4	0.0	8.048	A
C-A	328			328			
C-B	92	751	0.122	91	0.1	5.456	A
A-B	26			26			
A-C	263			263			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	657	0.004	3	0.0	5.502	A
B-A	4	533	0.008	4	0.0	8.513	A
C-A	392			392			
C-B	110	737	0.149	110	0.2	5.736	A
A-B	31			31			
A-C	314			314			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	641	0.005	3	0.0	5.647	A
B-A	6	492	0.011	5	0.0	9.251	A
C-A	480			480			
C-B	134	718	0.187	134	0.2	6.162	A
A-B	39			39			
A-C	384			384			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	641	0.005	3	0.0	5.648	A
B-A	6	492	0.011	6	0.0	9.252	A
C-A	480			480			
C-B	134	718	0.187	134	0.2	6.165	A
A-B	39			39			
A-C	384			384			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	657	0.004	3	0.0	5.506	A
B-A	4	533	0.008	5	0.0	8.514	A
C-A	392			392			
C-B	110	737	0.149	110	0.2	5.742	A
A-B	31			31			
A-C	314			314			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	668	0.003	2	0.0	5.406	A
B-A	4	563	0.007	4	0.0	8.049	A
C-A	328			328			
C-B	92	751	0.122	92	0.1	5.467	A
A-B	26			26			
A-C	263			263			

2024 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D21	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	620	100.000
B		✓	152	100.000
C		✓	436	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	2	618
	B	67	0	85
	C	431	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	9
	B	3	0	0
	C	12	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.16	7.12	0.2	A
B-A	0.17	10.22	0.2	B
C-A				
C-B	0.01	5.54	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	64	659	0.097	64	0.1	6.043	A
B-A	50	509	0.099	50	0.1	8.064	A
C-A	324			324			
C-B	4	708	0.005	4	0.0	5.114	A
A-B	2			2			
A-C	465			465			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	76	634	0.121	76	0.1	6.454	A
B-A	60	479	0.126	60	0.1	8.851	A
C-A	387			387			
C-B	4	686	0.007	4	0.0	5.284	A
A-B	2			2			
A-C	556			556			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	94	599	0.156	93	0.2	7.119	A
B-A	74	437	0.169	74	0.2	10.209	B
C-A	475			475			
C-B	6	655	0.008	5	0.0	5.539	A
A-B	2			2			
A-C	680			680			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	94	599	0.156	94	0.2	7.123	A
B-A	74	437	0.169	74	0.2	10.220	B
C-A	475			475			
C-B	6	655	0.008	6	0.0	5.539	A
A-B	2			2			
A-C	680			680			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	76	634	0.121	77	0.1	6.464	A
B-A	60	479	0.126	60	0.1	8.866	A
C-A	387			387			
C-B	4	686	0.007	5	0.0	5.284	A
A-B	2			2			
A-C	556			556			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	64	658	0.097	64	0.1	6.057	A
B-A	50	510	0.099	51	0.1	8.082	A
C-A	324			324			
C-B	4	708	0.005	4	0.0	5.114	A
A-B	2			2			
A-C	465			465			

2024 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D22	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	385	100.000
B		✓	8	100.000
C		✓	560	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	36	349
	B	5	0	3
	C	437	123	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	9
	B	25	0	0
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.65	0.0	A
B-A	0.01	9.26	0.0	A
C-A				
C-B	0.19	6.18	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	669	0.003	2	0.0	5.402	A
B-A	4	562	0.007	4	0.0	8.054	A
C-A	329			329			
C-B	93	750	0.123	92	0.1	5.464	A
A-B	27			27			
A-C	263			263			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	657	0.004	3	0.0	5.503	A
B-A	4	532	0.008	4	0.0	8.522	A
C-A	393			393			
C-B	111	737	0.150	110	0.2	5.746	A
A-B	32			32			
A-C	314			314			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	641	0.005	3	0.0	5.648	A
B-A	6	491	0.011	5	0.0	9.264	A
C-A	481			481			
C-B	135	718	0.189	135	0.2	6.178	A
A-B	40			40			
A-C	384			384			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	640	0.005	3	0.0	5.649	A
B-A	6	491	0.011	6	0.0	9.265	A
C-A	481			481			
C-B	135	718	0.189	135	0.2	6.179	A
A-B	40			40			
A-C	384			384			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	657	0.004	3	0.0	5.507	A
B-A	4	532	0.008	5	0.0	8.523	A
C-A	393			393			
C-B	111	737	0.150	111	0.2	5.752	A
A-B	32			32			
A-C	314			314			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	668	0.003	2	0.0	5.406	A
B-A	4	562	0.007	4	0.0	8.056	A
C-A	329			329			
C-B	93	750	0.123	93	0.1	5.475	A
A-B	27			27			
A-C	263			263			

2030 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D23	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	621	100.000
B		✓	160	100.000
C		✓	442	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	2	619
	B	70	0	90
	C	436	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	9
	B	3	0	0
	C	12	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.17	7.21	0.2	A
B-A	0.18	10.37	0.2	B
C-A				
C-B	0.01	5.55	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	68	659	0.103	67	0.1	6.083	A
B-A	53	508	0.104	52	0.1	8.131	A
C-A	328			328			
C-B	5	707	0.006	4	0.0	5.121	A
A-B	2			2			
A-C	466			466			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81	633	0.128	81	0.1	6.512	A
B-A	63	477	0.132	63	0.2	8.947	A
C-A	392			392			
C-B	5	685	0.008	5	0.0	5.293	A
A-B	2			2			
A-C	556			556			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	99	598	0.166	99	0.2	7.205	A
B-A	77	435	0.177	77	0.2	10.359	B
C-A	480			480			
C-B	7	655	0.010	7	0.0	5.550	A
A-B	2			2			
A-C	682			682			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	99	598	0.166	99	0.2	7.213	A
B-A	77	435	0.177	77	0.2	10.371	B
C-A	480			480			
C-B	7	655	0.010	7	0.0	5.550	A
A-B	2			2			
A-C	682			682			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81	633	0.128	81	0.1	6.525	A
B-A	63	477	0.132	63	0.2	8.963	A
C-A	392			392			
C-B	5	685	0.008	5	0.0	5.293	A
A-B	2			2			
A-C	556			556			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	68	658	0.103	68	0.1	6.100	A
B-A	53	508	0.104	53	0.1	8.151	A
C-A	328			328			
C-B	5	707	0.006	5	0.0	5.121	A
A-B	2			2			
A-C	466			466			

2030 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D24	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	388	100.000
B		✓	9	100.000
C		✓	566	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	37	351
	B	6	0	3
	C	437	129	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	9
	B	25	0	0
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.75	0.0	A
B-A	0.01	9.20	0.0	A
C-A				
C-B	0.20	6.26	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	657	0.003	2	0.0	5.500	A
B-A	5	569	0.008	4	0.0	7.971	A
C-A	329			329			
C-B	97	750	0.130	97	0.1	5.506	A
A-B	28			28			
A-C	264			264			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	645	0.004	3	0.0	5.604	A
B-A	5	538	0.010	5	0.0	8.446	A
C-A	393			393			
C-B	116	736	0.158	116	0.2	5.802	A
A-B	33			33			
A-C	316			316			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	629	0.005	3	0.0	5.753	A
B-A	7	496	0.013	7	0.0	9.201	A
C-A	481			481			
C-B	142	717	0.198	142	0.2	6.254	A
A-B	41			41			
A-C	386			386			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	629	0.005	3	0.0	5.754	A
B-A	7	496	0.013	7	0.0	9.203	A
C-A	481			481			
C-B	142	717	0.198	142	0.2	6.259	A
A-B	41			41			
A-C	386			386			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	645	0.004	3	0.0	5.605	A
B-A	5	538	0.010	5	0.0	8.450	A
C-A	393			393			
C-B	116	736	0.158	116	0.2	5.809	A
A-B	33			33			
A-C	316			316			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	657	0.003	2	0.0	5.501	A
B-A	5	569	0.008	5	0.0	7.976	A
C-A	329			329			
C-B	97	750	0.130	97	0.1	5.517	A
A-B	28			28			
A-C	264			264			

Junctions 9															
PICADY 9 - Priority Intersection Module															
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Filename: Junction 2 - South Marsh Road Hobson Way Construction.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 2 - South Marsh Road Hobson Way

Report generation date: 13/01/2020 09:33:19

- »2021 Construction, Base Adj + Com Dev AM
- »2021 Construction, Base Adj + Com Dev PM
- »2021 Construction, Base Adj + Com Dev + Dev AM
- »2021 Construction, Base Adj + Com Dev + Dev PM
- »2022 Construction, Base Adj + Com Dev AM
- »2022 Construction, Base Adj + Com Dev PM
- »2022 Construction, Base Adj + Com Dev + Dev AM
- »2022 Construction, Base Adj + Com Dev + Dev PM
- »2027 Construction, Base Adj + Com Dev AM
- »2027 Construction, Base Adj + Com Dev PM
- »2027 Construction, Base Adj + Com Dev + Dev AM
- »2027 Construction, Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 Construction																
Stream B-C	0.2	6.76	0.15	A	0.0	5.33	0.01	A	0.2	6.96	0.15	A	0.0	5.74	0.01	A
Stream B-A	0.2	9.34	0.14	A	0.0	9.44	0.01	A	0.2	9.96	0.17	A	0.0	9.41	0.01	A
Stream C-B	0.0	5.39	0.01	A	0.2	6.05	0.18	A	0.0	5.41	0.01	A	0.2	6.26	0.19	A
2022 Construction																
Stream B-C	0.2	6.78	0.15	A	0.0	5.59	0.01	A	0.2	6.88	0.15	A	0.0	5.74	0.01	A
Stream B-A	0.2	9.40	0.15	A	0.0	9.00	0.01	A	0.2	9.83	0.17	A	0.0	9.42	0.01	A
Stream C-B	0.0	5.39	0.01	A	0.2	6.06	0.18	A	0.0	5.35	0.01	A	0.2	6.28	0.19	A
2027 Construction																
Stream B-C	0.2	6.88	0.16	A	0.0	5.69	0.01	A	0.2	7.06	0.16	A	0.0	5.85	0.01	A
Stream B-A	0.2	9.53	0.16	A	0.0	8.95	0.01	A	0.2	10.19	0.18	B	0.0	9.37	0.01	A
Stream C-B	0.0	5.40	0.01	A	0.2	6.14	0.19	A	0.0	5.42	0.01	A	0.2	6.36	0.20	A

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

File summary

File Description

Title	Hobson Way / South Marsh Road (West of Hobson Way) - Construction
Location	
Site number	
Date	19/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2021 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.10	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hobson Way NB		Major
B	South Marsh Road EB		Minor
C	Hobson Way SB		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	11.50		✓	3.50	250.0		-

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	7.50	5.00	3.50	3.50		3.50	250	140

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	663	0.092	0.232	0.146	0.332
1	B-C	787	0.092	0.232	-	-
1	C-B	820	0.242	0.242	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	553	100.000
B		✓	143	100.000
C		✓	355	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	2	551
	B	61	0	82
	C	350	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	3
	B	3	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.15	6.76	0.2	A
B-A	0.14	9.34	0.2	A
C-A				
C-B	0.01	5.39	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	676	0.091	61	0.1	5.854	A
B-A	46	527	0.087	46	0.1	7.692	A
C-A	263			263			
C-B	4	720	0.005	4	0.0	5.027	A
A-B	2			2			
A-C	415			415			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	74	654	0.113	74	0.1	6.207	A
B-A	55	501	0.110	55	0.1	8.310	A
C-A	315			315			
C-B	4	700	0.006	4	0.0	5.173	A
A-B	2			2			
A-C	495			495			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	623	0.145	90	0.2	6.758	A
B-A	67	464	0.145	67	0.2	9.330	A
C-A	385			385			
C-B	6	673	0.008	5	0.0	5.391	A
A-B	2			2			
A-C	607			607			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	623	0.145	90	0.2	6.762	A
B-A	67	464	0.145	67	0.2	9.337	A
C-A	385			385			
C-B	6	673	0.008	6	0.0	5.391	A
A-B	2			2			
A-C	607			607			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	74	653	0.113	74	0.1	6.215	A
B-A	55	501	0.109	55	0.1	8.319	A
C-A	315			315			
C-B	4	700	0.006	5	0.0	5.174	A
A-B	2			2			
A-C	495			495			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	676	0.091	62	0.1	5.866	A
B-A	46	527	0.087	46	0.1	7.707	A
C-A	263			263			
C-B	4	720	0.005	4	0.0	5.029	A
A-B	2			2			
A-C	415			415			

2021 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.89	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	354	100.000
B		✓	10	100.000
C		✓	529	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	34	320
	B	5	0	5
	C	410	119	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	5
	B	25	0	0
	C	5	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.33	0.0	A
B-A	0.01	9.44	0.0	A
C-A				
C-B	0.18	6.05	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	4	708	0.005	4	0.0	5.113	A
B-A	4	546	0.007	4	0.0	8.301	A
C-A	309			309			
C-B	90	756	0.119	89	0.1	5.393	A
A-B	26			26			
A-C	241			241			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	4	696	0.006	4	0.0	5.204	A
B-A	4	519	0.009	4	0.0	8.742	A
C-A	369			369			
C-B	107	743	0.144	107	0.2	5.653	A
A-B	31			31			
A-C	288			288			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6	681	0.008	5	0.0	5.332	A
B-A	6	482	0.011	5	0.0	9.436	A
C-A	451			451			
C-B	131	726	0.180	131	0.2	6.045	A
A-B	37			37			
A-C	352			352			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	6	680	0.008	6	0.0	5.333	A
B-A	6	482	0.011	6	0.0	9.436	A
C-A	451			451			
C-B	131	726	0.180	131	0.2	6.048	A
A-B	37			37			
A-C	352			352			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	4	696	0.006	5	0.0	5.205	A
B-A	4	519	0.009	5	0.0	8.742	A
C-A	369			369			
C-B	107	743	0.144	107	0.2	5.658	A
A-B	31			31			
A-C	288			288			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	4	707	0.005	4	0.0	5.116	A
B-A	4	546	0.007	4	0.0	8.302	A
C-A	309			309			
C-B	90	756	0.119	90	0.1	5.403	A
A-B	26			26			
A-C	241			241			

2021 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	563	100.000
B		✓	152	100.000
C		✓	470	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	2	561
	B	70	0	82
	C	465	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	4
	B	3	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.15	6.96	0.2	A
B-A	0.17	9.96	0.2	A
C-A				
C-B	0.01	5.41	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	663	0.093	61	0.1	5.978	A
B-A	53	520	0.101	52	0.1	7.925	A
C-A	350			350			
C-B	4	718	0.005	4	0.0	5.040	A
A-B	2			2			
A-C	422			422			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	74	640	0.115	74	0.1	6.353	A
B-A	63	490	0.128	63	0.2	8.673	A
C-A	418			418			
C-B	4	698	0.006	4	0.0	5.190	A
A-B	2			2			
A-C	504			504			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	608	0.149	90	0.2	6.950	A
B-A	77	449	0.172	77	0.2	9.952	A
C-A	512			512			
C-B	6	671	0.008	5	0.0	5.412	A
A-B	2			2			
A-C	618			618			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	90	608	0.149	90	0.2	6.955	A
B-A	77	449	0.172	77	0.2	9.963	A
C-A	512			512			
C-B	6	671	0.008	6	0.0	5.412	A
A-B	2			2			
A-C	618			618			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	74	640	0.115	74	0.1	6.365	A
B-A	63	490	0.128	63	0.2	8.687	A
C-A	418			418			
C-B	4	698	0.006	5	0.0	5.192	A
A-B	2			2			
A-C	504			504			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	663	0.093	62	0.1	5.991	A
B-A	53	520	0.101	53	0.1	7.943	A
C-A	350			350			
C-B	4	718	0.005	4	0.0	5.042	A
A-B	2			2			
A-C	422			422			

2021 Construction, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	431	100.000
B		✓	8	100.000
C		✓	539	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	39	392
	B	5	0	3
	C	420	119	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	5
	B	25	0	0
	C	7	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.74	0.0	A
B-A	0.01	9.41	0.0	A
C-A				
C-B	0.19	6.26	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	661	0.003	2	0.0	5.460	A
B-A	4	557	0.007	4	0.0	8.131	A
C-A	316			316			
C-B	90	742	0.121	89	0.1	5.509	A
A-B	29			29			
A-C	295			295			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	648	0.004	3	0.0	5.576	A
B-A	4	526	0.009	4	0.0	8.624	A
C-A	378			378			
C-B	107	727	0.147	107	0.2	5.805	A
A-B	35			35			
A-C	352			352			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	630	0.005	3	0.0	5.742	A
B-A	6	484	0.011	5	0.0	9.413	A
C-A	462			462			
C-B	131	706	0.186	131	0.2	6.262	A
A-B	43			43			
A-C	432			432			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	630	0.005	3	0.0	5.743	A
B-A	6	484	0.011	6	0.0	9.413	A
C-A	462			462			
C-B	131	706	0.186	131	0.2	6.263	A
A-B	43			43			
A-C	432			432			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	648	0.004	3	0.0	5.579	A
B-A	4	526	0.009	5	0.0	8.627	A
C-A	378			378			
C-B	107	727	0.147	107	0.2	5.812	A
A-B	35			35			
A-C	352			352			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	661	0.003	2	0.0	5.465	A
B-A	4	557	0.007	4	0.0	8.132	A
C-A	316			316			
C-B	90	742	0.121	90	0.1	5.522	A
A-B	29			29			
A-C	295			295			

2022 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.10	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	553	100.000
B		✓	145	100.000
C		✓	365	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	2	551
	B	62	0	83
	C	360	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	3
	B	3	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.15	6.78	0.2	A
B-A	0.15	9.40	0.2	A
C-A				
C-B	0.01	5.39	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	675	0.093	62	0.1	5.866	A
B-A	47	526	0.089	46	0.1	7.718	A
C-A	271			271			
C-B	4	720	0.005	4	0.0	5.027	A
A-B	2			2			
A-C	415			415			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	75	653	0.114	75	0.1	6.223	A
B-A	56	500	0.112	56	0.1	8.348	A
C-A	324			324			
C-B	4	700	0.006	4	0.0	5.173	A
A-B	2			2			
A-C	495			495			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	91	622	0.147	91	0.2	6.781	A
B-A	68	463	0.148	68	0.2	9.388	A
C-A	396			396			
C-B	6	673	0.008	5	0.0	5.391	A
A-B	2			2			
A-C	607			607			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	91	622	0.147	91	0.2	6.785	A
B-A	68	463	0.147	68	0.2	9.396	A
C-A	396			396			
C-B	6	673	0.008	6	0.0	5.391	A
A-B	2			2			
A-C	607			607			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	75	653	0.114	75	0.1	6.229	A
B-A	56	500	0.112	56	0.1	8.357	A
C-A	324			324			
C-B	4	700	0.006	5	0.0	5.174	A
A-B	2			2			
A-C	495			495			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	675	0.093	63	0.1	5.880	A
B-A	47	526	0.089	47	0.1	7.732	A
C-A	271			271			
C-B	4	720	0.005	4	0.0	5.029	A
A-B	2			2			
A-C	415			415			

2022 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.88	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	355	100.000
B		✓	8	100.000
C		✓	530	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	35	320
	B	5	0	3
	C	410	120	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	5
	B	25	0	0
	C	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.59	0.0	A
B-A	0.01	9.00	0.0	A
C-A				
C-B	0.18	6.06	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	673	0.003	2	0.0	5.363	A
B-A	4	572	0.007	4	0.0	7.919	A
C-A	309			309			
C-B	90	756	0.120	90	0.1	5.400	A
A-B	26			26			
A-C	241			241			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	662	0.004	3	0.0	5.456	A
B-A	4	544	0.008	4	0.0	8.341	A
C-A	369			369			
C-B	108	743	0.145	108	0.2	5.663	A
A-B	31			31			
A-C	288			288			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	648	0.005	3	0.0	5.587	A
B-A	6	505	0.011	5	0.0	9.005	A
C-A	451			451			
C-B	132	726	0.182	132	0.2	6.059	A
A-B	39			39			
A-C	352			352			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	647	0.005	3	0.0	5.587	A
B-A	6	505	0.011	6	0.0	9.005	A
C-A	451			451			
C-B	132	726	0.182	132	0.2	6.062	A
A-B	39			39			
A-C	352			352			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	662	0.004	3	0.0	5.457	A
B-A	4	544	0.008	5	0.0	8.342	A
C-A	369			369			
C-B	108	743	0.145	108	0.2	5.668	A
A-B	31			31			
A-C	288			288			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	673	0.003	2	0.0	5.368	A
B-A	4	572	0.007	4	0.0	7.920	A
C-A	309			309			
C-B	90	756	0.120	90	0.1	5.413	A
A-B	26			26			
A-C	241			241			

2022 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	533	100.000
B		✓	154	100.000
C		✓	480	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	
From	A	0	2	531
	B	71	0	83
	C	475	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	0	4
	B	3	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.15	6.88	0.2	A
B-A	0.17	9.83	0.2	A
C-A				
C-B	0.01	5.35	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	668	0.094	62	0.1	5.938	A
B-A	53	524	0.102	53	0.1	7.866	A
C-A	358			358			
C-B	4	723	0.005	4	0.0	5.002	A
A-B	2			2			
A-C	400			400			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	75	646	0.116	75	0.1	6.301	A
B-A	64	495	0.129	64	0.2	8.588	A
C-A	427			427			
C-B	4	705	0.006	4	0.0	5.141	A
A-B	2			2			
A-C	477			477			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	91	615	0.149	91	0.2	6.871	A
B-A	78	455	0.172	78	0.2	9.817	A
C-A	523			523			
C-B	6	679	0.008	5	0.0	5.348	A
A-B	2			2			
A-C	585			585			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	91	615	0.149	91	0.2	6.875	A
B-A	78	455	0.172	78	0.2	9.827	A
C-A	523			523			
C-B	6	679	0.008	6	0.0	5.348	A
A-B	2			2			
A-C	585			585			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	75	646	0.116	75	0.1	6.310	A
B-A	64	495	0.129	64	0.2	8.602	A
C-A	427			427			
C-B	4	705	0.006	5	0.0	5.143	A
A-B	2			2			
A-C	477			477			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	62	668	0.094	63	0.1	5.953	A
B-A	53	524	0.102	54	0.1	7.881	A
C-A	358			358			
C-B	4	723	0.005	4	0.0	5.004	A
A-B	2			2			
A-C	400			400			

2022 Construction, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.83	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	432	100.000
B		✓	8	100.000
C		✓	540	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	40	392
	B	5	0	3
	C	420	120	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	5
	B	25	0	0
	C	7	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.74	0.0	A
B-A	0.01	9.42	0.0	A
C-A				
C-B	0.19	6.28	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	661	0.003	2	0.0	5.461	A
B-A	4	557	0.007	4	0.0	8.136	A
C-A	316			316			
C-B	90	742	0.122	90	0.1	5.516	A
A-B	30			30			
A-C	295			295			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	648	0.004	3	0.0	5.576	A
B-A	4	526	0.009	4	0.0	8.631	A
C-A	378			378			
C-B	108	727	0.148	108	0.2	5.816	A
A-B	36			36			
A-C	352			352			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	630	0.005	3	0.0	5.743	A
B-A	6	483	0.011	5	0.0	9.423	A
C-A	462			462			
C-B	132	705	0.187	132	0.2	6.272	A
A-B	44			44			
A-C	432			432			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	630	0.005	3	0.0	5.744	A
B-A	6	483	0.011	6	0.0	9.423	A
C-A	462			462			
C-B	132	705	0.187	132	0.2	6.278	A
A-B	44			44			
A-C	432			432			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	648	0.004	3	0.0	5.578	A
B-A	4	526	0.009	5	0.0	8.632	A
C-A	378			378			
C-B	108	727	0.148	108	0.2	5.824	A
A-B	36			36			
A-C	352			352			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	661	0.003	2	0.0	5.465	A
B-A	4	557	0.007	4	0.0	8.139	A
C-A	316			316			
C-B	90	742	0.122	90	0.1	5.528	A
A-B	30			30			
A-C	295			295			

2027 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.17	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	554	100.000
B		✓	154	100.000
C		✓	371	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	2	552
	B	66	0	88
	C	365	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	3
	B	3	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.16	6.88	0.2	A
B-A	0.16	9.53	0.2	A
C-A				
C-B	0.01	5.40	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66	674	0.098	66	0.1	5.916	A
B-A	50	526	0.095	49	0.1	7.778	A
C-A	275			275			
C-B	5	720	0.006	4	0.0	5.034	A
A-B	2			2			
A-C	416			416			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	79	651	0.121	79	0.1	6.288	A
B-A	59	499	0.119	59	0.1	8.435	A
C-A	328			328			
C-B	5	700	0.008	5	0.0	5.182	A
A-B	2			2			
A-C	496			496			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	97	620	0.156	97	0.2	6.879	A
B-A	73	462	0.157	72	0.2	9.525	A
C-A	402			402			
C-B	7	673	0.010	7	0.0	5.402	A
A-B	2			2			
A-C	608			608			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	97	620	0.156	97	0.2	6.884	A
B-A	73	462	0.157	73	0.2	9.533	A
C-A	402			402			
C-B	7	673	0.010	7	0.0	5.402	A
A-B	2			2			
A-C	608			608			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	79	651	0.122	79	0.1	6.299	A
B-A	59	499	0.119	60	0.1	8.446	A
C-A	328			328			
C-B	5	700	0.008	5	0.0	5.184	A
A-B	2			2			
A-C	496			496			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66	674	0.098	66	0.1	5.929	A
B-A	50	526	0.095	50	0.1	7.794	A
C-A	275			275			
C-B	5	720	0.006	5	0.0	5.036	A
A-B	2			2			
A-C	416			416			

2027 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.93	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	359	100.000
B		✓	9	100.000
C		✓	537	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
From	A	0	37	322
	B	6	0	3
	C	411	126	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	5
	B	25	0	0
	C	6	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.69	0.0	A
B-A	0.01	8.95	0.0	A
C-A				
C-B	0.19	6.14	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	661	0.003	2	0.0	5.462	A
B-A	5	578	0.008	4	0.0	7.839	A
C-A	309			309			
C-B	95	755	0.126	94	0.1	5.443	A
A-B	28			28			
A-C	242			242			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	651	0.004	3	0.0	5.556	A
B-A	5	549	0.010	5	0.0	8.270	A
C-A	369			369			
C-B	113	742	0.153	113	0.2	5.719	A
A-B	33			33			
A-C	289			289			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	636	0.005	3	0.0	5.692	A
B-A	7	510	0.013	7	0.0	8.947	A
C-A	453			453			
C-B	139	725	0.191	139	0.2	6.140	A
A-B	41			41			
A-C	355			355			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	636	0.005	3	0.0	5.692	A
B-A	7	509	0.013	7	0.0	8.948	A
C-A	453			453			
C-B	139	725	0.191	139	0.2	6.141	A
A-B	41			41			
A-C	355			355			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	650	0.004	3	0.0	5.559	A
B-A	5	549	0.010	5	0.0	8.272	A
C-A	369			369			
C-B	113	742	0.153	113	0.2	5.727	A
A-B	33			33			
A-C	289			289			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	661	0.003	2	0.0	5.463	A
B-A	5	578	0.008	5	0.0	7.842	A
C-A	309			309			
C-B	95	755	0.126	95	0.1	5.456	A
A-B	28			28			
A-C	242			242			

2027 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	1.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	564	100.000
B		✓	162	100.000
C		✓	486	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	2	562
	B	74	0	88
	C	480	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	4
	B	3	0	0
	C	4	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.16	7.06	0.2	A
B-A	0.18	10.19	0.2	B
C-A				
C-B	0.01	5.42	0.0	A
A-B				
A-C				

Main Results for each time segment

06:45 - 07:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66	663	0.100	66	0.1	6.026	A
B-A	56	517	0.108	55	0.1	8.024	A
C-A	361			361			
C-B	5	718	0.006	4	0.0	5.046	A
A-B	2			2			
A-C	423			423			

07:00 - 07:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	79	639	0.124	79	0.1	6.422	A
B-A	67	487	0.137	66	0.2	8.814	A
C-A	432			432			
C-B	5	698	0.008	5	0.0	5.198	A
A-B	2			2			
A-C	505			505			

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	97	607	0.160	97	0.2	7.058	A
B-A	81	445	0.183	81	0.2	10.173	B
C-A	528			528			
C-B	7	670	0.010	7	0.0	5.423	A
A-B	2			2			
A-C	619			619			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	97	607	0.160	97	0.2	7.062	A
B-A	81	445	0.183	81	0.2	10.185	B
C-A	528			528			
C-B	7	670	0.010	7	0.0	5.423	A
A-B	2			2			
A-C	619			619			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	79	639	0.124	79	0.1	6.432	A
B-A	67	487	0.137	67	0.2	8.829	A
C-A	432			432			
C-B	5	698	0.008	5	0.0	5.200	A
A-B	2			2			
A-C	505			505			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66	662	0.100	66	0.1	6.042	A
B-A	56	517	0.108	56	0.1	8.043	A
C-A	361			361			
C-B	5	718	0.006	5	0.0	5.047	A
A-B	2			2			
A-C	423			423			

2027 Construction, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Hobson Way / South Marsh Road (West of Hobson Way)	T-Junction	Two-way	0.88	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		✓	436	100.000
B		✓	9	100.000
C		✓	547	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A	B	C
	A	0	41	395
	B	6	0	3
	C	421	126	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	0	5
	B	25	0	0
	C	7	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.85	0.0	A
B-A	0.01	9.37	0.0	A
C-A				
C-B	0.20	6.36	0.2	A
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	649	0.003	2	0.0	5.562	A
B-A	5	563	0.008	4	0.0	8.057	A
C-A	317			317			
C-B	95	741	0.128	94	0.1	5.561	A
A-B	31			31			
A-C	297			297			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	636	0.004	3	0.0	5.680	A
B-A	5	531	0.010	5	0.0	8.561	A
C-A	378			378			
C-B	113	726	0.156	113	0.2	5.875	A
A-B	37			37			
A-C	355			355			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	618	0.005	3	0.0	5.853	A
B-A	7	487	0.014	7	0.0	9.369	A
C-A	464			464			
C-B	139	704	0.197	138	0.2	6.358	A
A-B	45			45			
A-C	435			435			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	618	0.005	3	0.0	5.853	A
B-A	7	487	0.014	7	0.0	9.370	A
C-A	464			464			
C-B	139	704	0.197	139	0.2	6.363	A
A-B	45			45			
A-C	435			435			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	3	636	0.004	3	0.0	5.681	A
B-A	5	531	0.010	5	0.0	8.564	A
C-A	378			378			
C-B	113	726	0.156	114	0.2	5.882	A
A-B	37			37			
A-C	355			355			

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2	649	0.003	2	0.0	5.563	A
B-A	5	563	0.008	5	0.0	8.060	A
C-A	317			317			
C-B	95	741	0.128	95	0.1	5.575	A
A-B	31			31			
A-C	297			297			

ANNEX 18: LAPORTE ROAD/ HOBSON WAY/ KILN LANE MODELLING OUTPUTS

Junctions 9															
ARCADY 9 - Roundabout Module															
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020															
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk															
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution															

Filename: Junction 3 - Hobson Way Kiln Lane Laporte Road Rbt Operational.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 3 - Hobson Way Kiln Lane Laporte Road Rbt

Report generation date: 13/01/2020 09:39:02

»2023 Operational, Base Adj + Com Dev AM
 »2023 Operational, Base Adj + Com Dev PM
 »2024 Operational, Base Adj + Com Dev AM
 »2024 Operational, Base Adj + Com Dev PM
 »2030 Operational, Base Adj + Com Dev AM
 »2030 Operational, Base Adj + Com Dev PM
 »2023 Operational, Base Adj + Com Dev + Dev AM
 »2023 Operational, Base Adj + Com Dev + Dev PM
 »2024 Operational, Base Adj + Com Dev + Dev AM
 »2024 Operational, Base Adj + Com Dev + Dev PM
 »2030 Operational, Base Adj + Com Dev + Dev AM
 »2030 Operational, Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2023 Operational																
Arm 1	0.4	2.09	0.28	A	0.2	1.95	0.16	A	0.5	2.28	0.31	A	0.2	2.05	0.17	A
Arm 2	0.5	3.21	0.33	A	0.1	2.33	0.08	A	0.7	3.57	0.37	A	0.1	2.46	0.10	A
Arm 3	0.1	2.51	0.11	A	0.7	3.21	0.40	A	0.1	2.59	0.12	A	0.7	3.27	0.41	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2024 Operational																
Arm 1	0.4	2.09	0.28	A	0.2	1.95	0.16	A	0.5	2.29	0.31	A	0.2	2.06	0.17	A
Arm 2	0.6	3.22	0.33	A	0.1	2.33	0.08	A	0.7	3.59	0.37	A	0.1	2.46	0.10	A
Arm 3	0.1	2.51	0.11	A	0.7	3.23	0.40	A	0.2	2.60	0.12	A	0.7	3.28	0.41	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2030 Operational																
Arm 1	0.4	2.10	0.29	A	0.2	1.97	0.16	A	0.5	2.30	0.32	A	0.2	2.00	0.18	A
Arm 2	0.6	3.28	0.34	A	0.1	2.34	0.09	A	0.7	3.66	0.38	A	0.1	2.35	0.10	A
Arm 3	0.1	2.53	0.12	A	0.8	3.29	0.41	A	0.2	2.61	0.12	A	0.8	3.35	0.42	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A

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

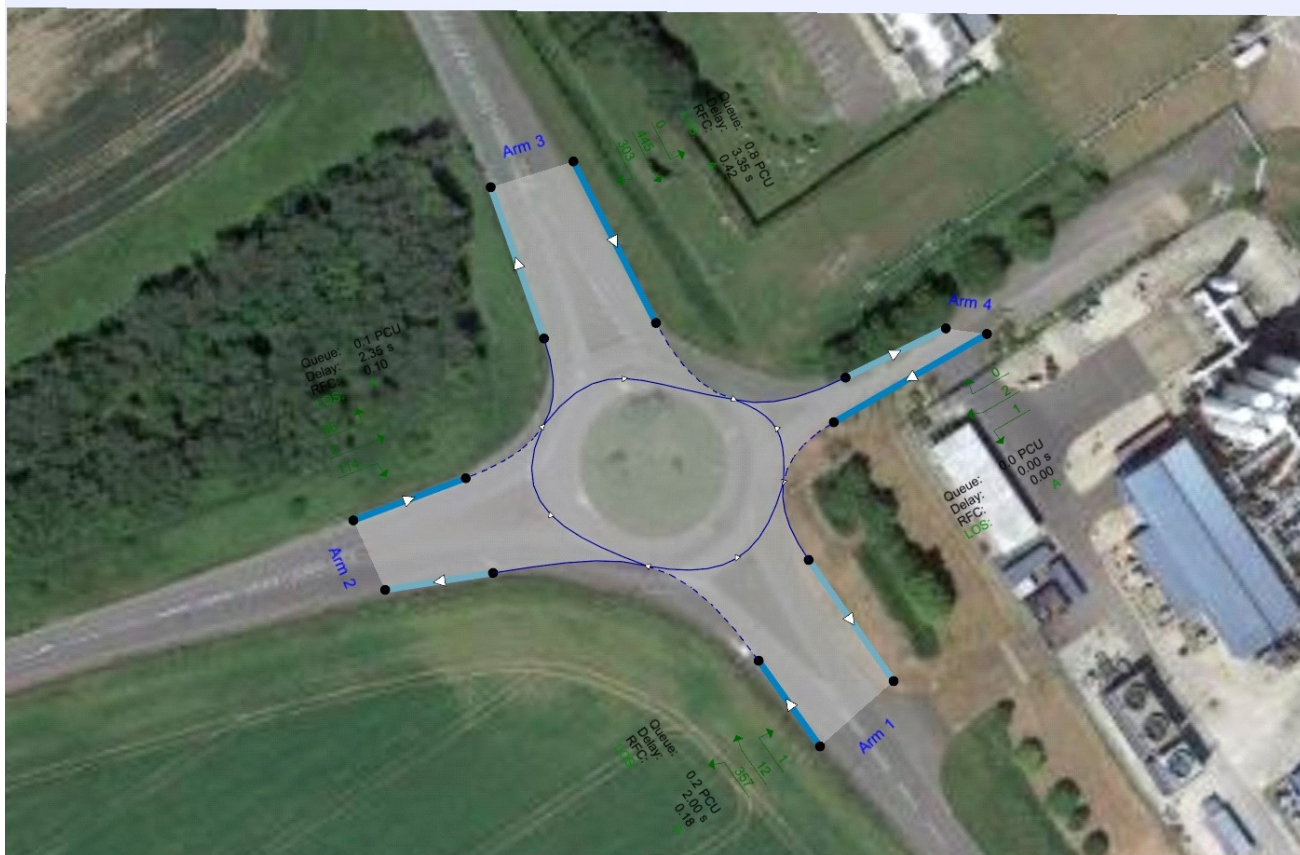
File summary

File Description

Title	Laporte Road / Kiln Lane / Hobson Way - Operational
Location	
Site number	
Date	19/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D13	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D14	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D15	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D16	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D19	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D20	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D21	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D22	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D23	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D24	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Hobson Way NB Approach	
2	Kiln Lane EB Approach	
3	Laporte Road SB Approach	
4	Unnamed Access	

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)	Exit only
1	7.30	8.31	7.0	95.0	45.7	23.2	
2	6.21	8.60	6.1	21.5	45.5	26.0	
3	6.34	6.57	6.4	36.9	45.5	25.1	
4	4.30	5.09	1.1	63.1	45.5	27.3	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.813	2572
2	0.737	2241
3	0.708	2062
4	0.587	1434

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)
D13	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	631	100.000
2		✓	556	100.000
3		✓	189	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	156	475	0
	2	301	5	247	3
	3	73	115	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	12	0	0
	2	6	0	18	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	2.09	0.4	A
2	0.33	3.21	0.5	A
3	0.11	2.51	0.1	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	475	90	2499	0.190	474	0.2	1.826	A
2	419	357	1978	0.212	417	0.3	2.557	A
3	142	232	1897	0.075	142	0.1	2.303	A
4	0	371	1217	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	567	108	2484	0.228	567	0.3	1.928	A
2	500	427	1927	0.259	499	0.4	2.797	A
3	170	278	1865	0.091	170	0.1	2.384	A
4	0	444	1174	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	695	132	2464	0.282	694	0.4	2.089	A
2	612	523	1856	0.330	612	0.5	3.206	A
3	208	340	1821	0.114	208	0.1	2.506	A
4	0	543	1115	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	695	132	2464	0.282	695	0.4	2.089	A
2	612	523	1856	0.330	612	0.5	3.209	A
3	208	340	1821	0.114	208	0.1	2.507	A
4	0	544	1115	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	567	108	2484	0.228	568	0.3	1.931	A
2	500	427	1926	0.259	500	0.4	2.803	A
3	170	278	1865	0.091	170	0.1	2.385	A
4	0	445	1173	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	475	90	2498	0.190	475	0.2	1.827	A
2	419	358	1977	0.212	419	0.3	2.564	A
3	142	233	1897	0.075	142	0.1	2.304	A
4	0	372	1216	0.000	0	0.0	0.000	A

2023 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D14	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	339	100.000
2		✓	169	100.000
3		✓	726	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	326	12	1
	2	87	1	81	0
	3	438	288	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	5	10	0
	2	26	0	40	0
	3	0	18	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	1.95	0.2	A
2	0.08	2.33	0.1	A
3	0.40	3.21	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	217	2395	0.107	255	0.1	1.767	A
2	127	10	2234	0.057	127	0.1	2.257	A
3	547	67	2014	0.271	545	0.4	2.606	A
4	0	611	1076	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	260	2361	0.129	305	0.2	1.840	A
2	152	12	2232	0.068	152	0.1	2.285	A
3	653	80	2005	0.326	652	0.5	2.832	A
4	0	731	1005	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	318	2313	0.161	373	0.2	1.950	A
2	186	14	2230	0.083	186	0.1	2.326	A
3	799	98	1992	0.401	799	0.7	3.208	A
4	0	895	909	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	318	2313	0.161	373	0.2	1.951	A
2	186	14	2230	0.083	186	0.1	2.326	A
3	799	98	1992	0.401	799	0.7	3.211	A
4	0	896	908	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	260	2360	0.129	305	0.2	1.843	A
2	152	12	2232	0.068	152	0.1	2.286	A
3	653	80	2005	0.326	653	0.5	2.838	A
4	0	733	1004	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	218	2395	0.107	255	0.1	1.768	A
2	127	10	2234	0.057	127	0.1	2.257	A
3	547	67	2014	0.271	547	0.4	2.614	A
4	0	613	1074	0.000	0	0.0	0.000	A

2024 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D15	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	633	100.000
2		✓	560	100.000
3		✓	190	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	157	476	0
	2	302	5	250	3
	3	73	116	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	12	0	0
	2	6	0	18	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	2.09	0.4	A
2	0.33	3.22	0.6	A
3	0.11	2.51	0.1	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	477	91	2498	0.191	476	0.2	1.828	A
2	422	358	1978	0.213	420	0.3	2.564	A
3	143	233	1897	0.075	143	0.1	2.306	A
4	0	372	1216	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	569	109	2483	0.229	569	0.3	1.931	A
2	503	428	1926	0.261	503	0.4	2.806	A
3	171	278	1864	0.092	171	0.1	2.388	A
4	0	446	1173	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	697	133	2464	0.283	697	0.4	2.093	A
2	617	524	1855	0.332	616	0.5	3.221	A
3	209	341	1820	0.115	209	0.1	2.510	A
4	0	546	1114	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	697	133	2464	0.283	697	0.4	2.093	A
2	617	524	1855	0.332	617	0.6	3.224	A
3	209	341	1820	0.115	209	0.1	2.510	A
4	0	546	1114	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	569	109	2483	0.229	569	0.3	1.932	A
2	503	428	1926	0.261	504	0.4	2.810	A
3	171	279	1864	0.092	171	0.1	2.390	A
4	0	446	1172	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	477	91	2498	0.191	477	0.2	1.829	A
2	422	359	1977	0.213	422	0.3	2.568	A
3	143	234	1896	0.075	143	0.1	2.307	A
4	0	374	1215	0.000	0	0.0	0.000	A

2024 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.76	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D16	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	339	100.000
2		✓	170	100.000
3		✓	731	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	326	12	1
	2	87	1	82	0
	3	440	291	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	5	10	0
	2	26	0	40	0
	3	0	18	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	1.95	0.2	A
2	0.08	2.33	0.1	A
3	0.40	3.23	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	219	2394	0.107	255	0.1	1.769	A
2	128	10	2234	0.057	128	0.1	2.259	A
3	550	67	2014	0.273	549	0.4	2.613	A
4	0	615	1073	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	262	2359	0.129	305	0.2	1.842	A
2	153	12	2232	0.068	153	0.1	2.287	A
3	657	80	2005	0.328	657	0.5	2.842	A
4	0	736	1002	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	321	2311	0.162	373	0.2	1.953	A
2	187	14	2230	0.084	187	0.1	2.328	A
3	805	98	1992	0.404	804	0.7	3.224	A
4	0	901	905	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	321	2310	0.162	373	0.2	1.953	A
2	187	14	2230	0.084	187	0.1	2.328	A
3	805	98	1992	0.404	805	0.7	3.227	A
4	0	902	905	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	263	2358	0.129	305	0.2	1.842	A
2	153	12	2232	0.068	153	0.1	2.289	A
3	657	80	2005	0.328	658	0.5	2.848	A
4	0	737	1002	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	220	2393	0.107	255	0.1	1.772	A
2	128	10	2234	0.057	128	0.1	2.259	A
3	550	67	2014	0.273	551	0.4	2.621	A
4	0	617	1072	0.000	0	0.0	0.000	A

2030 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	638	100.000
2		✓	577	100.000
3		✓	194	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	158	480	0
	2	307	6	261	3
	3	74	119	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	12	0	0
	2	6	0	18	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.29	2.10	0.4	A
2	0.34	3.28	0.6	A
3	0.12	2.53	0.1	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	480	94	2496	0.192	479	0.2	1.834	A
2	434	361	1975	0.220	433	0.3	2.588	A
3	146	237	1894	0.077	146	0.1	2.315	A
4	0	380	1211	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	574	112	2481	0.231	573	0.3	1.939	A
2	519	431	1923	0.270	518	0.4	2.844	A
3	174	284	1861	0.094	174	0.1	2.400	A
4	0	455	1167	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	702	138	2460	0.286	702	0.4	2.103	A
2	635	528	1852	0.343	635	0.6	3.281	A
3	214	348	1816	0.118	213	0.1	2.526	A
4	0	557	1108	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	702	138	2460	0.286	702	0.4	2.103	A
2	635	528	1852	0.343	635	0.6	3.284	A
3	214	348	1815	0.118	214	0.1	2.526	A
4	0	557	1107	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	574	112	2480	0.231	574	0.3	1.941	A
2	519	432	1923	0.270	519	0.4	2.847	A
3	174	284	1860	0.094	175	0.1	2.402	A
4	0	455	1167	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	480	94	2495	0.192	481	0.2	1.837	A
2	434	362	1975	0.220	435	0.3	2.597	A
3	146	238	1893	0.077	146	0.1	2.316	A
4	0	381	1211	0.000	0	0.0	0.000	A

2030 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	342	100.000
2		✓	175	100.000
3		✓	748	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	329	12	1
	2	88	1	86	0
	3	445	303	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	5	10	0
	2	26	0	40	0
	3	0	19	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	1.97	0.2	A
2	0.09	2.34	0.1	A
3	0.41	3.29	0.8	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	257	228	2386	0.108	257	0.1	1.777	A
2	132	10	2234	0.059	131	0.1	2.265	A
3	563	68	2014	0.280	561	0.4	2.648	A
4	0	628	1065	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	307	273	2350	0.131	307	0.2	1.852	A
2	157	12	2232	0.070	157	0.1	2.294	A
3	672	81	2004	0.335	672	0.5	2.889	A
4	0	752	993	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	377	334	2300	0.164	376	0.2	1.967	A
2	193	14	2230	0.086	193	0.1	2.336	A
3	824	99	1992	0.414	823	0.7	3.292	A
4	0	921	894	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	377	335	2300	0.164	377	0.2	1.968	A
2	193	14	2230	0.086	193	0.1	2.336	A
3	824	99	1991	0.414	824	0.8	3.294	A
4	0	922	893	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	307	274	2349	0.131	308	0.2	1.853	A
2	157	12	2232	0.070	157	0.1	2.296	A
3	672	81	2004	0.335	673	0.5	2.895	A
4	0	753	992	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	257	229	2386	0.108	258	0.1	1.778	A
2	132	10	2234	0.059	132	0.1	2.267	A
3	563	68	2014	0.280	564	0.4	2.654	A
4	0	631	1064	0.000	0	0.0	0.000	A

2023 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D19	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	697	100.000
2		✓	625	100.000
3		✓	189	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	222	475	0
	2	370	5	247	3
	3	73	115	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	29	0	0
	2	15	0	18	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.31	2.28	0.5	A
2	0.37	3.57	0.7	A
3	0.12	2.59	0.1	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	525	90	2499	0.210	524	0.3	1.962	A
2	471	357	1978	0.238	469	0.4	2.763	A
3	142	284	1861	0.076	142	0.1	2.352	A
4	0	423	1186	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	627	108	2484	0.252	626	0.4	2.087	A
2	562	427	1927	0.292	561	0.5	3.057	A
3	170	340	1821	0.093	170	0.1	2.448	A
4	0	506	1137	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	767	132	2464	0.311	767	0.5	2.284	A
2	688	523	1856	0.371	687	0.7	3.570	A
3	208	416	1767	0.118	208	0.1	2.592	A
4	0	619	1071	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	767	132	2464	0.311	767	0.5	2.284	A
2	688	523	1856	0.371	688	0.7	3.573	A
3	208	416	1767	0.118	208	0.1	2.593	A
4	0	620	1070	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	627	108	2484	0.252	627	0.4	2.090	A
2	562	427	1926	0.292	563	0.5	3.064	A
3	170	340	1821	0.093	170	0.1	2.451	A
4	0	507	1137	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	525	90	2498	0.210	525	0.3	1.965	A
2	471	358	1977	0.238	471	0.4	2.770	A
3	142	285	1860	0.077	142	0.1	2.355	A
4	0	424	1185	0.000	0	0.0	0.000	A

2023 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D20	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	367	100.000
2		✓	195	100.000
3		✓	726	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	354	12	1
	2	113	1	81	0
	3	438	288	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	9	10	0
	2	37	0	40	0
	3	0	18	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.17	2.05	0.2	A
2	0.10	2.46	0.1	A
3	0.41	3.27	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	276	217	2395	0.115	276	0.1	1.850	A
2	147	10	2234	0.066	146	0.1	2.379	A
3	547	86	2001	0.273	545	0.4	2.630	A
4	0	631	1064	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	330	260	2361	0.140	330	0.2	1.932	A
2	175	12	2232	0.079	175	0.1	2.413	A
3	653	103	1988	0.328	652	0.5	2.867	A
4	0	755	991	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	404	318	2313	0.175	404	0.2	2.055	A
2	215	14	2230	0.096	215	0.1	2.463	A
3	799	127	1972	0.405	799	0.7	3.264	A
4	0	924	892	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	404	318	2313	0.175	404	0.2	2.055	A
2	215	14	2230	0.096	215	0.1	2.463	A
3	799	127	1972	0.405	799	0.7	3.266	A
4	0	925	891	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	330	260	2360	0.140	330	0.2	1.932	A
2	175	12	2232	0.079	175	0.1	2.414	A
3	653	103	1988	0.328	653	0.5	2.873	A
4	0	756	991	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	276	218	2395	0.115	276	0.1	1.854	A
2	147	10	2234	0.066	147	0.1	2.381	A
3	547	87	2000	0.273	547	0.4	2.639	A
4	0	633	1063	0.000	0	0.0	0.000	A

2024 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.87	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D21	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	699	100.000
2		✓	629	100.000
3		✓	190	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	223	476	0
	2	371	5	250	3
	3	73	116	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	29	0	0
	2	15	0	18	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.31	2.29	0.5	A
2	0.37	3.59	0.7	A
3	0.12	2.60	0.2	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	526	91	2498	0.211	525	0.3	1.965	A
2	474	358	1978	0.239	472	0.4	2.770	A
3	143	284	1860	0.077	143	0.1	2.355	A
4	0	424	1185	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	628	109	2483	0.253	628	0.4	2.090	A
2	565	428	1926	0.294	565	0.5	3.067	A
3	171	340	1821	0.094	171	0.1	2.451	A
4	0	508	1136	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	770	133	2464	0.312	769	0.5	2.288	A
2	693	524	1855	0.373	692	0.7	3.586	A
3	209	417	1767	0.118	209	0.2	2.597	A
4	0	621	1070	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	770	133	2464	0.312	770	0.5	2.289	A
2	693	524	1855	0.373	693	0.7	3.589	A
3	209	417	1766	0.118	209	0.2	2.597	A
4	0	622	1069	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	628	109	2483	0.253	629	0.4	2.091	A
2	565	428	1926	0.294	566	0.5	3.074	A
3	171	341	1820	0.094	171	0.1	2.452	A
4	0	509	1136	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	526	91	2498	0.211	527	0.3	1.969	A
2	474	359	1977	0.240	474	0.4	2.779	A
3	143	286	1859	0.077	143	0.1	2.356	A
4	0	426	1184	0.000	0	0.0	0.000	A

2024 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D22	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	367	100.000
2		✓	196	100.000
3		✓	731	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	354	12	1
	2	113	1	82	0
	3	440	291	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	9	10	0
	2	37	0	40	0
	3	0	18	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.17	2.06	0.2	A
2	0.10	2.46	0.1	A
3	0.41	3.28	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	276	219	2394	0.115	276	0.1	1.852	A
2	148	10	2234	0.066	147	0.1	2.380	A
3	550	86	2001	0.275	549	0.4	2.638	A
4	0	634	1062	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	330	262	2359	0.140	330	0.2	1.934	A
2	176	12	2232	0.079	176	0.1	2.415	A
3	657	103	1988	0.330	657	0.5	2.878	A
4	0	759	989	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	404	321	2311	0.175	404	0.2	2.057	A
2	216	14	2230	0.097	216	0.1	2.464	A
3	805	127	1972	0.408	804	0.7	3.280	A
4	0	929	889	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	404	321	2310	0.175	404	0.2	2.058	A
2	216	14	2230	0.097	216	0.1	2.465	A
3	805	127	1972	0.408	805	0.7	3.283	A
4	0	930	888	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	330	263	2358	0.140	330	0.2	1.936	A
2	176	12	2232	0.079	176	0.1	2.417	A
3	657	103	1988	0.330	658	0.5	2.884	A
4	0	761	988	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	276	220	2393	0.115	276	0.1	1.853	A
2	148	10	2234	0.066	148	0.1	2.380	A
3	550	87	2000	0.275	551	0.4	2.644	A
4	0	637	1061	0.000	0	0.0	0.000	A

2030 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D23	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	704	100.000
2		✓	646	100.000
3		✓	194	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	224	480	0
	2	376	6	261	3
	3	74	119	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	29	0	0
	2	15	0	18	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.32	2.30	0.5	A
2	0.38	3.66	0.7	A
3	0.12	2.61	0.2	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	530	94	2496	0.212	529	0.3	1.970	A
2	486	361	1975	0.246	485	0.4	2.798	A
3	146	289	1857	0.079	146	0.1	2.365	A
4	0	432	1181	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	633	112	2481	0.255	633	0.4	2.098	A
2	581	431	1923	0.302	580	0.5	3.108	A
3	174	346	1817	0.096	174	0.1	2.464	A
4	0	517	1131	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	775	138	2460	0.315	775	0.5	2.300	A
2	711	528	1852	0.384	710	0.7	3.655	A
3	214	423	1762	0.121	213	0.2	2.613	A
4	0	632	1063	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	775	138	2460	0.315	775	0.5	2.300	A
2	711	528	1852	0.384	711	0.7	3.659	A
3	214	424	1761	0.121	214	0.2	2.614	A
4	0	633	1063	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	633	112	2480	0.255	633	0.4	2.101	A
2	581	432	1923	0.302	582	0.5	3.113	A
3	174	347	1816	0.096	175	0.1	2.465	A
4	0	518	1130	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	530	94	2495	0.212	530	0.3	1.974	A
2	486	362	1975	0.246	487	0.4	2.808	A
3	146	290	1856	0.079	146	0.1	2.366	A
4	0	433	1180	0.000	0	0.0	0.000	A

2030 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D24	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	370	100.000
2		✓	201	100.000
3		✓	748	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	357	12	1
	2	114	1	86	0
	3	445	303	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	5	10	0
	2	26	0	40	0
	3	0	19	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.18	2.00	0.2	A
2	0.10	2.35	0.1	A
3	0.42	3.35	0.8	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	279	228	2386	0.117	278	0.1	1.794	A
2	151	10	2234	0.068	151	0.1	2.272	A
3	563	87	2000	0.282	561	0.4	2.674	A
4	0	648	1054	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	333	273	2350	0.142	332	0.2	1.875	A
2	181	12	2232	0.081	181	0.1	2.306	A
3	672	104	1988	0.338	672	0.5	2.925	A
4	0	775	979	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	407	334	2300	0.177	407	0.2	1.999	A
2	221	14	2230	0.099	221	0.1	2.354	A
3	824	128	1971	0.418	823	0.8	3.350	A
4	0	949	877	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	407	335	2300	0.177	407	0.2	2.000	A
2	221	14	2230	0.099	221	0.1	2.354	A
3	824	128	1971	0.418	824	0.8	3.352	A
4	0	950	877	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	333	274	2349	0.142	333	0.2	1.876	A
2	181	12	2232	0.081	181	0.1	2.306	A
3	672	104	1988	0.338	673	0.5	2.931	A
4	0	777	978	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	279	229	2386	0.117	279	0.1	1.795	A
2	151	10	2234	0.068	151	0.1	2.272	A
3	563	87	2000	0.282	564	0.4	2.680	A
4	0	650	1053	0.000	0	0.0	0.000	A

Junctions 9															
ARCADY 9 - Roundabout Module															
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Filename: Junction 3 - Hobson Way Kiln Lane Laporte Road Rbt Construction.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 3 - Hobson Way Kiln Lane Laporte Road Rbt

Report generation date: 13/01/2020 09:38:11

- »2021 Construction, Base Adj + Com Dev AM
- »2021 Construction, Base Adj + Com Dev PM
- »2021 Construction, Base Adj + Com Dev + Dev AM
- »2021 Construction, Base Adj + Com Dev + Dev PM
- »2022 Construction, Base Adj + Com Dev AM
- »2022 Construction, Base Adj + Com Dev PM
- »2022 Construction, Base Adj + Com Dev + Dev AM
- »2022 Construction, Base Adj + Com Dev + Dev PM
- »2027 Construction, Base Adj + Com Dev AM
- »2027 Construction, Base Adj + Com Dev PM
- »2027 Construction, Base Adj + Com Dev + Dev AM
- »2027 Construction, Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 Construction																
Arm 1	0.4	2.08	0.28	A	0.2	1.93	0.16	A	0.4	2.11	0.28	A	0.3	2.02	0.19	A
Arm 2	0.5	3.12	0.31	A	0.1	2.31	0.08	A	0.7	3.42	0.38	A	0.1	2.37	0.09	A
Arm 3	0.1	2.46	0.11	A	0.7	3.18	0.40	A	0.1	2.60	0.12	A	0.7	3.20	0.40	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2022 Construction																
Arm 1	0.4	2.09	0.28	A	0.2	1.93	0.16	A	0.4	2.12	0.29	A	0.3	2.03	0.20	A
Arm 2	0.5	3.21	0.33	A	0.1	2.31	0.08	A	0.7	3.52	0.40	A	0.2	2.24	0.12	A
Arm 3	0.1	2.50	0.11	A	0.7	3.20	0.40	A	0.2	2.65	0.12	A	0.7	3.38	0.41	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
2027 Construction																
Arm 1	0.4	2.10	0.28	A	0.2	1.94	0.16	A	0.4	2.13	0.29	A	0.3	2.05	0.20	A
Arm 2	0.6	3.26	0.34	A	0.1	2.32	0.09	A	0.8	3.60	0.41	A	0.1	2.38	0.09	A
Arm 3	0.1	2.52	0.12	A	0.7	3.27	0.41	A	0.2	2.67	0.12	A	0.7	3.28	0.41	A
Arm 4	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A	0.0	0.00	0.00	A

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

File summary

File Description

Title	Laporte Road / Kiln Lane / Hobson Way - Construction
Location	
Site number	
Date	19/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2021 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.54	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Hobson Way NB Approach	
2	Kiln Lane EB Approach	
3	Laporte Road SB Approach	
4	Unnamed Access	

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)	Exit only
1	7.30	8.31	7.0	95.0	45.7	23.2	
2	6.21	8.60	6.1	21.5	45.5	26.0	
3	6.34	6.57	6.4	36.9	45.5	25.1	
4	4.30	5.09	1.1	63.1	45.5	27.3	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.813	2572
2	0.737	2241
3	0.708	2062
4	0.587	1434

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	629	100.000
2		✓	531	100.000
3		✓	184	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	156	473	0
	2	290	5	233	3
	3	73	110	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	12	0	0
	2	6	0	17	0
	3	0	20	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	2.08	0.4	A
2	0.31	3.12	0.5	A
3	0.11	2.46	0.1	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	474	86	2502	0.189	473	0.2	1.822	A
2	400	355	1979	0.202	399	0.3	2.515	A
3	139	224	1903	0.073	138	0.1	2.265	A
4	0	359	1224	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	565	103	2488	0.227	565	0.3	1.923	A
2	477	425	1928	0.248	477	0.4	2.740	A
3	165	268	1872	0.088	165	0.1	2.342	A
4	0	429	1182	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	693	127	2469	0.281	692	0.4	2.081	A
2	585	520	1858	0.315	584	0.5	3.120	A
3	203	328	1830	0.111	202	0.1	2.457	A
4	0	526	1126	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	693	127	2469	0.281	693	0.4	2.081	A
2	585	521	1857	0.315	585	0.5	3.123	A
3	203	328	1829	0.111	203	0.1	2.457	A
4	0	526	1125	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	565	103	2488	0.227	566	0.3	1.924	A
2	477	426	1928	0.248	478	0.4	2.743	A
3	165	268	1872	0.088	166	0.1	2.345	A
4	0	430	1182	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	474	87	2501	0.189	474	0.2	1.823	A
2	400	356	1979	0.202	400	0.3	2.521	A
3	139	225	1903	0.073	139	0.1	2.268	A
4	0	360	1223	0.000	0	0.0	0.000	A

2021 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	337	100.000
2		✓	166	100.000
3		✓	717	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	325	11	1
	2	86	1	79	0
	3	435	282	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	4	10	0
	2	25	0	40	0
	3	0	18	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	1.93	0.2	A
2	0.08	2.31	0.1	A
3	0.40	3.18	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	254	212	2399	0.106	253	0.1	1.747	A
2	125	9	2234	0.056	125	0.1	2.243	A
3	540	66	2015	0.268	538	0.4	2.591	A
4	0	604	1080	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	303	254	2365	0.128	303	0.2	1.817	A
2	149	11	2233	0.067	149	0.1	2.271	A
3	645	79	2006	0.321	644	0.5	2.813	A
4	0	722	1010	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	371	311	2319	0.160	371	0.2	1.925	A
2	183	13	2231	0.082	183	0.1	2.310	A
3	789	97	1993	0.396	789	0.7	3.178	A
4	0	884	915	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	371	312	2318	0.160	371	0.2	1.925	A
2	183	13	2231	0.082	183	0.1	2.310	A
3	789	97	1993	0.396	789	0.7	3.181	A
4	0	885	915	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	303	255	2365	0.128	303	0.2	1.821	A
2	149	11	2233	0.067	149	0.1	2.271	A
3	645	79	2006	0.321	645	0.5	2.816	A
4	0	724	1010	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	254	213	2398	0.106	254	0.1	1.747	A
2	125	9	2234	0.056	125	0.1	2.245	A
3	540	66	2015	0.268	540	0.4	2.597	A
4	0	606	1079	0.000	0	0.0	0.000	A

2021 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.75	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	639	100.000
2		✓	646	100.000
3		✓	184	100.000
4		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	166	473	0
	2	405	5	233	3
	3	73	110	0	1
	4	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	15	0	0
	2	5	0	17	0
	3	0	20	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	2.11	0.4	A
2	0.38	3.42	0.7	A
3	0.12	2.60	0.1	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	481	86	2502	0.192	480	0.2	1.843	A
2	486	355	1979	0.246	485	0.4	2.622	A
3	139	310	1842	0.075	138	0.1	2.346	A
4	0	445	1173	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	574	103	2488	0.231	574	0.3	1.947	A
2	581	425	1928	0.301	580	0.5	2.911	A
3	165	371	1799	0.092	165	0.1	2.447	A
4	0	533	1122	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	704	127	2469	0.285	703	0.4	2.110	A
2	711	520	1858	0.383	710	0.7	3.418	A
3	203	454	1740	0.116	202	0.1	2.600	A
4	0	652	1051	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	704	127	2469	0.285	704	0.4	2.110	A
2	711	521	1857	0.383	711	0.7	3.421	A
3	203	455	1740	0.116	203	0.1	2.600	A
4	0	653	1051	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	574	103	2488	0.231	575	0.3	1.949	A
2	581	426	1928	0.301	582	0.5	2.917	A
3	165	372	1798	0.092	166	0.1	2.450	A
4	0	534	1121	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	481	87	2501	0.192	481	0.2	1.846	A
2	486	356	1979	0.246	487	0.4	2.629	A
3	139	311	1841	0.075	139	0.1	2.348	A
4	0	447	1172	0.000	0	0.0	0.000	A

2021 Construction, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	409	100.000
2		✓	176	100.000
3		✓	717	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	397	11	1
	2	96	1	79	0
	3	435	282	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	5	10	0
	2	30	0	40	0
	3	0	18	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.19	2.02	0.3	A
2	0.09	2.37	0.1	A
3	0.40	3.20	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	308	212	2399	0.128	307	0.2	1.808	A
2	133	9	2234	0.059	132	0.1	2.295	A
3	540	74	2010	0.269	538	0.4	2.601	A
4	0	611	1076	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	368	254	2365	0.155	368	0.2	1.893	A
2	158	11	2233	0.071	158	0.1	2.325	A
3	645	88	1999	0.322	644	0.5	2.826	A
4	0	731	1005	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	450	311	2319	0.194	450	0.3	2.025	A
2	194	13	2231	0.087	194	0.1	2.368	A
3	789	108	1985	0.398	789	0.7	3.199	A
4	0	895	909	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	450	312	2318	0.194	450	0.3	2.025	A
2	194	13	2231	0.087	194	0.1	2.368	A
3	789	108	1985	0.398	789	0.7	3.201	A
4	0	896	908	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	368	255	2365	0.155	368	0.2	1.897	A
2	158	11	2233	0.071	158	0.1	2.326	A
3	645	88	1999	0.322	645	0.5	2.831	A
4	0	733	1004	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	308	213	2398	0.128	308	0.2	1.809	A
2	133	9	2234	0.059	133	0.1	2.296	A
3	540	74	2009	0.269	540	0.4	2.609	A
4	0	613	1074	0.000	0	0.0	0.000	A

2022 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.59	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	630	100.000
2		✓	552	100.000
3		✓	188	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	156	474	0
	2	300	5	244	3
	3	73	114	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	12	0	0
	2	6	0	19	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	2.09	0.4	A
2	0.33	3.21	0.5	A
3	0.11	2.50	0.1	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	474	89	2499	0.190	473	0.2	1.825	A
2	416	356	1979	0.210	414	0.3	2.560	A
3	142	231	1898	0.075	141	0.1	2.300	A
4	0	369	1217	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	566	107	2485	0.228	566	0.3	1.927	A
2	496	426	1927	0.257	496	0.4	2.798	A
3	169	277	1866	0.091	169	0.1	2.381	A
4	0	442	1175	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	694	131	2465	0.281	693	0.4	2.086	A
2	608	522	1857	0.327	607	0.5	3.203	A
3	207	339	1822	0.114	207	0.1	2.502	A
4	0	541	1117	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	694	131	2465	0.281	694	0.4	2.087	A
2	608	522	1857	0.327	608	0.5	3.206	A
3	207	339	1822	0.114	207	0.1	2.503	A
4	0	542	1116	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	566	107	2485	0.228	567	0.3	1.928	A
2	496	426	1927	0.258	497	0.4	2.801	A
3	169	277	1865	0.091	169	0.1	2.384	A
4	0	443	1174	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	474	90	2499	0.190	475	0.2	1.828	A
2	416	357	1978	0.210	416	0.3	2.564	A
3	142	232	1897	0.075	142	0.1	2.303	A
4	0	371	1217	0.000	0	0.0	0.000	A

2022 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.73	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	338	100.000
2		✓	167	100.000
3		✓	722	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	325	12	1
	2	86	1	80	0
	3	437	285	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	4	9	0
	2	25	0	39	0
	3	0	18	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	1.93	0.2	A
2	0.08	2.31	0.1	A
3	0.40	3.20	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	254	215	2397	0.106	254	0.1	1.749	A
2	126	10	2234	0.056	125	0.1	2.238	A
3	544	66	2015	0.270	542	0.4	2.598	A
4	0	607	1078	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	304	257	2363	0.129	304	0.2	1.820	A
2	150	12	2232	0.067	150	0.1	2.266	A
3	649	79	2006	0.324	649	0.5	2.823	A
4	0	727	1008	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	372	315	2316	0.161	372	0.2	1.928	A
2	184	14	2230	0.082	184	0.1	2.306	A
3	795	97	1993	0.399	794	0.7	3.193	A
4	0	890	912	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	372	315	2316	0.161	372	0.2	1.928	A
2	184	14	2230	0.082	184	0.1	2.306	A
3	795	97	1993	0.399	795	0.7	3.196	A
4	0	891	911	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	304	257	2362	0.129	304	0.2	1.820	A
2	150	12	2232	0.067	150	0.1	2.268	A
3	649	79	2006	0.324	650	0.5	2.826	A
4	0	728	1007	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	254	216	2397	0.106	255	0.1	1.752	A
2	126	10	2234	0.056	126	0.1	2.240	A
3	544	66	2015	0.270	544	0.4	2.607	A
4	0	610	1076	0.000	0	0.0	0.000	A

2022 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	640	100.000
2		✓	667	100.000
3		✓	188	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	166	474	0
	2	415	5	244	3
	3	73	114	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	15	0	0
	2	5	0	19	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.29	2.12	0.4	A
2	0.40	3.52	0.7	A
3	0.12	2.65	0.2	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	482	89	2499	0.193	481	0.2	1.846	A
2	502	356	1979	0.254	501	0.4	2.668	A
3	142	318	1837	0.077	141	0.1	2.383	A
4	0	456	1167	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	575	107	2485	0.232	575	0.3	1.951	A
2	600	426	1927	0.311	599	0.5	2.972	A
3	169	380	1793	0.094	169	0.1	2.489	A
4	0	545	1114	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	705	131	2465	0.286	704	0.4	2.115	A
2	734	522	1857	0.396	734	0.7	3.510	A
3	207	465	1732	0.119	207	0.2	2.649	A
4	0	668	1042	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	705	131	2465	0.286	705	0.4	2.115	A
2	734	522	1857	0.396	734	0.7	3.516	A
3	207	466	1732	0.120	207	0.2	2.650	A
4	0	668	1042	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	575	107	2485	0.232	576	0.3	1.951	A
2	600	426	1927	0.311	600	0.5	2.979	A
3	169	381	1792	0.094	169	0.1	2.492	A
4	0	546	1114	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	482	90	2499	0.193	482	0.2	1.846	A
2	502	357	1978	0.254	503	0.4	2.675	A
3	142	319	1836	0.077	142	0.1	2.387	A
4	0	457	1166	0.000	0	0.0	0.000	A

2022 Construction, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	411	100.000
2		✓	250	100.000
3		✓	722	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	398	12	1
	2	96	1	80	73
	3	437	285	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	5	9	0
	2	30	0	39	0
	3	0	18	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.20	2.03	0.3	A
2	0.12	2.24	0.2	A
3	0.41	3.38	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	309	215	2397	0.129	309	0.2	1.811	A
2	188	10	2234	0.084	188	0.1	2.141	A
3	544	128	1971	0.276	542	0.4	2.679	A
4	0	615	1073	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	369	257	2363	0.156	369	0.2	1.897	A
2	225	12	2232	0.101	225	0.1	2.182	A
3	649	154	1953	0.332	649	0.5	2.937	A
4	0	736	1002	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	453	315	2316	0.195	452	0.3	2.030	A
2	275	14	2230	0.123	275	0.2	2.240	A
3	795	188	1928	0.412	794	0.7	3.376	A
4	0	901	906	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	453	315	2316	0.195	453	0.3	2.030	A
2	275	14	2230	0.123	275	0.2	2.240	A
3	795	188	1928	0.412	795	0.7	3.378	A
4	0	902	905	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	369	257	2362	0.156	370	0.2	1.900	A
2	225	12	2232	0.101	225	0.1	2.182	A
3	649	154	1953	0.332	650	0.5	2.943	A
4	0	737	1002	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	309	216	2397	0.129	310	0.2	1.814	A
2	188	10	2234	0.084	188	0.1	2.141	A
3	544	129	1970	0.276	544	0.4	2.688	A
4	0	617	1072	0.000	0	0.0	0.000	A

2027 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.63	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	635	100.000
2		✓	569	100.000
3		✓	193	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	157	478	0
	2	305	5	256	3
	3	74	118	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	13	0	0
	2	6	0	18	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	2.10	0.4	A
2	0.34	3.26	0.6	A
3	0.12	2.52	0.1	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	478	92	2497	0.191	477	0.2	1.834	A
2	428	359	1977	0.217	427	0.3	2.575	A
3	145	235	1895	0.077	145	0.1	2.311	A
4	0	377	1213	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	571	111	2482	0.230	571	0.3	1.938	A
2	512	430	1925	0.266	511	0.4	2.826	A
3	174	281	1863	0.093	173	0.1	2.395	A
4	0	451	1170	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	699	135	2462	0.284	699	0.4	2.101	A
2	626	526	1854	0.338	626	0.6	3.252	A
3	212	344	1818	0.117	212	0.1	2.519	A
4	0	552	1110	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	699	135	2462	0.284	699	0.4	2.101	A
2	626	526	1853	0.338	626	0.6	3.255	A
3	212	345	1818	0.117	212	0.1	2.520	A
4	0	553	1110	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	571	111	2482	0.230	571	0.3	1.939	A
2	512	430	1924	0.266	512	0.4	2.832	A
3	174	282	1862	0.093	174	0.1	2.397	A
4	0	452	1169	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	478	93	2497	0.191	478	0.2	1.838	A
2	428	360	1976	0.217	429	0.3	2.584	A
3	145	236	1895	0.077	145	0.1	2.314	A
4	0	378	1212	0.000	0	0.0	0.000	A

2027 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.78	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	341	100.000
2		✓	173	100.000
3		✓	741	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	328	12	1
	2	88	1	84	0
	3	443	298	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	4	9	0
	2	26	0	39	0
	3	0	19	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	1.94	0.2	A
2	0.09	2.32	0.1	A
3	0.41	3.27	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	257	224	2389	0.107	256	0.1	1.757	A
2	130	10	2234	0.058	130	0.1	2.254	A
3	558	68	2014	0.277	556	0.4	2.637	A
4	0	623	1069	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	307	269	2353	0.130	306	0.2	1.830	A
2	156	12	2232	0.070	155	0.1	2.283	A
3	666	81	2004	0.332	666	0.5	2.874	A
4	0	746	997	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	375	329	2304	0.163	375	0.2	1.943	A
2	190	14	2230	0.085	190	0.1	2.325	A
3	816	99	1992	0.410	815	0.7	3.268	A
4	0	913	898	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	375	329	2304	0.163	375	0.2	1.943	A
2	190	14	2230	0.085	190	0.1	2.325	A
3	816	99	1991	0.410	816	0.7	3.271	A
4	0	914	898	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	307	269	2353	0.130	307	0.2	1.834	A
2	156	12	2232	0.070	156	0.1	2.285	A
3	666	81	2004	0.332	667	0.5	2.879	A
4	0	747	996	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	257	225	2389	0.107	257	0.1	1.760	A
2	130	10	2234	0.058	130	0.1	2.255	A
3	558	68	2014	0.277	558	0.4	2.643	A
4	0	625	1067	0.000	0	0.0	0.000	A

2027 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	645	100.000
2		✓	685	100.000
3		✓	193	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	167	478	0
	2	420	6	256	3
	3	74	118	0	1
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	16	0	0
	2	6	0	18	0
	3	0	22	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.29	2.13	0.4	A
2	0.41	3.60	0.8	A
3	0.12	2.67	0.2	A
4	0.00	0.00	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	486	93	2496	0.195	485	0.2	1.855	A
2	516	359	1977	0.261	514	0.4	2.708	A
3	145	322	1834	0.079	145	0.1	2.396	A
4	0	464	1162	0.000	0	0.0	0.000	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	580	111	2481	0.234	580	0.3	1.963	A
2	616	430	1925	0.320	615	0.5	3.025	A
3	174	385	1789	0.097	173	0.1	2.504	A
4	0	555	1108	0.000	0	0.0	0.000	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	710	136	2461	0.289	710	0.4	2.132	A
2	754	526	1854	0.407	753	0.8	3.598	A
3	212	472	1728	0.123	212	0.2	2.669	A
4	0	680	1035	0.000	0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	710	137	2461	0.289	710	0.4	2.132	A
2	754	526	1853	0.407	754	0.8	3.604	A
3	212	472	1727	0.123	212	0.2	2.670	A
4	0	680	1035	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	580	112	2481	0.234	580	0.3	1.964	A
2	616	430	1924	0.320	617	0.5	3.035	A
3	174	386	1788	0.097	174	0.1	2.505	A
4	0	556	1108	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	486	93	2496	0.195	486	0.3	1.859	A
2	516	360	1976	0.261	516	0.4	2.715	A
3	145	323	1833	0.079	145	0.1	2.397	A
4	0	466	1161	0.000	0	0.0	0.000	A

2027 Construction, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Laporte Road / Kiln Lane / Hobson Way	Standard Roundabout	2.78	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	413	100.000
2		✓	183	100.000
3		✓	741	100.000
4		✓	3	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	400	12	1
	2	98	1	84	0
	3	443	298	0	0
	4	1	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	5	9	0
	2	31	0	39	0
	3	0	18	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.20	2.05	0.3	A
2	0.09	2.38	0.1	A
3	0.41	3.28	0.7	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	311	224	2389	0.130	310	0.2	1.819	A
2	138	10	2234	0.062	137	0.1	2.306	A
3	558	75	2008	0.278	556	0.4	2.639	A
4	0	631	1064	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	371	269	2353	0.158	371	0.2	1.907	A
2	165	12	2232	0.074	164	0.1	2.337	A
3	666	90	1998	0.333	666	0.5	2.878	A
4	0	755	991	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	455	329	2304	0.197	454	0.3	2.045	A
2	201	14	2230	0.090	201	0.1	2.382	A
3	816	110	1984	0.411	815	0.7	3.280	A
4	0	924	892	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	455	329	2304	0.197	455	0.3	2.045	A
2	201	14	2230	0.090	201	0.1	2.382	A
3	816	110	1984	0.411	816	0.7	3.283	A
4	0	925	891	0.000	0	0.0	0.000	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	371	269	2353	0.158	372	0.2	1.911	A
2	165	12	2232	0.074	165	0.1	2.338	A
3	666	90	1998	0.333	667	0.5	2.884	A
4	0	756	991	0.000	0	0.0	0.000	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	311	225	2389	0.130	311	0.2	1.820	A
2	138	10	2234	0.062	138	0.1	2.306	A
3	558	75	2008	0.278	558	0.4	2.647	A
4	0	633	1063	0.000	0	0.0	0.000	A

ANNEX 19: TRONDHEIM WAY/ KILN LANE MODELLING OUTPUTS

Junctions 9															
ARCADY 9 - Roundabout Module															
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020															
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk															
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution															

Filename: Junction 4 - Kiln Lane North Moss Lane A1173 Rbt Operational.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 4 - Kiln Lane North Moss Lane A1173 Rbt

Report generation date: 13/01/2020 09:44:03

- »2023 Operational, Base Adj + Com Dev AM
- »2023 Operational, Base Adj + Com Dev PM
- »2024 Operational, Base Adj + Com Dev AM
- »2024 Operational, Base Adj + Com Dev PM
- »2030 Operational, Base Adj + Com Dev AM
- »2030 Operational, Base Adj + Com Dev PM
- »2023 Operational, Base Adj + Com Dev + Dev AM
- »2023 Operational, Base Adj + Com Dev + Dev PM
- »2024 Operational, Base Adj + Com Dev + Dev AM
- »2024 Operational, Base Adj + Com Dev + Dev PM
- »2030 Operational, Base Adj + Com Dev + Dev AM
- »2030 Operational, Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2023 Operational																
Arm 1	0.3	4.04	0.15	A	0.4	3.77	0.24	A	0.4	4.47	0.20	A	0.4	3.99	0.26	A
Arm 2	0.1	2.64	0.10	A	0.1	2.95	0.07	A	0.1	2.73	0.10	A	0.1	2.99	0.07	A
Arm 3	0.4	3.49	0.27	A	0.5	3.79	0.29	A	0.6	3.89	0.31	A	0.6	3.95	0.31	A
Arm 4	0.0	3.16	0.03	A	0.1	2.47	0.05	A	0.0	3.26	0.03	A	0.1	2.50	0.05	A
2024 Operational																
Arm 1	0.3	4.03	0.15	A	0.4	3.80	0.25	A	0.4	4.49	0.20	A	0.5	4.02	0.27	A
Arm 2	0.1	2.66	0.10	A	0.1	3.01	0.08	A	0.1	2.75	0.11	A	0.1	3.05	0.08	A
Arm 3	0.5	3.54	0.27	A	0.6	3.84	0.29	A	0.6	3.96	0.32	A	0.6	4.01	0.31	A
Arm 4	0.0	3.18	0.03	A	0.1	2.49	0.05	A	0.0	3.29	0.03	A	0.1	2.52	0.05	A
2030 Operational																
Arm 1	0.3	4.16	0.16	A	0.5	3.91	0.27	A	0.4	4.54	0.21	A	0.5	4.13	0.29	A
Arm 2	0.1	2.75	0.11	A	0.1	3.07	0.08	A	0.1	2.78	0.11	A	0.1	3.11	0.08	A
Arm 3	0.5	3.54	0.29	A	0.6	3.91	0.31	A	0.7	4.04	0.34	A	0.6	4.08	0.32	A
Arm 4	0.1	3.51	0.06	A	0.1	2.51	0.06	A	0.0	3.36	0.03	A	0.1	2.55	0.06	A

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

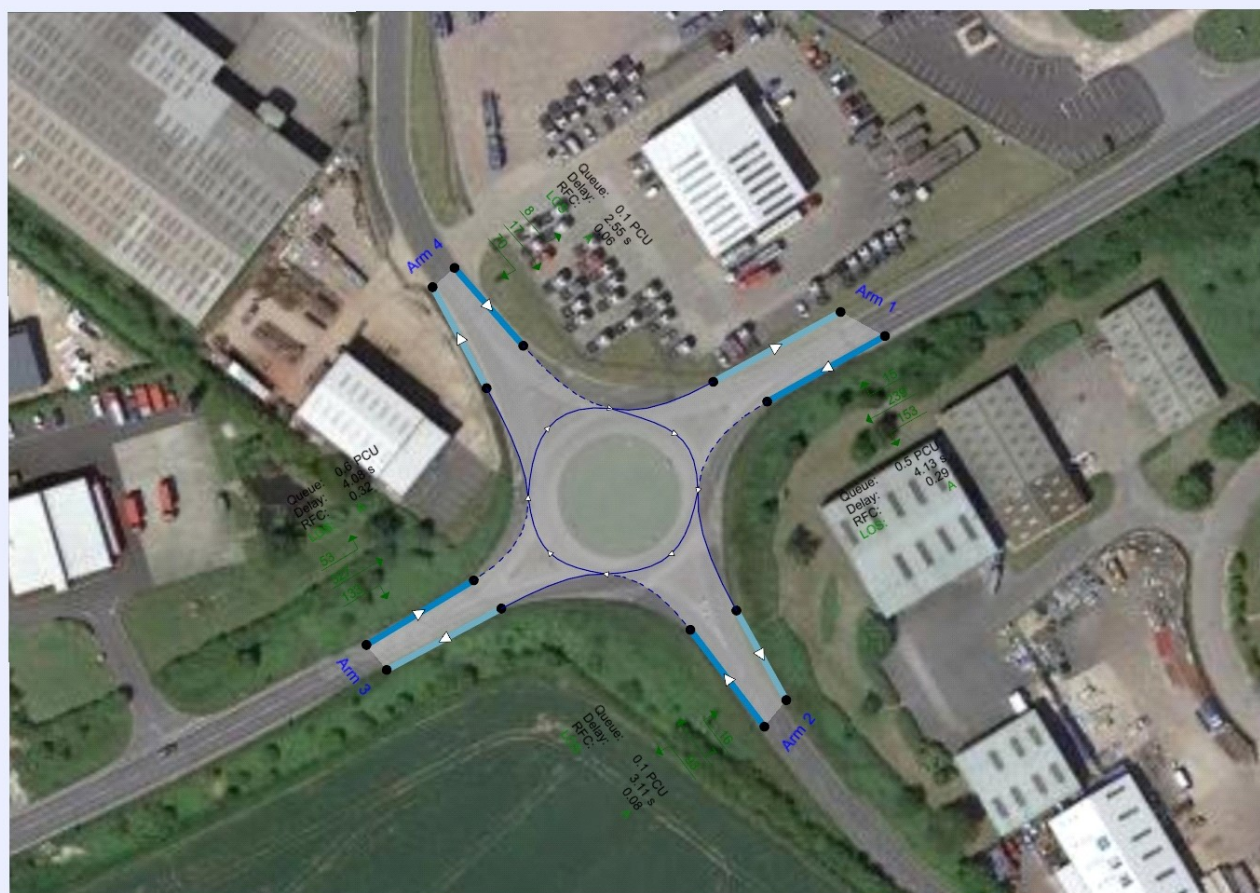
File summary

File Description

Title	Kiln Lane / North Moss Lane / Trondheim Way - Operational
Location	
Site number	
Date	19/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D13	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D14	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D15	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D16	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D19	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D20	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D21	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D22	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D23	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D24	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Kiln Lane	
2	North Moss Lane	
3	A1173	
4	untitled	

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)	Exit only
1	3.28	6.99	14.0	44.6	44.8	19.0	
2	4.06	7.65	10.4	33.2	44.8	14.5	
3	3.84	7.10	13.0	32.1	44.8	20.5	
4	4.46	8.23	15.6	54.3	44.8	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.649	1707
2	0.684	1875
3	0.663	1800
4	0.779	2265

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)
D13	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	225	100.000
2		✓	152	100.000
3		✓	421	100.000
4		✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	20	203	2
	2	63	0	75	14
	3	305	59	8	49
	4	11	3	31	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	38	57	100
	2	7	0	17	8
	3	29	12	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.15	4.04	0.3	A
2	0.10	2.64	0.1	A
3	0.27	3.49	0.4	A
4	0.03	3.16	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	169	77	1657	0.102	169	0.2	3.757	A
2	114	184	1749	0.065	114	0.1	2.461	A
3	317	60	1760	0.180	316	0.3	3.085	A
4	35	326	2011	0.017	35	0.0	2.943	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	202	92	1647	0.123	202	0.2	3.871	A
2	137	220	1724	0.079	137	0.1	2.534	A
3	378	72	1752	0.216	378	0.3	3.244	A
4	41	391	1961	0.021	41	0.0	3.031	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	248	112	1634	0.152	247	0.3	4.036	A
2	167	269	1691	0.099	167	0.1	2.642	A
3	464	88	1741	0.266	463	0.4	3.487	A
4	51	479	1892	0.027	51	0.0	3.158	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	248	112	1634	0.152	248	0.3	4.036	A
2	167	270	1690	0.099	167	0.1	2.642	A
3	464	88	1741	0.266	464	0.4	3.487	A
4	51	479	1892	0.027	51	0.0	3.159	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	202	92	1647	0.123	203	0.2	3.873	A
2	137	220	1724	0.079	137	0.1	2.535	A
3	378	72	1752	0.216	379	0.3	3.248	A
4	41	391	1960	0.021	41	0.0	3.034	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	169	77	1657	0.102	170	0.2	3.761	A
2	114	185	1749	0.065	115	0.1	2.462	A
3	317	60	1760	0.180	317	0.3	3.089	A
4	35	328	2010	0.017	35	0.0	2.945	A

2023 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D14	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	339	100.000
2		✓	108	100.000
3		✓	465	100.000
4		✓	89	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	144	181	14
	2	15	3	84	6
	3	287	124	5	49
	4	7	16	66	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	47	27
	2	60	0	25	20
	3	36	15	5	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.24	3.77	0.4	A
2	0.07	2.95	0.1	A
3	0.29	3.79	0.5	A
4	0.05	2.47	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	161	1602	0.159	254	0.2	3.303	A
2	81	200	1738	0.047	81	0.1	2.773	A
3	350	29	1781	0.197	349	0.3	3.335	A
4	67	326	2011	0.033	67	0.0	2.282	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	192	1582	0.193	305	0.3	3.487	A
2	97	239	1711	0.057	97	0.1	2.847	A
3	418	34	1777	0.235	418	0.4	3.516	A
4	80	390	1961	0.041	80	0.1	2.358	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	235	1554	0.240	373	0.4	3.772	A
2	119	293	1675	0.071	119	0.1	2.954	A
3	512	42	1772	0.289	511	0.5	3.789	A
4	98	477	1893	0.052	98	0.1	2.471	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	373	236	1554	0.240	373	0.4	3.773	A
2	119	293	1675	0.071	119	0.1	2.954	A
3	512	42	1772	0.289	512	0.5	3.792	A
4	98	478	1893	0.052	98	0.1	2.472	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	305	193	1582	0.193	305	0.3	3.490	A
2	97	239	1711	0.057	97	0.1	2.847	A
3	418	34	1777	0.235	419	0.4	3.519	A
4	80	391	1961	0.041	80	0.1	2.361	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	161	1602	0.159	255	0.2	3.308	A
2	81	200	1738	0.047	81	0.1	2.774	A
3	350	29	1781	0.197	350	0.3	3.344	A
4	67	327	2010	0.033	67	0.0	2.285	A

2024 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.49	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D15	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	228	100.000
2		✓	158	100.000
3		✓	434	100.000
4		✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	21	205	2
	2	64	0	80	14
	3	311	65	8	50
	4	11	3	31	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	56	100
	2	7	0	17	8
	3	29	15	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.15	4.03	0.3	A
2	0.10	2.66	0.1	A
3	0.27	3.54	0.5	A
4	0.03	3.18	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	172	81	1654	0.104	171	0.2	3.747	A
2	119	185	1748	0.068	119	0.1	2.472	A
3	327	61	1759	0.186	326	0.3	3.114	A
4	35	336	2003	0.017	35	0.0	2.955	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	205	97	1644	0.125	205	0.2	3.864	A
2	142	222	1723	0.082	142	0.1	2.548	A
3	390	73	1751	0.223	390	0.4	3.283	A
4	41	402	1951	0.021	41	0.0	3.045	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	251	119	1629	0.154	251	0.3	4.033	A
2	174	272	1689	0.103	174	0.1	2.659	A
3	478	89	1740	0.275	477	0.5	3.540	A
4	51	493	1881	0.027	51	0.0	3.178	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	251	119	1629	0.154	251	0.3	4.033	A
2	174	272	1689	0.103	174	0.1	2.659	A
3	478	89	1740	0.275	478	0.5	3.540	A
4	51	493	1881	0.027	51	0.0	3.178	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	205	97	1643	0.125	205	0.2	3.867	A
2	142	222	1723	0.082	142	0.1	2.551	A
3	390	73	1751	0.223	391	0.4	3.288	A
4	41	403	1951	0.021	41	0.0	3.048	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	172	81	1654	0.104	172	0.2	3.751	A
2	119	186	1748	0.068	119	0.1	2.475	A
3	327	61	1759	0.186	327	0.3	3.124	A
4	35	338	2002	0.017	35	0.0	2.959	A

2024 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.62	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D16	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	347	100.000
2		✓	114	100.000
3		✓	473	100.000
4		✓	91	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	146	187	14
	2	15	3	90	6
	3	290	127	5	51
	4	8	16	67	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	46	27
	2	60	0	27	20
	3	36	17	5	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.25	3.80	0.4	A
2	0.08	3.01	0.1	A
3	0.29	3.84	0.6	A
4	0.05	2.49	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	261	164	1600	0.163	260	0.2	3.318	A
2	86	205	1735	0.049	86	0.1	2.819	A
3	356	29	1781	0.200	355	0.3	3.368	A
4	69	330	2008	0.034	68	0.0	2.293	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	312	196	1579	0.198	312	0.3	3.508	A
2	102	245	1707	0.060	102	0.1	2.897	A
3	425	34	1777	0.239	425	0.4	3.555	A
4	82	395	1957	0.042	82	0.1	2.372	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	382	240	1551	0.246	382	0.4	3.804	A
2	126	300	1669	0.075	125	0.1	3.011	A
3	521	42	1772	0.294	520	0.6	3.838	A
4	100	484	1888	0.053	100	0.1	2.488	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	382	240	1551	0.246	382	0.4	3.804	A
2	126	301	1669	0.075	126	0.1	3.012	A
3	521	42	1772	0.294	521	0.6	3.842	A
4	100	484	1888	0.053	100	0.1	2.488	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	312	196	1579	0.198	312	0.3	3.511	A
2	102	246	1707	0.060	103	0.1	2.900	A
3	425	34	1777	0.239	426	0.4	3.558	A
4	82	396	1956	0.042	82	0.1	2.374	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	261	164	1600	0.163	261	0.2	3.325	A
2	86	206	1734	0.049	86	0.1	2.821	A
3	356	29	1781	0.200	356	0.3	3.377	A
4	69	332	2007	0.034	69	0.0	2.297	A

2030 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	237	100.000
2		✓	165	100.000
3		✓	451	100.000
4		✓	96	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	22	213	2
	2	67	0	83	15
	3	336	59	8	48
	4	11	3	81	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	56	100
	2	7	0	17	8
	3	27	8	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	4.16	0.3	A
2	0.11	2.75	0.1	A
3	0.29	3.54	0.5	A
4	0.06	3.51	0.1	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	178	114	1632	0.109	178	0.2	3.819	A
2	124	229	1718	0.072	124	0.1	2.526	A
3	340	64	1757	0.193	338	0.3	3.095	A
4	72	353	1990	0.036	72	0.1	3.212	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	213	137	1618	0.132	213	0.2	3.956	A
2	148	274	1687	0.088	148	0.1	2.616	A
3	405	76	1749	0.232	405	0.4	3.271	A
4	86	422	1936	0.045	86	0.1	3.330	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	261	167	1598	0.163	261	0.3	4.155	A
2	182	335	1645	0.110	182	0.1	2.751	A
3	497	94	1737	0.286	496	0.5	3.541	A
4	106	517	1862	0.057	106	0.1	3.507	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	261	167	1598	0.163	261	0.3	4.157	A
2	182	336	1645	0.110	182	0.1	2.752	A
3	497	94	1737	0.286	497	0.5	3.542	A
4	106	517	1862	0.057	106	0.1	3.507	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	213	137	1618	0.132	213	0.2	3.960	A
2	148	275	1687	0.088	148	0.1	2.617	A
3	405	76	1749	0.232	406	0.4	3.274	A
4	86	423	1935	0.045	86	0.1	3.331	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	178	115	1632	0.109	179	0.2	3.823	A
2	124	230	1718	0.072	124	0.1	2.529	A
3	340	64	1757	0.193	340	0.3	3.102	A
4	72	354	1989	0.036	72	0.1	3.216	A

2030 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.70	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	379	100.000
2		✓	119	100.000
3		✓	493	100.000
4		✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	153	211	15
	2	16	3	93	7
	3	301	133	6	53
	4	8	17	70	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	41	27
	2	60	0	27	20
	3	36	17	0	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.27	3.91	0.5	A
2	0.08	3.07	0.1	A
3	0.31	3.91	0.6	A
4	0.06	2.51	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	285	172	1595	0.179	284	0.3	3.354	A
2	90	227	1720	0.052	89	0.1	2.853	A
3	371	31	1779	0.209	370	0.3	3.402	A
4	72	344	1997	0.036	71	0.0	2.307	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	341	206	1573	0.217	340	0.3	3.570	A
2	107	271	1689	0.063	107	0.1	2.940	A
3	443	37	1775	0.250	443	0.4	3.602	A
4	85	412	1944	0.044	85	0.1	2.390	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	417	252	1543	0.270	417	0.5	3.906	A
2	131	332	1648	0.080	131	0.1	3.067	A
3	543	45	1770	0.307	542	0.6	3.908	A
4	105	505	1872	0.056	105	0.1	2.514	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	417	252	1543	0.270	417	0.5	3.910	A
2	131	333	1647	0.080	131	0.1	3.068	A
3	543	45	1770	0.307	543	0.6	3.911	A
4	105	505	1871	0.056	105	0.1	2.515	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	341	206	1573	0.217	341	0.3	3.574	A
2	107	272	1689	0.063	107	0.1	2.941	A
3	443	37	1775	0.250	444	0.4	3.608	A
4	85	413	1943	0.044	85	0.1	2.393	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	285	173	1595	0.179	286	0.3	3.365	A
2	90	228	1719	0.052	90	0.1	2.857	A
3	371	31	1779	0.209	372	0.4	3.409	A
4	72	346	1995	0.036	72	0.0	2.309	A

2023 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D19	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	291	100.000
2		✓	152	100.000
3		✓	490	100.000
4		✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	20	269	2
	2	63	0	75	14
	3	373	59	9	49
	4	11	3	31	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	65	100
	2	7	0	17	8
	3	37	12	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.20	4.47	0.4	A
2	0.10	2.73	0.1	A
3	0.31	3.89	0.6	A
4	0.03	3.26	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	219	77	1656	0.132	218	0.2	4.077	A
2	114	234	1715	0.067	114	0.1	2.514	A
3	369	60	1760	0.210	368	0.3	3.358	A
4	35	378	1970	0.018	35	0.0	3.005	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	262	93	1646	0.159	261	0.3	4.237	A
2	137	280	1683	0.081	137	0.1	2.602	A
3	440	72	1752	0.251	440	0.4	3.567	A
4	41	453	1912	0.022	41	0.0	3.109	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	320	113	1633	0.196	320	0.4	4.468	A
2	167	343	1640	0.102	167	0.1	2.732	A
3	540	88	1741	0.310	539	0.6	3.891	A
4	51	554	1833	0.028	51	0.0	3.263	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	320	113	1633	0.196	320	0.4	4.470	A
2	167	344	1640	0.102	167	0.1	2.732	A
3	540	88	1741	0.310	539	0.6	3.894	A
4	51	555	1833	0.028	51	0.0	3.264	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	262	93	1646	0.159	262	0.3	4.241	A
2	137	281	1683	0.081	137	0.1	2.605	A
3	440	72	1752	0.251	441	0.4	3.574	A
4	41	454	1912	0.022	41	0.0	3.110	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	219	78	1656	0.132	219	0.2	4.086	A
2	114	235	1714	0.067	115	0.1	2.518	A
3	369	60	1760	0.210	369	0.3	3.368	A
4	35	380	1969	0.018	35	0.0	3.007	A

2023 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D20	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	367	100.000
2		✓	108	100.000
3		✓	492	100.000
4		✓	89	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	144	209	14
	2	15	3	84	6
	3	313	124	5	50
	4	7	16	66	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	52	27
	2	60	0	25	20
	3	39	16	0	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.26	3.99	0.4	A
2	0.07	2.99	0.1	A
3	0.31	3.95	0.6	A
4	0.05	2.50	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	276	161	1602	0.172	275	0.3	3.449	A
2	81	221	1724	0.047	81	0.1	2.797	A
3	370	29	1781	0.208	369	0.4	3.441	A
4	67	345	1996	0.034	67	0.0	2.300	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	330	192	1582	0.209	330	0.3	3.659	A
2	97	264	1694	0.057	97	0.1	2.877	A
3	442	34	1777	0.249	442	0.4	3.642	A
4	80	413	1943	0.041	80	0.1	2.381	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	404	235	1554	0.260	404	0.4	3.984	A
2	119	323	1654	0.072	119	0.1	2.994	A
3	542	42	1772	0.306	541	0.6	3.949	A
4	98	506	1871	0.052	98	0.1	2.502	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	404	236	1554	0.260	404	0.4	3.986	A
2	119	324	1653	0.072	119	0.1	2.995	A
3	542	42	1772	0.306	542	0.6	3.952	A
4	98	506	1870	0.052	98	0.1	2.503	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	330	193	1582	0.209	330	0.3	3.662	A
2	97	265	1694	0.057	97	0.1	2.878	A
3	442	34	1777	0.249	443	0.5	3.645	A
4	80	414	1942	0.041	80	0.1	2.382	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	276	161	1602	0.172	277	0.3	3.460	A
2	81	222	1723	0.047	81	0.1	2.801	A
3	370	29	1781	0.208	371	0.4	3.449	A
4	67	347	1995	0.034	67	0.0	2.303	A

2024 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.89	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D21	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	294	100.000
2		✓	158	100.000
3		✓	504	100.000
4		✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	21	271	2
	2	64	0	80	14
	3	380	65	9	50
	4	11	3	31	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	65	100
	2	7	0	17	8
	3	37	15	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.20	4.49	0.4	A
2	0.11	2.75	0.1	A
3	0.32	3.96	0.6	A
4	0.03	3.29	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	221	82	1653	0.134	220	0.3	4.090	A
2	119	235	1714	0.069	119	0.1	2.526	A
3	379	61	1759	0.216	378	0.4	3.394	A
4	35	389	1962	0.018	35	0.0	3.017	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	264	98	1643	0.161	264	0.3	4.253	A
2	142	282	1682	0.084	142	0.1	2.616	A
3	453	73	1751	0.259	453	0.5	3.612	A
4	41	465	1903	0.022	41	0.0	3.125	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	324	120	1629	0.199	323	0.4	4.492	A
2	174	345	1639	0.106	174	0.1	2.750	A
3	555	89	1740	0.319	554	0.6	3.953	A
4	51	570	1821	0.028	51	0.0	3.285	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	324	120	1629	0.199	324	0.4	4.494	A
2	174	346	1638	0.106	174	0.1	2.751	A
3	555	89	1740	0.319	555	0.6	3.957	A
4	51	570	1821	0.028	51	0.0	3.286	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	264	98	1643	0.161	265	0.3	4.258	A
2	142	283	1682	0.084	142	0.1	2.617	A
3	453	73	1751	0.259	454	0.5	3.619	A
4	41	466	1902	0.022	41	0.0	3.127	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	221	82	1653	0.134	222	0.3	4.098	A
2	119	237	1713	0.069	119	0.1	2.527	A
3	379	61	1759	0.216	380	0.4	3.401	A
4	35	390	1961	0.018	35	0.0	3.020	A

2024 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.78	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D22	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	375	100.000
2		✓	114	100.000
3		✓	499	100.000
4		✓	91	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	146	215	14
	2	15	3	90	6
	3	316	127	5	51
	4	8	16	67	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	51	27
	2	60	0	27	20
	3	40	17	5	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.27	4.02	0.5	A
2	0.08	3.05	0.1	A
3	0.31	4.01	0.6	A
4	0.05	2.52	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	282	164	1600	0.176	281	0.3	3.463	A
2	86	226	1720	0.050	86	0.1	2.844	A
3	376	29	1781	0.211	374	0.4	3.480	A
4	69	349	1993	0.034	68	0.0	2.311	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	337	196	1579	0.213	337	0.3	3.680	A
2	102	270	1690	0.061	102	0.1	2.929	A
3	449	34	1777	0.252	448	0.5	3.686	A
4	82	419	1939	0.042	82	0.1	2.395	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	413	240	1551	0.266	412	0.5	4.015	A
2	126	331	1648	0.076	125	0.1	3.053	A
3	549	42	1772	0.310	549	0.6	4.003	A
4	100	513	1866	0.054	100	0.1	2.519	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	413	240	1551	0.266	413	0.5	4.019	A
2	126	331	1648	0.076	126	0.1	3.053	A
3	549	42	1772	0.310	549	0.6	4.006	A
4	100	513	1865	0.054	100	0.1	2.520	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	337	196	1579	0.213	338	0.3	3.684	A
2	102	271	1690	0.061	103	0.1	2.930	A
3	449	34	1777	0.252	449	0.5	3.690	A
4	82	419	1938	0.042	82	0.1	2.396	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	282	164	1600	0.176	283	0.3	3.474	A
2	86	227	1720	0.050	86	0.1	2.848	A
3	376	29	1781	0.211	376	0.4	3.487	A
4	69	351	1991	0.034	69	0.0	2.313	A

2030 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D23	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	303	100.000
2		✓	165	100.000
3		✓	534	100.000
4		✓	48	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	22	279	2
	2	67	0	83	15
	3	405	68	9	52
	4	11	3	33	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	65	100
	2	7	0	17	8
	3	35	14	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.21	4.54	0.4	A
2	0.11	2.78	0.1	A
3	0.34	4.04	0.7	A
4	0.03	3.36	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	228	86	1651	0.138	227	0.3	4.115	A
2	124	243	1709	0.073	124	0.1	2.541	A
3	402	64	1757	0.229	401	0.4	3.418	A
4	36	412	1944	0.019	36	0.0	3.062	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	272	102	1640	0.166	272	0.3	4.286	A
2	148	291	1676	0.089	148	0.1	2.636	A
3	480	76	1749	0.275	480	0.5	3.656	A
4	43	493	1881	0.023	43	0.0	3.179	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	334	125	1625	0.205	333	0.4	4.537	A
2	182	356	1631	0.111	182	0.1	2.778	A
3	588	94	1737	0.338	587	0.7	4.031	A
4	53	604	1795	0.029	53	0.0	3.354	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	334	126	1625	0.205	334	0.4	4.539	A
2	182	357	1631	0.111	182	0.1	2.779	A
3	588	94	1737	0.338	588	0.7	4.036	A
4	53	604	1794	0.029	53	0.0	3.355	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	272	103	1640	0.166	273	0.3	4.291	A
2	148	292	1675	0.089	148	0.1	2.638	A
3	480	76	1749	0.275	481	0.5	3.660	A
4	43	494	1880	0.023	43	0.0	3.181	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	228	86	1651	0.138	228	0.3	4.124	A
2	124	244	1708	0.073	124	0.1	2.543	A
3	402	64	1757	0.229	402	0.4	3.426	A
4	36	414	1943	0.019	36	0.0	3.065	A

2030 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.87	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D24	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	407	100.000
2		✓	119	100.000
3		✓	519	100.000
4		✓	95	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	153	239	15
	2	16	3	93	7
	3	327	133	6	53
	4	8	17	70	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	46	27
	2	60	0	27	20
	3	40	17	0	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.29	4.13	0.5	A
2	0.08	3.11	0.1	A
3	0.32	4.08	0.6	A
4	0.06	2.55	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	172	1595	0.192	305	0.3	3.502	A
2	90	248	1706	0.053	89	0.1	2.879	A
3	391	31	1779	0.220	389	0.4	3.516	A
4	72	364	1982	0.036	71	0.0	2.326	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	366	206	1573	0.233	366	0.4	3.744	A
2	107	296	1672	0.064	107	0.1	2.972	A
3	467	37	1775	0.263	466	0.5	3.736	A
4	85	436	1926	0.044	85	0.1	2.414	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	448	252	1543	0.290	448	0.5	4.126	A
2	131	363	1627	0.081	131	0.1	3.110	A
3	571	45	1770	0.323	571	0.6	4.078	A
4	105	533	1849	0.057	105	0.1	2.546	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	448	252	1543	0.290	448	0.5	4.129	A
2	131	363	1626	0.081	131	0.1	3.111	A
3	571	45	1770	0.323	571	0.6	4.081	A
4	105	534	1849	0.057	105	0.1	2.547	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	366	206	1573	0.233	366	0.4	3.751	A
2	107	297	1672	0.064	107	0.1	2.973	A
3	467	37	1775	0.263	467	0.5	3.743	A
4	85	437	1925	0.044	85	0.1	2.415	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	306	173	1595	0.192	307	0.3	3.511	A
2	90	249	1705	0.053	90	0.1	2.880	A
3	391	31	1779	0.220	391	0.4	3.526	A
4	72	366	1980	0.036	72	0.0	2.329	A

Junctions 9															
ARCADY 9 - Roundabout Module															
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020															
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Filename: Junction 4 - Kiln Lane North Moss Lane A1173 Rbt Construction.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 4 - Kiln Lane North Moss Lane A1173 Rbt

Report generation date: 13/01/2020 09:43:10

- »2021 Construction, Base Adj + Com Dev AM
- »2021 Construction, Base Adj + Com Dev PM
- »2021 Construction, Base Adj + Com Dev + Dev AM
- »2021 Construction, Base Adj + Com Dev + Dev PM
- »2022 Construction, Base Adj + Com Dev AM
- »2022 Construction, Base Adj + Com Dev PM
- »2022 Construction, Base Adj + Com Dev + Dev AM
- »2022 Construction, Base Adj + Com Dev + Dev PM
- »2027 Construction, Base Adj + Com Dev AM
- »2027 Construction, Base Adj + Com Dev PM
- »2027 Construction, Base Adj + Com Dev + Dev AM
- »2027 Construction, Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 Construction																
Arm 1	0.3	3.97	0.15	A	0.4	3.72	0.23	A	0.3	4.05	0.15	A	0.5	3.88	0.28	A
Arm 2	0.1	2.60	0.09	A	0.1	2.93	0.07	A	0.1	2.61	0.09	A	0.1	3.03	0.07	A
Arm 3	0.4	3.37	0.24	A	0.5	3.69	0.28	A	0.5	3.57	0.32	A	0.5	3.82	0.29	A
Arm 4	0.0	3.10	0.03	A	0.1	2.45	0.05	A	0.0	3.27	0.03	A	0.1	2.46	0.05	A
2022 Construction																
Arm 1	0.3	4.03	0.15	A	0.4	3.76	0.23	A	0.3	4.08	0.16	A	0.5	3.92	0.29	A
Arm 2	0.1	2.63	0.10	A	0.1	2.94	0.07	A	0.1	2.65	0.10	A	0.1	3.05	0.07	A
Arm 3	0.4	3.48	0.26	A	0.5	3.79	0.29	A	0.6	3.69	0.33	A	0.6	3.86	0.29	A
Arm 4	0.0	3.15	0.03	A	0.1	2.47	0.05	A	0.0	3.32	0.03	A	0.1	2.48	0.05	A
2027 Construction																
Arm 1	0.3	4.05	0.16	A	0.4	3.93	0.26	A	0.3	4.13	0.16	A	0.5	4.04	0.31	A
Arm 2	0.1	2.67	0.11	A	0.1	3.05	0.08	A	0.1	2.64	0.09	A	0.1	3.16	0.08	A
Arm 3	0.5	3.57	0.29	A	0.6	3.88	0.30	A	0.7	3.83	0.36	A	0.6	3.95	0.31	A
Arm 4	0.0	3.21	0.03	A	0.1	2.50	0.06	A	0.0	3.39	0.03	A	0.1	2.51	0.06	A

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

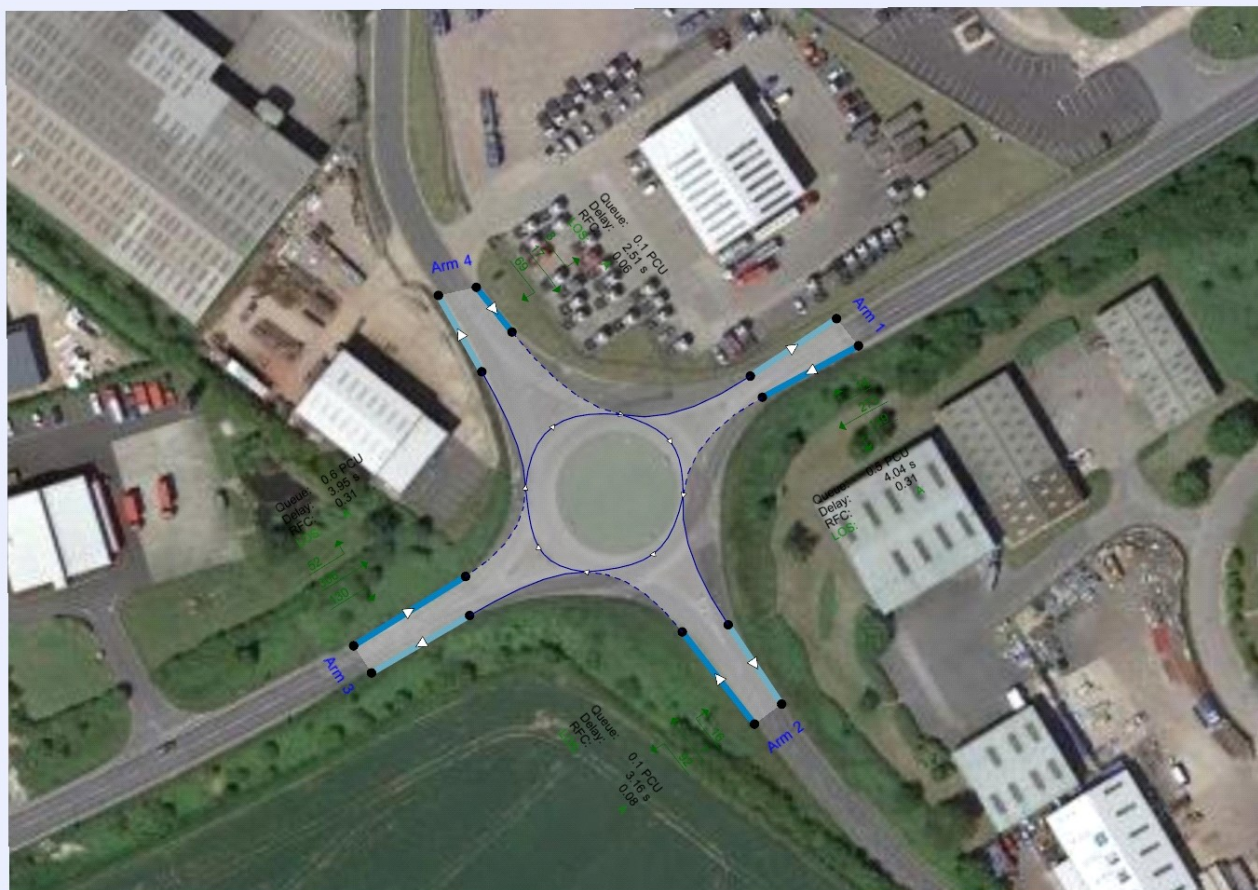
File summary

File Description

Title	Kiln Lane / North Moss Lane / Trondheim Way - Construction
Location	
Site number	
Date	19/12/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2021 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.38	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Kiln Lane	
2	North Moss Lane	
3	A1173	
4	untitled	

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)	Exit only
1	3.28	6.99	14.0	44.6	44.8	19.0	
2	4.06	7.65	10.4	33.2	44.8	14.5	
3	3.84	7.10	13.0	32.1	44.8	20.5	
4	4.46	8.23	15.6	54.3	44.8	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.649	1707
2	0.684	1875
3	0.663	1800
4	0.779	2265

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	216	100.000
2		✓	144	100.000
3		✓	385	100.000
4		✓	44	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	20	194	2
	2	61	0	69	14
	3	275	54	8	48
	4	10	3	30	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	38	56	100
	2	7	0	16	8
	3	30	8	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.15	3.97	0.3	A
2	0.09	2.60	0.1	A
3	0.24	3.37	0.4	A
4	0.03	3.10	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	163	72	1660	0.098	162	0.2	3.710	A
2	108	176	1754	0.062	108	0.1	2.432	A
3	290	59	1761	0.165	289	0.2	3.020	A
4	33	299	2032	0.016	33	0.0	2.907	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	194	86	1651	0.118	194	0.2	3.816	A
2	129	211	1730	0.075	129	0.1	2.500	A
3	346	70	1753	0.197	346	0.3	3.160	A
4	40	358	1986	0.020	40	0.0	2.986	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	238	106	1638	0.145	238	0.3	3.970	A
2	159	259	1698	0.093	158	0.1	2.600	A
3	424	86	1743	0.243	424	0.4	3.371	A
4	48	438	1924	0.025	48	0.0	3.099	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	238	106	1638	0.145	238	0.3	3.971	A
2	159	259	1698	0.093	159	0.1	2.600	A
3	424	86	1743	0.243	424	0.4	3.371	A
4	48	438	1924	0.025	48	0.0	3.100	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	194	86	1650	0.118	194	0.2	3.818	A
2	129	211	1730	0.075	130	0.1	2.503	A
3	346	70	1753	0.197	346	0.3	3.162	A
4	40	358	1986	0.020	40	0.0	2.986	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	163	72	1660	0.098	163	0.2	3.714	A
2	108	177	1754	0.062	108	0.1	2.435	A
3	290	59	1761	0.165	290	0.2	3.024	A
4	33	300	2031	0.016	33	0.0	2.909	A

2021 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	323	100.000
2		✓	103	100.000
3		✓	450	100.000
4		✓	87	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	140	169	14
	2	15	3	79	6
	3	282	114	5	49
	4	7	16	64	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	51	27
	2	60	0	25	20
	3	36	15	5	49
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.23	3.72	0.4	A
2	0.07	2.93	0.1	A
3	0.28	3.69	0.5	A
4	0.05	2.45	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	243	152	1608	0.151	242	0.2	3.287	A
2	78	189	1746	0.044	77	0.1	2.758	A
3	339	29	1781	0.190	338	0.3	3.259	A
4	65	314	2020	0.032	65	0.0	2.270	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	290	181	1589	0.183	290	0.3	3.458	A
2	93	226	1720	0.054	93	0.1	2.827	A
3	405	34	1777	0.228	404	0.4	3.429	A
4	78	376	1972	0.040	78	0.1	2.343	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	356	222	1562	0.228	355	0.4	3.721	A
2	113	277	1685	0.067	113	0.1	2.927	A
3	495	42	1772	0.280	495	0.5	3.687	A
4	96	461	1906	0.050	96	0.1	2.451	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	356	222	1562	0.228	356	0.4	3.722	A
2	113	277	1685	0.067	113	0.1	2.927	A
3	495	42	1772	0.280	495	0.5	3.687	A
4	96	461	1906	0.050	96	0.1	2.451	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	290	182	1589	0.183	291	0.3	3.463	A
2	93	227	1720	0.054	93	0.1	2.830	A
3	405	34	1777	0.228	405	0.4	3.431	A
4	78	377	1971	0.040	78	0.1	2.344	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	243	152	1608	0.151	243	0.2	3.292	A
2	78	190	1745	0.044	78	0.1	2.759	A
3	339	29	1781	0.190	339	0.3	3.265	A
4	65	316	2019	0.032	66	0.0	2.273	A

2021 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.53	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	226	100.000
2		✓	144	100.000
3		✓	500	100.000
4		✓	44	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	20	204	2
	2	61	0	69	14
	3	390	54	8	48
	4	10	3	30	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	58	100
	2	7	0	16	8
	3	21	8	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.15	4.05	0.3	A
2	0.09	2.61	0.1	A
3	0.32	3.57	0.5	A
4	0.03	3.27	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	170	72	1660	0.103	169	0.2	3.773	A
2	108	184	1749	0.062	108	0.1	2.440	A
3	376	59	1761	0.214	375	0.3	3.072	A
4	33	385	1965	0.017	33	0.0	3.009	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	203	86	1651	0.123	203	0.2	3.887	A
2	129	220	1724	0.075	129	0.1	2.510	A
3	449	70	1753	0.256	449	0.4	3.268	A
4	40	461	1906	0.021	40	0.0	3.114	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	249	106	1638	0.152	249	0.3	4.049	A
2	159	269	1691	0.094	158	0.1	2.613	A
3	551	86	1743	0.316	550	0.5	3.570	A
4	48	564	1825	0.027	48	0.0	3.271	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	249	106	1638	0.152	249	0.3	4.050	A
2	159	270	1690	0.094	159	0.1	2.613	A
3	551	86	1743	0.316	551	0.5	3.573	A
4	48	565	1825	0.027	48	0.0	3.272	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	203	86	1650	0.123	203	0.2	3.888	A
2	129	220	1724	0.075	130	0.1	2.511	A
3	449	70	1753	0.256	450	0.4	3.271	A
4	40	462	1905	0.021	40	0.0	3.118	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	170	72	1660	0.103	170	0.2	3.777	A
2	108	185	1749	0.062	108	0.1	2.443	A
3	376	59	1761	0.214	377	0.3	3.079	A
4	33	387	1964	0.017	33	0.0	3.011	A

2021 Construction, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	396	100.000
2		✓	103	100.000
3		✓	460	100.000
4		✓	87	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	140	242	14
	2	15	3	79	6
	3	292	114	5	49
	4	7	16	64	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	35	27
	2	60	0	25	20
	3	38	15	0	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	3.88	0.5	A
2	0.07	3.03	0.1	A
3	0.29	3.82	0.5	A
4	0.05	2.46	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	298	152	1608	0.185	297	0.3	3.330	A
2	78	244	1708	0.045	77	0.1	2.821	A
3	346	29	1781	0.194	345	0.3	3.366	A
4	65	322	2014	0.033	65	0.0	2.277	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	356	181	1589	0.224	356	0.3	3.544	A
2	93	292	1675	0.055	93	0.1	2.907	A
3	414	34	1777	0.233	413	0.4	3.547	A
4	78	385	1965	0.040	78	0.1	2.352	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	436	222	1562	0.279	436	0.5	3.877	A
2	113	357	1630	0.070	113	0.1	3.033	A
3	506	42	1772	0.286	506	0.5	3.818	A
4	96	472	1897	0.050	96	0.1	2.463	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	436	222	1562	0.279	436	0.5	3.880	A
2	113	358	1630	0.070	113	0.1	3.033	A
3	506	42	1772	0.286	506	0.5	3.821	A
4	96	472	1897	0.050	96	0.1	2.463	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	356	182	1589	0.224	356	0.4	3.550	A
2	93	293	1675	0.055	93	0.1	2.908	A
3	414	34	1777	0.233	414	0.4	3.552	A
4	78	386	1964	0.040	78	0.1	2.353	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	298	152	1608	0.185	298	0.3	3.340	A
2	78	245	1707	0.045	78	0.1	2.825	A
3	346	29	1781	0.195	347	0.3	3.376	A
4	65	323	2013	0.033	66	0.0	2.278	A

2022 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.45	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	222	100.000
2		✓	150	100.000
3		✓	414	100.000
4		✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	20	200	2
	2	62	0	74	14
	3	298	59	8	49
	4	11	3	31	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	57	100
	2	7	0	17	8
	3	30	12	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.15	4.03	0.3	A
2	0.10	2.63	0.1	A
3	0.26	3.48	0.4	A
4	0.03	3.15	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	167	77	1657	0.101	166	0.2	3.750	A
2	113	181	1751	0.065	113	0.1	2.457	A
3	312	59	1760	0.177	311	0.3	3.087	A
4	35	320	2015	0.017	35	0.0	2.936	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	200	92	1647	0.121	199	0.2	3.864	A
2	135	217	1726	0.078	135	0.1	2.528	A
3	372	71	1752	0.212	372	0.3	3.242	A
4	41	384	1966	0.021	41	0.0	3.022	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	244	112	1634	0.150	244	0.3	4.025	A
2	165	266	1693	0.098	165	0.1	2.634	A
3	456	87	1742	0.262	455	0.4	3.480	A
4	51	470	1899	0.027	51	0.0	3.147	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	244	112	1634	0.150	244	0.3	4.026	A
2	165	266	1693	0.098	165	0.1	2.634	A
3	456	87	1742	0.262	456	0.4	3.480	A
4	51	470	1899	0.027	51	0.0	3.147	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	200	92	1647	0.121	200	0.2	3.867	A
2	135	218	1726	0.078	135	0.1	2.531	A
3	372	71	1752	0.212	373	0.3	3.247	A
4	41	384	1966	0.021	41	0.0	3.025	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	167	77	1657	0.101	167	0.2	3.758	A
2	113	182	1750	0.065	113	0.1	2.458	A
3	312	60	1760	0.177	312	0.3	3.091	A
4	35	322	2014	0.017	35	0.0	2.940	A

2022 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.57	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	331	100.000
2		✓	107	100.000
3		✓	461	100.000
4		✓	88	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	142	175	14
	2	15	3	83	6
	3	284	123	5	49
	4	7	16	65	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	49	27
	2	60	0	25	20
	3	36	16	5	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.23	3.76	0.4	A
2	0.07	2.94	0.1	A
3	0.29	3.79	0.5	A
4	0.05	2.47	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	249	159	1603	0.155	248	0.2	3.300	A
2	81	194	1742	0.046	80	0.1	2.766	A
3	347	29	1781	0.195	346	0.3	3.337	A
4	66	323	2014	0.033	66	0.0	2.278	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	298	190	1583	0.188	297	0.3	3.479	A
2	96	233	1716	0.056	96	0.1	2.838	A
3	414	34	1777	0.233	414	0.4	3.517	A
4	79	386	1964	0.040	79	0.1	2.354	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	364	233	1555	0.234	364	0.4	3.756	A
2	118	285	1680	0.070	118	0.1	2.942	A
3	508	42	1772	0.286	507	0.5	3.787	A
4	97	473	1897	0.051	97	0.1	2.465	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	364	233	1555	0.234	364	0.4	3.756	A
2	118	285	1680	0.070	118	0.1	2.943	A
3	508	42	1772	0.286	508	0.5	3.790	A
4	97	473	1896	0.051	97	0.1	2.466	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	298	191	1583	0.188	298	0.3	3.485	A
2	96	233	1715	0.056	96	0.1	2.841	A
3	414	34	1777	0.233	415	0.4	3.519	A
4	79	387	1963	0.040	79	0.1	2.355	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	249	160	1603	0.155	249	0.2	3.308	A
2	81	195	1741	0.046	81	0.1	2.768	A
3	347	29	1781	0.195	347	0.3	3.347	A
4	66	324	2013	0.033	66	0.0	2.280	A

2022 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	232	100.000
2		✓	150	100.000
3		✓	529	100.000
4		✓	46	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	20	210	2
	2	62	0	74	14
	3	413	59	8	49
	4	11	3	31	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	58	100
	2	7	0	17	8
	3	21	12	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	4.08	0.3	A
2	0.10	2.65	0.1	A
3	0.33	3.69	0.6	A
4	0.03	3.32	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	175	77	1657	0.105	174	0.2	3.793	A
2	113	189	1746	0.065	113	0.1	2.464	A
3	398	59	1760	0.226	397	0.3	3.136	A
4	35	407	1948	0.018	35	0.0	3.040	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	209	92	1647	0.127	208	0.2	3.912	A
2	135	226	1720	0.078	135	0.1	2.538	A
3	476	71	1752	0.271	475	0.4	3.350	A
4	41	487	1886	0.022	41	0.0	3.154	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	112	1634	0.156	255	0.3	4.083	A
2	165	277	1685	0.098	165	0.1	2.647	A
3	582	87	1742	0.334	582	0.6	3.687	A
4	51	596	1801	0.028	51	0.0	3.324	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	112	1634	0.156	255	0.3	4.083	A
2	165	277	1685	0.098	165	0.1	2.647	A
3	582	87	1742	0.334	582	0.6	3.690	A
4	51	597	1800	0.028	51	0.0	3.325	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	209	92	1647	0.127	209	0.2	3.913	A
2	135	227	1720	0.078	135	0.1	2.539	A
3	476	71	1752	0.271	476	0.4	3.356	A
4	41	488	1885	0.022	41	0.0	3.158	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	175	77	1657	0.105	175	0.2	3.800	A
2	113	190	1745	0.065	113	0.1	2.466	A
3	398	60	1760	0.226	399	0.3	3.143	A
4	35	408	1947	0.018	35	0.0	3.042	A

2022 Construction, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.69	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	404	100.000
2		✓	107	100.000
3		✓	471	100.000
4		✓	88	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	142	248	14
	2	15	3	83	6
	3	294	123	5	49
	4	7	16	65	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	34	27
	2	60	0	25	20
	3	38	16	0	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.29	3.92	0.5	A
2	0.07	3.05	0.1	A
3	0.29	3.86	0.6	A
4	0.05	2.48	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	304	159	1603	0.190	303	0.3	3.346	A
2	81	249	1704	0.047	80	0.1	2.830	A
3	355	29	1781	0.199	353	0.3	3.384	A
4	66	330	2008	0.033	66	0.0	2.285	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	363	190	1583	0.229	363	0.4	3.569	A
2	96	298	1671	0.058	96	0.1	2.919	A
3	423	34	1777	0.238	423	0.4	3.571	A
4	79	395	1957	0.040	79	0.1	2.362	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	445	233	1555	0.286	444	0.5	3.918	A
2	118	365	1625	0.073	118	0.1	3.049	A
3	519	42	1772	0.293	518	0.6	3.854	A
4	97	484	1888	0.051	97	0.1	2.477	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	445	233	1555	0.286	445	0.5	3.922	A
2	118	366	1625	0.073	118	0.1	3.050	A
3	519	42	1772	0.293	519	0.6	3.857	A
4	97	484	1888	0.051	97	0.1	2.478	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	363	191	1583	0.229	364	0.4	3.573	A
2	96	299	1670	0.058	96	0.1	2.922	A
3	423	34	1777	0.238	424	0.4	3.574	A
4	79	396	1956	0.040	79	0.1	2.365	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	304	160	1603	0.190	304	0.3	3.354	A
2	81	250	1704	0.047	81	0.1	2.834	A
3	355	29	1781	0.199	355	0.3	3.391	A
4	66	332	2007	0.033	66	0.0	2.288	A

2027 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.52	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	232	100.000
2		✓	162	100.000
3		✓	451	100.000
4		✓	47	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	21	209	2
	2	66	0	82	14
	3	325	66	9	51
	4	11	3	32	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	56	100
	2	7	0	17	8
	3	28	14	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	4.05	0.3	A
2	0.11	2.67	0.1	A
3	0.29	3.57	0.5	A
4	0.03	3.21	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	175	83	1652	0.106	174	0.2	3.759	A
2	122	190	1745	0.070	122	0.1	2.482	A
3	340	62	1758	0.193	338	0.3	3.125	A
4	35	350	1993	0.018	35	0.0	2.979	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	209	100	1642	0.127	208	0.2	3.879	A
2	146	227	1719	0.085	146	0.1	2.559	A
3	405	75	1750	0.232	405	0.4	3.302	A
4	42	419	1939	0.022	42	0.0	3.074	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	122	1627	0.157	255	0.3	4.053	A
2	178	278	1685	0.106	178	0.1	2.674	A
3	497	91	1739	0.286	496	0.5	3.571	A
4	52	513	1866	0.028	52	0.0	3.214	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	255	122	1627	0.157	255	0.3	4.053	A
2	178	279	1684	0.106	178	0.1	2.675	A
3	497	91	1739	0.286	497	0.5	3.574	A
4	52	513	1865	0.028	52	0.0	3.214	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	209	100	1642	0.127	209	0.2	3.881	A
2	146	228	1719	0.085	146	0.1	2.560	A
3	405	75	1750	0.232	406	0.4	3.305	A
4	42	419	1938	0.022	42	0.0	3.075	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	175	84	1652	0.106	175	0.2	3.763	A
2	122	191	1744	0.070	122	0.1	2.483	A
3	340	63	1758	0.193	340	0.3	3.134	A
4	35	351	1991	0.018	35	0.0	2.980	A

2027 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.68	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	363	100.000
2		✓	118	100.000
3		✓	484	100.000
4		✓	94	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	149	200	14
	2	16	3	92	7
	3	296	130	6	52
	4	8	17	69	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	49	27
	2	60	0	27	20
	3	36	17	5	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.26	3.93	0.4	A
2	0.08	3.05	0.1	A
3	0.30	3.88	0.6	A
4	0.06	2.50	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	273	169	1597	0.171	272	0.3	3.403	A
2	89	217	1727	0.051	89	0.1	2.841	A
3	364	30	1780	0.205	363	0.3	3.388	A
4	71	338	2001	0.035	71	0.0	2.301	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	326	202	1575	0.207	326	0.3	3.608	A
2	106	260	1697	0.063	106	0.1	2.924	A
3	435	36	1776	0.245	435	0.4	3.582	A
4	85	405	1949	0.043	84	0.1	2.382	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	400	248	1546	0.259	399	0.4	3.931	A
2	130	318	1657	0.078	130	0.1	3.046	A
3	533	44	1770	0.301	532	0.6	3.878	A
4	103	496	1879	0.055	103	0.1	2.503	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	400	248	1546	0.259	400	0.4	3.932	A
2	130	318	1657	0.078	130	0.1	3.046	A
3	533	44	1770	0.301	533	0.6	3.881	A
4	103	497	1878	0.055	103	0.1	2.503	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	326	202	1575	0.207	327	0.3	3.614	A
2	106	260	1697	0.063	106	0.1	2.925	A
3	435	36	1776	0.245	436	0.4	3.588	A
4	85	406	1949	0.043	85	0.1	2.383	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	273	170	1596	0.171	274	0.3	3.407	A
2	89	218	1726	0.051	89	0.1	2.842	A
3	364	30	1780	0.205	365	0.3	3.395	A
4	71	340	2000	0.035	71	0.0	2.304	A

2027 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.71	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	242	100.000
2		✓	142	100.000
3		✓	566	100.000
4		✓	47	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	21	219	2
	2	62	0	66	14
	3	440	66	9	51
	4	11	3	32	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	38	58	100
	2	7	0	17	8
	3	21	14	0	14
	4	50	0	81	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	4.13	0.3	A
2	0.09	2.64	0.1	A
3	0.36	3.83	0.7	A
4	0.03	3.39	0.0	A

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	182	83	1652	0.110	181	0.2	3.823	A
2	107	197	1740	0.061	107	0.1	2.458	A
3	426	59	1760	0.242	425	0.4	3.207	A
4	35	433	1928	0.018	35	0.0	3.081	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	218	100	1642	0.133	217	0.2	3.950	A
2	128	236	1713	0.075	128	0.1	2.531	A
3	509	71	1752	0.290	508	0.5	3.446	A
4	42	518	1861	0.023	42	0.0	3.205	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	266	122	1627	0.164	266	0.3	4.133	A
2	156	289	1677	0.093	156	0.1	2.639	A
3	623	87	1742	0.358	622	0.7	3.828	A
4	52	635	1771	0.029	52	0.0	3.392	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	266	122	1627	0.164	266	0.3	4.134	A
2	156	290	1677	0.093	156	0.1	2.640	A
3	623	87	1742	0.358	623	0.7	3.831	A
4	52	635	1770	0.029	52	0.0	3.393	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	218	100	1642	0.133	218	0.2	3.952	A
2	128	237	1713	0.075	128	0.1	2.534	A
3	509	71	1752	0.290	510	0.5	3.450	A
4	42	519	1860	0.023	42	0.0	3.207	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	182	84	1652	0.110	182	0.2	3.827	A
2	107	198	1739	0.061	107	0.1	2.459	A
3	426	60	1760	0.242	427	0.4	3.215	A
4	35	435	1926	0.018	35	0.0	3.083	A

2027 Construction, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	Kiln Lane / North Moss Lane / Trondheim Way	Standard Roundabout	3.78	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	436	100.000
2		✓	118	100.000
3		✓	493	100.000
4		✓	94	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	149	273	14
	2	16	3	92	7
	3	306	130	5	52
	4	8	17	69	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	3	31	27
	2	60	0	27	20
	3	38	17	0	84
	4	60	13	23	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.31	4.04	0.5	A
2	0.08	3.16	0.1	A
3	0.31	3.95	0.6	A
4	0.06	2.51	0.1	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	328	168	1597	0.205	327	0.3	3.390	A
2	89	271	1690	0.053	89	0.1	2.906	A
3	371	30	1780	0.209	370	0.4	3.435	A
4	71	345	1996	0.035	71	0.0	2.307	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	392	201	1576	0.249	392	0.4	3.640	A
2	106	324	1653	0.064	106	0.1	3.007	A
3	443	36	1776	0.250	443	0.4	3.637	A
4	85	413	1943	0.043	84	0.1	2.390	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	480	246	1547	0.310	479	0.5	4.038	A
2	130	397	1603	0.081	130	0.1	3.158	A
3	543	44	1770	0.307	542	0.6	3.945	A
4	103	506	1871	0.055	103	0.1	2.514	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	480	247	1546	0.310	480	0.5	4.042	A
2	130	397	1603	0.081	130	0.1	3.158	A
3	543	44	1770	0.307	543	0.6	3.948	A
4	103	506	1870	0.055	103	0.1	2.514	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	392	202	1576	0.249	393	0.4	3.647	A
2	106	325	1653	0.064	106	0.1	3.011	A
3	443	36	1776	0.250	444	0.5	3.643	A
4	85	414	1942	0.044	85	0.1	2.393	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	328	169	1597	0.206	329	0.3	3.401	A
2	89	272	1689	0.053	89	0.1	2.910	A
3	371	30	1780	0.209	372	0.4	3.443	A
4	71	347	1995	0.035	71	0.0	2.311	A

ANNEX 20: A1173/ KILN LANE MODELLING OUTPUTS

Junctions 9															
ARCADY 9 - Roundabout Module															
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020															
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk															
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution															

Filename: Junction 6 - Operational.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 6 - A11732 Rbt

Report generation date: 13/01/2020 11:56:41

»2023 Operational, Base Adj + Com Dev AM
 »2023 Operational, Base Adj + Com Dev PM
 »2024 Operational, Base Adj + Com Dev AM
 »2024 Operational, Base Adj + Com Dev PM
 »2030 Operational, Base Adj + Com Dev AM
 »2030 Operational, Base Adj + Com Dev PM
 »2023 Operational, Base Adj + Com Dev + Dev AM
 »2023 Operational, Base Adj + Com Dev + Dev PM
 »2024 Operational, Base Adj + Com Dev + Dev AM
 »2024 Operational, Base Adj + Com Dev + Dev PM
 »2030 Operational, Base Adj + Com Dev + Dev AM
 »2030 Operational, Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2023 Operational																
Arm 1	0.0	3.61	0.00	A	0.0	6.43	0.01	A	0.0	3.74	0.00	A	0.0	6.59	0.01	A
Arm 2	2.2	5.97	0.67	A	0.6	3.46	0.33	A	2.6	6.78	0.70	A	0.7	3.62	0.34	A
Arm 3	0.8	4.94	0.40	A	4.6	12.69	0.82	B	0.8	5.20	0.41	A	4.9	13.53	0.83	B
Arm 4	0.3	2.88	0.18	A	0.6	4.27	0.31	A	0.4	3.13	0.21	A	0.6	4.50	0.32	A
2024 Operational																
Arm 1	0.1	6.29	0.03	A	0.1	11.32	0.09	B	0.1	6.55	0.04	A	0.2	11.75	0.09	B
Arm 2	2.5	6.52	0.70	A	0.7	3.63	0.35	A	3.0	7.47	0.73	A	0.7	3.79	0.37	A
Arm 3	0.8	5.14	0.42	A	5.5	14.86	0.85	B	0.9	5.41	0.43	A	6.0	15.95	0.87	C
Arm 4	0.3	2.95	0.19	A	0.6	4.49	0.32	A	0.4	3.20	0.22	A	0.7	4.73	0.34	A
2030 Operational																
Arm 1	0.1	6.38	0.03	A	0.2	12.51	0.10	B	0.1	6.65	0.04	A	0.2	13.01	0.10	B
Arm 2	3.0	7.48	0.73	A	0.7	3.73	0.36	A	3.6	8.69	0.77	A	0.8	3.89	0.38	A
Arm 3	0.9	5.47	0.44	A	7.6	18.87	0.90	C	1.0	5.78	0.46	A	8.4	20.48	0.91	C
Arm 4	0.4	2.99	0.20	A	0.7	4.75	0.35	A	0.4	3.25	0.23	A	0.8	5.01	0.37	A

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

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

File summary

File Description

Title	A1173 / Kiln Lane - Operational
Location	
Site number	
Date	03/01/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2023 Operational	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15
D2	2023 Operational	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15
D3	2024 Operational	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15
D4	2024 Operational	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15
D5	2030 Operational	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15
D6	2030 Operational	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15
D7	2023 Operational	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15
D8	2023 Operational	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15
D9	2024 Operational	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15
D10	2024 Operational	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15
D11	2030 Operational	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15
D12	2030 Operational	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	5.24	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Unnamed Access	
2	A1173 EB Approach	
3	A1173 SB Approach	
4	Kiln Lane WB Approach	

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)	Exit only
1	3.65	4.50	12.6	21.0	49.2	10.8	
2	3.70	8.24	19.0	40.0	49.2	16.4	
3	3.25	7.99	12.3	31.0	49.2	14.8	
4	3.97	8.14	64.8	19.9	49.2	17.5	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.576	1409
2	0.697	2037
3	0.640	1742
4	0.748	2348

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 period length (min)	Time segment length (min)
D1	2023 Operational	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	4	677	351
	3	0	182	0	56
	4	0	279	120	0

Demand (PCU/hr)

07:15 - 07:30

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	878	398
	3	0	251	0	103
	4	0	228	43	0

Demand (PCU/hr)

07:30 - 07:45

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	4	793	535
	3	0	350	0	77
	4	0	206	64	0

Demand (PCU/hr)

07:45 - 08:00

	To				
		1	2	3	4
From	1	0	4	0	0
	2	0	0	711	514
	3	4	354	0	209
	4	0	262	90	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	5	25
	3	0	19	0	18
	4	0	40	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	6	32
	3	0	26	0	33
	4	0	46	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	4	20
	3	0	26	0	29
	4	0	48	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	6	18
	3	0	20	0	11
	4	0	44	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	3.61	0.0	A
2	0.67	5.97	2.2	A
3	0.40	4.94	0.8	A
4	0.18	2.88	0.3	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	583	1073	0.000	0	0.0	0.000	A
2	1032	120	1953	0.528	1027	1.2	4.292	A
3	238	353	1516	0.157	237	0.2	3.342	A
4	399	185	2209	0.181	398	0.3	2.870	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	522	1108	0.000	0	0.0	0.000	A
2	1276	43	2007	0.636	1273	1.9	5.521	A
3	354	397	1488	0.238	353	0.4	4.058	A
4	271	251	2160	0.125	271	0.2	2.838	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	623	1049	0.000	0	0.0	0.000	A
2	1332	64	1992	0.669	1331	2.2	5.972	A
3	427	538	1398	0.306	426	0.6	4.687	A
4	270	353	2084	0.130	270	0.2	2.815	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	706	1002	0.004	4	0.0	3.606	A
2	1225	90	1974	0.621	1226	1.8	5.340	A
3	567	514	1413	0.401	566	0.8	4.944	A
4	352	358	2080	0.169	352	0.3	2.880	A

2023 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	8.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D2	2023 Operational	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	276	364
	3	0	1061	0	182
	4	0	348	124	0

Demand (PCU/hr)

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	263	291
	3	0	515	0	207
	4	0	233	154	0

Demand (PCU/hr)

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	4	0	0
	2	0	0	306	223
	3	0	967	4	199
	4	0	336	166	0

Demand (PCU/hr)

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	315	202
	3	0	711	0	195
	4	0	207	81	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	14	38
	3	0	4	0	20
	4	0	34	21	0

Heavy Vehicle Percentages

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	19	38
	3	0	6	0	49
	4	0	40	20	0

Heavy Vehicle Percentages

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	39
	3	0	5	0	35
	4	0	27	18	0

Heavy Vehicle Percentages

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	55
	3	0	4	0	44
	4	0	36	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.01	6.43	0.0	A
2	0.33	3.46	0.6	A
3	0.82	12.69	4.6	B
4	0.31	4.27	0.6	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1515	535	0.000	0	0.0	0.000	A
2	640	123	1951	0.328	638	0.6	3.462	A
3	1243	363	1510	0.823	1225	4.6	12.690	B
4	472	1045	1566	0.301	470	0.6	4.271	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	916	881	0.000	0	0.0	0.000	A
2	554	154	1929	0.287	554	0.5	3.358	A
3	722	291	1555	0.464	736	1.0	5.158	A
4	387	528	1953	0.198	388	0.3	3.020	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	1465	564	0.007	4	0.0	6.428	A
2	529	170	1919	0.276	529	0.5	3.233	A
3	1170	223	1599	0.732	1163	2.9	8.848	A
4	502	964	1627	0.309	501	0.5	3.959	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1005	829	0.000	0.03	0.0	0.000	A
2	517	81	1980	0.261	517	0.5	3.167	A
3	906	202	1613	0.562	912	1.4	5.726	A
4	288	716	1812	0.159	289	0.3	3.151	A

2024 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	5.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2024 Operational	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

		To			
From		1	2	3	4
	1	0	20	8	8
	2	24	4	686	362
	3	8	188	0	56
	4	8	282	121	0

Demand (PCU/hr)

07:15 - 07:30

		To			
From		1	2	3	4
	1	0	12	8	0
	2	20	0	894	410
	3	4	258	0	104
	4	4	230	43	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	12	4	0
	2	20	4	807	552
	3	4	358	0	78
	4	0	212	65	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	16	0	0
	2	20	0	729	527
	3	4	362	0	212
	4	0	265	91	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	67	100	100
	2	20	0	5	25
	3	100	19	0	18
	4	100	40	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	50	100	0
	2	25	0	6	33
	3	0	25	0	33
	4	0	46	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	50	0	0
	2	25	0	4	20
	3	0	26	0	29
	4	0	47	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	32	0	0
	2	25	0	7	18
	3	0	20	0	11
	4	0	44	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	6.29	0.1	A
2	0.70	6.52	2.5	A
3	0.42	5.14	0.8	A
4	0.19	2.95	0.3	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	593	1067	0.034	36	0.1	6.290	A
2	1076	136	1942	0.554	1071	1.4	4.571	A
3	252	396	1488	0.169	251	0.2	3.495	A
4	411	223	2181	0.188	410	0.3	2.951	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	531	1103	0.018	20	0.0	5.538	A
2	1324	51	2001	0.662	1321	2.2	5.972	A
3	366	429	1467	0.249	365	0.4	4.139	A
4	277	282	2137	0.130	277	0.2	2.863	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	638	1041	0.015	16	0.0	4.693	A
2	1383	69	1989	0.695	1382	2.5	6.517	A
3	440	575	1374	0.320	439	0.6	4.858	A
4	277	385	2060	0.134	277	0.2	2.851	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	718	995	0.016	16	0.0	4.854	A
2	1276	91	1973	0.647	1278	2.1	5.786	A
3	578	548	1391	0.415	577	0.8	5.141	A
4	356	386	2059	0.173	356	0.3	2.922	A

2024 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	9.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2024 Operational	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	32	8	8
	2	28	0	283	367
	3	8	1077	0	183
	4	8	356	125	0

Demand (PCU/hr)

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	28	4	4
	2	24	0	270	298
	3	4	521	0	209
	4	0	244	155	0

Demand (PCU/hr)

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	28	4	0
	2	24	0	322	226
	3	0	987	4	201
	4	0	348	168	0

Demand (PCU/hr)

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	24	0	0
	2	24	0	331	208
	3	0	724	0	197
	4	0	218	82	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	33	100	100
	2	75	0	14	38
	3	100	4	0	20
	4	100	33	21	0

Heavy Vehicle Percentages

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	17	0	0
	2	50	0	19	40
	3	0	6	0	49
	4	0	42	20	0

Heavy Vehicle Percentages

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	16	0	0
	2	50	0	17	39
	3	0	5	0	35
	4	0	26	18	0

Heavy Vehicle Percentages

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	20	0	0
	2	50	0	17	53
	3	0	4	0	44
	4	0	34	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.09	11.32	0.1	B
2	0.35	3.63	0.7	A
3	0.85	14.86	5.5	B
4	0.32	4.49	0.6	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	48	1537	523	0.092	47	0.1	11.323	B
2	678	140	1939	0.350	675	0.7	3.635	A
3	1268	401	1485	0.854	1246	5.5	14.864	B
4	489	1094	1530	0.320	487	0.6	4.490	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	937	869	0.041	36	0.0	4.906	A
2	592	163	1923	0.308	592	0.6	3.517	A
3	734	326	1533	0.479	752	1.1	5.435	A
4	399	565	1925	0.207	400	0.3	3.132	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	32	1498	545	0.059	32	0.1	7.979	A
2	572	176	1914	0.299	572	0.5	3.380	A
3	1192	250	1582	0.754	1183	3.2	9.658	A
4	516	1007	1594	0.324	515	0.6	4.109	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	24	1031	814	0.029	24	0.0	5.465	A
2	563	83	1979	0.284	563	0.5	3.290	A
3	921	232	1593	0.578	928	1.5	6.038	A
4	300	754	1784	0.168	301	0.3	3.208	A

2030 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	6.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D5	2030 Operational	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

		To			
From		1	2	3	4
	1	0	20	8	8
	2	24	5	720	389
	3	8	196	0	59
	4	8	293	127	0

Demand (PCU/hr)

07:15 - 07:30

		To			
From		1	2	3	4
	1	0	12	8	0
	2	20	0	938	438
	3	4	270	0	109
	4	4	238	45	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	12	4	0
	2	20	5	847	588
	3	4	374	0	82
	4	0	220	68	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	17	0	0
	2	20	0	765	561
	3	5	379	0	222
	4	0	275	95	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	67	100	100
	2	20	0	5	23
	3	100	19	0	18
	4	100	40	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	50	100	0
	2	25	0	6	32
	3	0	25	0	33
	4	0	45	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	50	0	0
	2	25	0	4	20
	3	0	26	0	29
	4	0	46	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	32	0	0
	2	25	0	7	17
	3	0	20	0	11
	4	0	44	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	6.38	0.1	A
2	0.73	7.48	3.0	A
3	0.44	5.47	0.9	A
4	0.20	2.99	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	619	1052	0.034	36	0.1	6.382	A
2	1138	142	1938	0.587	1132	1.6	4.914	A
3	263	424	1471	0.179	262	0.3	3.577	A
4	428	232	2174	0.197	427	0.4	2.988	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	553	1090	0.018	20	0.0	5.604	A
2	1396	53	2000	0.698	1392	2.6	6.666	A
3	383	457	1449	0.264	382	0.5	4.275	A
4	287	294	2128	0.135	287	0.2	2.877	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	666	1025	0.016	16	0.0	4.770	A
2	1460	72	1987	0.735	1458	3.0	7.476	A
3	460	611	1351	0.341	459	0.6	5.094	A
4	288	402	2047	0.141	288	0.2	2.874	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	17	749	977	0.017	17	0.0	4.950	A
2	1346	95	1971	0.683	1348	2.4	6.456	A
3	606	582	1370	0.442	605	0.9	5.472	A
4	370	404	2046	0.181	370	0.3	2.969	A

2030 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	11.50	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D6	2030 Operational	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	32	8	8
	2	28	0	295	382
	3	8	1127	0	191
	4	8	386	131	0

Demand (PCU/hr)

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	28	4	4
	2	24	0	282	310
	3	4	544	0	218
	4	0	269	163	0

Demand (PCU/hr)

16:30 - 16:45

		To			
From		1	2	3	4
	1	0	29	4	0
	2	24	0	336	234
	3	0	1032	5	209
	4	0	378	176	0

Demand (PCU/hr)

16:45 - 17:00

		To			
From		1	2	3	4
	1	0	24	0	0
	2	24	0	345	216
	3	0	757	0	205
	4	242	86	0	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

		To			
From		1	2	3	4
	1	0	33	100	100
	2	75	0	14	38
	3	100	4	0	20
	4	100	31	21	0

Heavy Vehicle Percentages

16:15 - 16:30

		To			
From		1	2	3	4
	1	0	17	0	0
	2	50	0	19	39
	3	0	6	0	50
	4	0	38	20	0

Heavy Vehicle Percentages

16:30 - 16:45

		To			
From		1	2	3	4
	1	0	16	0	0
	2	50	0	17	39
	3	0	5	0	35
	4	0	25	18	0

Heavy Vehicle Percentages

16:45 - 17:00

		To			
From		1	2	3	4
	1	0	20	0	0
	2	50	0	17	53
	3	0	4	0	45
	4	0	31	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.10	12.51	0.2	B
2	0.36	3.73	0.7	A
3	0.90	18.87	7.6	C
4	0.35	4.75	0.7	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	48	1615	478	0.101	47	0.2	12.509	B
2	705	146	1935	0.364	702	0.7	3.726	A
3	1326	416	1476	0.899	1295	7.6	18.868	C
4	525	1137	1498	0.351	522	0.7	4.747	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	1000	832	0.043	36	0.1	5.134	A
2	616	171	1917	0.321	616	0.6	3.581	A
3	766	338	1525	0.502	792	1.2	5.867	A
4	432	595	1903	0.227	433	0.4	3.203	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	33	1580	498	0.066	33	0.1	8.809	A
2	594	185	1908	0.311	594	0.6	3.451	A
3	1246	258	1577	0.790	1235	3.9	11.158	B
4	554	1051	1562	0.355	553	0.7	4.374	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	24	853	917	0.026	24	0.0	4.837	A
2	585	0.95	2036	0.287	585	0.5	3.212	A
3	962	240	1588	0.606	971	1.7	6.536	A
4	328	788	1758	0.187	330	0.2	2.692	A

2023 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	5.79	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D7	2023 Operational	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

		To			
From		1	2	3	4
	1	0	0	0	0
	2	0	4	677	423
	3	0	182	0	56
	4	0	351	120	0

Demand (PCU/hr)

07:15 - 07:30

		To			
From		1	2	3	4
	1	0	0	0	0
	2	0	0	878	466
	3	0	251	0	103
	4	0	292	43	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	4	793	603
	3	0	350	0	77
	4	0	270	64	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	4	0	0
	2	0	0	711	578
	3	4	354	0	209
	4	0	326	90	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	5	34
	3	0	19	0	18
	4	0	49	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	6	38
	3	0	26	0	33
	4	0	55	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	4	25
	3	0	26	0	29
	4	0	58	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	6	24
	3	0	20	0	11
	4	0	52	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	3.74	0.0	A
2	0.70	6.78	2.6	A
3	0.41	5.20	0.8	A
4	0.21	3.13	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	655	1031	0.000	0	0.0	0.000	A
2	1104	120	1953	0.565	1098	1.5	4.786	A
3	238	425	1470	0.162	237	0.2	3.466	A
4	471	185	2209	0.213	469	0.4	3.116	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	586	1071	0.000	0	0.0	0.000	A
2	1344	43	2007	0.670	1341	2.3	6.199	A
3	354	465	1444	0.245	353	0.4	4.218	A
4	335	251	2160	0.155	335	0.3	3.088	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	687	1013	0.000	0	0.0	0.000	A
2	1400	64	1992	0.703	1399	2.6	6.783	A
3	427	606	1354	0.315	426	0.6	4.906	A
4	334	353	2084	0.160	334	0.3	3.094	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	770	965	0.004	4	0.0	3.744	A
2	1289	90	1974	0.653	1291	2.2	5.988	A
3	567	579	1372	0.413	566	0.8	5.195	A
4	416	358	2080	0.200	416	0.4	3.134	A

2023 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	8.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D8	2023 Operational	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

		To			
From		1	2	3	4
	1	0	0	0	0
	2	0	0	276	396
	3	0	1061	0	182
	4	0	380	124	0

Demand (PCU/hr)

16:15 - 16:30

		To			
From		1	2	3	4
	1	0	0	0	0
	2	0	0	263	315
	3	0	515	0	207
	4	0	265	154	0

Demand (PCU/hr)

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	4	0	0
	2	0	0	306	247
	3	0	967	4	199
	4	0	360	166	0

Demand (PCU/hr)

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	315	226
	3	0	711	0	195
	4	0	231	81	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	14	42
	3	0	4	0	20
	4	0	38	21	0

Heavy Vehicle Percentages

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	19	41
	3	0	6	0	49
	4	0	46	20	0

Heavy Vehicle Percentages

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	43
	3	0	5	0	35
	4	0	30	18	0

Heavy Vehicle Percentages

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	55
	3	0	4	0	44
	4	0	36	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.01	6.59	0.0	A
2	0.34	3.62	0.7	A
3	0.83	13.53	4.9	B
4	0.32	4.50	0.6	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1546	518	0.000	0	0.0	0.000	A
2	672	123	1951	0.344	669	0.7	3.615	A
3	1243	394	1489	0.835	1223	4.9	13.531	B
4	504	1044	1567	0.322	501	0.6	4.498	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	949	862	0.000	0	0.0	0.000	A
2	578	154	1929	0.300	578	0.6	3.468	A
3	722	315	1540	0.469	737	1.0	5.275	A
4	419	529	1952	0.215	420	0.4	3.178	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	1489	550	0.007	4	0.0	6.589	A
2	553	170	1919	0.288	553	0.5	3.340	A
3	1170	247	1584	0.739	1162	3.0	9.153	A
4	526	964	1627	0.323	525	0.6	4.113	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1030	815	0.000	0.03	0.0	0.000	A
2	541	82	1980	0.273	541	0.5	3.242	A
3	906	226	1597	0.567	912	1.5	5.862	A
4	312	716	1812	0.172	313	0.3	3.208	A

2024 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	6.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D9	2024 Operational	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

		To			
From		1	2	3	4
	1	0	20	8	8
	2	24	4	686	434
	3	8	188	0	56
	4	8	354	121	0

Demand (PCU/hr)

07:15 - 07:30

		To			
From		1	2	3	4
	1	0	12	8	0
	2	20	0	894	478
	3	4	258	0	104
	4	4	294	43	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	12	4	0
	2	20	4	807	620
	3	4	358	0	78
	4	0	276	65	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	16	0	0
	2	20	0	729	591
	3	4	362	0	212
	4	0	329	91	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	67	100	100
	2	20	0	5	33
	3	100	19	0	18
	4	100	49	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	50	100	0
	2	25	0	6	39
	3	0	25	0	33
	4	0	55	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	50	0	0
	2	25	0	4	25
	3	0	26	0	29
	4	0	26	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	0	32	0
	2	25	0	7	23
	3	0	20	0	11
	4	0	52	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.04	6.55	0.1	A
2	0.73	7.47	3.0	A
3	0.43	5.41	0.9	A
4	0.22	3.20	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	665	1026	0.035	36	0.1	6.552	A
2	1148	136	1942	0.591	1141	1.6	5.106	A
3	252	467	1443	0.175	251	0.3	3.630	A
4	483	223	2181	0.221	481	0.4	3.202	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	595	1066	0.019	20	0.0	5.733	A
2	1392	51	2001	0.696	1388	2.6	6.753	A
3	366	497	1424	0.257	365	0.4	4.309	A
4	341	282	2137	0.160	342	0.3	3.115	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	702	1004	0.016	16	0.0	4.871	A
2	1451	69	1989	0.730	1450	3.0	7.472	A
3	440	642	1331	0.331	439	0.6	5.093	A
4	341	385	2060	0.166	341	0.2	2.637	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	781	958	0.017	16	0.0	3.831	A
2	1340	91	1973	0.679	1342	2.5	6.511	A
3	578	612	1350	0.428	577	0.9	5.413	A
4	420	386	2059	0.204	420	0.4	3.180	A

2024 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	9.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D10	2024 Operational	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

		To			
		1	2	3	4
From	1	0	32	8	8
	2	28	0	283	399
	3	8	1077	0	183
	4	8	388	125	0

Demand (PCU/hr)

16:15 - 16:30

		To			
		1	2	3	4
From	1	0	28	4	4
	2	24	0	270	322
	3	4	521	0	209
	4	0	276	155	0

Demand (PCU/hr)

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	28	4	0
	2	24	0	322	250
	3	0	987	4	201
	4	0	372	168	0

Demand (PCU/hr)

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	24	0	0
	2	24	0	331	232
	3	0	724	0	197
	4	0	242	82	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	33	100	100
	2	75	0	14	42
	3	100	4	0	20
	4	100	37	21	0

Heavy Vehicle Percentages

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	17	0	0
	2	50	0	19	43
	3	0	6	0	49
	4	0	47	20	0

Heavy Vehicle Percentages

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	16	0	0
	2	50	0	17	43
	3	0	5	0	35
	4	0	29	18	0

Heavy Vehicle Percentages

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	20	0	0
	2	50	0	17	57
	3	0	4	0	44
	4	0	38	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.09	11.75	0.2	B
2	0.37	3.79	0.7	A
3	0.87	15.95	6.0	C
4	0.34	4.73	0.7	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	48	1567	505	0.095	47	0.2	11.751	B
2	710	140	1939	0.366	707	0.7	3.795	A
3	1268	433	1465	0.866	1244	6.0	15.948	C
4	521	1092	1531	0.340	518	0.7	4.730	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	970	849	0.042	36	0.1	5.024	A
2	616	163	1923	0.320	616	0.6	3.626	A
3	734	350	1518	0.484	754	1.1	5.574	A
4	431	566	1924	0.224	432	0.4	3.285	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	32	1522	531	0.060	32	0.1	8.197	A
2	596	176	1914	0.311	596	0.6	3.495	A
3	1192	274	1566	0.761	1183	3.3	10.015	B
4	540	1007	1595	0.339	539	0.6	4.272	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	24	1055	800	0.030	24	0.0	5.564	A
2	587	83	1979	0.297	587	0.6	3.397	A
3	921	256	1578	0.584	928	1.6	6.186	A
4	324	754	1784	0.182	325	0.3	3.336	A

2030 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	7.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D11	2030 Operational	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

		To			
From		1	2	3	4
	1	0	20	8	8
	2	24	5	720	461
	3	8	196	0	59
	4	8	365	127	0

Demand (PCU/hr)

07:15 - 07:30

		To			
From		1	2	3	4
	1	0	12	8	0
	2	20	0	938	506
	3	4	270	0	109
	4	4	302	45	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	12	4	0
	2	20	5	847	656
	3	4	374	0	82
	4	0	284	68	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	17	0	0
	2	20	0	765	625
	3	5	379	0	222
	4	0	339	95	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	67	100	100
	2	20	0	5	31
	3	100	19	0	18
	4	100	49	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	50	100	0
	2	25	0	6	37
	3	0	25	0	33
	4	0	54	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	50	0	0
	2	25	0	4	24
	3	0	26	0	29
	4	0	56	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	32	0	0
	2	25	0	7	23
	3	0	20	0	11
	4	0	52	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.04	6.65	0.1	A
2	0.77	8.69	3.6	A
3	0.46	5.78	1.0	A
4	0.23	3.25	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	690	1011	0.036	36	0.1	6.652	A
2	1210	142	1938	0.624	1203	1.9	5.523	A
3	263	495	1425	0.185	262	0.3	3.718	A
4	500	232	2174	0.230	498	0.4	3.248	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	617	1053	0.019	20	0.0	5.802	A
2	1464	53	2000	0.732	1459	3.1	7.609	A
3	383	525	1406	0.272	382	0.5	4.456	A
4	351	294	2128	0.165	352	0.3	3.135	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	730	988	0.016	16	0.0	4.949	A
2	1528	72	1987	0.769	1526	3.6	8.693	A
3	460	679	1307	0.352	459	0.7	5.352	A
4	352	402	2047	0.172	352	0.3	3.161	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	17	813	940	0.018	17	0.0	5.147	A
2	1410	95	1971	0.715	1413	2.9	7.381	A
3	606	646	1328	0.456	605	1.0	5.782	A
4	434	404	2046	0.212	434	0.4	3.234	A

2030 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	12.21	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D12	2030 Operational	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

		To			
		1	2	3	4
From	1	0	32	8	8
	2	28	0	295	414
	3	8	1127	0	191
	4	8	418	131	0

Demand (PCU/hr)

16:15 - 16:30

		To			
		1	2	3	4
From	1	0	28	4	4
	2	24	0	282	334
	3	4	544	0	218
	4	0	301	163	0

Demand (PCU/hr)

16:30 - 16:45

		To			
From		1	2	3	4
	1	0	29	4	0
	2	24	0	336	258
	3	0	1032	5	209
	4	0	402	176	0

Demand (PCU/hr)

16:45 - 17:00

		To			
From		1	2	3	4
	1	0	24	0	0
	2	24	0	345	240
	3	0	757	0	205
	4	0	266	86	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

		To			
From		1	2	3	4
	1	0	33	100	100
	2	75	0	14	42
	3	100	4	0	20
	4	100	35	21	0

Heavy Vehicle Percentages

16:15 - 16:30

		To			
From		1	2	3	4
	1	0	17	0	0
	2	50	0	19	43
	3	0	6	0	50
	4	0	43	20	0

Heavy Vehicle Percentages

16:30 - 16:45

		To			
From		1	2	3	4
	1	0	16	0	0
	2	50	0	17	43
	3	0	5	0	35
	4	0	28	18	0

Heavy Vehicle Percentages

16:45 - 17:00

		To			
From		1	2	3	4
	1	0	20	0	0
	2	50	0	17	57
	3	0	4	0	45
	4	0	35	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.10	13.01	0.2	B
2	0.38	3.89	0.8	A
3	0.91	20.48	8.4	C
4	0.37	5.01	0.8	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	48	1644	461	0.104	47	0.2	13.012	B
2	737	146	1935	0.381	734	0.8	3.890	A
3	1326	448	1455	0.911	1292	8.4	20.482	C
4	557	1134	1500	0.371	554	0.8	5.009	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	1035	812	0.044	36	0.1	5.268	A
2	640	171	1917	0.334	641	0.7	3.708	A
3	766	363	1510	0.507	795	1.2	6.049	A
4	464	597	1901	0.244	465	0.4	3.361	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	33	1604	484	0.068	33	0.1	9.073	A
2	618	185	1908	0.324	618	0.6	3.566	A
3	1246	282	1561	0.798	1235	4.1	11.632	B
4	578	1051	1562	0.370	577	0.7	4.556	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	24	1118	764	0.031	24	0.0	5.835	A
2	609	87	1976	0.308	609	0.6	3.456	A
3	962	264	1573	0.612	971	1.8	6.716	A
4	352	789	1758	0.200	354	0.3	3.412	A

Junctions 9															
ARCADY 9 - Roundabout Module															
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Filename: Junction 6 - Construction.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 6 - A11732 Rbt

Report generation date: 13/01/2020 11:47:36

»2021 Construction , Base Adj + Com Dev AM
 »2021 Construction , Base Adj + Com Dev PM
 »2022 Construction , Base Adj + Com Dev AM
 »2022 Construction , Base Adj + Com Dev PM
 »2027 Construction , Base Adj + Com Dev AM
 »2027 Construction , Base Adj + Com Dev PM
 »2021 Construction , Base Adj + Com Dev + Dev AM
 »2021 Construction , Base Adj + Com Dev + Dev PM
 »2022 Construction , Base Adj + Com Dev + Dev AM
 »2022 Construction , Base Adj + Com Dev + Dev PM
 »2027 Construction , Base Adj + Com Dev + Dev AM
 »2027 Construction , Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 Construction																
Arm 1	0.0	3.55	0.00	A	0.0	6.23	0.01	A	0.0	3.57	0.00	A	0.0	6.69	0.01	A
Arm 2	2.5	6.52	0.70	A	0.6	3.41	0.32	A	3.3	7.96	0.76	A	0.6	3.50	0.33	A
Arm 3	0.7	4.72	0.38	A	4.1	11.79	0.81	B	0.8	5.12	0.40	A	4.3	12.14	0.81	B
Arm 4	0.3	2.86	0.17	A	0.5	4.13	0.29	A	0.3	2.91	0.18	A	0.6	4.32	0.34	A
2022 Construction																
Arm 1	0.0	3.59	0.00	A	0.0	6.29	0.01	A	0.0	3.61	0.00	A	0.0	6.75	0.01	A
Arm 2	2.1	5.79	0.66	A	0.6	3.45	0.32	A	2.7	6.89	0.71	A	0.6	3.52	0.33	A
Arm 3	0.7	4.86	0.39	A	4.3	12.07	0.81	B	0.8	5.29	0.41	A	4.4	12.43	0.82	B
Arm 4	0.3	2.86	0.18	A	0.5	4.22	0.30	A	0.3	2.93	0.19	A	0.7	4.42	0.34	A
2027 Construction																
Arm 1	0.1	6.34	0.03	A	0.2	11.96	0.10	B	0.1	6.40	0.03	A	0.2	13.29	0.11	B
Arm 2	2.7	7.01	0.72	A	0.7	3.69	0.36	A	3.6	8.67	0.77	A	0.7	3.77	0.37	A
Arm 3	0.9	5.32	0.43	A	6.6	16.91	0.88	C	1.0	5.83	0.45	A	6.9	17.56	0.88	C
Arm 4	0.3	2.97	0.19	A	0.7	4.63	0.34	A	0.4	3.02	0.20	A	0.8	4.91	0.39	A

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

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

File summary

File Description

Title	A1173 / Kiln Lane - Construction
Location	
Site number	
Date	03/01/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15
D2	2021 Construction	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15
D3	2022 Construction	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15
D4	2022 Construction	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15
D5	2027 Construction	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15
D6	2027 Construction	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15
D7	2021 Construction	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15
D8	2021 Construction	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15
D9	2022 Construction	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15
D10	2022 Construction	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15
D11	2027 Construction	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15
D12	2027 Construction	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2021 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	5.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Unnamed Access	
2	A1173 EB Approach	
3	A1173 SB Approach	
4	Kiln Lane WB Approach	

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)	Exit only
1	3.65	4.50	12.6	21.0	49.2	10.8	
2	3.70	8.24	19.0	40.0	49.2	16.4	
3	3.25	7.99	12.3	31.0	49.2	14.8	
4	3.97	8.14	64.8	19.9	49.2	17.5	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.576	1409
2	0.697	2037
3	0.640	1742
4	0.748	2348

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 period length (min)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	4	783	313
	3	0	170	0	54
	4	0	265	117	0

Demand (PCU/hr)

07:15 - 07:30

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	975	363
	3	0	249	0	100
	4	0	211	42	0

Demand (PCU/hr)

07:30 - 07:45

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	4	892	501
	3	0	341	0	75
	4	0	194	63	0

Demand (PCU/hr)

07:45 - 08:00

	To				
		1	2	3	4
From	1	0	4	0	0
	2	0	0	817	472
	3	4	341	0	204
	4	0	249	88	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	4	25
	3	0	17	0	18
	4	0	42	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	5	33
	3	0	28	0	33
	4	0	46	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	3	20
	3	0	26	0	29
	4	0	47	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	5	17
	3	0	21	0	11
	4	0	43	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	3.55	0.0	A
2	0.70	6.52	2.5	A
3	0.38	4.72	0.7	A
4	0.17	2.86	0.3	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	554	1089	0.000	0	0.0	0.000	A
2	1100	117	1956	0.563	1094	1.4	4.537	A
3	224	315	1540	0.145	223	0.2	3.203	A
4	382	173	2218	0.172	381	0.3	2.860	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	502	1119	0.000	0	0.0	0.000	A
2	1338	42	2007	0.667	1335	2.2	5.933	A
3	349	362	1510	0.231	348	0.4	4.007	A
4	253	249	2162	0.117	253	0.2	2.814	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	601	1062	0.000	0	0.0	0.000	A
2	1397	63	1993	0.701	1396	2.5	6.525	A
3	416	504	1419	0.293	415	0.5	4.535	A
4	257	344	2090	0.123	257	0.2	2.767	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	678	1018	0.004	4	0.0	3.549	A
2	1289	88	1976	0.652	1291	2.1	5.748	A
3	549	473	1439	0.381	548	0.7	4.719	A
4	337	345	2090	0.161	337	0.3	2.823	A

2021 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	7.89	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D2	2021 Construction	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

	To			
	1	2	3	4
From	1	0	0	0
	2	0	0	266
	3	0	1047	0
	4	0	324	121

Demand (PCU/hr)

16:15 - 16:30

	To			
	1	2	3	4
From	1	0	0	0
	2	0	0	253
	3	0	514	0
	4	0	216	150

Demand (PCU/hr)

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	4	0	0
	2	0	0	299	211
	3	0	956	4	195
	4	0	320	162	0

Demand (PCU/hr)

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	303	190
	3	0	706	0	190
	4	0	195	79	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	14	39
	3	0	4	0	20
	4	0	34	21	0

Heavy Vehicle Percentages

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	20	41
	3	0	6	0	49
	4	0	44	20	0

Heavy Vehicle Percentages

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	41
	3	0	5	0	35
	4	0	28	18	0

Heavy Vehicle Percentages

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	25
	3	0	4	0	44
	4	0	38	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.01	6.23	0.0	A
2	0.32	3.41	0.6	A
3	0.81	11.79	4.1	B
4	0.29	4.13	0.5	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1476	558	0.000	0	0.0	0.000	A
2	618	120	1953	0.316	616	0.6	3.413	A
3	1225	351	1517	0.807	1208	4.1	11.792	B
4	445	1033	1575	0.282	443	0.5	4.131	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	892	894	0.000	0	0.0	0.000	A
2	538	150	1932	0.278	538	0.5	3.366	A
3	717	285	1559	0.460	730	1.0	5.080	A
4	366	525	1955	0.187	367	0.3	3.017	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	1435	581	0.007	4	0.0	6.233	A
2	510	166	1921	0.265	510	0.5	3.196	A
3	1155	211	1607	0.719	1148	2.7	8.437	A
4	482	954	1635	0.295	481	0.5	3.882	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	986	840	0.000	0.03	0.0	0.000	A
2	493	79	1981	0.249	493	0.4	2.888	A
3	896	190	1620	0.553	901	1.4	5.574	A
4	274	711	1816	0.151	275	0.2	3.147	A

2022 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	5.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2022 Construction	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

	To	1	2	3	4
From	1	0	0	0	0
	2	0	4	668	344
	3	0	180	0	55
	4	0	276	118	0

Demand (PCU/hr)

07:15 - 07:30

	To	1	2	3	4
From	1	0	0	0	0
	2	0	0	867	391
	3	0	248	0	101
	4	0	225	42	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	4	782	526
	3	0	345	0	76
	4	0	204	63	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	4	0	0
	2	0	0	702	505
	3	1	350	0	207
	4	0	259	89	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	5	26
	3	0	19	0	18
	4	0	40	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	6	32
	3	0	26	0	33
	4	0	46	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	4	20
	3	0	26	0	29
	4	0	48	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	6	19
	3	0	20	0	11
	4	0	44	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	3.59	0.0	A
2	0.66	5.79	2.1	A
3	0.39	4.86	0.7	A
4	0.18	2.86	0.3	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	576	1077	0.000	0	0.0	0.000	A
2	1016	118	1955	0.520	1011	1.2	4.224	A
3	235	346	1520	0.155	234	0.2	3.323	A
4	394	183	2211	0.178	393	0.3	2.859	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	515	1112	0.000	0	0.0	0.000	A
2	1258	42	2007	0.627	1255	1.9	5.383	A
3	349	390	1492	0.234	348	0.4	4.025	A
4	267	248	2163	0.123	267	0.2	2.831	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	615	1054	0.000	0	0.0	0.000	A
2	1312	63	1993	0.658	1311	2.1	5.792	A
3	421	529	1403	0.300	420	0.5	4.631	A
4	267	348	2087	0.128	267	0.2	2.805	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	698	1007	0.004	4	0.0	3.590	A
2	1207	89	1975	0.611	1208	1.8	5.227	A
3	558	505	1418	0.393	557	0.7	4.863	A
4	348	351	2085	0.167	348	0.3	2.865	A

2022 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	8.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2022 Construction	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	273	360
	3	0	1048	0	180
	4	0	340	122	0

Demand (PCU/hr)

16:15 - 16:30

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	260	288
	3	0	509	0	205
	4	0	226	152	0

Demand (PCU/hr)

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	4	0	0
	2	0	0	303	221
	3	0	955	4	197
	4	0	328	164	0

Demand (PCU/hr)

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	311	200
	3	0	703	0	192
	4	0	201	80	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	14	39
	3	0	4	0	20
	4	0	35	21	0

Heavy Vehicle Percentages

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	19	38
	3	0	6	0	49
	4	0	42	20	0

Heavy Vehicle Percentages

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	39
	3	0	5	0	35
	4	0	28	18	0

Heavy Vehicle Percentages

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	35
	3	0	4	0	44
	4	0	37	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.01	6.29	0.0	A
2	0.32	3.45	0.6	A
3	0.81	12.07	4.3	B
4	0.30	4.22	0.5	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1493	548	0.000	0	0.0	0.000	A
2	633	121	1952	0.324	631	0.6	3.453	A
3	1228	359	1512	0.812	1211	4.3	12.067	B
4	462	1033	1575	0.293	460	0.5	4.221	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	900	890	0.000	0	0.0	0.000	A
2	548	152	1931	0.284	548	0.5	3.340	A
3	714	288	1557	0.458	727	1.0	5.083	A
4	378	521	1958	0.193	379	0.3	3.015	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	1444	576	0.007	4	0.0	6.288	A
2	524	168	1920	0.273	524	0.5	3.218	A
3	1156	221	1600	0.722	1149	2.7	8.570	A
4	492	953	1635	0.301	491	0.5	3.914	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	990	838	0.000	0.03	0.0	0.000	A
2	511	80	1981	0.258	511	0.4	3.007	A
3	895	200	1614	0.555	900	1.4	5.620	A
4	281	708	1819	0.155	282	0.2	3.139	A

2027 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	6.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D5	2027 Construction	Base Adj + Com Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

		To			
From		1	2	3	4
	1	0	20	8	8
	2	24	4	705	377
	3	8	193	0	58
	4	8	288	124	0

Demand (PCU/hr)

07:15 - 07:30

		To			
From		1	2	3	4
	1	0	12	8	0
	2	20	0	918	426
	3	4	265	0	107
	4	4	235	44	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	12	4	0
	2	20	4	829	572
	3	4	367	0	80
	4	0	217	67	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	16	0	0
	2	20	0	749	546
	3	4	371	0	218
	4	0	271	93	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	67	100	100
	2	20	0	5	24
	3	100	19	0	18
	4	100	40	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	50	100	0
	2	25	0	6	32
	3	0	25	0	33
	4	0	45	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	50	0	0
	2	25	0	4	20
	3	0	26	0	29
	4	0	47	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	32	0	0
	2	25	0	7	18
	3	0	20	0	11
	4	0	44	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	6.34	0.1	A
2	0.72	7.01	2.7	A
3	0.43	5.32	0.9	A
4	0.19	2.97	0.3	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	607	1059	0.034	36	0.1	6.339	A
2	1110	139	1940	0.572	1104	1.5	4.752	A
3	259	411	1479	0.175	258	0.3	3.542	A
4	420	228	2177	0.193	419	0.3	2.968	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	544	1095	0.018	20	0.0	5.577	A
2	1364	52	2000	0.682	1360	2.4	6.332	A
3	376	445	1457	0.258	375	0.4	4.217	A
4	283	289	2132	0.133	283	0.2	2.864	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	654	1032	0.016	16	0.0	4.736	A
2	1425	71	1987	0.717	1424	2.7	7.011	A
3	451	595	1361	0.331	450	0.6	4.983	A
4	284	394	2053	0.138	284	0.2	2.872	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	735	985	0.016	16	0.0	4.903	A
2	1315	93	1972	0.667	1317	2.3	6.147	A
3	593	567	1379	0.430	592	0.9	5.317	A
4	364	395	2052	0.177	364	0.3	2.948	A

2027 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	10.51	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D6	2027 Construction	Base Adj + Com Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	32	8	8
	2	28	0	290	376
	3	8	1105	0	187
	4	8	373	128	0

Demand (PCU/hr)

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	28	4	4
	2	24	0	276	305
	3	4	534	0	214
	4	0	258	159	0

Demand (PCU/hr)

16:30 - 16:45

		To				
From		1	2	3	4	
	1	0	28	4	0	
	2	24	0	330	230	
	3	0	1012	4	206	
	4	0	364	173	0	

Demand (PCU/hr)

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	24	0	0
	2	24	0	338	213
	3	0	742	0	201
	4	0	231	84	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	33	100	100
	2	75	0	14	38
	3	100	4	0	20
	4	100	32	21	0

Heavy Vehicle Percentages

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	17	0	0
	2	50	0	19	40
	3	0	6	0	50
	4	0	40	20	0

Heavy Vehicle Percentages

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	16	0	0
	2	50	0	17	39
	3	0	5	0	35
	4	0	25	18	0

Heavy Vehicle Percentages

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	20	0	0
	2	50	0	17	53
	3	0	4	0	45
	4	0	32	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.10	11.96	0.2	B
2	0.36	3.69	0.7	A
3	0.88	16.91	6.6	C
4	0.34	4.63	0.7	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	48	1581	497	0.097	47	0.2	11.961	B
2	694	143	1937	0.358	691	0.7	3.686	A
3	1300	410	1479	0.879	1274	6.6	16.908	C
4	509	1118	1512	0.337	506	0.7	4.634	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	971	849	0.042	36	0.1	5.028	A
2	605	167	1920	0.315	605	0.6	3.556	A
3	752	333	1529	0.492	774	1.1	5.669	A
4	417	581	1913	0.218	418	0.4	3.171	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	32	1543	519	0.062	32	0.1	8.404	A
2	584	181	1911	0.306	584	0.6	3.421	A
3	1222	254	1579	0.774	1212	3.6	10.437	B
4	537	1031	1577	0.341	536	0.6	4.240	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	24	1065	795	0.030	24	0.0	5.602	A
2	575	85	1978	0.291	575	0.5	3.322	A
3	943	237	1590	0.593	951	1.6	6.303	A
4	315	773	1770	0.178	316	0.3	3.236	A

2021 Construction , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	6.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D7	2021 Construction	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	4	783	429
	3	0	170	0	58
	4	0	281	117	0

Demand (PCU/hr)

07:15 - 07:30

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	975	475
	3	0	249	0	104
	4	0	219	42	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	4	892	613
	3	0	341	0	79
	4	0	202	63	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	4	0	0
	2	0	0	817	580
	3	4	341	0	204
	4	0	257	88	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	4	19
	3	0	17	0	17
	4	0	44	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	5	25
	3	0	28	0	32
	4	0	47	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	3	16
	3	0	26	0	27
	4	0	48	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	5	15
	3	0	21	0	11
	4	0	44	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	3.57	0.0	A
2	0.76	7.96	3.3	A
3	0.40	5.12	0.8	A
4	0.18	2.91	0.3	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	570	1080	0.000	0	0.0	0.000	A
2	1216	117	1956	0.622	1209	1.8	5.199	A
3	228	430	1466	0.155	227	0.2	3.397	A
4	398	173	2218	0.179	397	0.3	2.911	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	510	1115	0.000	0	0.0	0.000	A
2	1450	42	2007	0.722	1446	2.8	7.050	A
3	353	474	1439	0.245	352	0.4	4.276	A
4	261	248	2162	0.121	261	0.2	2.841	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	609	1057	0.000	0	0.0	0.000	A
2	1509	63	1993	0.757	1507	3.3	7.957	A
3	420	615	1348	0.312	419	0.6	4.889	A
4	265	344	2090	0.127	265	0.2	2.797	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	686	1013	0.004	4	0.0	3.565	A
2	1397	88	1976	0.707	1399	2.7	6.835	A
3	549	581	1370	0.401	548	0.8	5.116	A
4	345	345	2090	0.165	345	0.3	2.853	A

2021 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	7.99	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D8	2021 Construction	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	266	368
	3	0	1047	0	178
	4	0	400	125	0

Demand (PCU/hr)

16:15 - 16:30

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	253	293
	3	0	544	0	203
	4	0	288	154	0

Demand (PCU/hr)

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	4	0	0
	2	0	0	299	219
	3	0	956	4	195
	4	0	388	162	0

Demand (PCU/hr)

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	303	198
	3	0	706	0	190
	4	0	263	79	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	14	41
	3	0	4	0	20
	4	0	29	20	0

Heavy Vehicle Percentages

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	20	42
	3	0	6	0	49
	4	0	32	19	0

Heavy Vehicle Percentages

16:30 - 16:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	43
	3	0	5	0	35
	4	0	24	18	0

Heavy Vehicle Percentages

16:45 - 17:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	16	55
	3	0	4	0	44
	4	0	28	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.01	6.69	0.0	A
2	0.33	3.50	0.6	A
3	0.81	12.14	4.3	B
4	0.34	4.32	0.6	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1555	512	0.000	0	0.0	0.000	A
2	634	124	1950	0.325	632	0.6	3.496	A
3	1225	367	1507	0.813	1208	4.3	12.141	B
4	525	1032	1576	0.333	522	0.6	4.321	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	999	833	0.000	0	0.0	0.000	A
2	546	154	1929	0.283	546	0.5	3.406	A
3	747	293	1554	0.481	760	1.1	5.290	A
4	442	556	1932	0.229	443	0.4	3.075	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	1503	542	0.007	4	0.0	6.687	A
2	518	166	1921	0.270	518	0.5	3.237	A
3	1155	219	1602	0.721	1148	2.7	8.540	A
4	550	954	1634	0.337	549	0.6	4.050	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1054	801	0.000	0.03	0.0	0.000	A
2	501	79	1981	0.253	501	0.4	3.131	A
3	896	198	1615	0.555	901	1.4	5.613	A
4	342	711	1816	0.188	343	0.3	3.123	A

2022 Construction , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	5.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D9	2022 Construction	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

		To			
From		1	2	3	4
	1	0	0	0	0
	2	0	4	668	460
	3	0	180	0	59
	4	0	292	118	0

Demand (PCU/hr)

07:15 - 07:30

		To			
From		1	2	3	4
	1	0	0	0	0
	2	0	0	867	503
	3	0	248	0	105
	4	0	233	42	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	4	782	638
	3	0	345	0	80
	4	0	212	63	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	4	0	0
	2	0	0	702	613
	3	1	350	0	207
	4	0	267	89	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	5	20
	3	0	19	0	17
	4	0	43	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	6	25
	3	0	26	0	32
	4	0	47	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	4	17
	3	0	26	0	27
	4	0	50	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	0	0	0
	2	0	0	6	16
	3	0	20	0	11
	4	0	45	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.00	3.61	0.0	A
2	0.71	6.89	2.7	A
3	0.41	5.29	0.8	A
4	0.19	2.93	0.3	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	592	1067	0.000	0	0.0	0.000	A
2	1132	118	1955	0.579	1126	1.5	4.770	A
3	239	462	1447	0.165	238	0.2	3.529	A
4	410	183	2211	0.185	409	0.3	2.926	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	523	1107	0.000	0	0.0	0.000	A
2	1370	42	2007	0.682	1367	2.4	6.272	A
3	353	502	1421	0.248	352	0.4	4.300	A
4	275	248	2163	0.127	275	0.2	2.858	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	623	1049	0.000	0	0.0	0.000	A
2	1424	63	1993	0.715	1423	2.7	6.890	A
3	425	641	1332	0.319	424	0.6	5.003	A
4	275	348	2087	0.132	275	0.2	2.849	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	706	1002	0.004	4	0.0	3.606	A
2	1315	89	1975	0.666	1317	2.2	6.060	A
3	558	614	1349	0.414	557	0.8	5.288	A
4	356	351	2085	0.171	356	0.3	2.895	A

2022 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	8.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D10	2022 Construction	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

	To			
	1	2	3	4
From	1	0	0	0
	2	0	0	273
	3	0	1048	0
	4	0	416	126

Demand (PCU/hr)

16:15 - 16:30

	To			
	1	2	3	4
From	1	0	0	0
	2	0	0	260
	3	0	509	0
	4	0	298	156

Demand (PCU/hr)

16:30 - 16:45

	To				
		1	2	3	4
From	1	0	4	0	0
	2	0	0	303	229
	3	0	955	4	197
	4	0	396	164	0

Demand (PCU/hr)

16:45 - 17:00

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	311	208
	3	0	703	0	192
	4	0	269	80	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	14	40
	3	0	4	0	20
	4	0	30	20	0

Heavy Vehicle Percentages

16:15 - 16:30

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	19	39
	3	0	6	0	49
	4	0	31	19	0

Heavy Vehicle Percentages

16:30 - 16:45

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	16	41
	3	0	5	0	35
	4	0	23	18	0

Heavy Vehicle Percentages

16:45 - 17:00

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	16	56
	3	0	4	0	44
	4	0	27	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.01	6.75	0.0	A
2	0.33	3.52	0.6	A
3	0.82	12.43	4.4	B
4	0.34	4.42	0.7	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1572	502	0.000	0	0.0	0.000	A
2	649	125	1949	0.333	646	0.6	3.524	A
3	1228	375	1502	0.817	1210	4.4	12.428	B
4	542	1033	1575	0.344	539	0.7	4.421	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	976	846	0.000	0	0.0	0.000	A
2	556	156	1928	0.288	556	0.5	3.385	A
3	714	296	1552	0.460	728	1.0	5.124	A
4	454	521	1958	0.232	455	0.4	3.034	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	4	1512	537	0.007	4	0.0	6.749	A
2	532	168	1920	0.277	532	0.5	3.257	A
3	1156	229	1595	0.725	1149	2.8	8.663	A
4	560	953	1635	0.342	559	0.6	4.060	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	0	1058	799	0.000	0.03	0.0	0.000	A
2	519	80	1981	0.262	519	0.5	3.186	A
3	895	208	1609	0.556	900	1.4	5.665	A
4	349	708	1819	0.192	350	0.3	3.117	A

2027 Construction , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	7.21	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D11	2027 Construction	Base Adj + Com Dev + Dev AM	DIRECT	07:00	08:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

07:00 - 07:15

		To			
		1	2	3	4
From	1	0	20	8	8
	2	24	4	705	493
	3	8	193	0	62
	4	8	304	124	0

Demand (PCU/hr)

07:15 - 07:30

		To			
		1	2	3	4
From	1	0	12	8	0
	2	20	0	918	538
	3	4	265	0	111
	4	4	243	44	0

Demand (PCU/hr)

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	12	4	0
	2	20	4	829	684
	3	4	367	0	84
	4	0	225	67	0

Demand (PCU/hr)

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	16	0	0
	2	20	0	749	654
	3	4	371	0	218
	4	0	279	93	0

Vehicle Mix

Heavy Vehicle Percentages

07:00 - 07:15

	To				
From		1	2	3	4
	1	0	67	100	100
	2	20	0	5	20
	3	100	19	0	17
	4	100	42	56	0

Heavy Vehicle Percentages

07:15 - 07:30

	To				
From		1	2	3	4
	1	0	50	100	0
	2	25	0	6	25
	3	0	25	0	32
	4	0	47	67	0

Heavy Vehicle Percentages

07:30 - 07:45

	To				
From		1	2	3	4
	1	0	50	0	0
	2	25	0	4	17
	3	0	26	0	27
	4	0	48	25	0

Heavy Vehicle Percentages

07:45 - 08:00

	To				
From		1	2	3	4
	1	0	32	0	0
	2	25	0	7	15
	3	0	20	0	11
	4	0	45	24	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	6.40	0.1	A
2	0.77	8.67	3.6	A
3	0.45	5.83	1.0	A
4	0.20	3.02	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	623	1050	0.034	36	0.1	6.396	A
2	1226	139	1940	0.632	1219	1.9	5.478	A
3	263	526	1405	0.187	262	0.3	3.774	A
4	436	228	2177	0.200	435	0.4	3.023	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	20	552	1090	0.018	20	0.0	5.598	A
2	1476	52	2000	0.738	1471	3.1	7.581	A
3	380	557	1386	0.274	379	0.5	4.526	A
4	291	288	2132	0.136	292	0.2	2.911	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	662	1027	0.016	16	0.0	4.759	A
2	1537	71	1987	0.773	1535	3.6	8.667	A
3	455	706	1290	0.353	454	0.7	5.416	A
4	292	394	2053	0.142	292	0.2	2.903	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	16	743	981	0.016	16	0.0	4.927	A
2	1423	93	1972	0.722	1426	2.9	7.340	A
3	593	675	1310	0.453	592	1.0	5.828	A
4	372	395	2052	0.181	372	0.3	2.979	A

2027 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 / Kiln Lane	Standard Roundabout	10.70	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D12	2027 Construction	Base Adj + Com Dev + Dev PM	DIRECT	16:00	17:00	60	15

Vehicle mix varies over time	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	Use O-D data	Scaling Factor (%)
1		✓	100.000
2		✓	100.000
3		✓	100.000
4		✓	100.000

Origin-Destination Data

Demand (PCU/hr)

16:00 - 16:15

	To				
From		1	2	3	4
	1	0	32	8	8
	2	28	0	290	392
	3	8	1105	0	187
	4	8	449	132	0

Demand (PCU/hr)

16:15 - 16:30

	To				
From		1	2	3	4
	1	0	28	4	4
	2	24	0	276	313
	3	4	534	0	214
	4	0	330	163	0

Demand (PCU/hr)

16:30 - 16:45

		To			
From		1	2	3	4
	1	0	28	4	0
	2	24	0	330	238
	3	0	1012	4	206
	4	0	432	173	0

Demand (PCU/hr)

16:45 - 17:00

		To			
From		1	2	3	4
	1	0	24	0	0
	2	24	0	338	221
	3	0	742	0	201
	4	0	299	84	0

Vehicle Mix

Heavy Vehicle Percentages

16:00 - 16:15

		To			
From		1	2	3	4
	1	0	33	100	100
	2	75	0	14	40
	3	100	4	0	20
	4	100	28	20	0

Heavy Vehicle Percentages

16:15 - 16:30

		To			
From		1	2	3	4
	1	0	17	0	0
	2	50	0	19	41
	3	0	6	0	50
	4	0	31	19	0

Heavy Vehicle Percentages

16:30 - 16:45

		To			
From		1	2	3	4
	1	0	16	0	0
	2	50	0	17	40
	3	0	5	0	35
	4	0	22	18	0

Heavy Vehicle Percentages

16:45 - 17:00

		To			
From		1	2	3	4
	1	0	20	0	0
	2	50	0	17	54
	3	0	4	0	45
	4	0	25	27	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.11	13.29	0.2	B
2	0.37	3.77	0.7	A
3	0.88	17.56	6.9	C
4	0.39	4.91	0.8	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	48	1659	452	0.106	47	0.2	13.291	B
2	710	147	1934	0.367	707	0.7	3.774	A
3	1300	426	1469	0.885	1272	6.9	17.562	C
4	589	1117	1512	0.389	586	0.8	4.907	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	36	1049	804	0.045	36	0.1	5.322	A
2	613	171	1917	0.320	614	0.6	3.601	A
3	752	341	1523	0.494	775	1.1	5.724	A
4	493	582	1912	0.258	494	0.4	3.221	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	32	1611	480	0.067	32	0.1	9.133	A
2	592	181	1911	0.310	592	0.6	3.455	A
3	1222	262	1574	0.776	1212	3.6	10.571	B
4	605	1031	1577	0.384	604	0.7	4.467	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	24	1133	755	0.032	24	0.0	5.906	A
2	583	85	1978	0.295	583	0.5	3.357	A
3	943	245	1585	0.595	951	1.7	6.355	A
4	383	773	1770	0.216	385	0.3	3.264	A

ANNEX 21: A1173/ SHIIP SITE ACCESS MODELLING OUTPUTS

Junctions 9															
ARCADY 9 - Roundabout Module															
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020															
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk															
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution															

Filename: Junction 7 - Operational.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 7 - A1173 New Rbt

Report generation date: 13/01/2020 09:52:13

- »2023 Operational, Base Adj + Com Dev AM
- »2023 Operational, Base Adj + Com Dev PM
- »2023 Operational, Base Adj + Com Dev + Dev AM
- »2023 Operational, Base Adj + Com Dev + Dev PM
- »2024 Operational, Base Adj + Com Dev AM
- »2024 Operational, Base Adj + Com Dev PM
- »2024 Operational, Base Adj + Com Dev + Dev AM
- »2024 Operational, Base Adj + Com Dev + Dev PM
- »2030 Operational, Base Adj + Com Dev AM
- »2030 Operational, Base Adj + Com Dev PM
- »2030 Operational, Base Adj + Com Dev + Dev AM
- »2030 Operational, Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2023 Operational																
Arm 1	0.0	3.07	0.03	A	0.1	4.04	0.09	A	0.0	3.18	0.03	A	0.1	4.13	0.09	A
Arm 2	1.2	2.79	0.51	A	0.4	2.12	0.24	A	1.3	2.99	0.53	A	0.4	2.17	0.25	A
Arm 3	0.0	6.11	0.03	A	0.0	3.14	0.03	A	0.0	6.52	0.03	A	0.0	3.19	0.03	A
Arm 4	0.3	2.10	0.21	A	0.8	2.37	0.42	A	0.4	2.25	0.23	A	0.8	2.46	0.43	A
2024 Operational																
Arm 1	0.1	3.38	0.06	A	0.2	4.64	0.16	A	0.1	3.51	0.06	A	0.2	4.76	0.16	A
Arm 2	1.3	2.99	0.54	A	0.5	2.22	0.27	A	1.5	3.21	0.56	A	0.5	2.28	0.28	A
Arm 3	0.0	6.63	0.03	A	0.0	3.28	0.03	A	0.0	7.11	0.03	A	0.0	3.33	0.03	A
Arm 4	0.4	2.18	0.22	A	0.9	2.54	0.44	A	0.5	2.34	0.25	A	0.9	2.61	0.45	A
2030 Operational																
Arm 1	0.1	3.43	0.06	A	0.2	4.93	0.17	A	0.1	3.56	0.06	A	0.2	5.06	0.17	A
Arm 2	1.5	3.17	0.56	A	0.5	2.25	0.28	A	1.6	3.37	0.59	A	0.5	2.30	0.29	A
Arm 3	0.0	7.14	0.03	A	0.0	3.33	0.03	A	0.0	7.71	0.03	A	0.0	3.39	0.03	A
Arm 4	0.4	2.21	0.23	A	1.0	2.64	0.47	A	0.5	2.29	0.26	A	1.0	2.72	0.48	A

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

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

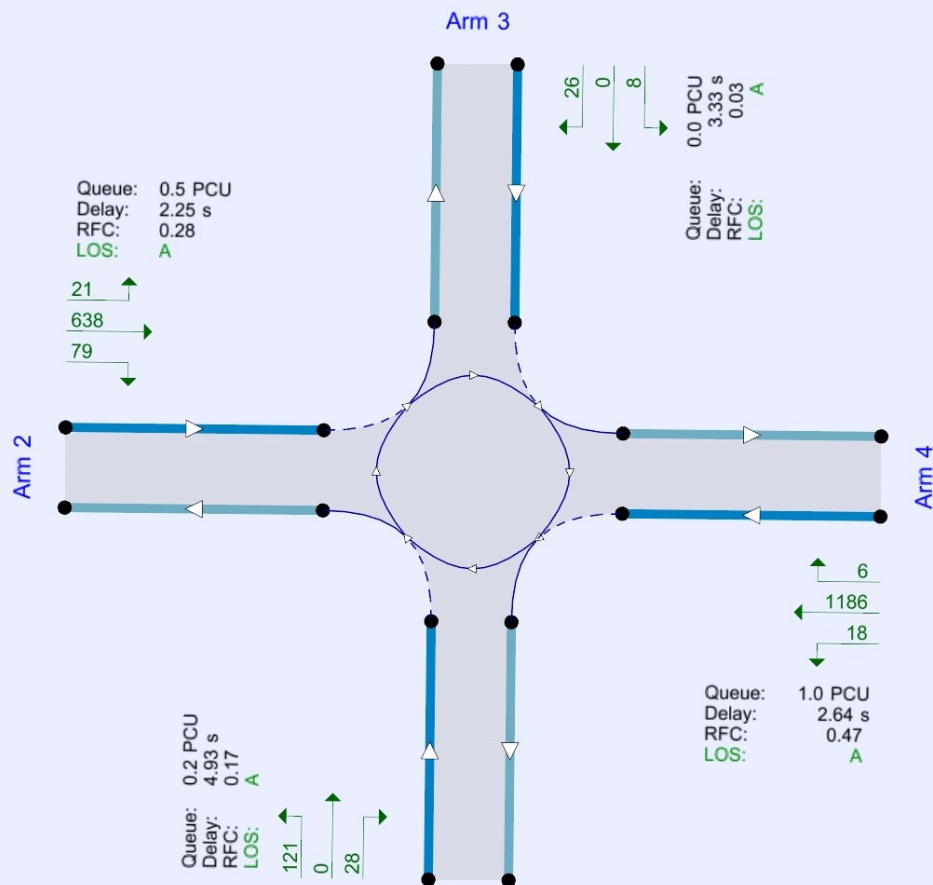
File summary

File Description

Title	A1173 New Roundabout - Operational
Location	
Site number	
Date	10/01/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15
D10	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15
D11	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15
D12	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15
D13	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15
D14	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15
D15	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15
D16	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15
D20	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15
D21	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Site Access (S)	
2	A1173 (W)	
3	Site Access (N)	
4	A1173 (E)	

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)	Exit only
1	3.65	7.14	24.4	20.0	40.1	15.5	
2	4.92	10.00	92.2	20.0	40.1	13.2	
3	3.64	7.11	20.7	20.0	40.1	17.3	
4	4.93	10.00	88.5	20.0	40.1	14.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.702	1924
2	0.911	2962
3	0.688	1866
4	0.906	2943

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)
D9	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	41	100.000
2		✓	1360	100.000
3		✓	21	100.000
4		✓	542	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	32	0	9
	2	70	0	23	1267
	3	0	16	0	5
	4	14	522	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	23	0	29
	2	6	0	10	13
	3	0	33	0	67
	4	8	33	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	3.07	0.0	A
2	0.51	2.79	1.2	A
3	0.03	6.11	0.0	A
4	0.21	2.10	0.3	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	31	409	1637	0.019	31	0.0	2.785	A
2	1024	11	2952	0.347	1021	0.6	2.096	A
3	16	1011	1170	0.014	16	0.0	4.358	A
4	408	65	2885	0.141	407	0.2	1.918	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	37	489	1581	0.023	37	0.0	2.897	A
2	1223	13	2950	0.414	1222	0.8	2.343	A
3	19	1209	1034	0.018	19	0.0	4.957	A
4	487	77	2873	0.170	487	0.3	1.992	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	45	599	1504	0.030	45	0.0	3.066	A
2	1497	17	2947	0.508	1496	1.2	2.789	A
3	23	1481	847	0.027	23	0.0	6.105	A
4	597	95	2857	0.209	596	0.3	2.102	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	45	599	1503	0.030	45	0.0	3.067	A
2	1497	17	2947	0.508	1497	1.2	2.794	A
3	23	1482	846	0.027	23	0.0	6.112	A
4	597	95	2857	0.209	597	0.3	2.102	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	37	489	1580	0.023	37	0.0	2.898	A
2	1223	13	2950	0.414	1224	0.8	2.351	A
3	19	1211	1032	0.018	19	0.0	4.964	A
4	487	77	2873	0.170	488	0.3	1.994	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	31	410	1636	0.019	31	0.0	2.788	A
2	1024	11	2952	0.347	1025	0.6	2.104	A
3	16	1014	1168	0.014	16	0.0	4.368	A
4	408	65	2884	0.141	408	0.2	1.919	A

2023 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	85	100.000
2		✓	649	100.000
3		✓	34	100.000
4		✓	1093	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	69	0	16
	2	39	0	21	589
	3	0	26	0	8
	4	9	1078	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	8	0	14
	2	26	0	40	31
	3	0	13	0	33
From	4	29	10	50	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.09	4.04	0.1	A
2	0.24	2.12	0.4	A
3	0.03	3.14	0.0	A
4	0.42	2.37	0.8	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	64	834	1339	0.048	64	0.1	3.080	A
2	489	17	2947	0.166	488	0.3	1.916	A
3	26	484	1533	0.017	26	0.0	2.796	A
4	823	49	2899	0.284	821	0.4	1.908	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	76	997	1224	0.062	76	0.1	3.421	A
2	583	20	2944	0.198	583	0.3	1.996	A
3	31	579	1468	0.021	31	0.0	2.933	A
4	983	58	2890	0.340	982	0.6	2.081	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	94	1221	1067	0.088	93	0.1	4.034	A
2	715	24	2940	0.243	714	0.4	2.117	A
3	37	709	1378	0.027	37	0.0	3.144	A
4	1203	72	2878	0.418	1203	0.8	2.368	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	94	1222	1066	0.088	94	0.1	4.037	A
2	715	24	2940	0.243	715	0.4	2.117	A
3	37	709	1378	0.027	37	0.0	3.144	A
4	1203	72	2878	0.418	1203	0.8	2.370	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	76	999	1223	0.062	77	0.1	3.427	A
2	583	20	2944	0.198	584	0.3	1.998	A
3	31	579	1467	0.021	31	0.0	2.936	A
4	983	58	2890	0.340	983	0.6	2.083	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	64	836	1337	0.048	64	0.1	3.086	A
2	489	17	2947	0.166	489	0.3	1.919	A
3	26	485	1532	0.017	26	0.0	2.800	A
4	823	49	2899	0.284	823	0.4	1.915	A

2023 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	41	100.000
2		✓	1428	100.000
3		✓	21	100.000
4		✓	608	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	32	0	9
	2	70	0	23	1335
	3	0	16	0	5
	4	14	588	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	23	0	29
	2	6	0	10	15
	3	0	33	0	67
From	4	8	38	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	3.18	0.0	A
2	0.53	2.99	1.3	A
3	0.03	6.52	0.0	A
4	0.23	2.25	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	31	458	1602	0.019	31	0.0	2.846	A
2	1075	11	2952	0.364	1072	0.7	2.189	A
3	16	1062	1135	0.014	16	0.0	4.494	A
4	458	65	2885	0.159	457	0.3	2.029	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	37	548	1539	0.024	37	0.0	2.977	A
2	1284	13	2950	0.435	1283	0.9	2.469	A
3	19	1270	992	0.019	19	0.0	5.170	A
4	547	77	2873	0.190	546	0.3	2.118	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	45	671	1453	0.031	45	0.0	3.177	A
2	1572	17	2947	0.533	1571	1.3	2.988	A
3	23	1555	796	0.029	23	0.0	6.511	A
4	669	95	2857	0.234	669	0.4	2.252	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	45	672	1452	0.031	45	0.0	3.178	A
2	1572	17	2947	0.533	1572	1.3	2.995	A
3	23	1557	795	0.029	23	0.0	6.520	A
4	669	95	2857	0.234	669	0.4	2.252	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	37	549	1539	0.024	37	0.0	2.978	A
2	1284	13	2950	0.435	1285	0.9	2.478	A
3	19	1273	990	0.019	19	0.0	5.180	A
4	547	77	2873	0.190	547	0.3	2.120	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	31	460	1601	0.019	31	0.0	2.848	A
2	1075	11	2952	0.364	1076	0.7	2.198	A
3	16	1065	1133	0.014	16	0.0	4.504	A
4	458	65	2884	0.159	458	0.3	2.032	A

2023 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.44	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	85	100.000
2		✓	675	100.000
3		✓	34	100.000
4		✓	1121	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	69	0	16
	2	39	0	21	615
	3	0	26	0	8
	4	9	1106	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1	2	3	4
	1	0	8	0	14
	2	26	0	40	33
	3	0	13	0	33
	4	29	12	50	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.09	4.13	0.1	A
2	0.25	2.17	0.4	A
3	0.03	3.19	0.0	A
4	0.43	2.46	0.8	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	64	855	1324	0.048	64	0.1	3.116	A
2	508	17	2947	0.172	507	0.3	1.957	A
3	26	503	1520	0.017	26	0.0	2.822	A
4	844	49	2899	0.291	842	0.5	1.963	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	76	1022	1206	0.063	76	0.1	3.474	A
2	607	20	2944	0.206	607	0.3	2.044	A
3	31	602	1452	0.021	31	0.0	2.966	A
4	1008	58	2890	0.349	1007	0.6	2.146	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	94	1252	1045	0.090	93	0.1	4.125	A
2	743	24	2940	0.253	743	0.4	2.175	A
3	37	737	1359	0.028	37	0.0	3.191	A
4	1234	72	2878	0.429	1233	0.8	2.455	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	94	1253	1045	0.090	94	0.1	4.128	A
2	743	24	2940	0.253	743	0.4	2.175	A
3	37	738	1358	0.028	37	0.0	3.191	A
4	1234	72	2878	0.429	1234	0.8	2.457	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	76	1024	1205	0.063	77	0.1	3.481	A
2	607	20	2944	0.206	607	0.3	2.045	A
3	31	603	1451	0.021	31	0.0	2.970	A
4	1008	58	2890	0.349	1009	0.6	2.150	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	64	857	1322	0.048	64	0.1	3.123	A
2	508	17	2947	0.172	508	0.3	1.959	A
3	26	505	1519	0.017	26	0.0	2.823	A
4	844	49	2899	0.291	845	0.5	1.969	A

2024 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D13	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	79	100.000
2		✓	1435	100.000
3		✓	21	100.000
4		✓	566	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	60	0	19
	2	118	0	23	1294
	3	0	16	0	5
	4	21	539	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	28	0	46
	2	9	0	10	13
	3	0	33	0	67
From	4	5	34	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.06	3.38	0.1	A
2	0.54	2.99	1.3	A
3	0.03	6.63	0.0	A
4	0.22	2.18	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	421	1628	0.037	59	0.0	3.027	A
2	1080	19	2945	0.367	1078	0.6	2.168	A
3	16	1075	1126	0.014	16	0.0	4.530	A
4	426	101	2852	0.149	425	0.2	1.965	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	504	1570	0.045	71	0.1	3.167	A
2	1290	22	2942	0.438	1289	0.9	2.451	A
3	19	1286	981	0.019	19	0.0	5.227	A
4	509	120	2834	0.180	509	0.3	2.050	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	617	1491	0.058	87	0.1	3.382	A
2	1580	28	2937	0.538	1578	1.3	2.978	A
3	23	1574	783	0.030	23	0.0	6.621	A
4	623	147	2810	0.222	623	0.4	2.180	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	618	1490	0.058	87	0.1	3.383	A
2	1580	28	2937	0.538	1580	1.3	2.985	A
3	23	1576	782	0.030	23	0.0	6.631	A
4	623	148	2809	0.222	623	0.4	2.181	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	505	1569	0.045	71	0.1	3.171	A
2	1290	22	2942	0.438	1292	0.9	2.458	A
3	19	1288	980	0.019	19	0.0	5.239	A
4	509	121	2834	0.180	509	0.3	2.051	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	423	1627	0.037	60	0.1	3.028	A
2	1080	19	2945	0.367	1081	0.7	2.177	A
3	16	1078	1124	0.014	16	0.0	4.540	A
4	426	101	2852	0.149	426	0.2	1.966	A

2024 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D14	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	149	100.000
2		✓	712	100.000
3		✓	34	100.000
4		✓	1144	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	121	0	28
	2	79	0	21	612
	3	0	26	0	8
	4	18	1120	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	10	0	22
	2	34	0	40	32
	3	0	13	0	33
From	4	38	11	50	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	4.64	0.2	A
2	0.27	2.22	0.5	A
3	0.03	3.28	0.0	A
4	0.44	2.54	0.9	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	865	1316	0.085	112	0.1	3.349	A
2	536	26	2939	0.182	535	0.3	1.982	A
3	26	540	1494	0.017	26	0.0	2.870	A
4	861	79	2872	0.300	859	0.5	1.993	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1035	1197	0.112	134	0.1	3.792	A
2	640	31	2935	0.218	640	0.4	2.077	A
3	31	646	1421	0.022	31	0.0	3.031	A
4	1028	94	2858	0.360	1028	0.6	2.193	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1267	1035	0.159	164	0.2	4.632	A
2	784	37	2928	0.268	783	0.5	2.222	A
3	37	791	1322	0.028	37	0.0	3.283	A
4	1260	116	2838	0.444	1259	0.9	2.539	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1268	1034	0.159	164	0.2	4.638	A
2	784	37	2928	0.268	784	0.5	2.223	A
3	37	792	1321	0.028	37	0.0	3.284	A
4	1260	116	2838	0.444	1260	0.9	2.541	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1037	1196	0.112	134	0.1	3.798	A
2	640	31	2935	0.218	641	0.4	2.080	A
3	31	647	1421	0.022	31	0.0	3.035	A
4	1028	94	2858	0.360	1029	0.6	2.198	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	868	1315	0.085	112	0.1	3.355	A
2	536	26	2939	0.182	536	0.3	1.985	A
3	26	542	1493	0.017	26	0.0	2.872	A
4	861	79	2871	0.300	862	0.5	1.997	A

2024 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	3.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D15	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	79	100.000
2		✓	1503	100.000
3		✓	21	100.000
4		✓	632	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	60	0	19
	2	118	0	23	1362
	3	0	16	0	5
	4	21	605	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	28	0	46
	2	9	0	10	15
	3	0	33	0	67
From	4	5	39	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.06	3.51	0.1	A
2	0.56	3.21	1.5	A
3	0.03	7.11	0.0	A
4	0.25	2.34	0.5	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	471	1593	0.037	59	0.1	3.095	A
2	1132	19	2945	0.384	1129	0.7	2.268	A
3	16	1126	1091	0.014	16	0.0	4.677	A
4	476	101	2852	0.167	475	0.3	2.078	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	563	1528	0.046	71	0.1	3.257	A
2	1351	22	2942	0.459	1350	1.0	2.586	A
3	19	1347	939	0.020	19	0.0	5.465	A
4	568	120	2834	0.200	568	0.3	2.181	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	690	1440	0.060	87	0.1	3.509	A
2	1655	28	2937	0.563	1653	1.5	3.207	A
3	23	1648	732	0.032	23	0.0	7.100	A
4	696	147	2810	0.248	695	0.5	2.338	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	690	1439	0.060	87	0.1	3.510	A
2	1655	28	2937	0.563	1655	1.5	3.211	A
3	23	1650	730	0.032	23	0.0	7.114	A
4	696	148	2809	0.248	696	0.5	2.338	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	564	1528	0.046	71	0.1	3.261	A
2	1351	22	2942	0.459	1353	1.0	2.597	A
3	19	1350	937	0.020	19	0.0	5.478	A
4	568	121	2834	0.200	569	0.3	2.184	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	472	1592	0.037	60	0.1	3.100	A
2	1132	19	2945	0.384	1133	0.7	2.273	A
3	16	1130	1089	0.015	16	0.0	4.691	A
4	476	101	2852	0.167	476	0.3	2.082	A

2024 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D16	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	149	100.000
2		✓	738	100.000
3		✓	34	100.000
4		✓	1172	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	121	0	28
	2	79	0	21	638
	3	0	26	0	8
	4	18	1148	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	10	0	22
	2	34	0	40	34
	3	0	13	0	33
From	4	38	12	50	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	4.76	0.2	A
2	0.28	2.28	0.5	A
3	0.03	3.33	0.0	A
4	0.45	2.61	0.9	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	886	1302	0.086	112	0.1	3.390	A
2	556	26	2939	0.189	554	0.3	2.024	A
3	26	560	1481	0.017	26	0.0	2.897	A
4	882	79	2872	0.307	880	0.5	2.031	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1060	1180	0.114	134	0.1	3.857	A
2	663	31	2935	0.226	663	0.4	2.126	A
3	31	669	1405	0.022	31	0.0	3.066	A
4	1054	94	2858	0.369	1053	0.7	2.244	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1298	1013	0.162	164	0.2	4.750	A
2	813	37	2928	0.277	812	0.5	2.282	A
3	37	820	1302	0.029	37	0.0	3.334	A
4	1290	116	2838	0.455	1289	0.9	2.612	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1299	1012	0.162	164	0.2	4.756	A
2	813	37	2928	0.277	813	0.5	2.282	A
3	37	820	1302	0.029	37	0.0	3.335	A
4	1290	116	2838	0.455	1290	0.9	2.615	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1062	1179	0.114	134	0.1	3.863	A
2	663	31	2935	0.226	664	0.4	2.128	A
3	31	670	1405	0.022	31	0.0	3.070	A
4	1054	94	2858	0.369	1055	0.7	2.246	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	889	1300	0.086	112	0.1	3.396	A
2	556	26	2939	0.189	556	0.3	2.028	A
3	26	561	1480	0.017	26	0.0	2.901	A
4	882	79	2871	0.307	883	0.5	2.038	A

2030 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D17	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	79	100.000
2		✓	1507	100.000
3		✓	21	100.000
4		✓	590	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	60	0	19
	2	118	0	23	1366
	3	0	16	0	5
	4	21	563	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	28	0	46
	2	9	0	10	13
	3	0	33	0	67
From	4	5	34	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.06	3.43	0.1	A
2	0.56	3.17	1.5	A
3	0.03	7.14	0.0	A
4	0.23	2.21	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	439	1615	0.037	59	0.1	3.051	A
2	1135	19	2945	0.385	1132	0.7	2.233	A
3	16	1129	1089	0.015	16	0.0	4.687	A
4	444	101	2852	0.156	443	0.2	1.979	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	526	1555	0.046	71	0.1	3.199	A
2	1355	22	2942	0.460	1354	1.0	2.552	A
3	19	1350	937	0.020	19	0.0	5.480	A
4	530	120	2834	0.187	530	0.3	2.070	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	644	1472	0.059	87	0.1	3.427	A
2	1659	28	2937	0.565	1657	1.5	3.164	A
3	23	1653	729	0.032	23	0.0	7.131	A
4	650	147	2810	0.231	649	0.4	2.208	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	644	1472	0.059	87	0.1	3.428	A
2	1659	28	2937	0.565	1659	1.5	3.171	A
3	23	1655	727	0.032	23	0.0	7.145	A
4	650	148	2809	0.231	650	0.4	2.208	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	526	1554	0.046	71	0.1	3.203	A
2	1355	22	2942	0.460	1357	1.0	2.560	A
3	19	1353	935	0.020	19	0.0	5.493	A
4	530	121	2834	0.187	531	0.3	2.071	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	441	1614	0.037	60	0.1	3.053	A
2	1135	19	2945	0.385	1136	0.7	2.243	A
3	16	1133	1087	0.015	16	0.0	4.698	A
4	444	101	2852	0.156	444	0.2	1.982	A

2030 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.68	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D18	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	149	100.000
2		✓	738	100.000
3		✓	34	100.000
4		✓	1210	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	121	0	28
	2	79	0	21	638
	3	0	26	0	8
	4	18	1186	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	10	0	22
	2	34	0	40	32
	3	0	13	0	33
From	4	38	10	50	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.17	4.93	0.2	A
2	0.28	2.25	0.5	A
3	0.03	3.33	0.0	A
4	0.47	2.64	1.0	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	915	1282	0.088	112	0.1	3.448	A
2	556	26	2939	0.189	554	0.3	1.998	A
3	26	560	1481	0.017	26	0.0	2.897	A
4	911	79	2872	0.317	909	0.5	2.024	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1094	1156	0.116	134	0.1	3.947	A
2	663	31	2935	0.226	663	0.4	2.098	A
3	31	669	1405	0.022	31	0.0	3.066	A
4	1088	94	2858	0.381	1087	0.7	2.246	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1340	984	0.167	164	0.2	4.920	A
2	813	37	2928	0.277	812	0.5	2.252	A
3	37	820	1302	0.029	37	0.0	3.334	A
4	1332	116	2838	0.469	1331	1.0	2.635	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1341	983	0.167	164	0.2	4.927	A
2	813	37	2928	0.277	813	0.5	2.252	A
3	37	820	1302	0.029	37	0.0	3.335	A
4	1332	116	2838	0.469	1332	1.0	2.640	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1096	1155	0.116	134	0.1	3.956	A
2	663	31	2935	0.226	664	0.4	2.099	A
3	31	670	1405	0.022	31	0.0	3.070	A
4	1088	94	2858	0.381	1089	0.7	2.251	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	918	1280	0.088	112	0.1	3.458	A
2	556	26	2939	0.189	556	0.3	2.001	A
3	26	561	1480	0.017	26	0.0	2.901	A
4	911	79	2871	0.317	912	0.5	2.029	A

2030 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	3.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D20	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	79	100.000
2		✓	1575	100.000
3		✓	21	100.000
4		✓	656	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	60	0	19
	2	118	0	23	1434
	3	0	16	0	5
	4	21	629	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	28	0	46
	2	9	0	10	13
	3	0	33	0	67
From	4	5	34	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.06	3.56	0.1	A
2	0.59	3.37	1.6	A
3	0.03	7.71	0.0	A
4	0.26	2.29	0.5	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	489	1581	0.038	59	0.1	3.121	A
2	1186	19	2945	0.403	1183	0.8	2.296	A
3	16	1180	1054	0.015	16	0.0	4.845	A
4	494	101	2852	0.173	493	0.3	2.023	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	585	1513	0.047	71	0.1	3.292	A
2	1416	22	2942	0.481	1415	1.0	2.654	A
3	19	1411	895	0.021	19	0.0	5.743	A
4	590	120	2834	0.208	589	0.3	2.127	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	716	1421	0.061	87	0.1	3.558	A
2	1734	28	2937	0.590	1732	1.6	3.358	A
3	23	1727	677	0.034	23	0.0	7.690	A
4	722	147	2810	0.257	722	0.5	2.287	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	717	1421	0.061	87	0.1	3.559	A
2	1734	28	2937	0.590	1734	1.6	3.369	A
3	23	1730	676	0.034	23	0.0	7.709	A
4	722	148	2809	0.257	722	0.5	2.288	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	586	1513	0.047	71	0.1	3.293	A
2	1416	22	2942	0.481	1418	1.1	2.664	A
3	19	1415	893	0.021	19	0.0	5.761	A
4	590	121	2834	0.208	590	0.3	2.130	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	490	1580	0.038	60	0.1	3.123	A
2	1186	19	2945	0.403	1187	0.8	2.307	A
3	16	1184	1051	0.015	16	0.0	4.861	A
4	494	101	2852	0.173	494	0.3	2.026	A

2030 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D21	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	149	100.000
2		✓	764	100.000
3		✓	34	100.000
4		✓	1238	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	121	0	28
	2	79	0	21	664
	3	0	26	0	8
	4	18	1214	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	10	0	22
	2	34	0	40	33
	3	0	13	0	33
From	4	38	11	50	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.17	5.06	0.2	A
2	0.29	2.30	0.5	A
3	0.03	3.39	0.0	A
4	0.48	2.72	1.0	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	936	1267	0.089	112	0.1	3.492	A
2	575	26	2939	0.196	574	0.3	2.027	A
3	26	579	1468	0.017	26	0.0	2.924	A
4	932	79	2872	0.325	930	0.5	2.065	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1119	1138	0.118	134	0.1	4.016	A
2	687	31	2935	0.234	686	0.4	2.134	A
3	31	693	1389	0.022	31	0.0	3.103	A
4	1113	94	2858	0.389	1112	0.7	2.297	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1371	962	0.171	164	0.2	5.051	A
2	841	37	2928	0.287	841	0.5	2.298	A
3	37	848	1282	0.029	37	0.0	3.387	A
4	1363	116	2838	0.480	1362	1.0	2.714	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1372	961	0.171	164	0.2	5.060	A
2	841	37	2928	0.287	841	0.5	2.298	A
3	37	849	1282	0.029	37	0.0	3.388	A
4	1363	116	2838	0.480	1363	1.0	2.719	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1121	1137	0.118	134	0.2	4.025	A
2	687	31	2935	0.234	687	0.4	2.135	A
3	31	694	1389	0.022	31	0.0	3.104	A
4	1113	94	2858	0.389	1114	0.7	2.302	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	939	1265	0.089	112	0.1	3.502	A
2	575	26	2939	0.196	576	0.3	2.031	A
3	26	581	1466	0.017	26	0.0	2.928	A
4	932	79	2871	0.325	933	0.5	2.071	A

Junctions 9															
ARCADY 9 - Roundabout Module															
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020															
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Filename: Junction 7 - Construction.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 7 - A1173 New Rbt

Report generation date: 13/01/2020 09:51:04

- »2021 Construction , Base Adj + Com Dev AM
- »2021 Construction , Base Adj + Com Dev PM
- »2021 Construction , Base Adj + Com Dev + Dev AM
- »2021 Construction , Base Adj + Com Dev + Dev PM
- »2022 Construction , Base Adj + Com Dev AM
- »2022 Construction , Base Adj + Com Dev PM
- »2022 Construction , Base Adj + Com Dev + Dev AM
- »2022 Construction , Base Adj + Com Dev + Dev PM
- »2027 Construction , Base Adj + Com Dev AM
- »2027 Construction , Base Adj + Com Dev PM
- »2027 Construction , Base Adj + Com Dev + Dev AM
- »2027 Construction , Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
2021 Construction																
Arm 1	0.0	2.45	0.01	A	0.0	3.53	0.03	A	0.0	2.46	0.01	A	0.0	3.72	0.03	A
Arm 2	1.2	2.76	0.51	A	0.4	2.05	0.22	A	1.4	3.02	0.55	A	0.4	2.06	0.23	A
Arm 3	0.0	6.99	0.03	A	0.0	2.93	0.01	A	0.0	7.81	0.03	A	0.0	2.95	0.01	A
Arm 4	0.2	2.29	0.13	A	0.7	2.27	0.40	A	0.2	2.31	0.13	A	0.8	2.37	0.43	A
2022 Construction																
Arm 1	0.0	3.06	0.03	A	0.1	3.98	0.09	A	0.0	3.07	0.03	A	0.1	4.02	0.09	A
Arm 2	1.1	2.76	0.50	A	0.4	2.11	0.24	A	1.3	2.98	0.54	A	0.4	2.10	0.24	A
Arm 3	0.0	6.01	0.03	A	0.0	3.13	0.03	A	0.0	6.69	0.03	A	0.0	3.06	0.03	A
Arm 4	0.3	2.09	0.21	A	0.8	2.36	0.41	A	0.4	2.12	0.21	A	0.9	2.45	0.44	A
2027 Construction																
Arm 1	0.1	3.41	0.06	A	0.2	4.65	0.16	A	0.1	3.43	0.06	A	0.2	4.96	0.17	A
Arm 2	1.4	3.09	0.55	A	0.5	2.24	0.27	A	1.6	3.38	0.59	A	0.5	2.25	0.28	A
Arm 3	0.0	6.91	0.03	A	0.0	3.31	0.03	A	0.0	7.82	0.03	A	0.0	3.33	0.03	A
Arm 4	0.4	2.20	0.23	A	0.9	2.52	0.44	A	0.4	2.22	0.23	A	1.0	2.66	0.47	A

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

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

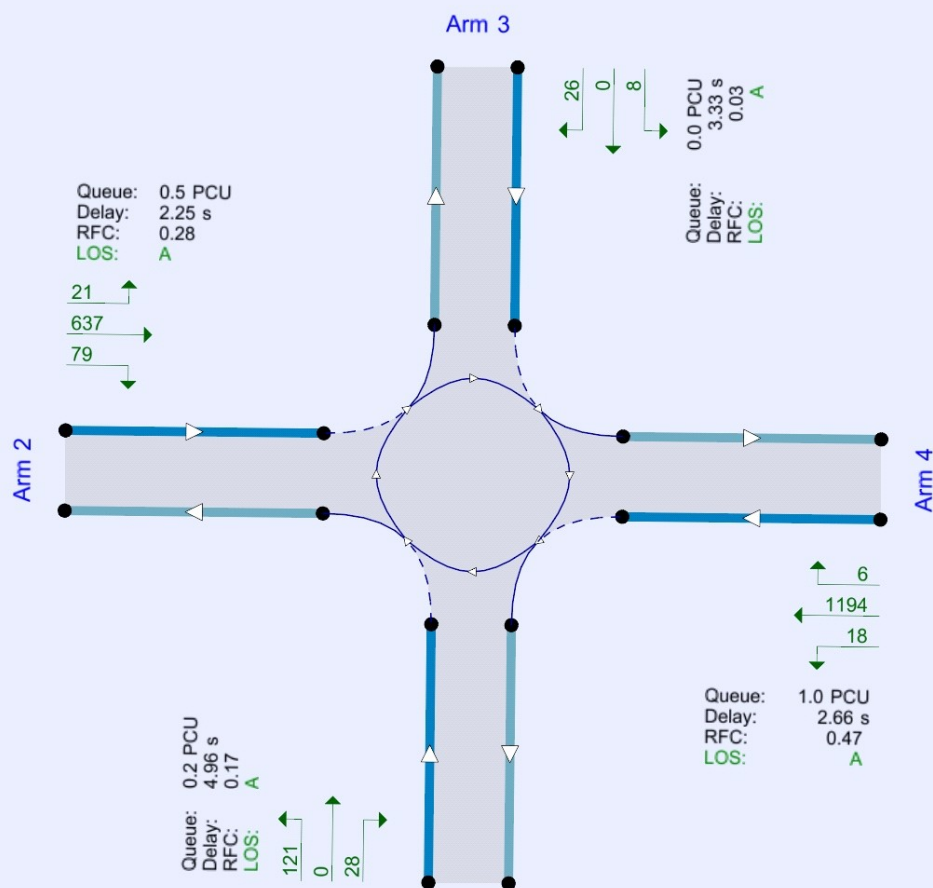
File summary

File Description

Title	A1173 New Roundabout - Construction
Location	
Site number	
Date	10/01/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2021 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Site Access (S)	
2	A1173 (W)	
3	Site Access (N)	
4	A1173 (E)	

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)	Exit only
1	3.65	7.14	24.4	20.0	40.1	15.5	
2	4.92	10.00	92.2	20.0	40.1	13.2	
3	3.64	7.11	20.7	20.0	40.1	17.3	
4	4.93	10.00	88.5	20.0	40.1	14.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.702	1924
2	0.911	2962
3	0.688	1866
4	0.906	2943

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	9	100.000
2		✓	1374	100.000
3		✓	19	100.000
4		✓	334	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	8	0	1
	2	23	0	13	1338
	3	0	13	0	6
	4	4	326	4	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	14	0	0
	2	5	0	18	11
	3	0	44	0	100
	4	0	63	33	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.01	2.45	0.0	A
2	0.51	2.76	1.2	A
3	0.03	6.99	0.0	A
4	0.13	2.29	0.2	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	7	258	1743	0.004	7	0.0	2.327	A
2	1034	4	2959	0.350	1032	0.6	2.070	A
3	14	1023	1162	0.012	14	0.0	4.954	A
4	251	27	2919	0.086	251	0.2	2.177	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	8	308	1707	0.005	8	0.0	2.377	A
2	1235	4	2958	0.418	1234	0.8	2.315	A
3	17	1224	1024	0.017	17	0.0	5.647	A
4	300	32	2914	0.103	300	0.2	2.222	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	10	377	1659	0.006	10	0.0	2.450	A
2	1513	6	2957	0.512	1511	1.2	2.760	A
3	21	1498	835	0.025	21	0.0	6.984	A
4	368	40	2907	0.126	368	0.2	2.286	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	10	378	1659	0.006	10	0.0	2.450	A
2	1513	6	2957	0.512	1513	1.2	2.764	A
3	21	1500	834	0.025	21	0.0	6.992	A
4	368	40	2907	0.126	368	0.2	2.286	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	8	309	1707	0.005	8	0.0	2.378	A
2	1235	4	2958	0.418	1237	0.8	2.321	A
3	17	1226	1022	0.017	17	0.0	5.658	A
4	300	32	2914	0.103	300	0.2	2.222	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	7	258	1742	0.004	7	0.0	2.329	A
2	1034	4	2959	0.350	1035	0.6	2.078	A
3	14	1026	1160	0.012	14	0.0	4.964	A
4	251	27	2919	0.086	252	0.2	2.179	A

2021 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	25	100.000
2		✓	598	100.000
3		✓	16	100.000
4		✓	1068	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	21	0	4
	2	8	0	12	578
	3	0	12	0	4
	4	1	1065	2	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	5	0	0
	2	14	0	33	31
	3	0	9	0	33
From	4	0	10	100	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	3.53	0.0	A
2	0.22	2.05	0.4	A
3	0.01	2.93	0.0	A
4	0.40	2.27	0.7	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	811	1355	0.014	19	0.0	2.806	A
2	450	5	2958	0.152	449	0.2	1.876	A
3	12	443	1561	0.008	12	0.0	2.652	A
4	804	15	2930	0.274	802	0.4	1.863	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	970	1243	0.018	22	0.0	3.070	A
2	538	5	2958	0.182	537	0.3	1.945	A
3	14	530	1501	0.010	14	0.0	2.763	A
4	960	18	2927	0.328	960	0.5	2.014	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1187	1091	0.025	27	0.0	3.526	A
2	658	7	2956	0.223	658	0.4	2.048	A
3	18	649	1419	0.012	18	0.0	2.931	A
4	1176	22	2923	0.402	1175	0.7	2.265	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1188	1090	0.025	28	0.0	3.528	A
2	658	7	2956	0.223	658	0.4	2.048	A
3	18	650	1419	0.012	18	0.0	2.931	A
4	1176	22	2923	0.402	1176	0.7	2.267	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	971	1243	0.018	23	0.0	3.075	A
2	538	5	2958	0.182	538	0.3	1.947	A
3	14	531	1501	0.010	14	0.0	2.764	A
4	960	18	2927	0.328	961	0.5	2.016	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	813	1353	0.014	19	0.0	2.809	A
2	450	5	2958	0.152	450	0.2	1.879	A
3	12	444	1560	0.008	12	0.0	2.655	A
4	804	15	2929	0.274	805	0.4	1.864	A

2021 Construction , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	9	100.000
2		✓	1486	100.000
3		✓	19	100.000
4		✓	344	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	8	0	1
	2	23	0	13	1450
	3	0	13	0	6
	4	4	336	4	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	14	0	0
	2	5	0	18	11
	3	0	44	0	100
From	4	0	64	33	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.01	2.46	0.0	A
2	0.55	3.02	1.4	A
3	0.03	7.81	0.0	A
4	0.13	2.31	0.2	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	7	265	1738	0.004	7	0.0	2.334	A
2	1119	4	2959	0.378	1116	0.7	2.165	A
3	14	1107	1104	0.013	14	0.0	5.217	A
4	259	27	2919	0.089	258	0.2	2.197	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	8	317	1701	0.005	8	0.0	2.386	A
2	1336	4	2958	0.452	1335	0.9	2.459	A
3	17	1324	955	0.018	17	0.0	6.063	A
4	309	32	2914	0.106	309	0.2	2.243	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	10	388	1651	0.006	10	0.0	2.461	A
2	1636	6	2957	0.553	1634	1.4	3.015	A
3	21	1621	750	0.028	21	0.0	7.794	A
4	379	40	2907	0.130	379	0.2	2.311	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	10	389	1651	0.006	10	0.0	2.462	A
2	1636	6	2957	0.553	1636	1.4	3.022	A
3	21	1623	749	0.028	21	0.0	7.807	A
4	379	40	2907	0.130	379	0.2	2.311	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	8	318	1701	0.005	8	0.0	2.387	A
2	1336	4	2958	0.452	1338	0.9	2.468	A
3	17	1327	953	0.018	17	0.0	6.076	A
4	309	32	2914	0.106	309	0.2	2.245	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	7	266	1737	0.004	7	0.0	2.337	A
2	1119	4	2959	0.378	1120	0.7	2.174	A
3	14	1111	1102	0.013	14	0.0	5.231	A
4	259	27	2919	0.089	259	0.2	2.199	A

2021 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	25	100.000
2		✓	609	100.000
3		✓	16	100.000
4		✓	1139	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	21	0	4
	2	8	0	12	589
	3	0	12	0	4
	4	1	1136	2	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	5	0	0
	2	14	0	33	31
	3	0	9	0	33
From	4	0	10	100	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	3.72	0.0	A
2	0.23	2.06	0.4	A
3	0.01	2.95	0.0	A
4	0.43	2.37	0.8	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	864	1317	0.014	19	0.0	2.886	A
2	458	5	2958	0.155	458	0.2	1.882	A
3	12	452	1555	0.008	12	0.0	2.662	A
4	857	15	2930	0.293	856	0.5	1.908	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	1033	1199	0.019	22	0.0	3.187	A
2	547	5	2958	0.185	547	0.3	1.953	A
3	14	540	1494	0.010	14	0.0	2.776	A
4	1024	18	2927	0.350	1023	0.6	2.082	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1265	1036	0.027	27	0.0	3.717	A
2	671	7	2956	0.227	670	0.4	2.059	A
3	18	661	1411	0.012	18	0.0	2.948	A
4	1254	22	2923	0.429	1253	0.8	2.371	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	28	1266	1035	0.027	28	0.0	3.720	A
2	671	7	2956	0.227	671	0.4	2.059	A
3	18	662	1411	0.012	18	0.0	2.949	A
4	1254	22	2923	0.429	1254	0.8	2.373	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	22	1035	1198	0.019	23	0.0	3.192	A
2	547	5	2958	0.185	548	0.3	1.953	A
3	14	541	1494	0.010	14	0.0	2.779	A
4	1024	18	2927	0.350	1025	0.6	2.084	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	19	866	1316	0.014	19	0.0	2.890	A
2	458	5	2958	0.155	459	0.2	1.885	A
3	12	453	1554	0.008	12	0.0	2.663	A
4	857	15	2929	0.293	858	0.5	1.912	A

2022 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	41	100.000
2		✓	1342	100.000
3		✓	21	100.000
4		✓	535	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	32	0	9
	2	70	0	23	1249
	3	0	16	0	5
	4	14	515	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	23	0	29
	2	6	0	10	13
	3	0	33	0	67
From	4	8	33	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	3.06	0.0	A
2	0.50	2.76	1.1	A
3	0.03	6.01	0.0	A
4	0.21	2.09	0.3	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	31	403	1641	0.019	31	0.0	2.778	A
2	1010	11	2952	0.342	1008	0.6	2.081	A
3	16	997	1180	0.013	16	0.0	4.323	A
4	403	65	2885	0.140	402	0.2	1.914	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	37	483	1585	0.023	37	0.0	2.889	A
2	1206	13	2950	0.409	1206	0.8	2.321	A
3	19	1193	1045	0.018	19	0.0	4.903	A
4	481	77	2873	0.167	481	0.3	1.986	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	45	591	1509	0.030	45	0.0	3.055	A
2	1478	17	2947	0.501	1476	1.1	2.751	A
3	23	1461	861	0.027	23	0.0	6.006	A
4	589	95	2857	0.206	589	0.3	2.095	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	45	591	1509	0.030	45	0.0	3.055	A
2	1478	17	2947	0.501	1478	1.1	2.756	A
3	23	1462	860	0.027	23	0.0	6.013	A
4	589	95	2857	0.206	589	0.3	2.095	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	37	483	1585	0.023	37	0.0	2.892	A
2	1206	13	2950	0.409	1208	0.8	2.328	A
3	19	1195	1044	0.018	19	0.0	4.910	A
4	481	77	2873	0.167	481	0.3	1.987	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	31	405	1640	0.019	31	0.0	2.782	A
2	1010	11	2952	0.342	1011	0.6	2.089	A
3	16	1001	1177	0.013	16	0.0	4.331	A
4	403	65	2884	0.140	403	0.2	1.917	A

2022 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	85	100.000
2		✓	642	100.000
3		✓	34	100.000
4		✓	1076	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	69	0	16
	2	39	0	21	582
	3	0	26	0	8
	4	9	1061	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	8	0	14
	2	26	0	40	31
	3	0	13	0	33
From	4	29	11	50	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.09	3.98	0.1	A
2	0.24	2.11	0.4	A
3	0.03	3.13	0.0	A
4	0.41	2.36	0.8	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	64	821	1348	0.047	64	0.1	3.058	A
2	483	17	2947	0.164	482	0.3	1.912	A
3	26	479	1537	0.017	26	0.0	2.790	A
4	810	49	2899	0.279	808	0.4	1.914	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	76	982	1235	0.062	76	0.1	3.389	A
2	577	20	2944	0.196	577	0.3	1.991	A
3	31	572	1472	0.021	31	0.0	2.924	A
4	967	58	2890	0.335	967	0.6	2.083	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	94	1203	1080	0.087	93	0.1	3.980	A
2	707	24	2940	0.240	706	0.4	2.110	A
3	37	701	1384	0.027	37	0.0	3.131	A
4	1185	72	2878	0.412	1184	0.8	2.363	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	94	1203	1079	0.087	94	0.1	3.983	A
2	707	24	2940	0.240	707	0.4	2.110	A
3	37	701	1383	0.027	37	0.0	3.132	A
4	1185	72	2878	0.412	1185	0.8	2.365	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	76	983	1234	0.062	77	0.1	3.395	A
2	577	20	2944	0.196	578	0.3	1.991	A
3	31	573	1472	0.021	31	0.0	2.928	A
4	967	58	2890	0.335	968	0.6	2.086	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	64	823	1346	0.048	64	0.1	3.065	A
2	483	17	2947	0.164	484	0.3	1.915	A
3	26	480	1536	0.017	26	0.0	2.794	A
4	810	49	2899	0.279	811	0.4	1.918	A

2022 Construction , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	41	100.000
2		✓	1454	100.000
3		✓	21	100.000
4		✓	545	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	32	0	9
	2	70	0	23	1361
	3	0	16	0	5
	4	14	525	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	23	0	29
	2	6	0	10	12
	3	0	33	0	67
From	4	8	34	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.03	3.07	0.0	A
2	0.54	2.98	1.3	A
3	0.03	6.69	0.0	A
4	0.21	2.12	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	31	411	1635	0.019	31	0.0	2.787	A
2	1095	11	2952	0.371	1092	0.7	2.158	A
3	16	1082	1122	0.014	16	0.0	4.549	A
4	410	65	2885	0.142	409	0.2	1.934	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	37	492	1579	0.023	37	0.0	2.900	A
2	1307	13	2950	0.443	1306	0.9	2.444	A
3	19	1294	976	0.019	19	0.0	5.257	A
4	490	77	2873	0.171	490	0.3	2.008	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	45	602	1501	0.030	45	0.0	3.071	A
2	1601	17	2947	0.543	1599	1.3	2.977	A
3	23	1584	776	0.030	23	0.0	6.681	A
4	600	95	2857	0.210	600	0.4	2.120	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	45	602	1501	0.030	45	0.0	3.072	A
2	1601	17	2947	0.543	1601	1.3	2.984	A
3	23	1585	775	0.030	23	0.0	6.691	A
4	600	95	2857	0.210	600	0.4	2.120	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	37	492	1578	0.023	37	0.0	2.901	A
2	1307	13	2950	0.443	1309	0.9	2.451	A
3	19	1296	974	0.019	19	0.0	5.270	A
4	490	77	2873	0.171	490	0.3	2.011	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	31	412	1634	0.019	31	0.0	2.791	A
2	1095	11	2952	0.371	1096	0.7	2.167	A
3	16	1085	1119	0.014	16	0.0	4.561	A
4	410	65	2884	0.142	411	0.2	1.936	A

2022 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.42	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	85	100.000
2		✓	652	100.000
3		✓	34	100.000
4		✓	1147	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	69	0	16
	2	39	0	21	592
	3	0	26	0	8
	4	9	1132	6	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1	2	3	4
	1	0	5	0	0
	2	14	0	33	31
	3	0	9	0	33
	4	0	10	100	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.09	4.02	0.1	A
2	0.24	2.10	0.4	A
3	0.03	3.06	0.0	A
4	0.44	2.45	0.9	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	64	874	1310	0.049	64	0.1	3.004	A
2	491	17	2947	0.167	490	0.3	1.902	A
3	26	486	1532	0.017	26	0.0	2.720	A
4	864	49	2899	0.298	862	0.5	1.945	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	76	1046	1190	0.064	76	0.1	3.362	A
2	586	20	2944	0.199	586	0.3	1.982	A
3	31	581	1466	0.021	31	0.0	2.854	A
4	1031	58	2890	0.357	1031	0.6	2.133	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	94	1281	1025	0.091	93	0.1	4.019	A
2	718	24	2940	0.244	717	0.4	2.103	A
3	37	712	1376	0.027	37	0.0	3.060	A
4	1263	72	2878	0.439	1262	0.9	2.452	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	94	1282	1025	0.091	94	0.1	4.022	A
2	718	24	2940	0.244	718	0.4	2.103	A
3	37	712	1376	0.027	37	0.0	3.061	A
4	1263	72	2878	0.439	1263	0.9	2.454	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	76	1047	1189	0.064	77	0.1	3.369	A
2	586	20	2944	0.199	587	0.3	1.984	A
3	31	582	1465	0.021	31	0.0	2.855	A
4	1031	58	2890	0.357	1032	0.6	2.135	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	64	877	1308	0.049	64	0.1	3.008	A
2	491	17	2947	0.167	491	0.3	1.903	A
3	26	487	1531	0.017	26	0.0	2.722	A
4	864	49	2899	0.298	864	0.5	1.951	A

2027 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	79	100.000
2		✓	1475	100.000
3		✓	21	100.000
4		✓	580	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	60	0	19
	2	118	0	23	1334
	3	0	16	0	5
	4	21	553	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	28	0	46
	2	9	0	10	13
	3	0	33	0	67
From	4	5	34	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.06	3.41	0.1	A
2	0.55	3.09	1.4	A
3	0.03	6.91	0.0	A
4	0.23	2.20	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	432	1621	0.037	59	0.1	3.041	A
2	1110	19	2945	0.377	1108	0.7	2.204	A
3	16	1105	1106	0.014	16	0.0	4.616	A
4	437	101	2852	0.153	436	0.2	1.973	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	517	1561	0.045	71	0.1	3.186	A
2	1326	22	2942	0.451	1325	0.9	2.506	A
3	19	1321	957	0.020	19	0.0	5.365	A
4	521	120	2834	0.184	521	0.3	2.062	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	633	1480	0.059	87	0.1	3.408	A
2	1624	28	2937	0.553	1622	1.4	3.078	A
3	23	1618	753	0.031	23	0.0	6.895	A
4	639	147	2810	0.227	638	0.4	2.196	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	633	1479	0.059	87	0.1	3.409	A
2	1624	28	2937	0.553	1624	1.4	3.086	A
3	23	1620	752	0.031	23	0.0	6.907	A
4	639	148	2809	0.227	639	0.4	2.197	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	517	1561	0.046	71	0.1	3.190	A
2	1326	22	2942	0.451	1328	0.9	2.516	A
3	19	1324	955	0.020	19	0.0	5.376	A
4	521	121	2834	0.184	522	0.3	2.063	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	433	1620	0.037	60	0.1	3.043	A
2	1110	19	2945	0.377	1111	0.7	2.211	A
3	16	1108	1103	0.014	16	0.0	4.627	A
4	437	101	2852	0.153	437	0.2	1.977	A

2027 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.59	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	149	100.000
2		✓	727	100.000
3		✓	34	100.000
4		✓	1147	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	121	0	28
	2	79	0	21	627
	3	0	26	0	8
	4	18	1123	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	10	0	22
	2	34	0	40	32
	3	0	13	0	33
From	4	38	10	50	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.16	4.65	0.2	A
2	0.27	2.24	0.5	A
3	0.03	3.31	0.0	A
4	0.44	2.52	0.9	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	868	1315	0.085	112	0.1	3.353	A
2	547	26	2939	0.186	546	0.3	1.991	A
3	26	551	1487	0.017	26	0.0	2.885	A
4	864	79	2872	0.301	862	0.5	1.977	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1038	1196	0.112	134	0.1	3.799	A
2	654	31	2935	0.223	653	0.4	2.089	A
3	31	660	1412	0.022	31	0.0	3.051	A
4	1031	94	2858	0.361	1031	0.6	2.177	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1271	1032	0.159	164	0.2	4.645	A
2	800	37	2928	0.273	800	0.5	2.240	A
3	37	808	1310	0.029	37	0.0	3.312	A
4	1263	116	2838	0.445	1262	0.9	2.522	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1272	1031	0.159	164	0.2	4.650	A
2	800	37	2928	0.273	800	0.5	2.240	A
3	37	808	1310	0.029	37	0.0	3.313	A
4	1263	116	2838	0.445	1263	0.9	2.524	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1039	1194	0.112	134	0.1	3.805	A
2	654	31	2935	0.223	654	0.4	2.090	A
3	31	660	1412	0.022	31	0.0	3.053	A
4	1031	94	2858	0.361	1032	0.6	2.181	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	870	1313	0.085	112	0.1	3.359	A
2	547	26	2939	0.186	548	0.3	1.995	A
3	26	553	1486	0.017	26	0.0	2.888	A
4	864	79	2871	0.301	864	0.5	1.983	A

2027 Construction , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	3.12	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	07:00	08:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	79	100.000
2		✓	1587	100.000
3		✓	21	100.000
4		✓	590	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	60	0	19
	2	118	0	23	1446
	3	0	16	0	5
	4	21	563	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1	2	3	4
	1	0	28	0	46
	2	9	0	10	12
	3	0	33	0	67
	4	5	35	20	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.06	3.43	0.1	A
2	0.59	3.38	1.6	A
3	0.03	7.82	0.0	A
4	0.23	2.22	0.4	A

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	439	1615	0.037	59	0.1	3.051	A
2	1195	19	2945	0.406	1192	0.8	2.290	A
3	16	1189	1048	0.015	16	0.0	4.874	A
4	444	101	2852	0.156	443	0.2	1.993	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	526	1555	0.046	71	0.1	3.199	A
2	1427	22	2942	0.485	1426	1.0	2.652	A
3	19	1422	888	0.021	19	0.0	5.792	A
4	530	120	2834	0.187	530	0.3	2.085	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	644	1472	0.059	87	0.1	3.427	A
2	1747	28	2937	0.595	1745	1.6	3.366	A
3	23	1741	668	0.035	23	0.0	7.798	A
4	650	147	2810	0.231	649	0.4	2.224	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	87	644	1472	0.059	87	0.1	3.428	A
2	1747	28	2937	0.595	1747	1.6	3.379	A
3	23	1743	667	0.035	23	0.0	7.818	A
4	650	148	2809	0.231	650	0.4	2.224	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	71	526	1554	0.046	71	0.1	3.203	A
2	1427	22	2942	0.485	1429	1.1	2.662	A
3	19	1425	885	0.021	19	0.0	5.809	A
4	530	121	2834	0.187	531	0.3	2.086	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	59	441	1614	0.037	60	0.1	3.055	A
2	1195	19	2945	0.406	1196	0.8	2.300	A
3	16	1193	1045	0.015	16	0.0	4.890	A
4	444	101	2852	0.156	444	0.2	1.997	A

2027 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 2 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Arm 4 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	A1173 New Roundabout	Standard Roundabout	2.69	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	16:00	17:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	149	100.000
2		✓	737	100.000
3		✓	34	100.000
4		✓	1218	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	121	0	28
	2	79	0	21	637
	3	0	26	0	8
	4	18	1194	6	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	10	0	22
	2	34	0	40	32
	3	0	13	0	33
From	4	38	10	50	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.17	4.96	0.2	A
2	0.28	2.25	0.5	A
3	0.03	3.33	0.0	A
4	0.47	2.66	1.0	A

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	921	1278	0.088	112	0.1	3.461	A
2	555	26	2939	0.189	554	0.3	1.997	A
3	26	559	1481	0.017	26	0.0	2.896	A
4	917	79	2872	0.319	915	0.5	2.031	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1101	1151	0.116	134	0.1	3.967	A
2	663	31	2935	0.226	662	0.4	2.097	A
3	31	669	1406	0.022	31	0.0	3.065	A
4	1095	94	2858	0.383	1094	0.7	2.255	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1349	977	0.168	164	0.2	4.958	A
2	811	37	2928	0.277	811	0.5	2.251	A
3	37	819	1303	0.029	37	0.0	3.332	A
4	1341	116	2838	0.472	1340	1.0	2.651	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	164	1350	977	0.168	164	0.2	4.964	A
2	811	37	2928	0.277	811	0.5	2.251	A
3	37	819	1302	0.029	37	0.0	3.333	A
4	1341	116	2838	0.472	1341	1.0	2.655	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	134	1103	1150	0.117	134	0.1	3.976	A
2	663	31	2935	0.226	663	0.4	2.100	A
3	31	669	1405	0.022	31	0.0	3.069	A
4	1095	94	2858	0.383	1096	0.7	2.260	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
1	112	924	1276	0.088	112	0.1	3.468	A
2	555	26	2939	0.189	555	0.3	1.999	A
3	26	560	1480	0.017	26	0.0	2.900	A
4	917	79	2871	0.319	918	0.5	2.037	A

ANNEX 22: A1173/ A180 MODELLING OUTPUTS

Junctions 9															
ARCADY 9 - Roundabout Module															
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020															
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk															
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution															

Filename: OPERATION A180 Interchange.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 5 - A180 Stallingborough Interchange

Report generation date: 13/01/2020 09:46:35

- »Do Minimum - 2023 Operational, Base Adj + Com Dev AM
- »Do Minimum - 2023 Operational , Base Adj + Com Dev PM
- »Do Minimum - 2024 Operational, Base Adj + Com Dev AM
- »Do Minimum - 2024 Operational, Base Adj + Com Dev PM
- »Do Minimum - 2030 Operational , Base Adj + Com Dev AM
- »Do Minimum - 2030 Operational , Base Adj + Com Dev PM
- »Do Minimum - 2023 Operational, Base Adj + Com Dev + Dev AM
- »Do Minimum - 2023 Operational , Base Adj + Com Dev + Dev PM
- »Do Minimum - 2024 Operational, Base Adj + Com Dev + Dev AM
- »Do Minimum - 2024 Operational, Base Adj + Com Dev + Dev PM
- »Do Minimum - 2030 Operational , Base Adj + Com Dev + Dev AM
- »Do Minimum - 2030 Operational , Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Do Minimum [Lane Simulation] - 2023 Operational																
Arm A	0.9	7.44		A	1.2	6.08		A	0.9	8.37		A	1.2	6.31		A
Arm B	0.8	4.59		A	0.5	4.03		A	0.6	4.83		A	0.7	4.11		A
Arm C	0.4	2.88		A	1.8	3.90		A	0.5	2.96		A	1.9	4.28		A
Arm D	2.0	6.22		A	0.5	3.32		A	2.5	6.92		A	0.6	3.32		A
Do Minimum [Lane Simulation] - 2024 Operational																
Arm A	1.2	8.96		A	1.3	6.86		A	1.2	8.92		A	1.2	6.80		A
Arm B	0.9	4.83		A	0.6	4.19		A	0.9	5.10		A	0.8	4.23		A
Arm C	0.4	2.52		A	2.3	4.54		A	0.5	2.98		A	2.0	4.36		A
Arm D	1.7	6.77		A	0.7	3.35		A	2.4	7.58		A	0.6	3.39		A
Do Minimum [Lane Simulation] - 2030 Operational																
Arm A	1.1	9.05		A	1.4	7.15		A	1.2	10.06		B	1.5	6.99		A
Arm B	0.7	4.85		A	0.7	4.25		A	1.0	5.15		A	0.7	4.33		A
Arm C	0.5	2.79		A	2.1	4.94		A	0.5	2.97		A	2.9	5.11		A
Arm D	2.5	7.88		A	0.5	3.36		A	2.6	8.27		A	0.5	3.35		A

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

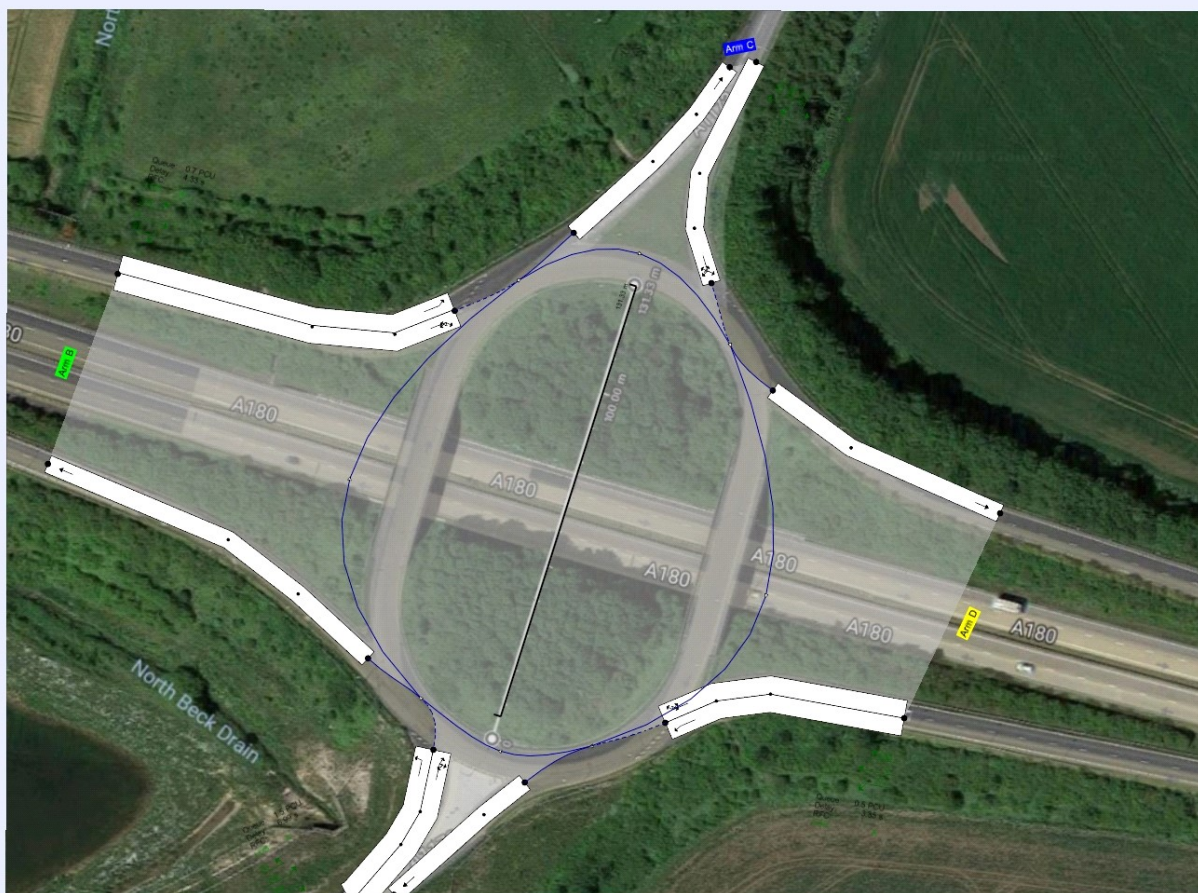
File summary

File Description

Title	A180 Stallingborough Interchange - Operational
Location	
Site number	
Date	20/08/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	866054237	101	6.70

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
D3	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D4	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	15	✓
D7	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D8	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	15	✓
D11	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D12	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	15	✓
D13	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D14	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	15	✓
D15	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D16	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	15	✓
D17	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D18	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Minimum	✓	✓	100.000	100.000

Do Minimum - 2023 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	5.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	A1173 NB APPROACH	
B	A180 EB OFFSLIP	
C	A1173 SB APPROACH	
D	A180 WB OFF-SLIP	

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)	Exit only
A	4.62	8.54	23.5	17.7	93.0	11.0	
B	7.72	8.46	24.6	24.2	100.0	10.0	
C	4.09	7.98	29.1	39.3	100.0	9.5	
D	6.55	7.41	25.6	44.3	93.0	0.0	

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.963	2852
B	1.025	3095
C	1.121	2968
D	1.219	3099

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
A	Evenly split	10.00
B	Evenly split	10.00
C	Evenly split	10.00
D	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
A	1 [Give-way line]	1	B	✓	9.00	0	99999
		2	A,C,D	✓	9.00	0	99999
	2	1	(A,B,C,D)		Infinity		
B	1 [Give-way line]	1	C		Infinity	1500	2000
		2	A,B,D		Infinity	1500	2000
C	1 [Give-way line]	1	A,B,C,D		Infinity	1800	99999
D	1 [Give-way line]	1	A		Infinity	1500	2000
		2	B,C,D		Infinity	1500	2000

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A	1 [Give-way line]	1	0.482	1426
		2	0.482	1426
B	1 [Give-way line]	1	0.513	1548
		2	0.513	1548
C	1 [Give-way line]	1	1.121	2968
D	1 [Give-way line]	1	0.609	1550
		2	0.609	1550

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A	B	C	D
A	1 [Give-way line]	1		✓		
		2	✓		✓	✓
	2	1	✓	✓	✓	✓
B	1 [Give-way line]	1			✓	
		2	✓	✓		✓
C	1 [Give-way line]	1	✓	✓	✓	✓
D	1 [Give-way line]	1	✓			
		2		✓	✓	✓

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	2023 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	359	100.000
B		ONE HOUR	✓	474	100.000
C		ONE HOUR	✓	356	100.000
D		ONE HOUR	✓	930	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	44	79	236
	B	25	1	447	1
	C	48	242	0	66
	D	96	0	834	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	37	2
	B	31	0	25	0
	C	50	75	0	79
	D	15	0	4	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	7.44	0.9	A	330	495
B	4.59	0.8	A	433	649
C	2.88	0.4	A	325	488
D	6.22	2.0	A	851	1276

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	268	67	822	269	125	0.0	0.4	4.446	A
B	361	90	870	361	221	0.0	0.3	3.787	A
C	275	69	194	276	1036	0.0	0.2	2.449	A
D	700	175	244	702	225	0.0	0.8	4.214	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	335	84	964	331	143	0.4	0.7	5.405	A
B	418	104	1034	417	262	0.3	0.6	4.211	A
C	320	80	237	320	1214	0.2	0.3	2.635	A
D	822	206	282	825	275	0.8	1.0	4.887	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	392	98	1181	391	183	0.7	0.8	7.236	A
B	519	130	1256	517	315	0.6	0.8	4.590	A
C	390	97	283	389	1491	0.3	0.4	2.804	A
D	1019	255	346	1018	327	1.0	1.6	6.047	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	386	96	1177	384	192	0.8	0.9	7.441	A
B	530	133	1250	530	311	0.8	0.7	4.412	A
C	389	97	281	390	1499	0.4	0.2	2.883	A
D	1026	256	344	1025	327	1.6	2.0	6.215	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	328	82	976	326	152	0.9	0.7	5.886	A
B	417	104	1038	419	264	0.7	0.5	4.110	A
C	321	80	246	321	1211	0.2	0.3	2.719	A
D	835	209	295	833	272	2.0	1.0	4.842	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	270	68	806	269	125	0.7	0.4	4.932	A
B	353	88	864	353	212	0.5	0.5	3.874	A
C	257	64	200	256	1017	0.3	0.2	2.497	A
D	701	175	230	701	226	1.0	0.8	4.201	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	31	1030	0.030	31	0.0	0.0	3.361	A
			2	A,C,D	237	1030	0.230	238	0.0	0.4	4.603	A
	Exit	1	1	(A,B,C,D)	268			268	0.0	0.0	0.000	A
			1		125			125	0.0	0.0	0.000	A
B	Entry	1	1	C	340	1500	0.227	340	0.0	0.3	3.827	A
			2	A,B,D	21	1500	0.014	21	0.0	0.0	3.154	A
	Exit	1	1		221			221	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	275	2750	0.100	276	0.0	0.2	2.449	A
	Exit	1	1		1036			1036	0.0	0.0	0.000	A
D	Entry	1	1	A	70	1500	0.047	71	0.0	0.0	2.857	A
			2	B,C,D	630	1500	0.420	631	0.0	0.7	4.358	A
	Exit	1	1		225			225	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	40	962	0.041	40	0.0	0.0	3.788	A
			2	A,C,D	295	962	0.307	291	0.4	0.7	5.642	A
		2	1	(A,B,C,D)	335			335	0.0	0.0	0.000	A
	Exit	1	1		143			143	0.0	0.0	0.000	A
B	Entry	1	1	C	396	1500	0.264	395	0.3	0.6	4.275	A
			2	A,B,D	22	1500	0.015	22	0.0	0.0	3.088	A
	Exit	1	1		262			262	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	320	2702	0.119	320	0.2	0.3	2.635	A
	Exit	1	1		1214			1214	0.0	0.0	0.000	A
D	Entry	1	1	A	83	1500	0.055	83	0.0	0.1	2.826	A
			2	B,C,D	740	1500	0.493	742	0.7	0.9	5.097	A
	Exit	1	1		275			275	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	48	857	0.056	48	0.0	0.1	4.358	A
			2	A,C,D	344	857	0.401	342	0.7	0.8	7.686	A
		2	1	(A,B,C,D)	392			392	0.0	0.0	0.004	A
	Exit	1	1		183			183	0.0	0.0	0.000	A
B	Entry	1	1	C	490	1500	0.327	490	0.6	0.8	4.676	A
			2	A,B,D	27	1500	0.018	27	0.0	0.0	3.097	A
	Exit	1	1		315			315	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	390	2650	0.147	389	0.3	0.4	2.804	A
	Exit	1	1		1491			1491	0.0	0.0	0.000	A
D	Entry	1	1	A	103	1500	0.069	104	0.1	0.1	2.946	A
			2	B,C,D	916	1500	0.611	914	0.9	1.5	6.363	A
	Exit	1	1		327			327	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	47	859	0.054	46	0.1	0.1	4.327	A
			2	A,C,D	339	859	0.395	338	0.8	0.8	7.894	A
		2	1	(A,B,C,D)	386			386	0.0	0.0	0.001	A
	Exit	1	1		192			192	0.0	0.0	0.000	A
B	Entry	1	1	C	500	1500	0.334	500	0.8	0.6	4.489	A
			2	A,B,D	30	1500	0.020	29	0.0	0.0	3.072	A
	Exit	1	1		311			311	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	389	2653	0.146	390	0.4	0.2	2.883	A
	Exit	1	1		1499			1499	0.0	0.0	0.000	A
D	Entry	1	1	A	112	1500	0.075	112	0.1	0.1	3.139	A
			2	B,C,D	914	1500	0.609	913	1.5	1.9	6.555	A
	Exit	1	1		327			327	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	38	956	0.039	37	0.1	0.1	3.885	A
			2	A,C,D	291	956	0.304	289	0.8	0.6	6.182	A
	Exit	1	1	(A,B,C,D)	328			328	0.0	0.0	0.000	A
			1		152			152	0.0	0.0	0.000	A
B	Entry	1	1	C	391	1500	0.261	392	0.6	0.5	4.181	A
			2	A,B,D	27	1500	0.018	27	0.0	0.0	2.976	A
	Exit	1	1		264			264	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	321	2692	0.119	321	0.2	0.3	2.719	A
	Exit	1	1		1211			1211	0.0	0.0	0.000	A
D	Entry	1	1	A	84	1500	0.056	84	0.1	0.1	3.020	A
			2	B,C,D	751	1500	0.501	749	1.9	0.9	5.026	A
	Exit	1	1		272			272	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	32	1038	0.031	33	0.1	0.0	3.583	A
			2	A,C,D	238	1038	0.229	237	0.6	0.3	5.138	A
	Exit	1	1	(A,B,C,D)	270			270	0.0	0.0	0.000	A
			1		125			125	0.0	0.0	0.000	A
B	Entry	1	1	C	333	1500	0.222	333	0.5	0.5	3.925	A
			2	A,B,D	20	1500	0.013	20	0.0	0.0	3.046	A
	Exit	1	1		212			212	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	257	2743	0.094	256	0.3	0.2	2.497	A
	Exit	1	1		1017			1017	0.0	0.0	0.000	A
D	Entry	1	1	A	74	1500	0.050	74	0.1	0.1	2.776	A
			2	B,C,D	627	1500	0.418	627	0.9	0.8	4.354	A
	Exit	1	1		226			226	0.0	0.0	0.000	A

Do Minimum - 2023 Operational , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	4.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

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	2023 Operational	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	568	100.000
B		ONE HOUR	✓	374	100.000
C		ONE HOUR	✓	1287	100.000
D		ONE HOUR	✓	456	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	2	83	181	302
	B	93	1	280	0
	C	143	382	0	762
	D	265	2	188	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	13	2
	B	2	0	50	0
	C	9	25	0	7
	D	2	100	28	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	6.08	1.2	A	528	792
B	4.03	0.5	A	340	509
C	3.90	1.8	A	1179	1769
D	3.32	0.5	A	415	622

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	428	107	430	427	381	0.0	0.5	4.199	A
B	279	70	506	278	351	0.0	0.3	3.782	A
C	979	245	305	980	478	0.0	0.7	2.442	A
D	338	84	472	338	813	0.0	0.3	3.068	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	519	130	493	522	453	0.5	0.4	4.837	A
B	331	83	612	335	402	0.3	0.3	3.782	A
C	1127	282	365	1127	582	0.7	1.2	2.887	A
D	411	103	535	410	957	0.3	0.4	3.164	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	644	161	621	637	539	0.4	1.2	6.085	A
B	403	101	744	403	514	0.3	0.5	3.910	A
C	1393	348	434	1392	713	1.2	1.4	3.897	A
D	489	122	670	490	1155	0.4	0.5	3.316	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	629	157	648	631	562	1.2	1.0	5.939	A
B	408	102	748	410	530	0.5	0.5	4.027	A
C	1437	359	437	1432	721	1.4	1.8	3.884	A
D	510	128	699	511	1171	0.5	0.4	3.263	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	510	127	499	512	447	1.0	0.6	5.056	A
B	335	84	597	337	414	0.5	0.3	3.726	A
C	1156	289	360	1156	573	1.8	0.9	3.042	A
D	390	98	554	392	962	0.4	0.4	3.182	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	439	110	452	439	377	0.6	0.5	4.476	A
B	280	70	524	281	367	0.3	0.3	3.706	A
C	983	246	310	985	495	0.9	0.7	2.498	A
D	350	88	476	353	819	0.4	0.2	3.100	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	62	1219	0.051	62	0.0	0.0	2.853	A
			2	A,C,D	366	1219	0.300	364	0.0	0.5	4.438	A
	Exit	2	1	(A,B,C,D)	428			428	0.0	0.0	0.000	A
			1		381			381	0.0	0.0	0.000	A
B	Entry	1	1	C	206	1500	0.137	205	0.0	0.2	4.395	A
			2	A,B,D	73	1500	0.049	73	0.0	0.1	2.554	A
	Exit	1	1		351			351	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	979	2625	0.373	980	0.0	0.7	2.442	A
	Exit	1	1		478			478	0.0	0.0	0.000	A
D	Entry	1	1	A	194	1500	0.130	195	0.0	0.1	2.838	A
			2	B,C,D	144	1500	0.096	143	0.0	0.1	3.470	A
	Exit	1	1		813			813	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	77	1189	0.065	77	0.0	0.0	3.136	A
			2	A,C,D	442	1189	0.372	444	0.5	0.4	5.133	A
	Exit	2	1	(A,B,C,D)	519			519	0.0	0.0	0.006	A
			1		453			453	0.0	0.0	0.000	A
B	Entry	1	1	C	245	1500	0.163	248	0.2	0.3	4.410	A
			2	A,B,D	86	1500	0.058	86	0.1	0.0	2.496	A
	Exit	1	1		402			402	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1127	2559	0.441	1127	0.7	1.2	2.887	A
	Exit	1	1		582			582	0.0	0.0	0.000	A
D	Entry	1	1	A	241	1500	0.161	241	0.1	0.2	2.903	A
			2	B,C,D	170	1500	0.114	169	0.1	0.2	3.621	A
	Exit	1	1		957			957	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	97	1127	0.086	96	0.0	0.1	3.468	A
			2	A,C,D	547	1127	0.485	541	0.4	1.1	6.530	A
	Exit	2	1	(A,B,C,D)	644			644	0.0	0.0	0.024	A
			1		539			539	0.0	0.0	0.000	A
B	Entry	1	1	C	307	1500	0.205	307	0.3	0.4	4.476	A
			2	A,B,D	95	1500	0.064	96	0.0	0.1	2.739	A
	Exit	1	1		514			514	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1393	2482	0.561	1392	1.2	1.4	3.897	A
	Exit	1	1		713			713	0.0	0.0	0.000	A
D	Entry	1	1	A	286	1500	0.191	286	0.2	0.3	3.096	A
			2	B,C,D	203	1500	0.135	204	0.2	0.2	3.701	A
	Exit	1	1		1155			1155	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	93	1114	0.084	93	0.1	0.1	3.613	A
			2	A,C,D	536	1114	0.481	538	1.1	0.9	6.350	A
	Exit	1	1	(A,B,C,D)	629			629	0.0	0.0	0.006	A
			1		562			562	0.0	0.0	0.000	A
B	Entry	1	1	C	305	1500	0.203	305	0.4	0.4	4.753	A
			2	A,B,D	104	1500	0.069	105	0.1	0.1	2.578	A
	Exit	1	1		530			530	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1437	2478	0.580	1432	1.4	1.8	3.884	A
	Exit	1	1		721			721	0.0	0.0	0.000	A
D	Entry	1	1	A	298	1500	0.199	299	0.3	0.3	3.066	A
			2	B,C,D	212	1500	0.141	212	0.2	0.2	3.619	A
	Exit	1	1		1171			1171	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	77	1185	0.065	77	0.1	0.1	3.278	A
			2	A,C,D	432	1185	0.365	434	0.9	0.6	5.380	A
	Exit	1	1	(A,B,C,D)	510			510	0.0	0.0	0.000	A
			1		447			447	0.0	0.0	0.000	A
B	Entry	1	1	C	249	1500	0.166	250	0.4	0.2	4.284	A
			2	A,B,D	87	1500	0.058	87	0.1	0.1	2.614	A
	Exit	1	1		414			414	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1156	2564	0.451	1156	1.8	0.9	3.042	A
	Exit	1	1		573			573	0.0	0.0	0.000	A
D	Entry	1	1	A	230	1500	0.153	229	0.3	0.2	2.964	A
			2	B,C,D	161	1500	0.107	163	0.2	0.1	3.565	A
	Exit	1	1		962			962	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	63	1208	0.052	63	0.1	0.0	3.167	A
			2	A,C,D	377	1208	0.312	376	0.6	0.4	4.713	A
	Exit	1	1	(A,B,C,D)	439			439	0.0	0.0	0.002	A
			1		377			377	0.0	0.0	0.000	A
B	Entry	1	1	C	208	1500	0.139	209	0.2	0.2	4.257	A
			2	A,B,D	72	1500	0.048	72	0.1	0.1	2.618	A
	Exit	1	1		367			367	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	983	2621	0.375	985	0.9	0.7	2.498	A
	Exit	1	1		495			495	0.0	0.0	0.000	A
D	Entry	1	1	A	202	1500	0.134	203	0.2	0.2	2.833	A
			2	B,C,D	149	1500	0.099	150	0.1	0.1	3.552	A
	Exit	1	1		819			819	0.0	0.0	0.000	A

Do Minimum - 2024 Operational, Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	5.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	366	100.000
B		ONE HOUR	✓	502	100.000
C		ONE HOUR	✓	397	100.000
D		ONE HOUR	✓	973	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A	B	C	D
From	A	0	44	84	238
	B	25	1	475	1
	C	52	263	0	82
	D	97	0	876	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A	B	C	D
From	A	0	0	36	3
	B	36	0	26	0
	C	47	75	0	13
	D	14	0	4	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	8.96	1.2	A	345	517
B	4.83	0.9	A	450	674
C	2.52	0.4	A	362	544
D	6.77	1.7	A	889	1334

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	283	71	855	283	131	0.0	0.4	4.743	A
B	370	92	905	373	233	0.0	0.3	4.080	A
C	306	77	202	306	1076	0.0	0.2	2.284	A
D	727	182	259	727	249	0.0	1.1	4.308	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	340	85	1043	342	160	0.4	0.6	5.866	A
B	435	109	1099	434	286	0.3	0.6	4.311	A
C	374	94	244	372	1289	0.2	0.3	2.329	A
D	883	221	318	886	298	1.1	1.4	5.348	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	404	101	1264	399	188	0.6	1.2	8.083	A
B	534	133	1330	532	333	0.6	0.9	4.727	A
C	426	106	289	424	1574	0.3	0.4	2.523	A
D	1082	271	365	1087	347	1.4	1.7	6.635	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	417	104	1225	420	190	1.2	1.1	8.964	A
B	541	135	1303	539	340	0.9	0.7	4.835	A
C	435	109	295	434	1547	0.4	0.4	2.489	A
D	1041	260	372	1043	358	1.7	1.7	6.773	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	344	86	1023	344	153	1.1	0.6	5.980	A
B	436	109	1091	438	277	0.7	0.5	4.225	A
C	349	87	245	350	1283	0.4	0.2	2.395	A
D	880	220	300	876	296	1.7	1.3	5.114	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	279	70	841	279	130	0.6	0.3	5.106	A
B	382	95	898	382	221	0.5	0.5	3.905	A
C	283	71	207	283	1074	0.2	0.2	2.332	A
D	722	181	245	726	245	1.3	0.7	4.269	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	32	1014	0.031	31	0.0	0.0	3.458	A
			2	A,C,D	252	1014	0.248	251	0.0	0.3	4.938	A
	Exit	2	1	(A,B,C,D)	283			283	0.0	0.0	0.000	A
			1		131			131	0.0	0.0	0.000	A
B	Entry	1	1	C	350	1500	0.234	353	0.0	0.3	4.114	A
			2	A,B,D	19	1500	0.013	20	0.0	0.0	3.486	A
	Exit	1	1		233			233	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	306	2742	0.112	306	0.0	0.2	2.284	A
	Exit	1	1		1076			1076	0.0	0.0	0.000	A
D	Entry	1	1	A	73	1500	0.049	73	0.0	0.1	2.912	A
			2	B,C,D	654	1500	0.436	654	0.0	1.0	4.455	A
	Exit	1	1		249			249	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	40	923	0.043	40	0.0	0.0	3.981	A
			2	A,C,D	300	923	0.325	302	0.3	0.5	6.139	A
	Exit	2	1	(A,B,C,D)	340			340	0.0	0.0	0.002	A
			1		160			160	0.0	0.0	0.000	A
B	Entry	1	1	C	411	1500	0.274	410	0.3	0.6	4.369	A
			2	A,B,D	24	1500	0.016	24	0.0	0.0	3.203	A
	Exit	1	1		286			286	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	374	2695	0.139	372	0.2	0.3	2.329	A
	Exit	1	1		1289			1289	0.0	0.0	0.000	A
D	Entry	1	1	A	88	1500	0.059	89	0.1	0.1	2.975	A
			2	B,C,D	795	1500	0.530	797	1.0	1.4	5.579	A
	Exit	1	1		298			298	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	47	817	0.058	48	0.0	0.0	4.671	A
			2	A,C,D	356	817	0.436	351	0.5	1.2	8.579	A
	Exit	2	1	(A,B,C,D)	404			403	0.0	0.0	0.020	A
			1		188			188	0.0	0.0	0.000	A
B	Entry	1	1	C	506	1500	0.337	504	0.6	0.9	4.801	A
			2	A,B,D	28	1500	0.019	28	0.0	0.0	3.378	A
	Exit	1	1		333			333	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	426	2644	0.161	424	0.3	0.4	2.523	A
	Exit	1	1		1574			1574	0.0	0.0	0.000	A
D	Entry	1	1	A	108	1500	0.072	108	0.1	0.1	3.031	A
			2	B,C,D	974	1500	0.650	979	1.4	1.6	7.013	A
	Exit	1	1		347			347	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	54	836	0.064	53	0.0	0.1	4.984	A
			2	A,C,D	363	836	0.435	367	1.2	1.0	9.566	A
		2	1	(A,B,C,D)	417			418	0.0	0.0	0.014	A
	Exit	1	1		190			190	0.0	0.0	0.000	A
B	Entry	1	1	C	512	1500	0.341	510	0.9	0.7	4.917	A
			2	A,B,D	28	1500	0.019	29	0.0	0.0	3.262	A
	Exit	1	1		340			340	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	435	2637	0.165	434	0.4	0.4	2.489	A
	Exit	1	1		1547			1547	0.0	0.0	0.000	A
D	Entry	1	1	A	105	1500	0.070	106	0.1	0.0	3.151	A
			2	B,C,D	935	1500	0.623	937	1.6	1.6	7.142	A
	Exit	1	1		358			358	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	40	933	0.043	40	0.1	0.1	4.301	A
			2	A,C,D	304	933	0.325	304	1.0	0.5	6.231	A
		2	1	(A,B,C,D)	344			344	0.0	0.0	0.001	A
	Exit	1	1		153			153	0.0	0.0	0.000	A
B	Entry	1	1	C	413	1500	0.275	415	0.7	0.5	4.297	A
			2	A,B,D	23	1500	0.016	23	0.0	0.0	2.885	A
	Exit	1	1		277			277	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	349	2693	0.130	350	0.4	0.2	2.395	A
	Exit	1	1		1283			1283	0.0	0.0	0.000	A
D	Entry	1	1	A	90	1500	0.060	90	0.0	0.1	2.992	A
			2	B,C,D	790	1500	0.527	786	1.6	1.2	5.326	A
	Exit	1	1		296			296	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	33	1021	0.032	33	0.1	0.0	3.834	A
			2	A,C,D	246	1021	0.241	246	0.5	0.3	5.297	A
		2	1	(A,B,C,D)	279			279	0.0	0.0	0.000	A
	Exit	1	1		130			130	0.0	0.0	0.000	A
B	Entry	1	1	C	359	1500	0.239	360	0.5	0.5	3.944	A
			2	A,B,D	23	1500	0.015	23	0.0	0.0	3.224	A
	Exit	1	1		221			221	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	283	2736	0.103	283	0.2	0.2	2.332	A
	Exit	1	1		1074			1074	0.0	0.0	0.000	A
D	Entry	1	1	A	74	1500	0.049	74	0.1	0.0	2.872	A
			2	B,C,D	649	1500	0.432	653	1.2	0.7	4.412	A
	Exit	1	1		245			245	0.0	0.0	0.000	A

Do Minimum - 2024 Operational, Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	4.76	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 Operational	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	578	100.000
B		ONE HOUR	✓	408	100.000
C		ONE HOUR	✓	1371	100.000
D		ONE HOUR	✓	481	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A	B	C	D
From	A	2	83	189	304
	B	94	1	313	0
	C	150	412	0	809
	D	268	2	210	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A	B	C	D
From	A	0	0	14	2
	B	2	0	53	0
	C	9	26	0	9
	D	2	100	26	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	6.86	1.3	A	533	799
B	4.19	0.6	A	378	567
C	4.54	2.3	A	1267	1900
D	3.35	0.7	A	444	666

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	434	109	467	438	391	0.0	0.4	4.220	A
B	313	78	531	312	373	0.0	0.5	3.751	A
C	1025	256	304	1024	539	0.0	0.8	2.634	A
D	366	92	493	366	836	0.0	0.3	3.117	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	535	134	569	536	448	0.4	0.9	5.285	A
B	365	91	646	365	459	0.5	0.4	4.067	A
C	1226	307	367	1226	644	0.8	1.1	3.145	A
D	419	105	598	419	996	0.3	0.4	3.171	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	637	159	706	636	579	0.9	1.3	6.534	A
B	443	111	788	444	553	0.4	0.6	4.152	A
C	1544	386	448	1540	785	1.1	2.3	4.545	A
D	540	135	745	540	1243	0.4	0.5	3.239	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	626	156	705	624	570	1.3	1.1	6.862	A
B	473	118	778	472	552	0.6	0.6	4.193	A
C	1526	381	433	1521	817	2.3	2.2	4.522	A
D	552	138	726	550	1227	0.5	0.7	3.348	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	528	132	570	529	449	1.1	0.6	5.364	A
B	363	91	638	364	462	0.6	0.3	3.882	A
C	1256	314	365	1256	637	2.2	1.3	3.266	A
D	421	105	599	419	1021	0.7	0.5	3.132	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	435	109	471	436	391	0.6	0.4	4.560	A
B	310	78	536	311	370	0.3	0.3	3.854	A
C	1024	256	306	1023	541	1.3	0.9	2.770	A
D	366	92	494	368	834	0.5	0.4	3.126	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	64	1201	0.053	65	0.0	0.0	3.019	A
			2	A,C,D	370	1201	0.308	373	0.0	0.4	4.431	A
	Exit	2	1	(A,B,C,D)	434			434	0.0	0.0	0.000	A
			1		391			391	0.0	0.0	0.000	A
B	Entry	1	1	C	241	1500	0.161	240	0.0	0.4	4.284	A
			2	A,B,D	72	1500	0.048	72	0.0	0.1	2.622	A
	Exit	1	1		373			373	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1025	2627	0.390	1024	0.0	0.8	2.634	A
	Exit	1	1		539			539	0.0	0.0	0.000	A
D	Entry	1	1	A	207	1500	0.138	207	0.0	0.1	2.942	A
			2	B,C,D	159	1500	0.106	159	0.0	0.2	3.395	A
	Exit	1	1		836			836	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	76	1152	0.066	75	0.0	0.1	3.346	A
			2	A,C,D	459	1152	0.399	461	0.4	0.7	5.624	A
	Exit	2	1	(A,B,C,D)	535			535	0.0	0.0	0.003	A
			1		448			448	0.0	0.0	0.000	A
B	Entry	1	1	C	281	1500	0.187	281	0.4	0.4	4.700	A
			2	A,B,D	84	1500	0.056	84	0.1	0.0	2.628	A
	Exit	1	1		459			459	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1226	2556	0.480	1226	0.8	1.1	3.145	A
	Exit	1	1		644			644	0.0	0.0	0.000	A
D	Entry	1	1	A	232	1500	0.155	233	0.1	0.1	2.852	A
			2	B,C,D	188	1500	0.125	186	0.2	0.3	3.655	A
	Exit	1	1		996			996	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	87	1086	0.081	88	0.1	0.1	3.466	A
			2	A,C,D	550	1086	0.506	548	0.7	1.1	7.028	A
	Exit	2	1	(A,B,C,D)	637			637	0.0	0.0	0.030	A
			1		579			579	0.0	0.0	0.000	A
B	Entry	1	1	C	335	1500	0.223	337	0.4	0.5	4.883	A
			2	A,B,D	108	1500	0.072	108	0.0	0.1	2.571	A
	Exit	1	1		553			553	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1544	2466	0.626	1540	1.1	2.3	4.545	A
	Exit	1	1		785			785	0.0	0.0	0.000	A
D	Entry	1	1	A	299	1500	0.199	298	0.1	0.3	2.968	A
			2	B,C,D	242	1500	0.161	242	0.3	0.2	3.656	A
	Exit	1	1		1243			1243	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	92	1086	0.085	92	0.1	0.1	3.441	A
			2	A,C,D	534	1086	0.491	532	1.1	1.0	7.424	A
	Exit	1	1	(A,B,C,D)	626			626	0.0	0.0	0.057	A
			1		570			570	0.0	0.0	0.000	A
B	Entry	1	1	C	366	1500	0.244	366	0.5	0.5	4.910	A
			2	A,B,D	106	1500	0.071	106	0.1	0.1	2.630	A
	Exit	1	1		552			552	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1526	2482	0.615	1521	2.3	2.2	4.522	A
	Exit	1	1		817			817	0.0	0.0	0.000	A
D	Entry	1	1	A	302	1500	0.201	301	0.3	0.3	3.152	A
			2	B,C,D	250	1500	0.167	249	0.2	0.4	3.654	A
	Exit	1	1		1227			1227	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	77	1152	0.067	77	0.1	0.1	3.287	A
			2	A,C,D	450	1152	0.391	452	1.0	0.5	5.732	A
	Exit	1	1	(A,B,C,D)	528			528	0.0	0.0	0.006	A
			1		449			449	0.0	0.0	0.000	A
B	Entry	1	1	C	281	1500	0.187	281	0.5	0.3	4.505	A
			2	A,B,D	82	1500	0.055	83	0.1	0.1	2.443	A
	Exit	1	1		462			462	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1256	2559	0.491	1256	2.2	1.3	3.266	A
	Exit	1	1		637			637	0.0	0.0	0.000	A
D	Entry	1	1	A	232	1500	0.155	231	0.3	0.2	2.924	A
			2	B,C,D	189	1500	0.126	188	0.4	0.3	3.448	A
	Exit	1	1		1021			1021	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	62	1199	0.052	62	0.1	0.1	3.183	A
			2	A,C,D	373	1199	0.311	374	0.5	0.3	4.797	A
	Exit	1	1	(A,B,C,D)	435			435	0.0	0.0	0.000	A
			1		391			391	0.0	0.0	0.000	A
B	Entry	1	1	C	238	1500	0.159	238	0.3	0.3	4.488	A
			2	A,B,D	72	1500	0.048	73	0.1	0.1	2.527	A
	Exit	1	1		370			370	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1024	2625	0.390	1023	1.3	0.9	2.770	A
	Exit	1	1		541			541	0.0	0.0	0.000	A
D	Entry	1	1	A	204	1500	0.136	204	0.2	0.1	2.938	A
			2	B,C,D	163	1500	0.109	164	0.3	0.2	3.425	A
	Exit	1	1		834			834	0.0	0.0	0.000	A

Do Minimum - 2030 Operational , Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	6.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2030 Operational	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	377	100.000
B		ONE HOUR	✓	520	100.000
C		ONE HOUR	✓	420	100.000
D		ONE HOUR	✓	1029	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A	B	C	D
From	A	0	44	87	246
	B	26	1	492	1
	C	54	273	0	93
	D	101	0	928	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A	B	C	D
From	A	0	0	35	2
	B	21	0	26	0
	C	48	74	0	53
	D	12	0	5	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	9.05	1.1	A	347	520
B	4.85	0.7	A	478	716
C	2.79	0.5	A	388	582
D	7.88	2.5	A	942	1414

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	286	71	896	285	136	0.0	0.4	4.815	A
B	397	99	945	397	236	0.0	0.5	4.050	A
C	315	79	211	315	1131	0.0	0.2	2.431	A
D	766	192	264	768	261	0.0	0.9	4.530	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	345	86	1088	344	160	0.4	0.7	6.247	A
B	472	118	1144	472	288	0.5	0.7	4.409	A
C	382	95	250	382	1365	0.2	0.3	2.596	A
D	932	233	319	929	313	0.9	1.6	5.610	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	411	103	1314	411	199	0.7	1.0	8.582	A
B	573	143	1380	576	345	0.7	0.7	4.846	A
C	460	115	298	459	1658	0.3	0.5	2.793	A
D	1128	282	385	1128	372	1.6	2.5	7.794	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	414	103	1326	413	199	1.0	1.1	9.049	A
B	573	143	1385	575	354	0.7	0.7	4.765	A
C	467	117	300	467	1660	0.5	0.4	2.781	A
D	1130	282	394	1132	373	2.5	2.5	7.880	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	339	85	1075	338	162	1.1	0.6	6.549	A
B	463	116	1130	463	284	0.7	0.6	4.414	A
C	376	94	246	377	1346	0.4	0.3	2.613	A
D	921	230	315	922	308	2.5	1.5	5.639	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	285	71	913	284	139	0.6	0.4	5.304	A
B	388	97	951	387	246	0.6	0.5	4.035	A
C	328	82	206	328	1133	0.3	0.2	2.516	A
D	777	194	275	777	259	1.5	1.1	4.538	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	33	994	0.034	33	0.0	0.0	3.506	A
			2	A,C,D	252	994	0.254	252	0.0	0.4	5.006	A
	Exit	2	1	(A,B,C,D)	286			286	0.0	0.0	0.000	A
			1		136			136	0.0	0.0	0.000	A
B	Entry	1	1	C	375	1500	0.250	375	0.0	0.5	4.134	A
			2	A,B,D	22	1500	0.015	22	0.0	0.0	2.726	A
	Exit	1	1		236			236	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	315	2732	0.115	315	0.0	0.2	2.431	A
	Exit	1	1		1131			1131	0.0	0.0	0.000	A
D	Entry	1	1	A	75	1500	0.050	75	0.0	0.1	2.796	A
			2	B,C,D	692	1500	0.461	693	0.0	0.9	4.709	A
	Exit	1	1		261			261	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	39	902	0.043	39	0.0	0.0	4.194	A
			2	A,C,D	306	902	0.340	305	0.4	0.7	6.544	A
	Exit	2	1	(A,B,C,D)	345			345	0.0	0.0	0.001	A
			1		160			160	0.0	0.0	0.000	A
B	Entry	1	1	C	447	1500	0.298	447	0.5	0.7	4.499	A
			2	A,B,D	24	1500	0.016	25	0.0	0.0	2.887	A
	Exit	1	1		288			288	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	382	2687	0.142	382	0.2	0.3	2.596	A
	Exit	1	1		1365			1365	0.0	0.0	0.000	A
D	Entry	1	1	A	91	1500	0.061	90	0.1	0.1	2.865	A
			2	B,C,D	841	1500	0.561	839	0.9	1.5	5.891	A
	Exit	1	1		313			313	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	49	793	0.062	49	0.0	0.0	4.674	A
			2	A,C,D	362	793	0.457	362	0.7	1.0	9.100	A
	Exit	2	1	(A,B,C,D)	411			411	0.0	0.0	0.038	A
			1		199			199	0.0	0.0	0.000	A
B	Entry	1	1	C	541	1500	0.360	544	0.7	0.6	4.967	A
			2	A,B,D	32	1500	0.021	32	0.0	0.0	2.845	A
	Exit	1	1		345			345	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	460	2634	0.175	459	0.3	0.5	2.793	A
	Exit	1	1		1658			1658	0.0	0.0	0.000	A
D	Entry	1	1	A	110	1500	0.073	110	0.1	0.1	2.909	A
			2	B,C,D	1018	1500	0.679	1018	1.5	2.4	8.298	A
	Exit	1	1		372			372	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	49	787	0.062	48	0.0	0.1	4.926	A
			2	A,C,D	365	787	0.464	365	1.0	1.0	9.590	A
		2	1	(A,B,C,D)	414			414	0.0	0.0	0.054	A
	Exit	1	1		199			199	0.0	0.0	0.000	A
B	Entry	1	1	C	541	1500	0.361	542	0.6	0.7	4.875	A
			2	A,B,D	32	1500	0.021	32	0.0	0.0	2.991	A
	Exit	1	1		354			354	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	467	2632	0.177	467	0.5	0.4	2.781	A
	Exit	1	1		1660			1660	0.0	0.0	0.000	A
D	Entry	1	1	A	111	1500	0.074	111	0.1	0.1	2.869	A
			2	B,C,D	1019	1500	0.679	1020	2.4	2.3	8.385	A
	Exit	1	1		373			373	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	40	908	0.044	39	0.1	0.0	4.283	A
			2	A,C,D	299	908	0.329	298	1.0	0.6	6.879	A
		2	1	(A,B,C,D)	339			339	0.0	0.0	0.001	A
	Exit	1	1		162			162	0.0	0.0	0.000	A
B	Entry	1	1	C	438	1500	0.292	438	0.7	0.6	4.503	A
			2	A,B,D	25	1500	0.017	25	0.0	0.0	2.937	A
	Exit	1	1		284			284	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	376	2692	0.140	377	0.4	0.3	2.613	A
	Exit	1	1		1346			1346	0.0	0.0	0.000	A
D	Entry	1	1	A	91	1500	0.060	91	0.1	0.0	2.919	A
			2	B,C,D	831	1500	0.554	831	2.3	1.4	5.918	A
	Exit	1	1		308			308	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	33	986	0.034	33	0.0	0.0	3.863	A
			2	A,C,D	251	986	0.255	251	0.6	0.4	5.512	A
		2	1	(A,B,C,D)	285			285	0.0	0.0	0.000	A
	Exit	1	1		139			139	0.0	0.0	0.000	A
B	Entry	1	1	C	368	1500	0.245	367	0.6	0.5	4.102	A
			2	A,B,D	20	1500	0.014	20	0.0	0.0	2.909	A
	Exit	1	1		246			246	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	328	2737	0.120	328	0.3	0.2	2.516	A
	Exit	1	1		1133			1133	0.0	0.0	0.000	A
D	Entry	1	1	A	76	1500	0.051	76	0.0	0.1	2.809	A
			2	B,C,D	701	1500	0.467	700	1.4	1.0	4.714	A
	Exit	1	1		259			259	0.0	0.0	0.000	A

Do Minimum - 2030 Operational , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	5.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2030 Operational	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	585	100.000
B		ONE HOUR	✓	419	100.000
C		ONE HOUR	✓	1441	100.000
D		ONE HOUR	✓	505	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A	B	C	D
From	A	2	83	192	308
	B	97	1	321	0
	C	156	427	0	858
	D	277	2	225	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A	B	C	D
From	A	0	0	15	2
	B	2	0	53	0
	C	9	26	0	6
	D	2	100	25	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	7.15	1.4	A	537	805
B	4.25	0.7	A	383	575
C	4.94	2.1	A	1314	1971
D	3.36	0.5	A	464	695

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	456	114	506	454	401	0.0	0.7	4.494	A
B	316	79	565	317	395	0.0	0.4	3.875	A
C	1080	270	310	1083	572	0.0	0.9	2.677	A
D	389	97	515	390	877	0.0	0.3	3.103	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	523	131	569	522	478	0.7	0.9	5.375	A
B	367	92	646	369	445	0.4	0.4	3.901	A
C	1275	319	363	1267	652	0.9	1.7	3.143	A
D	453	113	593	453	1037	0.3	0.4	3.118	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	633	158	720	632	598	0.9	1.4	6.665	A
B	455	114	788	458	563	0.4	0.5	4.173	A
C	1584	396	436	1592	811	1.7	1.9	4.936	A
D	568	142	750	568	1278	0.4	0.4	3.328	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	645	161	708	646	588	1.4	1.4	7.155	A
B	471	118	800	471	555	0.5	0.7	4.254	A
C	1581	395	456	1582	816	1.9	2.1	4.894	A
D	549	137	747	549	1293	0.4	0.5	3.364	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	525	131	583	521	478	1.4	1.1	5.257	A
B	378	94	651	378	452	0.7	0.5	3.970	A
C	1288	322	365	1289	664	2.1	1.3	3.271	A
D	459	115	602	459	1052	0.5	0.4	3.250	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	439	110	493	440	382	1.1	0.6	4.782	A
B	313	78	542	312	390	0.5	0.5	3.854	A
C	1075	269	309	1076	544	1.3	0.7	2.744	A
D	362	90	513	361	872	0.4	0.3	3.051	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	68	1182	0.057	67	0.0	0.1	3.104	A
			2	A,C,D	389	1182	0.329	387	0.0	0.6	4.741	A
	Exit	2	1	(A,B,C,D)	456			456	0.0	0.0	0.000	A
			1		401			401	0.0	0.0	0.000	A
B	Entry	1	1	C	244	1500	0.162	244	0.0	0.3	4.444	A
			2	A,B,D	73	1500	0.048	73	0.0	0.1	2.583	A
	Exit	1	1		395			395	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1080	2620	0.412	1083	0.0	0.9	2.677	A
	Exit	1	1		572			572	0.0	0.0	0.000	A
D	Entry	1	1	A	211	1500	0.141	211	0.0	0.1	2.760	A
			2	B,C,D	179	1500	0.119	179	0.0	0.2	3.607	A
	Exit	1	1		877			877	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	74	1152	0.064	72	0.1	0.1	3.396	A
			2	A,C,D	450	1152	0.390	450	0.6	0.8	5.735	A
	Exit	2	1	(A,B,C,D)	523			523	0.0	0.0	0.005	A
			1		478			478	0.0	0.0	0.000	A
B	Entry	1	1	C	281	1500	0.187	283	0.3	0.3	4.498	A
			2	A,B,D	86	1500	0.058	86	0.1	0.1	2.591	A
	Exit	1	1		445			445	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1275	2561	0.498	1267	0.9	1.7	3.143	A
	Exit	1	1		652			652	0.0	0.0	0.000	A
D	Entry	1	1	A	257	1500	0.172	257	0.1	0.3	2.878	A
			2	B,C,D	196	1500	0.131	197	0.2	0.1	3.485	A
	Exit	1	1		1037			1037	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	90	1079	0.083	89	0.1	0.1	3.523	A
			2	A,C,D	543	1079	0.503	542	0.8	1.2	7.116	A
	Exit	2	1	(A,B,C,D)	633			633	0.0	0.0	0.082	A
			1		598			598	0.0	0.0	0.000	A
B	Entry	1	1	C	351	1500	0.234	353	0.3	0.3	4.858	A
			2	A,B,D	105	1500	0.070	105	0.1	0.1	2.677	A
	Exit	1	1		563			563	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1584	2479	0.639	1592	1.7	1.9	4.936	A
	Exit	1	1		811			811	0.0	0.0	0.000	A
D	Entry	1	1	A	319	1500	0.213	319	0.3	0.2	3.037	A
			2	B,C,D	249	1500	0.166	249	0.1	0.3	3.775	A
	Exit	1	1		1278			1278	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	90	1085	0.083	89	0.1	0.1	3.606	A
			2	A,C,D	554	1085	0.511	557	1.2	1.3	7.695	A
	Exit	1	1	(A,B,C,D)	645			645	0.0	0.0	0.083	A
			1		588			588	0.0	0.0	0.000	A
B	Entry	1	1	C	359	1500	0.240	358	0.3	0.6	5.002	A
			2	A,B,D	113	1500	0.075	112	0.1	0.1	2.663	A
	Exit	1	1		555			555	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1581	2457	0.643	1582	1.9	2.1	4.894	A
	Exit	1	1		816			816	0.0	0.0	0.000	A
D	Entry	1	1	A	305	1500	0.203	305	0.2	0.3	3.128	A
			2	B,C,D	245	1500	0.163	245	0.3	0.2	3.714	A
	Exit	1	1		1293			1293	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	75	1145	0.065	75	0.1	0.0	3.480	A
			2	A,C,D	450	1145	0.393	446	1.3	1.0	5.561	A
	Exit	1	1	(A,B,C,D)	525			525	0.0	0.0	0.003	A
			1		478			478	0.0	0.0	0.000	A
B	Entry	1	1	C	290	1500	0.194	290	0.6	0.5	4.586	A
			2	A,B,D	88	1500	0.059	88	0.1	0.1	2.593	A
	Exit	1	1		452			452	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1288	2558	0.503	1289	2.1	1.3	3.271	A
	Exit	1	1		664			664	0.0	0.0	0.000	A
D	Entry	1	1	A	253	1500	0.169	253	0.3	0.2	3.004	A
			2	B,C,D	206	1500	0.138	206	0.2	0.2	3.615	A
	Exit	1	1		1052			1052	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	63	1189	0.053	62	0.0	0.1	3.285	A
			2	A,C,D	376	1189	0.316	377	1.0	0.5	5.051	A
	Exit	1	1	(A,B,C,D)	439			439	0.0	0.0	0.000	A
			1		382			382	0.0	0.0	0.000	A
B	Entry	1	1	C	243	1500	0.162	241	0.5	0.5	4.468	A
			2	A,B,D	71	1500	0.047	71	0.1	0.0	2.481	A
	Exit	1	1		390			390	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1075	2621	0.410	1076	1.3	0.7	2.744	A
	Exit	1	1		544			544	0.0	0.0	0.000	A
D	Entry	1	1	A	195	1500	0.130	196	0.2	0.2	2.884	A
			2	B,C,D	166	1500	0.111	166	0.2	0.1	3.294	A
	Exit	1	1		872			872	0.0	0.0	0.000	A

Do Minimum - 2023 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	5.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2023 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	360	100.000
B		ONE HOUR	✓	509	100.000
C		ONE HOUR	✓	422	100.000
D		ONE HOUR	✓	963	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	44	80	236
	B	25	1	482	1
	C	48	275	0	99
	D	96	0	867	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	37	2
	B	21	0	28	0
	C	50	77	0	85
	D	12	0	7	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	8.37	0.9	A	333	500
B	4.83	0.6	A	459	689
C	2.96	0.5	A	386	579
D	6.92	2.5	A	879	1318

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	275	69	866	274	123	0.0	0.5	4.741	A
B	374	94	900	375	240	0.0	0.4	4.282	A
C	317	79	194	317	1081	0.0	0.3	2.597	A
D	722	181	264	725	248	0.0	0.8	4.431	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	331	83	1022	329	153	0.5	0.7	5.826	A
B	453	113	1067	451	283	0.4	0.6	4.343	A
C	379	95	239	377	1280	0.3	0.4	2.691	A
D	866	216	309	866	306	0.8	1.2	5.207	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	398	100	1247	401	189	0.7	0.7	8.113	A
B	550	138	1293	552	355	0.6	0.6	4.827	A
C	469	117	297	469	1548	0.4	0.3	2.806	A
D	1053	263	386	1050	380	1.2	2.5	6.742	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	406	101	1253	407	191	0.7	0.9	8.375	A
B	553	138	1311	555	348	0.6	0.6	4.709	A
C	467	117	299	466	1567	0.3	0.5	2.961	A
D	1061	265	383	1061	382	2.5	2.0	6.924	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	317	79	1004	316	151	0.9	0.5	6.260	A
B	445	111	1041	447	279	0.6	0.5	4.222	A
C	365	91	231	364	1257	0.5	0.3	2.704	A
D	849	212	306	849	288	2.0	1.3	5.487	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	272	68	858	271	125	0.5	0.4	4.967	A
B	379	95	881	378	248	0.5	0.6	4.116	A
C	319	80	194	320	1065	0.3	0.2	2.554	A
D	721	180	263	720	250	1.3	1.1	4.728	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	32	1009	0.031	32	0.0	0.0	3.411	A
			2	A,C,D	243	1009	0.241	242	0.0	0.4	4.940	A
	Exit	2	1	(A,B,C,D)	275			275	0.0	0.0	0.000	A
			1		123			123	0.0	0.0	0.000	A
B	Entry	1	1	C	358	1500	0.239	358	0.0	0.4	4.352	A
			2	A,B,D	17	1500	0.011	17	0.0	0.0	3.003	A
	Exit	1	1		240			240	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	317	2750	0.115	317	0.0	0.3	2.597	A
	Exit	1	1		1081			1081	0.0	0.0	0.000	A
D	Entry	1	1	A	67	1500	0.045	68	0.0	0.0	2.840	A
			2	B,C,D	655	1500	0.437	657	0.0	0.7	4.599	A
	Exit	1	1		248			248	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	39	934	0.042	39	0.0	0.1	4.002	A
			2	A,C,D	292	934	0.312	289	0.4	0.6	6.094	A
	Exit	2	1	(A,B,C,D)	331			331	0.0	0.0	0.003	A
			1		153			153	0.0	0.0	0.000	A
B	Entry	1	1	C	430	1500	0.287	428	0.4	0.6	4.426	A
			2	A,B,D	24	1500	0.016	24	0.0	0.0	3.016	A
	Exit	1	1		283			283	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	379	2701	0.140	377	0.3	0.4	2.691	A
	Exit	1	1		1280			1280	0.0	0.0	0.000	A
D	Entry	1	1	A	88	1500	0.059	88	0.0	0.1	2.811	A
			2	B,C,D	778	1500	0.519	778	0.7	1.1	5.471	A
	Exit	1	1		306			306	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	49	825	0.060	49	0.1	0.1	4.430	A
			2	A,C,D	349	825	0.423	352	0.6	0.7	8.627	A
		2	1	(A,B,C,D)	398			398	0.0	0.0	0.023	A
	Exit	1	1		189			189	0.0	0.0	0.000	A
B	Entry	1	1	C	521	1500	0.347	522	0.6	0.6	4.939	A
			2	A,B,D	29	1500	0.020	29	0.0	0.0	2.934	A
	Exit	1	1		355			355	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	469	2635	0.178	469	0.4	0.3	2.806	A
	Exit	1	1		1548			1548	0.0	0.0	0.000	A
D	Entry	1	1	A	109	1500	0.073	109	0.1	0.1	2.973	A
			2	B,C,D	944	1500	0.629	941	1.1	2.3	7.148	A
	Exit	1	1		380			380	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	49	822	0.060	49	0.1	0.1	4.876	A
			2	A,C,D	357	822	0.434	358	0.7	0.8	8.889	A
		2	1	(A,B,C,D)	406			406	0.0	0.0	0.005	A
	Exit	1	1		191			191	0.0	0.0	0.000	A
B	Entry	1	1	C	524	1500	0.349	526	0.6	0.6	4.814	A
			2	A,B,D	29	1500	0.020	29	0.0	0.0	2.939	A
	Exit	1	1		348			348	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	467	2633	0.178	466	0.3	0.5	2.961	A
	Exit	1	1		1567			1567	0.0	0.0	0.000	A
D	Entry	1	1	A	107	1500	0.071	108	0.1	0.1	2.900	A
			2	B,C,D	953	1500	0.636	953	2.3	1.9	7.357	A
	Exit	1	1		382			382	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	41	942	0.043	41	0.1	0.0	4.119	A
			2	A,C,D	276	942	0.293	275	0.8	0.5	6.579	A
		2	1	(A,B,C,D)	317			317	0.0	0.0	0.001	A
	Exit	1	1		151			151	0.0	0.0	0.000	A
B	Entry	1	1	C	421	1500	0.281	422	0.6	0.5	4.311	A
			2	A,B,D	24	1500	0.016	25	0.0	0.0	2.849	A
	Exit	1	1		279			279	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	365	2709	0.135	364	0.5	0.3	2.704	A
	Exit	1	1		1257			1257	0.0	0.0	0.000	A
D	Entry	1	1	A	84	1500	0.056	83	0.1	0.1	2.963	A
			2	B,C,D	765	1500	0.510	766	1.9	1.2	5.749	A
	Exit	1	1		288			288	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	36	1013	0.036	37	0.0	0.0	3.561	A
			2	A,C,D	235	1013	0.232	234	0.5	0.4	5.186	A
	Exit	1	1	(A,B,C,D)	272			272	0.0	0.0	0.000	A
			1		125			125	0.0	0.0	0.000	A
B	Entry	1	1	C	360	1500	0.240	359	0.5	0.6	4.190	A
			2	A,B,D	19	1500	0.012	19	0.0	0.0	2.813	A
	Exit	1	1		248			248	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	319	2751	0.116	320	0.3	0.2	2.554	A
	Exit	1	1		1065			1065	0.0	0.0	0.000	A
D	Entry	1	1	A	74	1500	0.049	73	0.1	0.1	2.826	A
			2	B,C,D	648	1500	0.432	647	1.2	1.0	4.930	A
	Exit	1	1		250			250	0.0	0.0	0.000	A

Do Minimum - 2023 Operational , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	4.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2023 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	568	100.000
B		ONE HOUR	✓	387	100.000
C		ONE HOUR	✓	1315	100.000
D		ONE HOUR	✓	469	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	2	83	181	302
	B	93	1	293	0
	C	143	396	0	776
	D	265	2	201	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	13	2
	B	2	0	52	0
	C	9	27	0	8
	D	2	100	31	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	6.31	1.2	A	523	785
B	4.11	0.7	A	352	528
C	4.28	1.9	A	1209	1813
D	3.32	0.6	A	430	645

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	432	108	444	429	369	0.0	0.6	4.189	A
B	272	68	509	276	363	0.0	0.2	3.896	A
C	988	247	295	988	490	0.0	0.6	2.516	A
D	351	88	462	351	821	0.0	0.4	3.110	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	510	128	557	510	444	0.6	0.8	5.051	A
B	363	91	620	361	447	0.2	0.4	3.934	A
C	1190	298	359	1197	622	0.6	0.7	3.089	A
D	429	107	573	427	983	0.4	0.5	3.227	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	618	154	660	618	560	0.8	1.2	6.307	A
B	415	104	748	418	530	0.4	0.4	4.111	A
C	1443	361	435	1446	731	0.7	1.3	3.970	A
D	510	127	711	508	1170	0.5	0.6	3.276	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	633	158	661	630	547	1.2	1.1	6.013	A
B	424	106	753	424	537	0.4	0.7	4.055	A
C	1447	362	446	1444	731	1.3	1.9	4.281	A
D	510	128	699	509	1191	0.6	0.6	3.318	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	515	129	545	518	452	1.1	0.6	5.151	A
B	341	85	626	343	436	0.7	0.3	3.898	A
C	1184	296	360	1181	609	1.9	1.3	3.157	A
D	419	105	578	418	963	0.6	0.4	3.227	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	432	108	466	429	377	0.6	0.7	4.380	A
B	297	74	524	297	372	0.3	0.4	3.752	A
C	1000	250	304	999	517	1.3	0.7	2.624	A
D	360	90	483	360	819	0.4	0.3	3.097	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	69	1212	0.057	69	0.0	0.0	2.848	A
			2	A,C,D	363	1212	0.299	360	0.0	0.6	4.433	A
	Exit	2	1	(A,B,C,D)	432			432	0.0	0.0	0.000	A
			1		369			369	0.0	0.0	0.000	A
B	Entry	1	1	C	207	1500	0.138	211	0.0	0.1	4.440	A
			2	A,B,D	65	1500	0.043	65	0.0	0.0	2.659	A
	Exit	1	1		363			363	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	988	2637	0.375	988	0.0	0.6	2.516	A
	Exit	1	1		490			490	0.0	0.0	0.000	A
D	Entry	1	1	A	200	1500	0.134	201	0.0	0.2	2.801	A
			2	B,C,D	151	1500	0.100	151	0.0	0.2	3.629	A
	Exit	1	1		821			821	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	77	1158	0.066	77	0.0	0.0	3.247	A
			2	A,C,D	434	1158	0.375	433	0.6	0.8	5.374	A
	Exit	2	1	(A,B,C,D)	510			510	0.0	0.0	0.003	A
			1		444			444	0.0	0.0	0.000	A
B	Entry	1	1	C	275	1500	0.183	273	0.1	0.4	4.464	A
			2	A,B,D	88	1500	0.058	88	0.0	0.0	2.834	A
	Exit	1	1		447			447	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1190	2566	0.464	1197	0.6	0.7	3.089	A
	Exit	1	1		622			622	0.0	0.0	0.000	A
D	Entry	1	1	A	238	1500	0.159	238	0.2	0.2	3.022	A
			2	B,C,D	190	1500	0.127	189	0.2	0.3	3.568	A
	Exit	1	1		983			983	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	91	1108	0.082	91	0.0	0.1	3.501	A
			2	A,C,D	528	1108	0.476	527	0.8	1.1	6.767	A
		2	1	(A,B,C,D)	618			619	0.0	0.0	0.046	A
	Exit	1	1		560			560	0.0	0.0	0.000	A
B	Entry	1	1	C	302	1500	0.202	305	0.4	0.3	4.865	A
			2	A,B,D	113	1500	0.075	112	0.0	0.0	2.574	A
	Exit	1	1		530			530	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1443	2480	0.582	1446	0.7	1.3	3.970	A
	Exit	1	1		731			731	0.0	0.0	0.000	A
D	Entry	1	1	A	286	1500	0.190	285	0.2	0.3	3.000	A
			2	B,C,D	224	1500	0.149	223	0.3	0.4	3.735	A
	Exit	1	1		1170			1170	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	94	1108	0.085	94	0.1	0.1	3.669	A
			2	A,C,D	538	1108	0.486	535	1.1	1.0	6.445	A
		2	1	(A,B,C,D)	633			633	0.0	0.0	0.007	A
	Exit	1	1		547			547	0.0	0.0	0.000	A
B	Entry	1	1	C	321	1500	0.214	320	0.3	0.6	4.782	A
			2	A,B,D	103	1500	0.069	103	0.0	0.1	2.576	A
	Exit	1	1		537			537	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1447	2467	0.586	1444	1.3	1.9	4.281	A
	Exit	1	1		731			731	0.0	0.0	0.000	A
D	Entry	1	1	A	289	1500	0.193	289	0.3	0.3	3.031	A
			2	B,C,D	221	1500	0.147	220	0.4	0.3	3.806	A
	Exit	1	1		1191			1191	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	70	1164	0.060	70	0.1	0.0	3.444	A
			2	A,C,D	446	1164	0.383	447	1.0	0.6	5.429	A
		2	1	(A,B,C,D)	515			515	0.0	0.0	0.002	A
	Exit	1	1		452			452	0.0	0.0	0.000	A
B	Entry	1	1	C	260	1500	0.173	261	0.6	0.3	4.512	A
			2	A,B,D	82	1500	0.055	82	0.1	0.1	2.624	A
	Exit	1	1		436			436	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1184	2564	0.462	1181	1.9	1.3	3.157	A
	Exit	1	1		609			609	0.0	0.0	0.000	A
D	Entry	1	1	A	239	1500	0.159	238	0.3	0.2	2.907	A
			2	B,C,D	180	1500	0.120	180	0.3	0.2	3.751	A
	Exit	1	1		963			963	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	63	1201	0.052	62	0.0	0.1	3.163	A
			2	A,C,D	369	1201	0.308	366	0.6	0.6	4.607	A
	Exit	1	1	(A,B,C,D)	432			432	0.0	0.0	0.000	A
			1		377			377	0.0	0.0	0.000	A
B	Entry	1	1	C	227	1500	0.151	227	0.3	0.3	4.315	A
			2	A,B,D	70	1500	0.047	70	0.1	0.0	2.540	A
	Exit	1	1		372			372	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1000	2627	0.381	999	1.3	0.7	2.624	A
	Exit	1	1		517			517	0.0	0.0	0.000	A
D	Entry	1	1	A	199	1500	0.133	200	0.2	0.1	2.851	A
			2	B,C,D	160	1500	0.107	160	0.2	0.2	3.500	A
	Exit	1	1		819			819	0.0	0.0	0.000	A

Do Minimum - 2024 Operational, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	6.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2024 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	366	100.000
B		ONE HOUR	✓	537	100.000
C		ONE HOUR	✓	463	100.000
D		ONE HOUR	✓	1006	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	44	84	238
	B	25	1	510	1
	C	52	296	0	115
	D	97	0	909	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	35	2
	B	21	0	29	0
	C	47	77	0	70
	D	12	0	7	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	8.92	1.2	A	334	500
B	5.10	0.9	A	493	740
C	2.98	0.5	A	424	637
D	7.58	2.4	A	922	1384

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	271	68	906	270	131	0.0	0.4	4.686	A
B	407	102	919	406	257	0.0	0.5	4.194	A
C	350	87	203	351	1122	0.0	0.3	2.472	A
D	752	188	285	752	269	0.0	0.9	4.514	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	324	81	1091	322	157	0.4	0.6	6.079	A
B	476	119	1095	477	318	0.5	0.6	4.423	A
C	435	109	235	434	1337	0.3	0.4	2.751	A
D	902	226	349	899	320	0.9	1.6	5.325	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	405	101	1333	406	193	0.6	1.2	8.640	A
B	597	149	1364	596	375	0.6	0.9	5.101	A
C	509	127	297	510	1662	0.4	0.4	2.980	A
D	1114	279	411	1115	396	1.6	2.4	7.415	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	406	102	1328	407	193	1.2	1.0	8.924	A
B	589	147	1365	590	370	0.9	0.9	5.098	A
C	498	124	297	496	1659	0.4	0.5	2.919	A
D	1108	277	406	1115	387	2.4	1.9	7.581	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	328	82	1078	327	158	1.0	0.7	6.743	A
B	482	121	1105	482	300	0.9	0.6	4.508	A
C	415	104	241	414	1346	0.5	0.3	2.742	A
D	897	224	334	901	321	1.9	1.2	5.731	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	268	67	896	268	135	0.7	0.4	5.370	A
B	410	102	922	411	243	0.6	0.5	4.335	A
C	341	85	194	340	1138	0.3	0.3	2.549	A
D	761	190	269	763	266	1.2	1.0	4.767	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	32	990	0.032	32	0.0	0.0	3.384	A
			2	A,C,D	239	990	0.241	239	0.0	0.3	4.877	A
	Exit	2	1	(A,B,C,D)	271			271	0.0	0.0	0.000	A
			1		131			131	0.0	0.0	0.000	A
B	Entry	1	1	C	383	1500	0.256	383	0.0	0.4	4.270	A
			2	A,B,D	24	1500	0.016	23	0.0	0.0	2.956	A
	Exit	1	1		257			257	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	350	2741	0.128	351	0.0	0.3	2.472	A
	Exit	1	1		1122			1122	0.0	0.0	0.000	A
D	Entry	1	1	A	72	1500	0.048	72	0.0	0.1	2.829	A
			2	B,C,D	680	1500	0.453	680	0.0	0.8	4.687	A
	Exit	1	1		269			269	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	40	900	0.044	39	0.0	0.1	4.125	A
			2	A,C,D	284	900	0.315	283	0.3	0.5	6.374	A
	Exit	2	1	(A,B,C,D)	324			324	0.0	0.0	0.001	A
			1		157			157	0.0	0.0	0.000	A
B	Entry	1	1	C	453	1500	0.302	455	0.4	0.6	4.526	A
			2	A,B,D	23	1500	0.015	23	0.0	0.0	2.735	A
	Exit	1	1		318			318	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	435	2704	0.161	434	0.3	0.4	2.751	A
	Exit	1	1		1337			1337	0.0	0.0	0.000	A
D	Entry	1	1	A	88	1500	0.059	87	0.1	0.1	2.876	A
			2	B,C,D	814	1500	0.543	812	0.8	1.5	5.578	A
	Exit	1	1		320			320	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	49	784	0.062	48	0.1	0.1	4.790	A
			2	A,C,D	356	784	0.454	357	0.5	1.1	9.133	A
		2	1	(A,B,C,D)	405			404	0.0	0.0	0.065	A
	Exit	1	1		193			193	0.0	0.0	0.000	A
B	Entry	1	1	C	566	1500	0.377	566	0.6	0.9	5.214	A
			2	A,B,D	31	1500	0.021	31	0.0	0.0	3.190	A
	Exit	1	1		375			375	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	509	2634	0.193	510	0.4	0.4	2.980	A
	Exit	1	1		1662			1662	0.0	0.0	0.000	A
D	Entry	1	1	A	108	1500	0.072	109	0.1	0.1	2.863	A
			2	B,C,D	1006	1500	0.671	1006	1.5	2.3	7.887	A
	Exit	1	1		396			396	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	49	786	0.062	49	0.1	0.1	4.845	A
			2	A,C,D	357	786	0.455	358	1.1	0.9	9.447	A
		2	1	(A,B,C,D)	406			407	0.0	0.0	0.077	A
	Exit	1	1		193			193	0.0	0.0	0.000	A
B	Entry	1	1	C	559	1500	0.373	561	0.9	0.8	5.236	A
			2	A,B,D	30	1500	0.020	30	0.0	0.0	2.703	A
	Exit	1	1		370			370	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	498	2635	0.189	496	0.4	0.5	2.919	A
	Exit	1	1		1659			1659	0.0	0.0	0.000	A
D	Entry	1	1	A	108	1500	0.072	108	0.1	0.1	2.924	A
			2	B,C,D	1000	1500	0.667	1007	2.3	1.8	8.057	A
	Exit	1	1		387			387	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	39	907	0.043	39	0.1	0.1	4.497	A
			2	A,C,D	288	907	0.318	288	0.9	0.6	7.072	A
		2	1	(A,B,C,D)	328			328	0.0	0.0	0.000	A
	Exit	1	1		158			158	0.0	0.0	0.000	A
B	Entry	1	1	C	456	1500	0.304	455	0.8	0.5	4.598	A
			2	A,B,D	27	1500	0.018	27	0.0	0.0	2.946	A
	Exit	1	1		300			300	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	415	2698	0.154	414	0.5	0.3	2.742	A
	Exit	1	1		1346			1346	0.0	0.0	0.000	A
D	Entry	1	1	A	84	1500	0.056	84	0.1	0.0	2.931	A
			2	B,C,D	813	1500	0.542	817	1.8	1.2	6.010	A
	Exit	1	1		321			321	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	36	994	0.036	35	0.1	0.1	3.919	A
			2	A,C,D	232	994	0.234	233	0.6	0.4	5.604	A
	Exit	1	1	(A,B,C,D)	268			268	0.0	0.0	0.002	A
			1		135			135	0.0	0.0	0.000	A
B	Entry	1	1	C	388	1500	0.259	389	0.5	0.5	4.426	A
			2	A,B,D	21	1500	0.014	22	0.0	0.0	2.791	A
	Exit	1	1		243			243	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	341	2750	0.124	340	0.3	0.3	2.549	A
	Exit	1	1		1138			1138	0.0	0.0	0.000	A
D	Entry	1	1	A	75	1500	0.050	75	0.0	0.1	2.779	A
			2	B,C,D	687	1500	0.458	689	1.2	0.9	4.972	A
	Exit	1	1		266			266	0.0	0.0	0.000	A

Do Minimum - 2024 Operational, Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	4.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2024 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	578	100.000
B		ONE HOUR	✓	421	100.000
C		ONE HOUR	✓	1399	100.000
D		ONE HOUR	✓	494	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	2	83	189	304
	B	94	1	326	0
	C	150	426	0	823
	D	268	2	223	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	14	2
	B	2	0	54	0
	C	9	27	0	7
	D	2	100	29	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	6.80	1.2	A	524	786
B	4.23	0.8	A	379	568
C	4.36	2.0	A	1280	1919
D	3.39	0.6	A	456	684

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	438	109	495	438	372	0.0	0.5	4.262	A
B	299	75	552	297	381	0.0	0.6	3.908	A
C	1060	265	302	1055	547	0.0	0.9	2.597	A
D	373	93	495	372	862	0.0	0.4	3.092	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	508	127	564	509	459	0.5	0.7	5.220	A
B	372	93	627	370	446	0.6	0.7	4.048	A
C	1236	309	352	1233	646	0.9	1.3	3.225	A
D	438	109	584	439	1001	0.4	0.3	3.193	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	630	158	719	633	568	0.7	1.2	6.795	A
B	457	114	797	457	555	0.7	0.6	4.232	A
C	1547	387	441	1544	814	1.3	2.0	4.355	A
D	553	138	732	555	1253	0.3	0.6	3.393	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	613	153	707	618	565	1.2	1.1	6.498	A
B	459	115	770	457	555	0.6	0.8	4.132	A
C	1526	381	440	1527	787	2.0	1.8	4.356	A
D	542	135	731	540	1235	0.6	0.5	3.376	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	525	131	596	524	458	1.1	0.9	5.348	A
B	377	94	662	378	457	0.8	0.5	4.198	A
C	1269	317	368	1266	672	1.8	1.1	3.273	A
D	450	112	605	450	1029	0.5	0.4	3.175	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	430	108	501	429	377	0.9	0.6	4.659	A
B	309	77	542	307	388	0.5	0.5	3.872	A
C	1041	260	295	1042	554	1.1	0.8	2.688	A
D	380	95	498	380	839	0.4	0.3	3.175	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	62	1187	0.053	62	0.0	0.1	3.140	A
			2	A,C,D	375	1187	0.316	376	0.0	0.5	4.461	A
	Exit	2	1	(A,B,C,D)	438			438	0.0	0.0	0.000	A
			1		372			372	0.0	0.0	0.000	A
B	Entry	1	1	C	231	1500	0.154	229	0.0	0.5	4.488	A
			2	A,B,D	68	1500	0.045	68	0.0	0.1	2.592	A
	Exit	1	1		381			381	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1060	2630	0.403	1055	0.0	0.9	2.597	A
	Exit	1	1		547			547	0.0	0.0	0.000	A
D	Entry	1	1	A	194	1500	0.130	194	0.0	0.2	2.779	A
			2	B,C,D	179	1500	0.119	179	0.0	0.2	3.540	A
	Exit	1	1		862			862	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	73	1154	0.063	73	0.1	0.0	3.432	A
			2	A,C,D	435	1154	0.377	435	0.5	0.7	5.533	A
	Exit	2	1	(A,B,C,D)	508			508	0.0	0.0	0.007	A
			1		459			459	0.0	0.0	0.000	A
B	Entry	1	1	C	293	1500	0.195	290	0.5	0.7	4.645	A
			2	A,B,D	80	1500	0.053	80	0.1	0.1	2.634	A
	Exit	1	1		446			446	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1236	2574	0.480	1233	0.9	1.3	3.225	A
	Exit	1	1		646			646	0.0	0.0	0.000	A
D	Entry	1	1	A	246	1500	0.164	246	0.2	0.2	2.976	A
			2	B,C,D	192	1500	0.128	194	0.2	0.1	3.542	A
	Exit	1	1		1001			1001	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	91	1080	0.084	91	0.0	0.1	3.602	A
			2	A,C,D	540	1080	0.500	542	0.7	1.1	7.296	A
	Exit	1	1	(A,B,C,D)	630			631	0.0	0.0	0.065	A
			1		568			568	0.0	0.0	0.000	A
B	Entry	1	1	C	354	1500	0.236	354	0.7	0.5	4.983	A
			2	A,B,D	103	1500	0.069	103	0.1	0.1	2.532	A
	Exit	1	1		555			555	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1547	2474	0.625	1544	1.3	2.0	4.355	A
	Exit	1	1		814			814	0.0	0.0	0.000	A
D	Entry	1	1	A	297	1500	0.198	297	0.2	0.3	3.077	A
			2	B,C,D	257	1500	0.171	258	0.1	0.3	3.866	A
	Exit	1	1		1253			1253	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	94	1086	0.087	94	0.1	0.1	3.488	A
			2	A,C,D	521	1086	0.479	524	1.1	1.0	7.000	A
	Exit	1	1	(A,B,C,D)	613			614	0.0	0.0	0.047	A
			1		565			565	0.0	0.0	0.000	A
B	Entry	1	1	C	348	1500	0.232	346	0.5	0.7	4.811	A
			2	A,B,D	111	1500	0.074	111	0.1	0.1	2.608	A
	Exit	1	1		555			555	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1526	2475	0.616	1527	2.0	1.8	4.356	A
	Exit	1	1		787			787	0.0	0.0	0.000	A
D	Entry	1	1	A	294	1500	0.196	293	0.3	0.3	3.066	A
			2	B,C,D	248	1500	0.165	247	0.3	0.3	3.834	A
	Exit	1	1		1235			1235	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	74	1139	0.065	74	0.1	0.1	3.447	A
			2	A,C,D	451	1139	0.396	449	1.0	0.8	5.683	A
	Exit	1	1	(A,B,C,D)	525			525	0.0	0.0	0.004	A
			1		458			458	0.0	0.0	0.000	A
B	Entry	1	1	C	292	1500	0.195	292	0.7	0.4	4.878	A
			2	A,B,D	85	1500	0.057	85	0.1	0.1	2.657	A
	Exit	1	1		457			457	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1269	2556	0.497	1266	1.8	1.1	3.273	A
	Exit	1	1		672			672	0.0	0.0	0.000	A
D	Entry	1	1	A	235	1500	0.157	236	0.3	0.2	2.921	A
			2	B,C,D	214	1500	0.143	214	0.3	0.2	3.539	A
	Exit	1	1		1029			1029	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	63	1184	0.053	63	0.1	0.1	3.173	A
			2	A,C,D	367	1184	0.310	366	0.8	0.6	4.922	A
	Exit	1	1	(A,B,C,D)	430			430	0.0	0.0	0.006	A
			1		377			377	0.0	0.0	0.000	A
B	Entry	1	1	C	240	1500	0.160	238	0.4	0.5	4.393	A
			2	A,B,D	69	1500	0.046	69	0.1	0.0	2.659	A
	Exit	1	1		388			388	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1041	2637	0.395	1042	1.1	0.8	2.688	A
	Exit	1	1		554			554	0.0	0.0	0.000	A
D	Entry	1	1	A	201	1500	0.134	202	0.2	0.1	2.866	A
			2	B,C,D	179	1500	0.119	179	0.2	0.2	3.636	A
	Exit	1	1		839			839	0.0	0.0	0.000	A

Do Minimum - 2030 Operational , Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	6.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2030 Operational	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	378	100.000
B		ONE HOUR	✓	555	100.000
C		ONE HOUR	✓	486	100.000
D		ONE HOUR	✓	1062	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	44	88	246
	B	26	1	527	1
	C	54	306	0	126
	D	101	0	961	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	35	2
	B	21	0	28	0
	C	48	77	0	63
	D	12	0	7	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	10.06	1.2	B	347	520
B	5.15	1.0	A	509	763
C	2.97	0.5	A	446	668
D	8.27	2.6	A	971	1457

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	287	72	958	287	135	0.0	0.5	5.170	A
B	425	106	974	426	271	0.0	0.6	4.300	A
C	366	91	207	366	1194	0.0	0.3	2.531	A
D	795	199	300	793	273	0.0	1.0	4.750	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	334	84	1134	335	161	0.5	0.6	6.306	A
B	506	127	1153	505	315	0.6	0.6	4.602	A
C	430	108	240	431	1419	0.3	0.3	2.740	A
D	951	238	344	950	326	1.0	1.6	5.974	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	417	104	1391	419	202	0.6	1.1	9.991	A
B	601	150	1426	602	383	0.6	0.8	4.986	A
C	529	132	306	529	1723	0.3	0.4	2.965	A
D	1168	292	423	1169	411	1.6	2.6	8.272	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	414	104	1398	416	194	1.1	1.2	10.060	B
B	612	153	1421	613	392	0.8	1.0	5.148	A
C	541	135	294	542	1740	0.4	0.5	2.951	A
D	1165	291	428	1164	408	2.6	2.6	8.155	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	341	85	1147	340	161	1.2	0.7	7.483	A
B	498	124	1166	500	321	1.0	0.7	4.593	A
C	442	111	247	443	1419	0.5	0.3	2.788	A
D	950	238	353	955	336	2.6	1.7	6.194	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	287	72	953	285	140	0.7	0.6	5.607	A
B	412	103	976	412	263	0.7	0.5	4.173	A
C	365	91	208	366	1181	0.3	0.3	2.626	A
D	799	200	292	801	282	1.7	1.2	4.930	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	35	964	0.037	35	0.0	0.0	3.639	A
			2	A,C,D	251	964	0.261	252	0.0	0.5	5.393	A
	Exit	2	1	(A,B,C,D)	287			287	0.0	0.0	0.004	A
			1		135			135	0.0	0.0	0.000	A
B	Entry	1	1	C	404	1500	0.269	405	0.0	0.6	4.383	A
			2	A,B,D	21	1500	0.014	21	0.0	0.0	2.840	A
	Exit	1	1		271			271	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	366	2736	0.134	366	0.0	0.3	2.531	A
	Exit	1	1		1194			1194	0.0	0.0	0.000	A
D	Entry	1	1	A	71	1500	0.047	71	0.0	0.1	2.782	A
			2	B,C,D	724	1500	0.483	723	0.0	1.0	4.945	A
	Exit	1	1		273			273	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	39	880	0.044	40	0.0	0.0	4.165	A
			2	A,C,D	295	880	0.335	295	0.5	0.6	6.609	A
	Exit	2	1	(A,B,C,D)	334			334	0.0	0.0	0.000	A
			1		161			161	0.0	0.0	0.000	A
B	Entry	1	1	C	483	1500	0.322	482	0.6	0.6	4.708	A
			2	A,B,D	23	1500	0.015	23	0.0	0.0	2.676	A
	Exit	1	1		315			315	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	430	2699	0.159	431	0.3	0.3	2.740	A
	Exit	1	1		1419			1419	0.0	0.0	0.000	A
D	Entry	1	1	A	92	1500	0.061	92	0.1	0.1	2.931	A
			2	B,C,D	859	1500	0.573	858	1.0	1.6	6.280	A
	Exit	1	1		326			326	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	48	756	0.064	48	0.0	0.0	4.820	A
			2	A,C,D	369	756	0.489	371	0.6	1.1	10.626	B
		2	1	(A,B,C,D)	417			417	0.0	0.0	0.079	A
	Exit	1	1		202			202	0.0	0.0	0.000	A
B	Entry	1	1	C	569	1500	0.380	570	0.6	0.7	5.105	A
			2	A,B,D	31	1500	0.021	32	0.0	0.0	3.016	A
	Exit	1	1		383			383	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	529	2625	0.201	529	0.3	0.4	2.965	A
	Exit	1	1		1723			1723	0.0	0.0	0.000	A
D	Entry	1	1	A	114	1500	0.076	114	0.1	0.1	2.828	A
			2	B,C,D	1055	1500	0.703	1056	1.6	2.5	8.818	A
	Exit	1	1		411			411	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	49	753	0.065	50	0.0	0.1	5.097	A
			2	A,C,D	365	753	0.485	366	1.1	1.1	10.670	B
		2	1	(A,B,C,D)	414			414	0.0	0.0	0.099	A
	Exit	1	1		194			194	0.0	0.0	0.000	A
B	Entry	1	1	C	585	1500	0.390	586	0.7	1.0	5.281	A
			2	A,B,D	27	1500	0.018	27	0.0	0.0	2.809	A
	Exit	1	1		392			392	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	541	2638	0.205	542	0.4	0.5	2.951	A
	Exit	1	1		1740			1740	0.0	0.0	0.000	A
D	Entry	1	1	A	109	1500	0.073	109	0.1	0.1	2.890	A
			2	B,C,D	1056	1500	0.704	1055	2.5	2.5	8.698	A
	Exit	1	1		408			408	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	41	873	0.047	41	0.1	0.0	4.483	A
			2	A,C,D	299	873	0.343	299	1.1	0.7	7.890	A
		2	1	(A,B,C,D)	341			341	0.0	0.0	0.008	A
	Exit	1	1		161			161	0.0	0.0	0.000	A
B	Entry	1	1	C	473	1500	0.315	475	1.0	0.7	4.685	A
			2	A,B,D	25	1500	0.017	25	0.0	0.0	2.928	A
	Exit	1	1		321			321	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	442	2691	0.164	443	0.5	0.3	2.788	A
	Exit	1	1		1419			1419	0.0	0.0	0.000	A
D	Entry	1	1	A	88	1500	0.059	88	0.1	0.1	2.871	A
			2	B,C,D	862	1500	0.575	867	2.5	1.6	6.524	A
	Exit	1	1		336			336	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	34	967	0.035	34	0.0	0.1	3.955	A
			2	A,C,D	254	967	0.262	252	0.7	0.5	5.849	A
	Exit	1	1	(A,B,C,D)	287			287	0.0	0.0	0.000	A
			1		140			140	0.0	0.0	0.000	A
B	Entry	1	1	C	390	1500	0.260	391	0.7	0.5	4.245	A
			2	A,B,D	21	1500	0.014	21	0.0	0.0	2.924	A
	Exit	1	1		263			263	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	365	2735	0.134	366	0.3	0.3	2.626	A
	Exit	1	1		1181			1181	0.0	0.0	0.000	A
D	Entry	1	1	A	76	1500	0.051	76	0.1	0.1	2.790	A
			2	B,C,D	723	1500	0.482	724	1.6	1.2	5.145	A
	Exit	1	1		282			282	0.0	0.0	0.000	A

Do Minimum - 2030 Operational , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange	Large Roundabout	A,B,C,D	5.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2030 Operational	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	585	100.000
B		ONE HOUR	✓	432	100.000
C		ONE HOUR	✓	1469	100.000
D		ONE HOUR	✓	518	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	2	83	192	308
	B	97	1	334	0
	C	156	441	0	872
	D	277	2	238	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	15	2
	B	2	0	54	0
	C	9	27	0	7
	D	2	100	27	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	6.99	1.5	A	538	807
B	4.33	0.7	A	397	596
C	5.11	2.9	A	1346	2020
D	3.35	0.5	A	473	710

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	444	111	511	444	402	0.0	0.6	4.405	A
B	321	80	558	320	397	0.0	0.5	3.856	A
C	1114	279	307	1114	571	0.0	1.0	2.712	A
D	392	98	521	392	900	0.0	0.3	3.064	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	523	131	617	525	475	0.6	0.8	5.372	A
B	392	98	666	392	475	0.5	0.4	4.135	A
C	1310	328	370	1310	688	1.0	1.2	3.450	A
D	465	116	626	466	1054	0.3	0.4	3.234	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	645	161	754	646	587	0.8	1.5	6.857	A
B	472	118	810	474	590	0.4	0.4	4.328	A
C	1627	407	449	1630	834	1.2	2.3	5.021	A
D	568	142	771	568	1307	0.4	0.5	3.353	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	642	161	735	641	596	1.5	1.3	6.986	A
B	488	122	812	487	564	0.4	0.7	4.320	A
C	1599	400	450	1591	849	2.3	2.9	5.109	A
D	574	144	757	574	1285	0.5	0.5	3.339	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	526	132	601	524	475	1.3	0.8	5.491	A
B	393	98	658	393	468	0.7	0.5	4.094	A
C	1314	328	373	1315	678	2.9	1.1	3.562	A
D	455	114	621	455	1068	0.5	0.3	3.184	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	448	112	521	448	399	0.8	0.6	4.662	A
B	316	79	565	316	404	0.5	0.3	3.903	A
C	1115	279	308	1117	572	1.1	0.8	2.807	A
D	385	96	536	384	890	0.3	0.4	3.115	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	64	1180	0.054	64	0.0	0.0	3.098	A
			2	A,C,D	380	1180	0.322	379	0.0	0.6	4.637	A
	Exit	2	1	(A,B,C,D)	444			444	0.0	0.0	0.000	A
			1		402			402	0.0	0.0	0.000	A
B	Entry	1	1	C	250	1500	0.167	248	0.0	0.5	4.421	A
			2	A,B,D	71	1500	0.047	71	0.0	0.1	2.581	A
	Exit	1	1		397			397	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1114	2624	0.425	1114	0.0	1.0	2.712	A
	Exit	1	1		571			571	0.0	0.0	0.000	A
D	Entry	1	1	A	212	1500	0.142	212	0.0	0.1	2.843	A
			2	B,C,D	179	1500	0.120	180	0.0	0.1	3.382	A
	Exit	1	1		900			900	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	74	1129	0.066	74	0.0	0.0	3.250	A
			2	A,C,D	449	1129	0.398	451	0.6	0.7	5.739	A
	Exit	2	1	(A,B,C,D)	523			523	0.0	0.0	0.008	A
			1		475			475	0.0	0.0	0.000	A
B	Entry	1	1	C	304	1500	0.203	305	0.5	0.3	4.839	A
			2	A,B,D	88	1500	0.059	88	0.1	0.1	2.544	A
	Exit	1	1		475			475	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1310	2553	0.513	1310	1.0	1.2	3.450	A
	Exit	1	1		688			688	0.0	0.0	0.000	A
D	Entry	1	1	A	248	1500	0.165	247	0.1	0.2	2.973	A
			2	B,C,D	218	1500	0.145	218	0.1	0.2	3.611	A
	Exit	1	1		1054			1054	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	95	1063	0.090	95	0.0	0.1	3.661	A
			2	A,C,D	550	1063	0.517	551	0.7	1.4	7.372	A
	Exit	1	1	(A,B,C,D)	645			645	0.0	0.0	0.046	A
			1		587			587	0.0	0.0	0.000	A
B	Entry	1	1	C	368	1500	0.245	370	0.3	0.4	5.027	A
			2	A,B,D	104	1500	0.070	104	0.1	0.1	2.678	A
	Exit	1	1		590			590	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1627	2464	0.660	1630	1.2	2.3	5.021	A
	Exit	1	1		834			834	0.0	0.0	0.000	A
D	Entry	1	1	A	307	1500	0.205	307	0.2	0.2	3.056	A
			2	B,C,D	261	1500	0.174	261	0.2	0.3	3.778	A
	Exit	1	1		1307			1307	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	89	1072	0.083	88	0.1	0.1	3.710	A
			2	A,C,D	553	1072	0.516	553	1.4	1.2	7.504	A
	Exit	1	1	(A,B,C,D)	642			642	0.0	0.0	0.054	A
			1		596			596	0.0	0.0	0.000	A
B	Entry	1	1	C	378	1500	0.252	378	0.4	0.6	5.088	A
			2	A,B,D	109	1500	0.073	109	0.1	0.1	2.598	A
	Exit	1	1		564			564	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1599	2463	0.649	1591	2.3	2.9	5.109	A
	Exit	1	1		849			849	0.0	0.0	0.000	A
D	Entry	1	1	A	310	1500	0.207	311	0.2	0.2	3.071	A
			2	B,C,D	264	1500	0.176	263	0.3	0.2	3.728	A
	Exit	1	1		1285			1285	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	76	1136	0.067	76	0.1	0.1	3.427	A
			2	A,C,D	450	1136	0.396	448	1.2	0.7	5.853	A
	Exit	1	1	(A,B,C,D)	526			526	0.0	0.0	0.007	A
			1		475			475	0.0	0.0	0.000	A
B	Entry	1	1	C	303	1500	0.202	304	0.6	0.4	4.735	A
			2	A,B,D	90	1500	0.060	90	0.1	0.1	2.672	A
	Exit	1	1		468			468	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1314	2549	0.515	1315	2.9	1.1	3.562	A
	Exit	1	1		678			678	0.0	0.0	0.000	A
D	Entry	1	1	A	244	1500	0.163	245	0.2	0.1	2.912	A
			2	B,C,D	211	1500	0.140	210	0.2	0.2	3.570	A
	Exit	1	1		1068			1068	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	63	1175	0.053	63	0.1	0.0	3.250	A
			2	A,C,D	386	1175	0.328	385	0.7	0.6	4.904	A
	Exit	1	1	(A,B,C,D)	448			448	0.0	0.0	0.002	A
			1		399			399	0.0	0.0	0.000	A
B	Entry	1	1	C	242	1500	0.161	242	0.4	0.3	4.469	A
			2	A,B,D	74	1500	0.050	74	0.1	0.1	2.542	A
	Exit	1	1		404			404	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1115	2622	0.425	1117	1.1	0.8	2.807	A
	Exit	1	1		572			572	0.0	0.0	0.000	A
D	Entry	1	1	A	203	1500	0.135	203	0.1	0.2	2.819	A
			2	B,C,D	182	1500	0.121	181	0.2	0.2	3.534	A
	Exit	1	1		890			890	0.0	0.0	0.000	A

Junctions 9															
ARCADY 9 - Roundabout Module															
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2020															
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Filename: CONSTRUCTION A180 Interchange.j9

Path: \\UKLDS2PFPSW001.na.aecomnet.com\LE_PROJECTS\Transport Projects\60580855 - Project Koala\DCO\Junction Modelling JC\Junction 5 - A180 Stallingborough Interchange

Report generation date: 13/01/2020 09:45:11

- »Do Minimum - 2021 Construction , Base Adj + Com Dev AM
- »Do Minimum - 2021 Construction , Base Adj + Com Dev PM
- »Do Minimum - 2021 Construction, Base Adj + Com Dev + Dev AM
- »Do Minimum - 2021 Construction , Base Adj + Com Dev + Dev PM
- »Do Minimum - 2022 Construction, Base Adj + Com Dev AM
- »Do Minimum - 2022 Construction, Base Adj + Com Dev PM
- »Do Minimum - 2022 Construction, Base Adj + Com Dev + Dev AM
- »Do Minimum - 2022 Construction , Base Adj + Com Dev + Dev PM
- »Do Minimum - 2027 Construction , Base Adj + Com Dev AM
- »Do Minimum - 2027 Construction , Base Adj + Com Dev PM
- »Do Minimum - 2027 Construction, Base Adj + Com Dev + Dev AM
- »Do Minimum - 2027 Construction , Base Adj + Com Dev + Dev PM

Summary of junction performance

	Base Adj + Com Dev AM				Base Adj + Com Dev PM				Base Adj + Com Dev + Dev AM				Base Adj + Com Dev + Dev PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Do Minimum [Lane Simulation] - 2021 Construction																
Arm A	0.7	7.66		A	0.6	4.42		A	0.9	8.02		A	1.1	6.40		A
Arm B	0.7	4.37		A	0.5	3.89		A	1.0	4.87		A	0.5	3.79		A
Arm C	0.3	2.75		A	1.3	3.06		A	0.3	2.82		A	1.6	3.92		A
Arm D	2.1	7.03		A	0.5	3.23		A	2.1	6.87		A	0.5	3.24		A
Do Minimum [Lane Simulation] - 2022 Construction																
Arm A	0.8	7.43		A	1.4	6.21		A	1.0	7.26		A	1.3	6.52		A
Arm B	0.6	4.57		A	0.5	4.01		A	0.9	5.11		A	0.5	3.92		A
Arm C	0.4	2.88		A	1.4	3.94		A	0.4	2.78		A	2.3	4.34		A
Arm D	1.9	6.26		A	0.5	3.34		A	1.7	6.29		A	0.5	3.26		A
Do Minimum [Lane Simulation] - 2027 Construction																
Arm A	1.1	8.76		A	1.6	7.04		A	1.1	8.88		A	1.4	7.32		A
Arm B	0.8	4.90		A	0.6	4.18		A	1.3	5.34		A	0.6	4.33		A
Arm C	0.4	2.82		A	2.7	4.71		A	0.4	2.80		A	2.6	5.35		A
Arm D	2.6	7.33		A	0.5	3.35		A	2.1	7.49		A	0.6	3.32		A

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

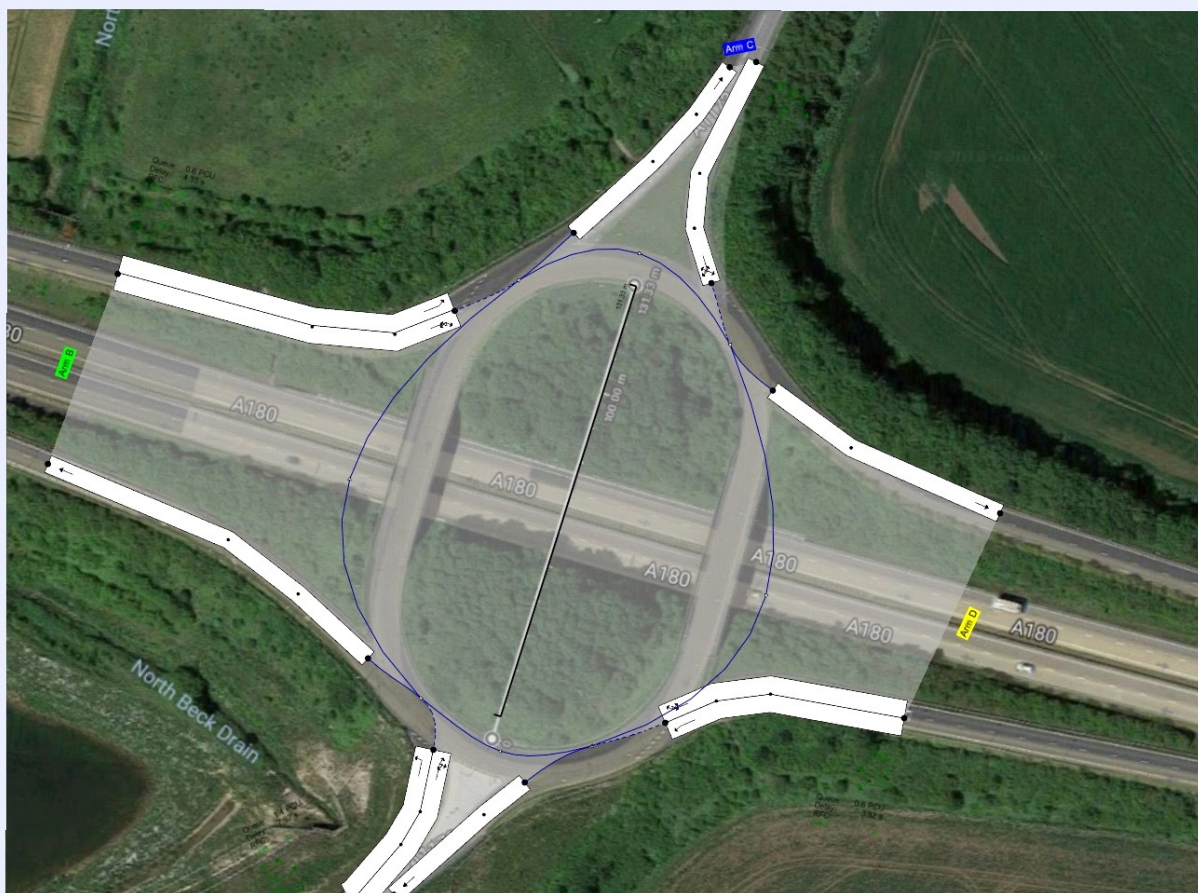
File summary

File Description

Title	A180 Stallingborough Interchange - Construction
Location	
Site number	
Date	20/08/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	james.colston
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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	1968719412	106	7.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D4	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	15	✓
D5	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D6	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	15	✓
D7	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D8	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	15	✓
D9	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D10	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	15	✓
D11	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	15	✓
D12	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	15	✓
D13	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	15	✓
D14	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	15	✓

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Do Minimum	✓	✓	100.000	100.000

Do Minimum - 2021 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	5.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	A1173 NB APPROACH	
B	A180 EB OFFSLIP	
C	A1173 SB APPROACH	
D	A180 WB OFF-SLIP	

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)	Exit only
A	4.62	8.54	23.5	17.7	93.0	11.0	
B	7.72	8.46	24.6	24.2	100.0	10.0	
C	4.09	7.98	29.1	39.3	100.0	9.5	
D	6.55	7.41	25.6	44.3	93.0	0.0	

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.963	2852
B	1.025	3095
C	1.121	2968
D	1.219	3099

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
A	Evenly split	10.00
B	Evenly split	10.00
C	Evenly split	10.00
D	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
A	1 [Give-way line]	1	B	✓	9.00	0	99999
		2	A,C,D	✓	9.00	0	99999
	2	1	(A,B,C,D)		Infinity		
B	1 [Give-way line]	1	C		Infinity	1500	2000
		2	A,B,D		Infinity	1500	2000
C	1 [Give-way line]	1	A,B,C,D		Infinity	1800	99999
D	1 [Give-way line]	1	A		Infinity	1500	2000
		2	B,C,D		Infinity	1500	2000

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
A	1 [Give-way line]	1	0.482	1426
		2	0.482	1426
B	1 [Give-way line]	1	0.513	1548
		2	0.513	1548
C	1 [Give-way line]	1	1.121	2968
D	1 [Give-way line]	1	0.609	1550
		2	0.609	1550

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A	B	C	D
A	1 [Give-way line]	1		✓		
		2	✓		✓	✓
	2	1	✓	✓	✓	✓
B	1 [Give-way line]	1			✓	
		2	✓	✓		✓
C	1 [Give-way line]	1	✓	✓	✓	✓
D	1 [Give-way line]	1	✓			
		2		✓	✓	✓

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	2021 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	357	100.000
B		ONE HOUR	✓	459	100.000
C		ONE HOUR	✓	313	100.000
D		ONE HOUR	✓	952	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	43	82	232
	B	25	1	432	1
	C	43	220	0	50
	D	94	0	858	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	33	2
	B	20	0	23	0
	C	50	75	0	100
	D	12	0	5	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	7.66	0.7	A	326	490
B	4.37	0.7	A	421	631
C	2.75	0.3	A	286	430
D	7.03	2.1	A	872	1308

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	268	67	810	268	125	0.0	0.5	4.649	A
B	346	86	879	344	199	0.0	0.4	3.777	A
C	245	61	194	245	1029	0.0	0.2	2.479	A
D	708	177	225	709	213	0.0	0.7	4.267	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	322	80	987	323	148	0.5	0.5	5.721	A
B	406	101	1075	406	235	0.4	0.4	4.080	A
C	278	70	237	278	1243	0.2	0.2	2.611	A
D	876	219	257	877	258	0.7	1.1	5.065	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	384	96	1189	386	179	0.5	0.6	7.030	A
B	507	127	1277	506	298	0.4	0.7	4.319	A
C	353	88	284	353	1499	0.2	0.3	2.752	A
D	1042	260	325	1042	312	1.1	1.9	6.307	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	395	99	1189	397	180	0.6	0.7	7.665	A
B	513	128	1299	513	287	0.7	0.7	4.365	A
C	342	85	294	339	1518	0.3	0.3	2.722	A
D	1050	263	318	1051	315	1.9	2.1	7.027	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	318	80	958	320	141	0.7	0.4	5.771	A
B	406	102	1046	407	232	0.7	0.4	4.050	A
C	274	68	235	271	1217	0.3	0.3	2.640	A
D	843	211	255	845	252	2.1	1.2	5.325	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	271	68	813	269	120	0.4	0.4	4.902	A
B	347	87	886	344	196	0.4	0.6	3.755	A
C	227	57	197	229	1033	0.3	0.1	2.427	A
D	715	179	218	714	208	1.2	1.0	4.319	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	31	1036	0.030	31	0.0	0.0	3.541	A
			2	A,C,D	237	1036	0.229	237	0.0	0.4	4.806	A
	Exit	1	1	(A,B,C,D)	268			268	0.0	0.0	0.000	A
			1		125			125	0.0	0.0	0.000	A
B	Entry	1	1	C	326	1500	0.217	324	0.0	0.4	3.820	A
			2	A,B,D	20	1500	0.014	20	0.0	0.0	3.070	A
	Exit	1	1		199			199	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	245	2751	0.089	245	0.0	0.2	2.479	A
	Exit	1	1		1029			1029	0.0	0.0	0.000	A
D	Entry	1	1	A	68	1500	0.045	68	0.0	0.1	2.730	A
			2	B,C,D	640	1500	0.427	641	0.0	0.6	4.420	A
	Exit	1	1		213			213	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	36	951	0.038	36	0.0	0.0	3.562	A
			2	A,C,D	286	951	0.300	286	0.4	0.4	6.037	A
	Exit	1	1	(A,B,C,D)	322			322	0.0	0.0	0.000	A
			1		148			148	0.0	0.0	0.000	A
B	Entry	1	1	C	382	1500	0.254	382	0.4	0.4	4.158	A
			2	A,B,D	24	1500	0.016	24	0.0	0.0	2.916	A
	Exit	1	1		235			235	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	278	2702	0.103	278	0.2	0.2	2.611	A
	Exit	1	1		1243			1243	0.0	0.0	0.000	A
D	Entry	1	1	A	89	1500	0.060	88	0.1	0.1	2.788	A
			2	B,C,D	787	1500	0.524	788	0.6	1.0	5.295	A
	Exit	1	1		258			258	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	49	853	0.057	48	0.0	0.0	4.358	A
			2	A,C,D	335	853	0.393	338	0.4	0.6	7.426	A
	Exit	1	1	(A,B,C,D)	384			384	0.0	0.0	0.006	A
			1		179			179	0.0	0.0	0.000	A
B	Entry	1	1	C	477	1500	0.318	477	0.4	0.6	4.411	A
			2	A,B,D	30	1500	0.020	29	0.0	0.1	2.926	A
	Exit	1	1		298			298	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	353	2650	0.133	353	0.2	0.3	2.752	A
	Exit	1	1		1499			1499	0.0	0.0	0.000	A
D	Entry	1	1	A	104	1500	0.069	103	0.1	0.1	2.856	A
			2	B,C,D	938	1500	0.625	939	1.0	1.8	6.668	A
	Exit	1	1		312			312	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	46	853	0.054	46	0.0	0.1	4.708	A
			2	A,C,D	349	853	0.409	351	0.6	0.6	8.059	A
	Exit	1	1	(A,B,C,D)	395			395	0.0	0.0	0.033	A
			1		180			180	0.0	0.0	0.000	A
B	Entry	1	1	C	481	1500	0.321	482	0.6	0.6	4.449	A
			2	A,B,D	31	1500	0.021	31	0.1	0.0	3.082	A
	Exit	1	1		287			287	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	342	2638	0.129	339	0.3	0.3	2.722	A
	Exit	1	1		1518			1518	0.0	0.0	0.000	A
D	Entry	1	1	A	103	1500	0.068	103	0.1	0.0	2.891	A
			2	B,C,D	947	1500	0.632	948	1.8	2.1	7.457	A
	Exit	1	1		315			315	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	37	964	0.039	37	0.1	0.1	4.101	A
			2	A,C,D	281	964	0.291	282	0.6	0.3	6.018	A
		2	1	(A,B,C,D)	318			318	0.0	0.0	0.002	A
	Exit	1	1		141			141	0.0	0.0	0.000	A
B	Entry	1	1	C	381	1500	0.254	382	0.6	0.4	4.123	A
			2	A,B,D	25	1500	0.017	25	0.0	0.0	2.931	A
	Exit	1	1		232			232	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	274	2704	0.101	271	0.3	0.3	2.640	A
	Exit	1	1		1217			1217	0.0	0.0	0.000	A
D	Entry	1	1	A	81	1500	0.054	81	0.0	0.0	2.910	A
			2	B,C,D	762	1500	0.508	763	2.1	1.1	5.572	A
	Exit	1	1		252			252	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	30	1034	0.029	30	0.1	0.0	3.698	A
			2	A,C,D	241	1034	0.233	239	0.3	0.4	5.079	A
		2	1	(A,B,C,D)	271			271	0.0	0.0	0.000	A
	Exit	1	1		120			120	0.0	0.0	0.000	A
B	Entry	1	1	C	325	1500	0.216	321	0.4	0.6	3.826	A
			2	A,B,D	22	1500	0.015	23	0.0	0.0	2.718	A
	Exit	1	1		196			196	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	227	2747	0.083	229	0.3	0.1	2.427	A
	Exit	1	1		1033			1033	0.0	0.0	0.000	A
D	Entry	1	1	A	67	1500	0.045	67	0.0	0.1	2.888	A
			2	B,C,D	648	1500	0.432	647	1.1	0.9	4.466	A
	Exit	1	1		208			208	0.0	0.0	0.000	A

Do Minimum - 2021 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	3.42	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

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	2021 Construction	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	361	100.000
B		ONE HOUR	✓	346	100.000
C		ONE HOUR	✓	1205	100.000
D		ONE HOUR	✓	430	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A	B	C	D
From	A	2	82	177	100
	B	91	1	254	0
	C	133	359	0	713
	D	260	2	167	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A	B	C	D
From	A	0	0	13	2
	B	2	0	49	0
	C	9	25	0	7
	D	2	100	30	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	4.42	0.6	A	332	497
B	3.89	0.5	A	319	478
C	3.06	1.3	A	1113	1669
D	3.23	0.5	A	397	596

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	276	69	396	276	374	0.0	0.3	3.627	A
B	266	67	341	266	331	0.0	0.3	3.573	A
C	905	226	152	907	455	0.0	0.6	2.133	A
D	326	82	444	325	614	0.0	0.4	3.017	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	326	82	489	327	445	0.3	0.4	3.925	A
B	311	78	411	312	405	0.3	0.3	3.732	A
C	1094	274	177	1092	546	0.6	0.9	2.513	A
D	394	98	540	394	729	0.4	0.4	3.126	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	398	99	578	399	533	0.4	0.4	4.344	A
B	377	94	487	379	491	0.3	0.3	3.796	A
C	1337	334	211	1339	655	0.9	1.0	3.056	A
D	470	117	641	470	908	0.4	0.5	3.225	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	389	97	594	387	538	0.4	0.6	4.422	A
B	373	93	491	373	490	0.3	0.5	3.888	A
C	1345	336	211	1346	653	1.0	1.3	3.046	A
D	482	121	650	482	907	0.5	0.4	3.227	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	324	81	472	323	431	0.6	0.5	4.111	A
B	320	80	410	320	384	0.5	0.3	3.817	A
C	1089	272	171	1089	559	1.3	0.8	2.610	A
D	386	97	516	387	744	0.4	0.3	3.112	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	277	69	402	277	363	0.5	0.3	3.663	A
B	265	66	333	268	346	0.3	0.2	3.759	A
C	905	226	151	904	450	0.8	0.5	2.189	A
D	326	82	439	327	616	0.3	0.3	3.007	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	59	1235	0.048	60	0.0	0.1	3.014	A
			2	A,C,D	217	1235	0.175	216	0.0	0.2	3.820	A
	Exit	2	1	(A,B,C,D)	276			276	0.0	0.0	0.000	A
			1		374			374	0.0	0.0	0.000	A
B	Entry	1	1	C	194	1500	0.129	194	0.0	0.2	4.065	A
			2	A,B,D	72	1500	0.048	72	0.0	0.0	2.677	A
	Exit	1	1		331			331	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	905	2798	0.324	907	0.0	0.6	2.133	A
	Exit	1	1		455			455	0.0	0.0	0.000	A
D	Entry	1	1	A	199	1500	0.133	198	0.0	0.2	2.826	A
			2	B,C,D	128	1500	0.085	127	0.0	0.2	3.396	A
	Exit	1	1		614			614	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	73	1190	0.061	72	0.1	0.1	3.227	A
			2	A,C,D	253	1190	0.213	254	0.2	0.3	4.140	A
	Exit	2	1	(A,B,C,D)	326			326	0.0	0.0	0.000	A
			1		445			445	0.0	0.0	0.000	A
B	Entry	1	1	C	228	1500	0.152	229	0.2	0.2	4.329	A
			2	A,B,D	83	1500	0.055	83	0.0	0.0	2.631	A
	Exit	1	1		405			405	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1094	2770	0.395	1092	0.6	0.9	2.513	A
	Exit	1	1		546			546	0.0	0.0	0.000	A
D	Entry	1	1	A	235	1500	0.156	236	0.2	0.2	2.960	A
			2	B,C,D	160	1500	0.106	158	0.2	0.2	3.447	A
	Exit	1	1		729			729	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	91	1148	0.079	91	0.1	0.1	3.345	A
			2	A,C,D	306	1148	0.267	308	0.3	0.3	4.657	A
	Exit	2	1	(A,B,C,D)	398			398	0.0	0.0	0.000	A
			1		533			533	0.0	0.0	0.000	A
B	Entry	1	1	C	279	1500	0.186	282	0.2	0.2	4.433	A
			2	A,B,D	98	1500	0.065	98	0.0	0.1	2.578	A
	Exit	1	1		491			491	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1337	2731	0.489	1339	0.9	1.0	3.056	A
	Exit	1	1		655			655	0.0	0.0	0.000	A
D	Entry	1	1	A	290	1500	0.194	290	0.2	0.2	3.083	A
			2	B,C,D	179	1500	0.119	180	0.2	0.2	3.516	A
	Exit	1	1		908			908	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	86	1140	0.076	86	0.1	0.1	3.508	A
			2	A,C,D	302	1140	0.265	300	0.3	0.6	4.713	A
	Exit	1	1	(A,B,C,D)	389			389	0.0	0.0	0.001	A
			1		538			538	0.0	0.0	0.000	A
B	Entry	1	1	C	272	1500	0.181	271	0.2	0.5	4.628	A
			2	A,B,D	101	1500	0.068	101	0.1	0.1	2.508	A
	Exit	1	1		490			490	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1345	2731	0.492	1346	1.0	1.3	3.046	A
	Exit	1	1		653			653	0.0	0.0	0.000	A
D	Entry	1	1	A	289	1500	0.193	288	0.2	0.3	3.070	A
			2	B,C,D	193	1500	0.129	193	0.2	0.1	3.534	A
	Exit	1	1		907			907	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	70	1199	0.059	70	0.1	0.1	3.263	A
			2	A,C,D	254	1199	0.212	253	0.6	0.4	4.379	A
	Exit	1	1	(A,B,C,D)	324			324	0.0	0.0	0.000	A
			1		431			431	0.0	0.0	0.000	A
B	Entry	1	1	C	239	1500	0.159	239	0.5	0.3	4.371	A
			2	A,B,D	80	1500	0.054	81	0.1	0.0	2.741	A
	Exit	1	1		384			384	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1089	2776	0.392	1089	1.3	0.8	2.610	A
	Exit	1	1		559			559	0.0	0.0	0.000	A
D	Entry	1	1	A	227	1500	0.151	227	0.3	0.1	2.888	A
			2	B,C,D	160	1500	0.106	160	0.1	0.2	3.532	A
	Exit	1	1		744			744	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	68	1232	0.055	68	0.1	0.0	3.089	A
			2	A,C,D	209	1232	0.170	209	0.4	0.3	3.852	A
	Exit	1	1	(A,B,C,D)	277			277	0.0	0.0	0.000	A
			1		363			363	0.0	0.0	0.000	A
B	Entry	1	1	C	194	1500	0.129	197	0.3	0.2	4.271	A
			2	A,B,D	71	1500	0.047	72	0.0	0.0	2.761	A
	Exit	1	1		346			346	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	905	2799	0.323	904	0.8	0.5	2.189	A
	Exit	1	1		450			450	0.0	0.0	0.000	A
D	Entry	1	1	A	199	1500	0.133	200	0.1	0.2	2.795	A
			2	B,C,D	127	1500	0.085	126	0.2	0.1	3.425	A
	Exit	1	1		616			616	0.0	0.0	0.000	A

Do Minimum - 2021 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	5.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

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	2021 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	357	100.000
B		ONE HOUR	✓	566	100.000
C		ONE HOUR	✓	323	100.000
D		ONE HOUR	✓	957	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	43	82	232
	B	25	1	539	1
	C	43	225	0	55
	D	94	0	863	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	33	2
	B	20	0	18	0
	C	50	76	0	100
	D	12	0	5	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	8.02	0.9	A	330	495
B	4.87	1.0	A	521	781
C	2.82	0.3	A	300	450
D	6.87	2.1	A	878	1317

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	268	67	823	268	125	0.0	0.4	4.584	A
B	429	107	887	428	204	0.0	0.5	3.907	A
C	248	62	194	248	1120	0.0	0.2	2.518	A
D	722	180	226	723	216	0.0	0.8	4.290	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	326	82	973	325	146	0.4	0.6	5.678	A
B	504	126	1059	505	239	0.5	0.6	4.252	A
C	290	72	240	291	1324	0.2	0.2	2.645	A
D	856	214	262	856	268	0.8	1.2	5.058	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	401	100	1202	401	176	0.6	0.9	7.503	A
B	630	157	1302	628	302	0.6	1.0	4.657	A
C	364	91	288	364	1643	0.2	0.3	2.808	A
D	1050	262	328	1050	324	1.2	1.9	6.866	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	394	98	1209	394	187	0.9	0.8	8.019	A
B	641	160	1300	639	303	1.0	1.0	4.874	A
C	361	90	287	362	1653	0.3	0.3	2.817	A
D	1067	267	332	1063	316	1.9	2.1	6.747	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	324	81	987	325	140	0.8	0.5	5.956	A
B	501	125	1063	501	249	1.0	0.6	4.256	A
C	299	75	235	299	1329	0.3	0.2	2.634	A
D	859	215	268	859	266	2.1	1.3	5.204	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	269	67	819	269	116	0.5	0.5	4.896	A
B	420	105	884	420	203	0.6	0.5	3.949	A
C	239	60	188	239	1116	0.2	0.2	2.532	A
D	716	179	218	717	209	1.3	0.9	4.423	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	32	1030	0.031	32	0.0	0.0	3.343	A
			2	A,C,D	236	1030	0.229	236	0.0	0.3	4.760	A
	Exit	2	1	(A,B,C,D)	268			268	0.0	0.0	0.000	A
			1		125			125	0.0	0.0	0.000	A
B	Entry	1	1	C	409	1500	0.273	408	0.0	0.5	3.953	A
			2	A,B,D	20	1500	0.013	20	0.0	0.0	2.990	A
	Exit	1	1		204			204	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	248	2750	0.090	248	0.0	0.2	2.518	A
	Exit	1	1		1120			1120	0.0	0.0	0.000	A
D	Entry	1	1	A	72	1500	0.048	72	0.0	0.1	2.848	A
			2	B,C,D	650	1500	0.433	651	0.0	0.8	4.438	A
	Exit	1	1		216			216	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	38	957	0.040	38	0.0	0.0	3.883	A
			2	A,C,D	288	957	0.301	288	0.3	0.6	5.933	A
	Exit	2	1	(A,B,C,D)	326			326	0.0	0.0	0.000	A
			1		146			146	0.0	0.0	0.000	A
B	Entry	1	1	C	478	1500	0.319	478	0.5	0.6	4.318	A
			2	A,B,D	26	1500	0.018	27	0.0	0.0	2.941	A
	Exit	1	1		239			239	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	290	2699	0.107	291	0.2	0.2	2.645	A
	Exit	1	1		1324			1324	0.0	0.0	0.000	A
D	Entry	1	1	A	84	1500	0.056	84	0.1	0.1	2.898	A
			2	B,C,D	772	1500	0.514	772	0.8	1.1	5.275	A
	Exit	1	1		268			268	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	48	847	0.057	48	0.0	0.1	4.522	A
			2	A,C,D	354	847	0.417	354	0.6	0.8	7.910	A
		2	1	(A,B,C,D)	401			402	0.0	0.0	0.031	A
	Exit	1	1		176			176	0.0	0.0	0.000	A
B	Entry	1	1	C	602	1500	0.401	600	0.6	1.0	4.741	A
			2	A,B,D	28	1500	0.019	29	0.0	0.0	2.897	A
	Exit	1	1		302			302	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	364	2645	0.138	364	0.2	0.3	2.808	A
	Exit	1	1		1643			1643	0.0	0.0	0.000	A
D	Entry	1	1	A	103	1500	0.068	102	0.1	0.1	3.061	A
			2	B,C,D	947	1500	0.631	948	1.1	1.8	7.252	A
	Exit	1	1		324			324	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	49	844	0.058	49	0.1	0.1	4.413	A
			2	A,C,D	345	844	0.409	345	0.8	0.8	8.530	A
		2	1	(A,B,C,D)	394			394	0.0	0.0	0.022	A
	Exit	1	1		187			187	0.0	0.0	0.000	A
B	Entry	1	1	C	610	1500	0.407	608	1.0	0.9	4.986	A
			2	A,B,D	31	1500	0.021	31	0.0	0.0	2.705	A
	Exit	1	1		303			303	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	361	2647	0.136	362	0.3	0.3	2.817	A
	Exit	1	1		1653			1653	0.0	0.0	0.000	A
D	Entry	1	1	A	109	1500	0.072	108	0.1	0.1	2.889	A
			2	B,C,D	958	1500	0.639	955	1.8	2.0	7.139	A
	Exit	1	1		316			316	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	41	951	0.043	40	0.1	0.1	4.002	A
			2	A,C,D	283	951	0.298	284	0.8	0.4	6.257	A
		2	1	(A,B,C,D)	324			324	0.0	0.0	0.000	A
	Exit	1	1		140			140	0.0	0.0	0.000	A
B	Entry	1	1	C	480	1500	0.320	481	0.9	0.6	4.319	A
			2	A,B,D	21	1500	0.014	21	0.0	0.0	2.934	A
	Exit	1	1		249			249	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	299	2705	0.111	299	0.3	0.2	2.634	A
	Exit	1	1		1329			1329	0.0	0.0	0.000	A
D	Entry	1	1	A	81	1500	0.054	81	0.1	0.1	2.824	A
			2	B,C,D	778	1500	0.519	778	2.0	1.2	5.444	A
	Exit	1	1		266			266	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	35	1032	0.033	34	0.1	0.1	3.766	A
			2	A,C,D	235	1032	0.228	235	0.4	0.4	5.071	A
	Exit	1	1	(A,B,C,D)	269			269	0.0	0.0	0.000	A
			1		116			116	0.0	0.0	0.000	A
B	Entry	1	1	C	401	1500	0.267	401	0.6	0.5	4.005	A
			2	A,B,D	19	1500	0.013	19	0.0	0.0	2.810	A
	Exit	1	1		203			203	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	239	2757	0.087	239	0.2	0.2	2.532	A
	Exit	1	1		1116			1116	0.0	0.0	0.000	A
D	Entry	1	1	A	68	1500	0.045	67	0.1	0.1	2.767	A
			2	B,C,D	649	1500	0.432	650	1.2	0.9	4.588	A
	Exit	1	1		209			209	0.0	0.0	0.000	A

Do Minimum - 2021 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	4.32	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

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	2021 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	561	100.000
B		ONE HOUR	✓	351	100.000
C		ONE HOUR	✓	1275	100.000
D		ONE HOUR	✓	435	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	2	82	177	300
	B	91	1	259	0
	C	133	424	0	718
	D	260	2	172	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	13	2
	B	2	0	49	0
	C	9	21	0	7
	D	2	100	31	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	6.40	1.1	A	511	766
B	3.79	0.5	A	324	485
C	3.92	1.6	A	1179	1769
D	3.24	0.5	A	397	596

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	429	107	451	430	371	0.0	0.5	4.214	A
B	261	65	490	261	390	0.0	0.3	3.689	A
C	977	244	302	973	449	0.0	1.0	2.470	A
D	325	81	497	325	778	0.0	0.3	3.046	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	489	122	545	487	437	0.5	0.8	4.894	A
B	318	79	570	320	462	0.3	0.3	3.750	A
C	1160	290	345	1162	544	1.0	0.8	2.876	A
D	390	97	593	389	914	0.3	0.4	3.153	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	626	157	650	626	527	0.8	1.1	5.973	A
B	386	96	720	386	555	0.3	0.4	3.793	A
C	1402	351	432	1398	674	0.8	1.6	3.770	A
D	470	118	707	470	1122	0.4	0.4	3.244	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	605	151	666	606	541	1.1	0.9	6.400	A
B	391	98	698	391	574	0.4	0.5	3.785	A
C	1417	354	427	1420	662	1.6	1.5	3.924	A
D	475	119	733	474	1115	0.4	0.5	3.153	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	509	127	562	511	430	0.9	0.7	5.023	A
B	321	80	607	322	465	0.5	0.2	3.765	A
C	1154	289	366	1153	564	1.5	1.0	2.949	A
D	398	100	595	397	924	0.5	0.4	3.131	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	406	102	449	405	360	0.7	0.6	4.579	A
B	265	66	477	265	378	0.2	0.3	3.671	A
C	966	242	291	971	451	1.0	0.6	2.581	A
D	326	81	483	327	779	0.4	0.2	3.022	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	64	1209	0.053	64	0.0	0.1	3.069	A
			2	A,C,D	365	1209	0.302	366	0.0	0.4	4.426	A
	Exit	2	1	(A,B,C,D)	429			429	0.0	0.0	0.000	A
			1		371			371	0.0	0.0	0.000	A
B	Entry	1	1	C	189	1500	0.126	189	0.0	0.2	4.309	A
			2	A,B,D	72	1500	0.048	71	0.0	0.0	2.535	A
	Exit	1	1		390			390	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	977	2630	0.371	973	0.0	1.0	2.470	A
	Exit	1	1		449			449	0.0	0.0	0.000	A
D	Entry	1	1	A	199	1500	0.132	198	0.0	0.2	2.855	A
			2	B,C,D	126	1500	0.084	127	0.0	0.1	3.411	A
	Exit	1	1		778			778	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	70	1164	0.060	70	0.1	0.0	3.458	A
			2	A,C,D	419	1164	0.360	417	0.4	0.7	5.155	A
	Exit	2	1	(A,B,C,D)	489			489	0.0	0.0	0.001	A
			1		437			437	0.0	0.0	0.000	A
B	Entry	1	1	C	234	1500	0.156	236	0.2	0.3	4.352	A
			2	A,B,D	84	1500	0.056	84	0.0	0.0	2.529	A
	Exit	1	1		462			462	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1160	2581	0.449	1162	1.0	0.8	2.876	A
	Exit	1	1		544			544	0.0	0.0	0.000	A
D	Entry	1	1	A	234	1500	0.156	233	0.2	0.2	2.960	A
			2	B,C,D	155	1500	0.103	156	0.1	0.2	3.531	A
	Exit	1	1		914			914	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	95	1113	0.085	93	0.0	0.2	3.579	A
			2	A,C,D	530	1113	0.477	532	0.7	0.9	6.378	A
		2	1	(A,B,C,D)	626			625	0.0	0.1	0.031	A
	Exit	1	1		527			527	0.0	0.0	0.000	A
B	Entry	1	1	C	282	1500	0.188	283	0.3	0.3	4.407	A
			2	A,B,D	103	1500	0.069	103	0.0	0.0	2.659	A
	Exit	1	1		555			555	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1402	2484	0.565	1398	0.8	1.6	3.770	A
	Exit	1	1		674			674	0.0	0.0	0.000	A
D	Entry	1	1	A	279	1500	0.186	280	0.2	0.2	3.022	A
			2	B,C,D	191	1500	0.127	191	0.2	0.2	3.665	A
	Exit	1	1		1122			1122	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	92	1105	0.083	91	0.2	0.1	3.684	A
			2	A,C,D	514	1105	0.465	515	0.9	0.9	6.839	A
		2	1	(A,B,C,D)	605			606	0.1	0.0	0.059	A
	Exit	1	1		541			541	0.0	0.0	0.000	A
B	Entry	1	1	C	284	1500	0.190	284	0.3	0.4	4.467	A
			2	A,B,D	107	1500	0.071	106	0.0	0.1	2.522	A
	Exit	1	1		574			574	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1417	2489	0.570	1420	1.6	1.5	3.924	A
	Exit	1	1		662			662	0.0	0.0	0.000	A
D	Entry	1	1	A	290	1500	0.193	289	0.2	0.3	2.931	A
			2	B,C,D	185	1500	0.123	186	0.2	0.2	3.564	A
	Exit	1	1		1115			1115	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	73	1155	0.063	72	0.1	0.1	3.201	A
			2	A,C,D	436	1155	0.377	438	0.9	0.6	5.346	A
		2	1	(A,B,C,D)	509			509	0.0	0.0	0.000	A
	Exit	1	1		430			430	0.0	0.0	0.000	A
B	Entry	1	1	C	235	1500	0.157	236	0.4	0.2	4.367	A
			2	A,B,D	86	1500	0.057	86	0.1	0.1	2.591	A
	Exit	1	1		465			465	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1154	2558	0.451	1153	1.5	1.0	2.949	A
	Exit	1	1		564			564	0.0	0.0	0.000	A
D	Entry	1	1	A	226	1500	0.150	226	0.3	0.2	2.911	A
			2	B,C,D	173	1500	0.115	171	0.2	0.2	3.543	A
	Exit	1	1		924			924	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	58	1209	0.048	58	0.1	0.0	3.305	A
			2	A,C,D	348	1209	0.288	346	0.6	0.6	4.800	A
	Exit	1	1	(A,B,C,D)	406			406	0.0	0.0	0.000	A
			1		360			360	0.0	0.0	0.000	A
B	Entry	1	1	C	197	1500	0.131	197	0.2	0.3	4.211	A
			2	A,B,D	68	1500	0.045	68	0.1	0.1	2.578	A
	Exit	1	1		378			378	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	966	2642	0.366	971	1.0	0.6	2.581	A
	Exit	1	1		451			451	0.0	0.0	0.000	A
D	Entry	1	1	A	194	1500	0.129	195	0.2	0.1	2.784	A
			2	B,C,D	132	1500	0.088	132	0.2	0.1	3.478	A
	Exit	1	1		779			779	0.0	0.0	0.000	A

Do Minimum - 2022 Construction, Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	5.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2022 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	356	100.000
B		ONE HOUR	✓	470	100.000
C		ONE HOUR	✓	350	100.000
D		ONE HOUR	✓	916	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A	B	C	D
From	A	0	44	78	234
	B	25	1	443	1
	C	47	240	0	63
	D	95	0	821	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A	B	C	D
From	A	0	0	37	2
	B	20	0	25	0
	C	50	75	0	84
	D	12	0	5	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	7.43	0.8	A	322	484
B	4.57	0.6	A	432	648
C	2.88	0.4	A	326	490
D	6.26	1.9	A	839	1259

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	270	68	786	271	121	0.0	0.4	4.458	A
B	353	88	844	353	212	0.0	0.5	3.871	A
C	267	67	195	267	1002	0.0	0.1	2.428	A
D	675	169	230	677	232	0.0	0.8	4.294	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	323	81	948	325	149	0.4	0.6	5.490	A
B	428	107	1018	425	254	0.5	0.6	4.077	A
C	315	79	230	316	1213	0.1	0.1	2.650	A
D	820	205	277	820	269	0.8	1.1	4.846	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	384	96	1169	385	184	0.6	0.8	7.303	A
B	511	128	1237	513	318	0.6	0.6	4.565	A
C	391	98	285	390	1465	0.1	0.3	2.726	A
D	1011	253	341	1013	334	1.1	1.9	6.261	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	382	96	1168	385	181	0.8	0.8	7.429	A
B	516	129	1235	520	317	0.6	0.6	4.492	A
C	399	100	282	397	1472	0.3	0.4	2.880	A
D	1008	252	346	1002	332	1.9	1.9	5.995	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	315	79	958	316	142	0.8	0.5	5.755	A
B	422	106	1013	420	261	0.6	0.6	4.146	A
C	310	78	227	309	1207	0.4	0.3	2.625	A
D	822	205	277	824	260	1.9	1.1	4.871	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	259	65	815	260	130	0.5	0.3	4.834	A
B	364	91	848	361	227	0.6	0.5	3.744	A
C	276	69	190	277	1019	0.3	0.2	2.582	A
D	700	175	246	699	221	1.1	0.8	4.276	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	34	1047	0.033	34	0.0	0.0	3.376	A
			2	A,C,D	236	1047	0.225	237	0.0	0.3	4.622	A
	Exit	2	1	(A,B,C,D)	270			270	0.0	0.0	0.000	A
			1		121			121	0.0	0.0	0.000	A
B	Entry	1	1	C	337	1500	0.224	337	0.0	0.4	3.919	A
			2	A,B,D	16	1500	0.011	16	0.0	0.0	3.005	A
	Exit	1	1		212			212	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	267	2749	0.097	267	0.0	0.1	2.428	A
	Exit	1	1		1002			1002	0.0	0.0	0.000	A
D	Entry	1	1	A	69	1500	0.046	69	0.0	0.1	2.797	A
			2	B,C,D	606	1500	0.404	608	0.0	0.7	4.455	A
	Exit	1	1		232			232	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	42	970	0.044	42	0.0	0.0	4.007	A
			2	A,C,D	281	970	0.290	282	0.3	0.5	5.720	A
	Exit	2	1	(A,B,C,D)	323			323	0.0	0.0	0.000	A
			1		149			149	0.0	0.0	0.000	A
B	Entry	1	1	C	406	1500	0.271	404	0.4	0.6	4.155	A
			2	A,B,D	21	1500	0.014	21	0.0	0.0	2.870	A
	Exit	1	1		254			254	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	315	2710	0.116	316	0.1	0.1	2.650	A
	Exit	1	1		1213			1213	0.0	0.0	0.000	A
D	Entry	1	1	A	84	1500	0.056	84	0.1	0.1	2.956	A
			2	B,C,D	736	1500	0.491	735	0.7	1.0	5.050	A
	Exit	1	1		269			269	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	50	863	0.058	50	0.0	0.0	4.602	A
			2	A,C,D	335	863	0.388	335	0.5	0.8	7.706	A
	Exit	2	1	(A,B,C,D)	384			385	0.0	0.0	0.025	A
			1		184			184	0.0	0.0	0.000	A
B	Entry	1	1	C	484	1500	0.323	486	0.6	0.6	4.676	A
			2	A,B,D	27	1500	0.018	27	0.0	0.0	2.815	A
	Exit	1	1		318			318	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	391	2649	0.148	390	0.1	0.3	2.726	A
	Exit	1	1		1465			1465	0.0	0.0	0.000	A
D	Entry	1	1	A	111	1500	0.074	111	0.1	0.1	2.878	A
			2	B,C,D	900	1500	0.600	902	1.0	1.8	6.634	A
	Exit	1	1		334			334	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	48	864	0.055	48	0.0	0.0	4.548	A
			2	A,C,D	335	864	0.388	337	0.8	0.7	7.866	A
		2	1	(A,B,C,D)	382			382	0.0	0.0	0.007	A
	Exit	1	1		181			181	0.0	0.0	0.000	A
B	Entry	1	1	C	489	1500	0.326	493	0.6	0.5	4.588	A
			2	A,B,D	26	1500	0.018	26	0.0	0.0	2.928	A
	Exit	1	1		317			317	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	399	2652	0.151	397	0.3	0.4	2.880	A
	Exit	1	1		1472			1472	0.0	0.0	0.000	A
D	Entry	1	1	A	104	1500	0.070	104	0.1	0.0	2.891	A
			2	B,C,D	903	1500	0.602	898	1.8	1.9	6.325	A
	Exit	1	1		332			332	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	42	964	0.044	43	0.0	0.0	4.021	A
			2	A,C,D	272	964	0.282	273	0.7	0.5	6.015	A
		2	1	(A,B,C,D)	315			315	0.0	0.0	0.006	A
	Exit	1	1		142			142	0.0	0.0	0.000	A
B	Entry	1	1	C	403	1500	0.269	401	0.5	0.6	4.223	A
			2	A,B,D	19	1500	0.013	19	0.0	0.0	2.872	A
	Exit	1	1		261			261	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	310	2713	0.114	309	0.4	0.3	2.625	A
	Exit	1	1		1207			1207	0.0	0.0	0.000	A
D	Entry	1	1	A	85	1500	0.056	84	0.0	0.1	2.777	A
			2	B,C,D	737	1500	0.491	739	1.9	1.0	5.102	A
	Exit	1	1		260			260	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	37	1033	0.036	37	0.0	0.0	3.487	A
			2	A,C,D	222	1033	0.215	223	0.5	0.3	5.043	A
		2	1	(A,B,C,D)	259			259	0.0	0.0	0.000	A
	Exit	1	1		130			130	0.0	0.0	0.000	A
B	Entry	1	1	C	342	1500	0.228	340	0.6	0.5	3.790	A
			2	A,B,D	21	1500	0.014	22	0.0	0.0	3.093	A
	Exit	1	1		227			227	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	276	2755	0.100	277	0.3	0.2	2.582	A
	Exit	1	1		1019			1019	0.0	0.0	0.000	A
D	Entry	1	1	A	73	1500	0.049	73	0.1	0.0	2.684	A
			2	B,C,D	627	1500	0.418	625	1.0	0.8	4.452	A
	Exit	1	1		221			221	0.0	0.0	0.000	A

Do Minimum - 2022 Construction, Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	4.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2022 Construction	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	566	100.000
B		ONE HOUR	✓	371	100.000
C		ONE HOUR	✓	1270	100.000
D		ONE HOUR	✓	450	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A	B	C	D
From	A	2	83	180	301
	B	92	1	278	0
	C	142	379	0	749
	D	263	2	184	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A	B	C	D
From	A	0	0	13	2
	B	2	0	50	0
	C	9	25	0	7
	D	2	100	28	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	6.21	1.4	A	527	791
B	4.01	0.5	A	343	514
C	3.94	1.4	A	1172	1759
D	3.34	0.5	A	421	632

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	439	110	418	437	377	0.0	0.8	4.112	A
B	287	72	500	287	354	0.0	0.4	3.687	A
C	952	238	303	950	483	0.0	0.8	2.483	A
D	336	84	460	335	793	0.0	0.4	3.019	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	515	129	497	517	456	0.8	0.6	4.818	A
B	345	86	613	345	401	0.4	0.4	3.837	A
C	1138	284	361	1135	597	0.8	1.0	2.901	A
D	415	104	536	418	960	0.4	0.3	3.157	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	644	161	643	641	561	0.6	1.4	5.807	A
B	417	104	765	415	519	0.4	0.5	4.014	A
C	1407	352	446	1411	735	1.0	1.4	3.941	A
D	514	129	689	515	1167	0.3	0.5	3.341	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	617	154	615	612	558	1.4	1.3	6.208	A
B	398	99	733	398	494	0.5	0.5	3.957	A
C	1393	348	439	1398	692	1.4	1.4	3.850	A
D	499	125	674	500	1164	0.5	0.5	3.304	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	524	131	503	524	468	1.3	0.7	5.240	A
B	327	82	615	328	413	0.5	0.4	3.736	A
C	1162	290	359	1157	584	1.4	1.3	2.985	A
D	416	104	554	417	962	0.5	0.3	3.171	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	423	106	437	421	383	0.7	0.5	4.238	A
B	282	71	502	282	356	0.4	0.3	3.632	A
C	984	246	291	984	492	1.3	0.5	2.484	A
D	347	87	475	345	801	0.3	0.3	3.104	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	67	1225	0.055	67	0.0	0.0	3.011	A
			2	A,C,D	372	1225	0.303	369	0.0	0.7	4.317	A
	Exit	2	1	(A,B,C,D)	439			439	0.0	0.0	0.001	A
			1		377			377	0.0	0.0	0.000	A
B	Entry	1	1	C	217	1500	0.145	216	0.0	0.3	4.284	A
			2	A,B,D	70	1500	0.047	70	0.0	0.0	2.536	A
	Exit	1	1		354			354	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	952	2628	0.362	950	0.0	0.8	2.483	A
	Exit	1	1		483			483	0.0	0.0	0.000	A
D	Entry	1	1	A	204	1500	0.136	203	0.0	0.2	2.842	A
			2	B,C,D	132	1500	0.088	132	0.0	0.2	3.348	A
	Exit	1	1		793			793	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	74	1186	0.062	74	0.0	0.0	3.270	A
			2	A,C,D	442	1186	0.372	442	0.7	0.5	5.074	A
	Exit	2	1	(A,B,C,D)	515			515	0.0	0.0	0.011	A
			1		456			456	0.0	0.0	0.000	A
B	Entry	1	1	C	263	1500	0.175	262	0.3	0.4	4.448	A
			2	A,B,D	82	1500	0.055	83	0.0	0.0	2.557	A
	Exit	1	1		401			401	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1138	2563	0.444	1135	0.8	1.0	2.901	A
	Exit	1	1		597			597	0.0	0.0	0.000	A
D	Entry	1	1	A	244	1500	0.162	245	0.2	0.2	2.918	A
			2	B,C,D	171	1500	0.114	172	0.2	0.2	3.578	A
	Exit	1	1		960			960	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	93	1116	0.084	93	0.0	0.1	3.638	A
			2	A,C,D	551	1116	0.493	548	0.5	1.3	6.183	A
	Exit	2	1	(A,B,C,D)	644			644	0.0	0.0	0.009	A
			1		561			561	0.0	0.0	0.000	A
B	Entry	1	1	C	315	1500	0.210	314	0.4	0.4	4.741	A
			2	A,B,D	102	1500	0.068	102	0.0	0.1	2.561	A
	Exit	1	1		519			519	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1407	2468	0.570	1411	1.0	1.4	3.941	A
	Exit	1	1		735			735	0.0	0.0	0.000	A
D	Entry	1	1	A	296	1500	0.198	296	0.2	0.3	3.133	A
			2	B,C,D	217	1500	0.145	219	0.2	0.2	3.700	A
	Exit	1	1		1167			1167	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	83	1129	0.074	81	0.1	0.2	3.574	A
			2	A,C,D	534	1129	0.473	530	1.3	1.1	6.652	A
	Exit	1	1	(A,B,C,D)	617			617	0.0	0.0	0.010	A
			1		558			558	0.0	0.0	0.000	A
B	Entry	1	1	C	297	1500	0.198	298	0.4	0.4	4.583	A
			2	A,B,D	101	1500	0.067	101	0.1	0.1	2.670	A
	Exit	1	1		494			494	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1393	2476	0.563	1398	1.4	1.4	3.850	A
	Exit	1	1		692			692	0.0	0.0	0.000	A
D	Entry	1	1	A	294	1500	0.196	294	0.3	0.2	3.077	A
			2	B,C,D	206	1500	0.137	206	0.2	0.3	3.704	A
	Exit	1	1		1164			1164	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	73	1184	0.062	73	0.2	0.1	3.300	A
			2	A,C,D	450	1184	0.380	451	1.1	0.6	5.514	A
	Exit	1	1	(A,B,C,D)	524			524	0.0	0.0	0.064	A
			1		468			468	0.0	0.0	0.000	A
B	Entry	1	1	C	250	1500	0.167	251	0.4	0.3	4.297	A
			2	A,B,D	77	1500	0.051	77	0.1	0.0	2.548	A
	Exit	1	1		413			413	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1162	2565	0.453	1157	1.4	1.3	2.985	A
	Exit	1	1		584			584	0.0	0.0	0.000	A
D	Entry	1	1	A	250	1500	0.167	250	0.2	0.2	2.887	A
			2	B,C,D	166	1500	0.111	167	0.3	0.1	3.696	A
	Exit	1	1		962			962	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	63	1215	0.052	63	0.1	0.1	2.861	A
			2	A,C,D	360	1215	0.296	358	0.6	0.5	4.488	A
	Exit	1	1	(A,B,C,D)	423			423	0.0	0.0	0.000	A
			1		383			383	0.0	0.0	0.000	A
B	Entry	1	1	C	209	1500	0.139	209	0.3	0.2	4.137	A
			2	A,B,D	73	1500	0.049	73	0.0	0.1	2.630	A
	Exit	1	1		356			356	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	984	2641	0.372	984	1.3	0.5	2.484	A
	Exit	1	1		492			492	0.0	0.0	0.000	A
D	Entry	1	1	A	201	1500	0.134	200	0.2	0.2	2.948	A
			2	B,C,D	146	1500	0.097	145	0.1	0.1	3.380	A
	Exit	1	1		801			801	0.0	0.0	0.000	A

Do Minimum - 2022 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	5.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2022 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	356	100.000
B		ONE HOUR	✓	577	100.000
C		ONE HOUR	✓	360	100.000
D		ONE HOUR	✓	923	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	44	78	234
	B	25	1	550	1
	C	47	245	0	68
	D	95	0	828	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	37	2
	B	20	0	20	0
	C	50	75	0	85
	D	12	0	6	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	7.26	1.0	A	320	480
B	5.11	0.9	A	536	803
C	2.78	0.4	A	334	501
D	6.29	1.7	A	840	1261

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	267	67	795	269	128	0.0	0.3	4.587	A
B	437	109	849	439	216	0.0	0.3	3.924	A
C	272	68	197	273	1091	0.0	0.1	2.509	A
D	681	170	237	687	233	0.0	0.7	4.227	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	306	76	973	309	158	0.3	0.4	5.652	A
B	528	132	1016	533	266	0.3	0.6	4.471	A
C	325	81	231	325	1317	0.1	0.2	2.636	A
D	834	208	296	835	260	0.7	1.2	4.954	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	390	98	1173	393	175	0.4	0.7	7.256	A
B	622	155	1238	622	328	0.6	0.7	4.820	A
C	389	97	289	391	1571	0.2	0.3	2.781	A
D	1001	250	348	1000	333	1.2	1.7	5.860	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	386	96	1170	383	188	0.7	1.0	7.041	A
B	657	164	1225	656	327	0.7	0.9	5.106	A
C	416	104	288	417	1593	0.3	0.4	2.771	A
D	990	247	367	990	338	1.7	1.3	6.289	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	307	77	974	308	150	1.0	0.4	5.705	A
B	533	133	1019	530	264	0.9	0.8	4.381	A
C	327	82	228	325	1321	0.4	0.3	2.680	A
D	835	209	288	836	265	1.3	1.1	5.133	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	264	66	822	265	122	0.4	0.3	4.934	A
B	437	109	861	435	226	0.8	0.6	4.013	A
C	276	69	199	277	1097	0.3	0.1	2.458	A
D	701	175	243	701	233	1.1	1.0	4.448	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	32	1043	0.031	33	0.0	0.0	3.253	A
			2	A,C,D	235	1043	0.225	235	0.0	0.3	4.786	A
	Exit	2	1	(A,B,C,D)	267			267	0.0	0.0	0.000	A
			1		128			128	0.0	0.0	0.000	A
B	Entry	1	1	C	418	1500	0.278	420	0.0	0.3	3.980	A
			2	A,B,D	19	1500	0.013	20	0.0	0.0	2.767	A
	Exit	1	1		216			216	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	272	2747	0.099	273	0.0	0.1	2.509	A
	Exit	1	1		1091			1091	0.0	0.0	0.000	A
D	Entry	1	1	A	74	1501	0.049	74	0.0	0.1	2.980	A
			2	B,C,D	607	1501	0.404	613	0.0	0.6	4.365	A
	Exit	1	1		233			233	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	38	957	0.040	38	0.0	0.1	4.060	A
			2	A,C,D	268	957	0.280	271	0.3	0.3	5.893	A
	Exit	2	1	(A,B,C,D)	306			306	0.0	0.0	0.001	A
			1		158			158	0.0	0.0	0.000	A
B	Entry	1	1	C	502	1500	0.334	507	0.3	0.6	4.553	A
			2	A,B,D	26	1500	0.018	26	0.0	0.0	2.793	A
	Exit	1	1		266			266	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	325	2709	0.120	325	0.1	0.2	2.636	A
	Exit	1	1		1317			1317	0.0	0.0	0.000	A
D	Entry	1	1	A	90	1500	0.060	90	0.1	0.1	2.841	A
			2	B,C,D	743	1500	0.496	745	0.6	1.1	5.182	A
	Exit	1	1		260			260	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	50	861	0.058	51	0.1	0.0	4.473	A
			2	A,C,D	340	861	0.395	342	0.3	0.6	7.684	A
		2	1	(A,B,C,D)	390			390	0.0	0.0	0.000	A
	Exit	1	1		175			175	0.0	0.0	0.000	A
B	Entry	1	1	C	593	1500	0.395	594	0.6	0.7	4.921	A
			2	A,B,D	29	1500	0.019	29	0.0	0.0	2.759	A
	Exit	1	1		328			328	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	389	2644	0.147	391	0.2	0.3	2.781	A
	Exit	1	1		1571			1571	0.0	0.0	0.000	A
D	Entry	1	1	A	105	1500	0.070	104	0.1	0.1	2.748	A
			2	B,C,D	897	1500	0.598	896	1.1	1.6	6.203	A
	Exit	1	1		333			333	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	46	862	0.053	46	0.0	0.1	4.368	A
			2	A,C,D	339	862	0.393	337	0.6	1.0	7.425	A
		2	1	(A,B,C,D)	386			386	0.0	0.0	0.003	A
	Exit	1	1		188			188	0.0	0.0	0.000	A
B	Entry	1	1	C	626	1500	0.417	625	0.7	0.8	5.214	A
			2	A,B,D	31	1500	0.021	31	0.0	0.0	2.893	A
	Exit	1	1		327			327	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	416	2645	0.157	417	0.3	0.4	2.771	A
	Exit	1	1		1593			1593	0.0	0.0	0.000	A
D	Entry	1	1	A	102	1500	0.068	102	0.1	0.0	2.889	A
			2	B,C,D	888	1500	0.592	888	1.6	1.2	6.646	A
	Exit	1	1		338			338	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	37	957	0.039	38	0.1	0.0	3.934	A
			2	A,C,D	270	957	0.282	270	1.0	0.4	5.965	A
		2	1	(A,B,C,D)	307			307	0.0	0.0	0.000	A
	Exit	1	1		150			150	0.0	0.0	0.000	A
B	Entry	1	1	C	510	1500	0.340	507	0.8	0.8	4.457	A
			2	A,B,D	23	1500	0.015	23	0.0	0.1	2.792	A
	Exit	1	1		264			264	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	327	2712	0.121	325	0.4	0.3	2.680	A
	Exit	1	1		1321			1321	0.0	0.0	0.000	A
D	Entry	1	1	A	86	1500	0.057	87	0.0	0.0	2.871	A
			2	B,C,D	749	1500	0.499	749	1.2	1.0	5.382	A
	Exit	1	1		265			265	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	36	1030	0.034	35	0.0	0.0	3.542	A
			2	A,C,D	228	1030	0.222	230	0.4	0.3	5.153	A
	Exit	2	1	(A,B,C,D)	264			264	0.0	0.0	0.000	A
			1		122			122	0.0	0.0	0.000	A
B	Entry	1	1	C	414	1500	0.276	413	0.8	0.6	4.084	A
			2	A,B,D	22	1500	0.015	22	0.1	0.0	2.671	A
	Exit	1	1		226			226	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	276	2745	0.101	277	0.3	0.1	2.458	A
	Exit	1	1		1097			1097	0.0	0.0	0.000	A
D	Entry	1	1	A	70	1500	0.047	70	0.0	0.1	2.774	A
			2	B,C,D	631	1500	0.421	631	1.0	1.0	4.626	A
	Exit	1	1		233			233	0.0	0.0	0.000	A

Do Minimum - 2022 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	4.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2022 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	566	100.000
B		ONE HOUR	✓	376	100.000
C		ONE HOUR	✓	1340	100.000
D		ONE HOUR	✓	455	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	2	83	180	301
	B	92	1	283	0
	C	142	444	0	754
	D	263	2	189	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	13	2
	B	2	0	49	0
	C	9	21	0	7
	D	2	100	31	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	6.52	1.3	A	522	783
B	3.92	0.5	A	346	520
C	4.34	2.3	A	1234	1850
D	3.26	0.5	A	417	625

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	426	107	485	426	380	0.0	0.4	4.224	A
B	290	72	503	292	408	0.0	0.2	3.792	A
C	1011	253	301	1011	494	0.0	0.8	2.424	A
D	345	86	521	344	791	0.0	0.3	3.007	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	520	130	585	522	439	0.4	0.7	5.008	A
B	347	87	613	346	494	0.2	0.4	3.902	A
C	1204	301	358	1205	600	0.8	1.1	3.036	A
D	394	99	629	395	934	0.3	0.3	3.112	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	632	158	708	631	552	0.7	1.3	6.522	A
B	412	103	746	411	594	0.4	0.5	3.872	A
C	1494	374	436	1488	720	1.1	2.1	4.104	A
D	501	125	759	502	1166	0.3	0.4	3.246	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	626	156	692	625	561	1.3	1.3	6.272	A
B	407	102	739	407	579	0.5	0.5	3.918	A
C	1486	371	442	1481	704	2.1	2.3	4.338	A
D	509	127	746	508	1177	0.4	0.5	3.257	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	507	127	578	506	450	1.3	0.9	5.193	A
B	341	85	601	344	483	0.5	0.3	3.827	A
C	1203	301	355	1199	590	2.3	1.4	3.175	A
D	412	103	616	412	938	0.5	0.4	3.110	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	421	105	476	421	370	0.9	0.5	4.400	A
B	281	70	505	283	392	0.3	0.3	3.816	A
C	1003	251	296	1001	492	1.4	0.9	2.582	A
D	340	85	505	342	792	0.4	0.3	3.047	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	63	1192	0.053	63	0.0	0.0	3.132	A
			2	A,C,D	363	1192	0.305	363	0.0	0.4	4.423	A
	Exit	2	1	(A,B,C,D)	426			426	0.0	0.0	0.000	A
			1		380			380	0.0	0.0	0.000	A
B	Entry	1	1	C	219	1500	0.146	220	0.0	0.2	4.363	A
			2	A,B,D	71	1500	0.047	72	0.0	0.0	2.599	A
	Exit	1	1		408			408	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1011	2631	0.384	1011	0.0	0.8	2.424	A
	Exit	1	1		494			494	0.0	0.0	0.000	A
D	Entry	1	1	A	203	1500	0.136	202	0.0	0.2	2.765	A
			2	B,C,D	142	1500	0.094	142	0.0	0.1	3.450	A
	Exit	1	1		791			791	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	78	1144	0.068	78	0.0	0.1	3.311	A
			2	A,C,D	442	1144	0.386	444	0.4	0.6	5.308	A
	Exit	2	1	(A,B,C,D)	520			520	0.0	0.0	0.011	A
			1		439			439	0.0	0.0	0.000	A
B	Entry	1	1	C	262	1500	0.174	261	0.2	0.3	4.502	A
			2	A,B,D	85	1500	0.057	85	0.0	0.0	2.621	A
	Exit	1	1		494			494	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1204	2566	0.469	1205	0.8	1.1	3.036	A
	Exit	1	1		600			600	0.0	0.0	0.000	A
D	Entry	1	1	A	225	1500	0.150	225	0.2	0.2	2.879	A
			2	B,C,D	169	1500	0.113	170	0.1	0.2	3.519	A
	Exit	1	1		934			934	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	92	1085	0.085	92	0.1	0.1	3.575	A
			2	A,C,D	539	1085	0.497	539	0.6	1.2	7.015	A
	Exit	1	1	(A,B,C,D)	632			632	0.0	0.0	0.025	A
			1		552			552	0.0	0.0	0.000	A
B	Entry	1	1	C	311	1500	0.208	310	0.3	0.4	4.445	A
			2	A,B,D	101	1500	0.067	101	0.0	0.1	2.678	A
	Exit	1	1		594			594	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1494	2479	0.603	1488	1.1	2.1	4.104	A
	Exit	1	1		720			720	0.0	0.0	0.000	A
D	Entry	1	1	A	292	1500	0.195	292	0.2	0.3	3.043	A
			2	B,C,D	209	1500	0.139	210	0.2	0.2	3.608	A
	Exit	1	1		1166			1166	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	92	1092	0.084	92	0.1	0.1	3.697	A
			2	A,C,D	533	1092	0.488	533	1.2	1.2	6.700	A
	Exit	1	1	(A,B,C,D)	626			626	0.0	0.0	0.032	A
			1		561			561	0.0	0.0	0.000	A
B	Entry	1	1	C	304	1500	0.203	304	0.4	0.4	4.558	A
			2	A,B,D	103	1500	0.069	103	0.1	0.1	2.606	A
	Exit	1	1		579			579	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1486	2472	0.601	1481	2.1	2.3	4.338	A
	Exit	1	1		704			704	0.0	0.0	0.000	A
D	Entry	1	1	A	299	1500	0.199	299	0.3	0.2	3.003	A
			2	B,C,D	210	1500	0.140	209	0.2	0.3	3.710	A
	Exit	1	1		1177			1177	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	80	1148	0.069	79	0.1	0.1	3.330	A
			2	A,C,D	428	1148	0.373	427	1.2	0.8	5.544	A
	Exit	1	1	(A,B,C,D)	507			507	0.0	0.0	0.001	A
			1		450			450	0.0	0.0	0.000	A
B	Entry	1	1	C	256	1500	0.171	258	0.4	0.2	4.408	A
			2	A,B,D	86	1500	0.057	86	0.1	0.1	2.587	A
	Exit	1	1		483			483	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1203	2570	0.468	1199	2.3	1.4	3.175	A
	Exit	1	1		590			590	0.0	0.0	0.000	A
D	Entry	1	1	A	236	1500	0.158	237	0.2	0.2	2.880	A
			2	B,C,D	175	1500	0.117	175	0.3	0.2	3.508	A
	Exit	1	1		938			938	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	59	1197	0.049	59	0.1	0.1	3.312	A
			2	A,C,D	362	1197	0.302	362	0.8	0.4	4.600	A
	Exit	2	1	(A,B,C,D)	421			421	0.0	0.0	0.000	A
			1		370			370	0.0	0.0	0.000	A
B	Entry	1	1	C	212	1500	0.141	213	0.2	0.3	4.411	A
			2	A,B,D	70	1500	0.046	70	0.1	0.0	2.588	A
	Exit	1	1		392			392	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1003	2636	0.381	1001	1.4	0.9	2.582	A
	Exit	1	1		492			492	0.0	0.0	0.000	A
D	Entry	1	1	A	197	1500	0.131	197	0.2	0.2	2.839	A
			2	B,C,D	143	1500	0.095	145	0.2	0.1	3.412	A
	Exit	1	1		792			792	0.0	0.0	0.000	A

Do Minimum - 2027 Construction , Base Adj + Com Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	6.21	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2027 Construction	Base Adj + Com Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	372	100.000
B		ONE HOUR	✓	512	100.000
C		ONE HOUR	✓	410	100.000
D		ONE HOUR	✓	1004	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A	B	C	D
From	A	0	44	86	242
	B	26	1	484	1
	C	53	269	0	88
	D	99	0	905	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A	B	C	D
From	A	0	0	35	2
	B	21	0	26	0
	C	47	74	0	56
	D	12	0	5	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	8.76	1.1	A	339	508
B	4.90	0.8	A	472	707
C	2.82	0.4	A	377	565
D	7.33	2.6	A	923	1385

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	278	70	884	276	135	0.0	0.5	4.774	A
B	388	97	915	388	245	0.0	0.5	4.011	A
C	321	80	199	320	1104	0.0	0.3	2.416	A
D	752	188	271	747	247	0.0	1.3	4.521	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	326	82	1054	325	162	0.5	0.7	6.118	A
B	461	115	1098	459	282	0.5	0.6	4.429	A
C	368	92	235	367	1322	0.3	0.3	2.588	A
D	905	226	313	903	289	1.3	1.4	5.408	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	408	102	1290	405	192	0.7	1.1	8.755	A
B	561	140	1352	561	343	0.6	0.7	4.905	A
C	447	112	296	446	1617	0.3	0.4	2.751	A
D	1109	277	378	1104	363	1.4	2.6	7.331	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	404	101	1286	404	201	1.1	1.0	8.726	A
B	562	140	1353	565	337	0.7	0.8	4.879	A
C	439	110	294	438	1623	0.4	0.4	2.819	A
D	1113	278	376	1111	356	2.6	2.2	7.139	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	330	83	1066	330	159	1.0	0.6	6.344	A
B	461	115	1111	462	285	0.8	0.6	4.271	A
C	377	94	237	376	1336	0.4	0.4	2.580	A
D	908	227	318	907	295	2.2	1.6	5.482	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	285	71	881	286	137	0.6	0.3	5.106	A
B	397	99	927	396	240	0.6	0.4	4.062	A
C	310	77	206	311	1118	0.4	0.2	2.433	A
D	754	188	265	753	251	1.6	0.9	4.488	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	35	1000	0.035	35	0.0	0.1	3.516	A
			2	A,C,D	243	1000	0.243	241	0.0	0.5	4.963	A
	Exit	2	1	(A,B,C,D)	278			278	0.0	0.0	0.000	A
			1		135			135	0.0	0.0	0.000	A
B	Entry	1	1	C	366	1500	0.244	366	0.0	0.5	4.082	A
			2	A,B,D	21	1500	0.014	21	0.0	0.0	2.888	A
	Exit	1	1		245			245	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	321	2745	0.117	320	0.0	0.3	2.416	A
	Exit	1	1		1104			1104	0.0	0.0	0.000	A
D	Entry	1	1	A	73	1500	0.049	73	0.0	0.1	2.747	A
			2	B,C,D	679	1500	0.453	674	0.0	1.2	4.706	A
	Exit	1	1		247			247	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	38	918	0.042	38	0.1	0.1	4.183	A
			2	A,C,D	288	918	0.314	288	0.5	0.6	6.395	A
	Exit	2	1	(A,B,C,D)	326			326	0.0	0.0	0.003	A
			1		162			162	0.0	0.0	0.000	A
B	Entry	1	1	C	437	1500	0.291	434	0.5	0.6	4.527	A
			2	A,B,D	25	1500	0.016	25	0.0	0.0	2.774	A
	Exit	1	1		282			282	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	368	2705	0.136	367	0.3	0.3	2.588	A
	Exit	1	1		1322			1322	0.0	0.0	0.000	A
D	Entry	1	1	A	93	1500	0.062	93	0.1	0.1	2.862	A
			2	B,C,D	812	1500	0.541	810	1.2	1.4	5.672	A
	Exit	1	1		289			289	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	51	805	0.063	51	0.1	0.0	4.611	A
			2	A,C,D	357	805	0.444	355	0.6	1.1	9.320	A
	Exit	2	1	(A,B,C,D)	408			408	0.0	0.0	0.045	A
			1		192			192	0.0	0.0	0.000	A
B	Entry	1	1	C	530	1500	0.353	530	0.6	0.7	5.020	A
			2	A,B,D	31	1500	0.021	31	0.0	0.1	3.034	A
	Exit	1	1		343			343	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	447	2636	0.170	446	0.3	0.4	2.751	A
	Exit	1	1		1617			1617	0.0	0.0	0.000	A
D	Entry	1	1	A	107	1500	0.071	107	0.1	0.0	2.886	A
			2	B,C,D	1002	1500	0.668	997	1.4	2.5	7.795	A
	Exit	1	1		363			363	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	48	806	0.059	48	0.0	0.0	4.955	A
			2	A,C,D	357	806	0.442	356	1.1	0.9	9.187	A
		2	1	(A,B,C,D)	404			404	0.0	0.0	0.082	A
	Exit	1	1		201			201	0.0	0.0	0.000	A
B	Entry	1	1	C	530	1500	0.354	533	0.7	0.8	4.992	A
			2	A,B,D	31	1500	0.021	32	0.1	0.0	2.997	A
	Exit	1	1		337			337	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	439	2638	0.166	438	0.4	0.4	2.819	A
	Exit	1	1		1623			1623	0.0	0.0	0.000	A
D	Entry	1	1	A	113	1500	0.076	114	0.0	0.1	2.889	A
			2	B,C,D	999	1500	0.666	997	2.5	2.1	7.580	A
	Exit	1	1		356			356	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	36	912	0.040	36	0.0	0.0	3.895	A
			2	A,C,D	294	912	0.322	293	0.9	0.5	6.680	A
		2	1	(A,B,C,D)	330			330	0.0	0.0	0.005	A
	Exit	1	1		159			159	0.0	0.0	0.000	A
B	Entry	1	1	C	437	1500	0.291	438	0.8	0.6	4.348	A
			2	A,B,D	24	1500	0.016	24	0.0	0.0	2.904	A
	Exit	1	1		285			285	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	377	2702	0.140	376	0.4	0.4	2.580	A
	Exit	1	1		1336			1336	0.0	0.0	0.000	A
D	Entry	1	1	A	90	1500	0.060	90	0.1	0.1	2.806	A
			2	B,C,D	818	1500	0.545	817	2.1	1.6	5.755	A
	Exit	1	1		295			295	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	36	1001	0.036	36	0.0	0.0	3.723	A
			2	A,C,D	250	1001	0.249	250	0.5	0.3	5.316	A
		2	1	(A,B,C,D)	285			285	0.0	0.0	0.002	A
	Exit	1	1		137			137	0.0	0.0	0.000	A
B	Entry	1	1	C	376	1500	0.250	375	0.6	0.4	4.117	A
			2	A,B,D	21	1500	0.014	21	0.0	0.0	3.164	A
	Exit	1	1		240			240	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	310	2737	0.113	311	0.4	0.2	2.433	A
	Exit	1	1		1118			1118	0.0	0.0	0.000	A
D	Entry	1	1	A	76	1500	0.051	76	0.1	0.1	2.818	A
			2	B,C,D	678	1500	0.452	677	1.6	0.8	4.665	A
	Exit	1	1		251			251	0.0	0.0	0.000	A

Do Minimum - 2027 Construction , Base Adj + Com Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	4.87	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2027 Construction	Base Adj + Com Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	582	100.000
B		ONE HOUR	✓	415	100.000
C		ONE HOUR	✓	1410	100.000
D		ONE HOUR	✓	494	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		A	B	C	D
From	A	2	83	191	306
	B	96	1	318	0
	C	153	421	0	836
	D	273	2	218	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
		A	B	C	D
From	A	0	0	15	2
	B	2	0	53	0
	C	9	26	0	6
	D	2	100	25	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	7.04	1.6	A	537	805
B	4.18	0.6	A	383	575
C	4.71	2.7	A	1296	1944
D	3.35	0.5	A	453	680

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	430	108	489	431	402	0.0	0.5	4.280	A
B	322	81	537	322	382	0.0	0.3	3.875	A
C	1082	271	306	1087	553	0.0	0.7	2.538	A
D	372	93	519	371	873	0.0	0.3	3.048	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	515	129	572	515	471	0.5	0.8	5.128	A
B	384	96	639	383	448	0.3	0.5	3.934	A
C	1249	312	366	1252	656	0.7	1.0	3.134	A
D	445	111	597	445	1021	0.3	0.4	3.182	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	647	162	720	642	583	0.8	1.6	6.972	A
B	456	114	794	458	568	0.5	0.5	4.126	A
C	1566	392	451	1564	801	1.0	2.7	4.707	A
D	548	137	754	549	1262	0.4	0.5	3.340	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	650	163	700	651	586	1.6	1.1	7.040	A
B	451	113	803	452	548	0.5	0.6	4.183	A
C	1548	387	454	1545	800	2.7	2.3	4.640	A
D	549	137	735	550	1264	0.5	0.4	3.350	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	533	133	573	535	471	1.1	0.7	5.394	A
B	375	94	653	375	454	0.6	0.4	4.010	A
C	1278	319	378	1279	651	2.3	1.4	3.379	A
D	438	110	605	439	1052	0.4	0.4	3.188	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	444	111	472	445	390	0.7	0.6	4.522	A
B	311	78	542	313	374	0.4	0.3	3.810	A
C	1052	263	308	1052	547	1.4	0.8	2.708	A
D	367	92	494	368	866	0.4	0.3	3.028	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	60	1191	0.050	60	0.0	0.1	3.175	A
			2	A,C,D	370	1191	0.311	371	0.0	0.4	4.477	A
	Exit	2	1	(A,B,C,D)	430			430	0.0	0.0	0.001	A
			1		402			402	0.0	0.0	0.000	A
B	Entry	1	1	C	248	1500	0.166	248	0.0	0.3	4.444	A
			2	A,B,D	74	1500	0.049	74	0.0	0.0	2.586	A
	Exit	1	1		382			382	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1082	2625	0.412	1087	0.0	0.7	2.538	A
	Exit	1	1		553			553	0.0	0.0	0.000	A
D	Entry	1	1	A	205	1500	0.136	204	0.0	0.2	2.846	A
			2	B,C,D	168	1500	0.112	167	0.0	0.2	3.348	A
	Exit	1	1		873			873	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	74	1150	0.065	75	0.1	0.0	3.224	A
			2	A,C,D	441	1150	0.383	440	0.4	0.8	5.465	A
	Exit	2	1	(A,B,C,D)	515			515	0.0	0.0	0.004	A
			1		471			471	0.0	0.0	0.000	A
B	Entry	1	1	C	295	1500	0.197	294	0.3	0.5	4.565	A
			2	A,B,D	89	1500	0.059	89	0.0	0.0	2.558	A
	Exit	1	1		448			448	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1249	2557	0.488	1252	0.7	1.0	3.134	A
	Exit	1	1		656			656	0.0	0.0	0.000	A
D	Entry	1	1	A	245	1500	0.164	244	0.2	0.2	2.974	A
			2	B,C,D	201	1500	0.134	201	0.2	0.2	3.497	A
	Exit	1	1		1021			1021	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	94	1079	0.087	94	0.0	0.1	3.607	A
			2	A,C,D	552	1079	0.512	548	0.8	1.5	7.507	A
	Exit	2	1	(A,B,C,D)	647			647	0.0	0.0	0.056	A
			1		583			583	0.0	0.0	0.000	A
B	Entry	1	1	C	344	1500	0.230	346	0.5	0.4	4.831	A
			2	A,B,D	111	1500	0.074	112	0.0	0.1	2.625	A
	Exit	1	1		568			568	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1566	2462	0.636	1564	1.0	2.7	4.707	A
	Exit	1	1		801			801	0.0	0.0	0.000	A
D	Entry	1	1	A	301	1500	0.200	300	0.2	0.3	3.053	A
			2	B,C,D	248	1500	0.165	249	0.2	0.2	3.771	A
	Exit	1	1		1262			1262	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	88	1089	0.081	88	0.1	0.1	3.612	A
			2	A,C,D	562	1089	0.516	563	1.5	1.0	7.519	A
	Exit	1	1	(A,B,C,D)	650			650	0.0	0.0	0.092	A
			1		586			586	0.0	0.0	0.000	A
B	Entry	1	1	C	345	1500	0.230	346	0.4	0.5	4.884	A
			2	A,B,D	106	1500	0.070	106	0.1	0.1	2.656	A
	Exit	1	1		548			548	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1548	2459	0.630	1545	2.7	2.3	4.640	A
	Exit	1	1		800			800	0.0	0.0	0.000	A
D	Entry	1	1	A	308	1500	0.205	309	0.3	0.2	3.174	A
			2	B,C,D	241	1500	0.161	241	0.2	0.2	3.624	A
	Exit	1	1		1264			1264	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	76	1150	0.066	75	0.1	0.1	3.425	A
			2	A,C,D	457	1150	0.398	460	1.0	0.6	5.740	A
	Exit	1	1	(A,B,C,D)	533			533	0.0	0.0	0.002	A
			1		471			471	0.0	0.0	0.000	A
B	Entry	1	1	C	287	1500	0.192	287	0.5	0.4	4.642	A
			2	A,B,D	87	1500	0.058	88	0.1	0.0	2.632	A
	Exit	1	1		454			454	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1278	2544	0.502	1279	2.3	1.4	3.379	A
	Exit	1	1		651			651	0.0	0.0	0.000	A
D	Entry	1	1	A	243	1500	0.162	243	0.2	0.2	2.944	A
			2	B,C,D	195	1500	0.130	196	0.2	0.2	3.558	A
	Exit	1	1		1052			1052	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	61	1199	0.051	61	0.1	0.0	3.157	A
			2	A,C,D	383	1199	0.320	384	0.6	0.5	4.764	A
	Exit	1	1	(A,B,C,D)	444			444	0.0	0.0	0.000	A
			1		390			390	0.0	0.0	0.000	A
B	Entry	1	1	C	242	1500	0.161	243	0.4	0.2	4.360	A
			2	A,B,D	69	1500	0.046	69	0.0	0.0	2.588	A
	Exit	1	1		374			374	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1052	2623	0.401	1052	1.4	0.8	2.708	A
	Exit	1	1		547			547	0.0	0.0	0.000	A
D	Entry	1	1	A	209	1500	0.139	208	0.2	0.2	2.771	A
			2	B,C,D	159	1500	0.106	159	0.2	0.1	3.444	A
	Exit	1	1		866			866	0.0	0.0	0.000	A

Do Minimum - 2027 Construction, Base Adj + Com Dev + Dev AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	6.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2027 Construction	Base Adj + Com Dev + Dev AM	ONE HOUR	06:45	08:15	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 (%)
A		ONE HOUR	✓	372	100.000
B		ONE HOUR	✓	619	100.000
C		ONE HOUR	✓	420	100.000
D		ONE HOUR	✓	1009	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	0	44	86	242
	B	26	1	591	1
	C	53	274	0	93
	D	99	0	910	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	35	2
	B	21	0	21	0
	C	47	75	0	58
	D	12	0	5	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	8.88	1.1	A	343	515
B	5.34	1.3	A	572	858
C	2.80	0.4	A	383	574
D	7.49	2.1	A	926	1390

Main Results for each time segment

06:45 - 07:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	279	70	893	276	129	0.0	0.6	4.700	A
B	466	116	933	465	236	0.0	0.5	4.163	A
C	314	78	207	313	1191	0.0	0.3	2.475	A
D	763	191	262	759	258	0.0	1.1	4.368	A

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	338	85	1076	338	152	0.6	0.7	5.878	A
B	569	142	1121	573	293	0.5	0.6	4.637	A
C	388	97	244	388	1450	0.3	0.4	2.566	A
D	903	226	325	903	306	1.1	1.5	5.277	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	420	105	1302	419	195	0.7	0.9	8.882	A
B	679	170	1375	682	347	0.6	0.9	5.344	A
C	452	113	310	454	1747	0.4	0.3	2.737	A
D	1105	276	388	1110	377	1.5	2.1	7.494	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	409	102	1313	408	198	0.9	1.1	8.662	A
B	672	168	1362	671	358	0.9	1.3	5.271	A
C	468	117	295	467	1739	0.3	0.4	2.798	A
D	1104	276	401	1110	361	2.1	2.1	7.299	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	338	84	1069	339	158	1.1	0.6	6.367	A
B	579	145	1133	575	275	1.3	1.0	4.677	A
C	368	92	250	367	1458	0.4	0.3	2.689	A
D	919	230	310	917	307	2.1	1.3	5.346	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	278	69	889	277	136	0.6	0.4	5.195	A
B	469	117	930	468	237	1.0	0.7	4.128	A
C	308	77	201	310	1197	0.3	0.1	2.518	A
D	764	191	263	761	247	1.3	1.1	4.508	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

06:45 - 07:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	32	996	0.032	32	0.0	0.0	3.433	A
			2	A,C,D	247	996	0.248	244	0.0	0.6	4.890	A
	Exit	2	1	(A,B,C,D)	279			279	0.0	0.0	0.001	A
			1		129			129	0.0	0.0	0.000	A
B	Entry	1	1	C	441	1500	0.294	441	0.0	0.4	4.226	A
			2	A,B,D	24	1500	0.016	24	0.0	0.1	2.903	A
	Exit	1	1		236			236	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	314	2736	0.115	313	0.0	0.3	2.475	A
	Exit	1	1		1191			1191	0.0	0.0	0.000	A
D	Entry	1	1	A	70	1500	0.046	69	0.0	0.0	2.838	A
			2	B,C,D	694	1500	0.462	690	0.0	1.1	4.518	A
	Exit	1	1		258			258	0.0	0.0	0.000	A

07:00 - 07:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	39	908	0.043	39	0.0	0.0	4.014	A
			2	A,C,D	299	908	0.329	299	0.6	0.6	6.152	A
	Exit	2	1	(A,B,C,D)	338			338	0.0	0.0	0.001	A
			1		152			152	0.0	0.0	0.000	A
B	Entry	1	1	C	544	1500	0.363	548	0.4	0.5	4.709	A
			2	A,B,D	26	1500	0.017	25	0.1	0.0	3.119	A
	Exit	1	1		293			293	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	388	2695	0.144	388	0.3	0.4	2.566	A
	Exit	1	1		1450			1450	0.0	0.0	0.000	A
D	Entry	1	1	A	81	1500	0.054	81	0.0	0.1	2.865	A
			2	B,C,D	822	1500	0.548	822	1.1	1.4	5.524	A
	Exit	1	1		306			306	0.0	0.0	0.000	A

07:15 - 07:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	46	799	0.058	46	0.0	0.1	4.727	A
			2	A,C,D	374	799	0.468	374	0.6	0.8	9.418	A
		2	1	(A,B,C,D)	420			420	0.0	0.0	0.053	A
	Exit	1	1		195			195	0.0	0.0	0.000	A
B	Entry	1	1	C	647	1500	0.431	651	0.5	0.9	5.462	A
			2	A,B,D	32	1500	0.021	32	0.0	0.0	2.985	A
	Exit	1	1		347			347	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	452	2620	0.172	454	0.4	0.3	2.737	A
	Exit	1	1		1747			1747	0.0	0.0	0.000	A
D	Entry	1	1	A	109	1500	0.073	109	0.1	0.1	2.921	A
			2	B,C,D	996	1500	0.664	1001	1.4	2.0	7.957	A
	Exit	1	1		377			377	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	47	793	0.059	46	0.1	0.1	4.784	A
			2	A,C,D	362	793	0.456	361	0.8	1.0	9.196	A
		2	1	(A,B,C,D)	409			409	0.0	0.0	0.027	A
	Exit	1	1		198			198	0.0	0.0	0.000	A
B	Entry	1	1	C	642	1500	0.428	641	0.9	1.3	5.382	A
			2	A,B,D	31	1500	0.020	31	0.0	0.0	2.953	A
	Exit	1	1		358			358	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	468	2637	0.178	467	0.3	0.4	2.798	A
	Exit	1	1		1739			1739	0.0	0.0	0.000	A
D	Entry	1	1	A	109	1500	0.073	109	0.1	0.1	2.955	A
			2	B,C,D	995	1500	0.663	1001	2.0	2.0	7.745	A
	Exit	1	1		361			361	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	34	911	0.038	34	0.1	0.0	4.434	A
			2	A,C,D	303	911	0.333	305	1.0	0.5	6.630	A
		2	1	(A,B,C,D)	338			338	0.0	0.0	0.002	A
	Exit	1	1		158			158	0.0	0.0	0.000	A
B	Entry	1	1	C	550	1500	0.367	547	1.3	1.0	4.753	A
			2	A,B,D	29	1500	0.019	28	0.0	0.0	3.124	A
	Exit	1	1		275			275	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	368	2688	0.137	367	0.4	0.3	2.689	A
	Exit	1	1		1458			1458	0.0	0.0	0.000	A
D	Entry	1	1	A	90	1500	0.060	89	0.1	0.1	2.834	A
			2	B,C,D	829	1500	0.553	828	2.0	1.2	5.598	A
	Exit	1	1		307			307	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	33	998	0.033	33	0.0	0.0	3.793	A
			2	A,C,D	245	998	0.245	245	0.5	0.3	5.397	A
		2	1	(A,B,C,D)	278			278	0.0	0.0	0.001	A
	Exit	1	1		136			136	0.0	0.0	0.000	A
B	Entry	1	1	C	446	1500	0.298	446	1.0	0.6	4.191	A
			2	A,B,D	23	1500	0.015	22	0.0	0.0	2.834	A
	Exit	1	1		237			237	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	308	2743	0.112	310	0.3	0.1	2.518	A
	Exit	1	1		1197			1197	0.0	0.0	0.000	A
D	Entry	1	1	A	77	1500	0.051	76	0.1	0.1	2.743	A
			2	B,C,D	687	1500	0.458	685	1.2	1.0	4.688	A
	Exit	1	1		247			247	0.0	0.0	0.000	A

Do Minimum - 2027 Construction , Base Adj + Com Dev + Dev PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Do Minimum [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	A180 Stallingborough Interchange;	Large Roundabout	A,B,C,D	5.25	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Entry-to-exit separation (m)
A	1025	39.00
B	1211	110.00
C	248	49.00
D	248	104.00

Slope / Intercept / Capacity

[same as above]

Lane Simulation: Arm options

[same as above]

Lanes

[same as above]

Entry Lane slope and intercept

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2027 Construction	Base Adj + Com Dev + Dev PM	ONE HOUR	15:45	17:15	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 (%)
A		ONE HOUR	✓	582	100.000
B		ONE HOUR	✓	420	100.000
C		ONE HOUR	✓	1480	100.000
D		ONE HOUR	✓	499	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	A	B	C	D	
From	A	2	83	191	306
	B	96	1	323	0
	C	153	486	0	841
	D	273	2	223	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	A	B	C	D	
From	A	0	0	15	2
	B	2	0	53	0
	C	9	22	0	7
	D	2	100	26	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	7.32	1.4	A	534	801
B	4.33	0.6	A	381	571
C	5.35	2.6	A	1358	2037
D	3.32	0.6	A	457	686

Main Results for each time segment

15:45 - 16:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	441	110	538	442	395	0.0	0.5	4.544	A
B	312	78	550	311	430	0.0	0.5	3.904	A
C	1104	276	308	1105	553	0.0	0.8	2.638	A
D	378	94	556	377	857	0.0	0.3	3.075	A

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	516	129	643	516	478	0.5	0.8	5.525	A
B	368	92	646	367	514	0.5	0.5	3.967	A
C	1343	336	364	1345	648	0.8	1.2	3.432	A
D	450	113	673	449	1036	0.3	0.6	3.239	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	641	160	778	639	576	0.8	1.4	7.183	A
B	456	114	793	455	624	0.5	0.6	4.207	A
C	1628	407	446	1624	801	1.2	2.6	4.935	A
D	548	137	805	549	1266	0.6	0.4	3.309	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	641	160	781	643	582	1.4	1.1	7.322	A
B	465	116	794	465	630	0.6	0.6	4.328	A
C	1636	409	452	1636	807	2.6	2.4	5.353	A
D	548	137	816	547	1272	0.4	0.6	3.321	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	524	131	649	527	474	1.1	0.8	5.780	A
B	371	93	660	370	517	0.6	0.5	4.006	A
C	1334	333	371	1334	659	2.4	1.3	3.567	A
D	454	113	671	453	1035	0.6	0.4	3.170	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	440	110	533	440	385	0.8	0.6	4.791	A
B	313	78	544	313	429	0.5	0.3	3.799	A
C	1104	276	305	1102	553	1.3	0.9	2.812	A
D	365	91	553	365	854	0.4	0.3	3.078	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

15:45 - 16:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	60	1167	0.052	61	0.0	0.0	3.187	A
			2	A,C,D	381	1167	0.326	381	0.0	0.4	4.780	A
	Exit	2	1	(A,B,C,D)	441			441	0.0	0.0	0.001	A
			1		395			395	0.0	0.0	0.000	A
B	Entry	1	1	C	241	1500	0.160	240	0.0	0.4	4.483	A
			2	A,B,D	71	1500	0.047	71	0.0	0.0	2.592	A
	Exit	1	1		430			430	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1104	2622	0.421	1105	0.0	0.8	2.638	A
	Exit	1	1		553			553	0.0	0.0	0.000	A
D	Entry	1	1	A	207	1500	0.138	207	0.0	0.1	2.845	A
			2	B,C,D	171	1500	0.114	170	0.0	0.2	3.422	A
	Exit	1	1		857			857	0.0	0.0	0.000	A

16:00 - 16:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	69	1116	0.062	69	0.0	0.1	3.329	A
			2	A,C,D	447	1116	0.400	447	0.4	0.7	5.896	A
	Exit	2	1	(A,B,C,D)	516			516	0.0	0.0	0.009	A
			1		478			478	0.0	0.0	0.000	A
B	Entry	1	1	C	281	1500	0.187	280	0.4	0.4	4.609	A
			2	A,B,D	87	1500	0.058	87	0.0	0.1	2.570	A
	Exit	1	1		514			514	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1343	2559	0.525	1345	0.8	1.2	3.432	A
	Exit	1	1		648			648	0.0	0.0	0.000	A
D	Entry	1	1	A	250	1500	0.167	249	0.1	0.3	3.008	A
			2	B,C,D	200	1500	0.134	200	0.2	0.3	3.588	A
	Exit	1	1		1036			1036	0.0	0.0	0.000	A

16:15 - 16:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	91	1051	0.087	91	0.1	0.1	3.755	A
			2	A,C,D	550	1051	0.523	548	0.7	1.3	7.732	A
	Exit	1	1	(A,B,C,D)	641			641	0.0	0.0	0.048	A
			1		576			576	0.0	0.0	0.000	A
B	Entry	1	1	C	350	1500	0.233	349	0.4	0.5	4.904	A
			2	A,B,D	106	1500	0.071	106	0.1	0.1	2.646	A
	Exit	1	1		624			624	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1628	2467	0.660	1624	1.2	2.6	4.935	A
	Exit	1	1		801			801	0.0	0.0	0.000	A
D	Entry	1	1	A	302	1500	0.201	302	0.3	0.2	3.036	A
			2	B,C,D	246	1500	0.164	247	0.3	0.2	3.713	A
	Exit	1	1		1266			1266	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	92	1050	0.087	92	0.1	0.1	3.789	A
			2	A,C,D	550	1050	0.524	552	1.3	1.0	7.906	A
	Exit	1	1	(A,B,C,D)	641			642	0.0	0.0	0.043	A
			1		582			582	0.0	0.0	0.000	A
B	Entry	1	1	C	358	1500	0.239	359	0.5	0.5	5.046	A
			2	A,B,D	107	1500	0.071	106	0.1	0.1	2.664	A
	Exit	1	1		630			630	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1636	2461	0.665	1636	2.6	2.4	5.353	A
	Exit	1	1		807			807	0.0	0.0	0.000	A
D	Entry	1	1	A	303	1500	0.202	302	0.2	0.3	3.061	A
			2	B,C,D	245	1500	0.163	245	0.2	0.3	3.710	A
	Exit	1	1		1272			1272	0.0	0.0	0.000	A

16:45 - 17:00

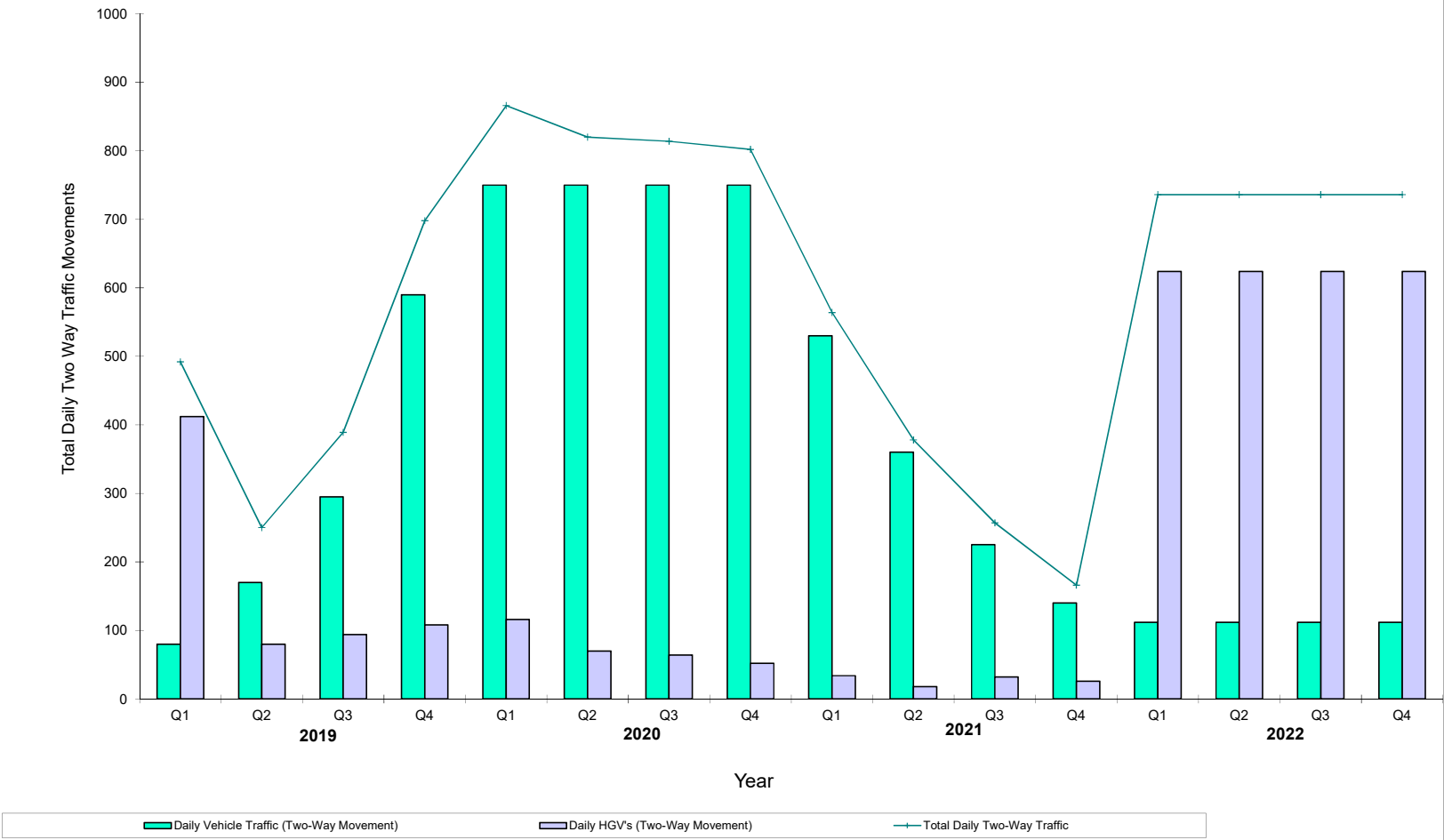
Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	73	1113	0.065	73	0.1	0.1	3.627	A
			2	A,C,D	452	1113	0.406	454	1.0	0.7	6.152	A
	Exit	1	1	(A,B,C,D)	524			524	0.0	0.0	0.010	A
			1		474			474	0.0	0.0	0.000	A
B	Entry	1	1	C	281	1500	0.187	280	0.5	0.5	4.637	A
			2	A,B,D	90	1500	0.060	91	0.1	0.0	2.643	A
	Exit	1	1		517			517	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1334	2552	0.523	1334	2.4	1.3	3.567	A
	Exit	1	1		659			659	0.0	0.0	0.000	A
D	Entry	1	1	A	246	1500	0.164	246	0.3	0.2	2.933	A
			2	B,C,D	208	1500	0.138	207	0.3	0.2	3.519	A
	Exit	1	1		1035			1035	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
A	Entry	1	1	B	62	1169	0.053	63	0.1	0.0	3.212	A
			2	A,C,D	378	1169	0.323	377	0.7	0.6	5.075	A
	Exit	1	1	(A,B,C,D)	440			440	0.0	0.0	0.001	A
			1		385			385	0.0	0.0	0.000	A
B	Entry	1	1	C	240	1500	0.160	240	0.5	0.3	4.386	A
			2	A,B,D	73	1500	0.049	73	0.0	0.1	2.553	A
	Exit	1	1		429			429	0.0	0.0	0.000	A
C	Entry	1	1	A,B,C,D	1104	2626	0.420	1102	1.3	0.9	2.812	A
	Exit	1	1		553			553	0.0	0.0	0.000	A
D	Entry	1	1	A	197	1500	0.131	197	0.2	0.1	2.812	A
			2	B,C,D	168	1500	0.112	168	0.2	0.2	3.472	A
	Exit	1	1		854			854	0.0	0.0	0.000	A

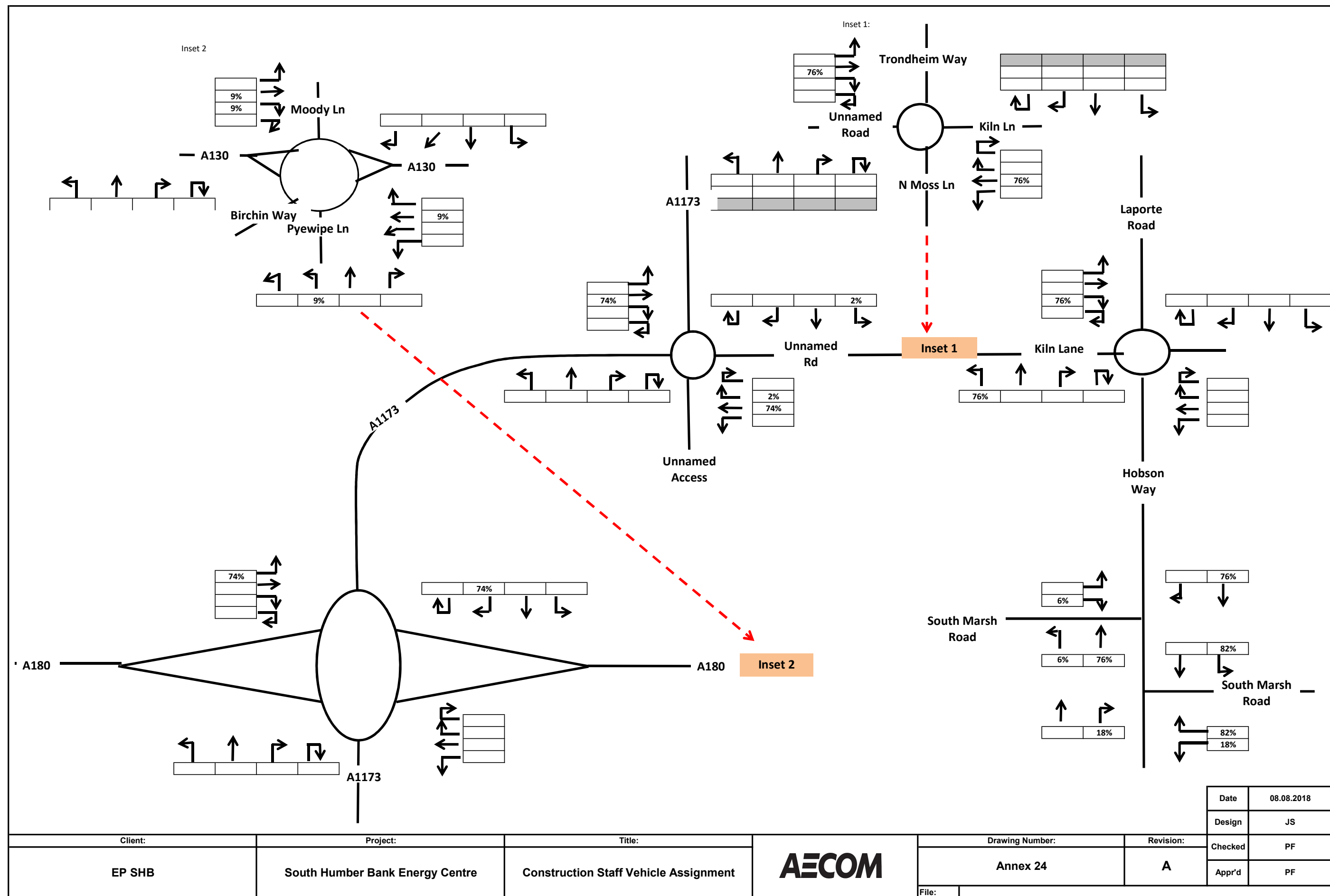
ANNEX 23: CONSTRUCTION TRAFFIC PROFILE

	Year 1 Construction				Year 2 Construction				Year 3 Construction				Operation			
Description	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Civil Construction																
Mechanical Erection																
Cold Commisioning																
Hot Commisioning																
Operation																
Typical Daily Construction Workforce in Month	80	170	295	590	750	750	750	750	530	360	225	140				
Typical Daily Construction Worker Vehicles (Inbound)(Based on 2.0 per vehicle)	40	85	148	295	375	375	375	375	265	180	113	70				
Typical Daily Construction Worker Vehicles (Outbound)(Based on 2.0 per vehicle)	40	85	148	295	375	375	375	375	265	180	113	70				
Typical Maximum Daily HGV Traffic in Month (Inbound)	206	40	47	54	58	35	32	26	17	9	16	13				
Typical Maximum Daily HGV Traffic in Month (Outbound)	206	40	47	54	58	35	32	26	17	9	16	13				
Typical Daily Operational Workforce in Month													56	56	56	56
Typical Daily Operational Traffic (Inbound) (Based on 1.0 per vehicle)													56	56	56	56
Typical Daily Operational Traffic (Outbound) (Based on 1.0 per vehicle)													56	56	56	56
Typical Maximum Daily Operational HGV Traffic (Inbound)													312	312	312	312
Typical Maximum Daily Operational HGV Traffic (Outbound)													312	312	312	312
Daily Vehicle Traffic (Two-Way Movement)	80	170	295	590	750	750	750	750	530	360	225	140	112	112	112	112
Daily HGV's (Two-Way Movement)	412	80	94	108	116	70	64	52	34	18	32	26	624	624	624	624
Total Daily Two-Way Traffic	492	250	389	698	866	820	814	802	564	378	257	166	736	736	736	736



SOUTH HUMBER BANK ENERGY CENTRE: PROFILE OF TRAFFIC DURING CONSTRUCTION AND OPERATION (TWO-WAY TRIPS)

ANNEX 24: CONSTRUCTION WORKER VEHICLE ASSIGNMENT



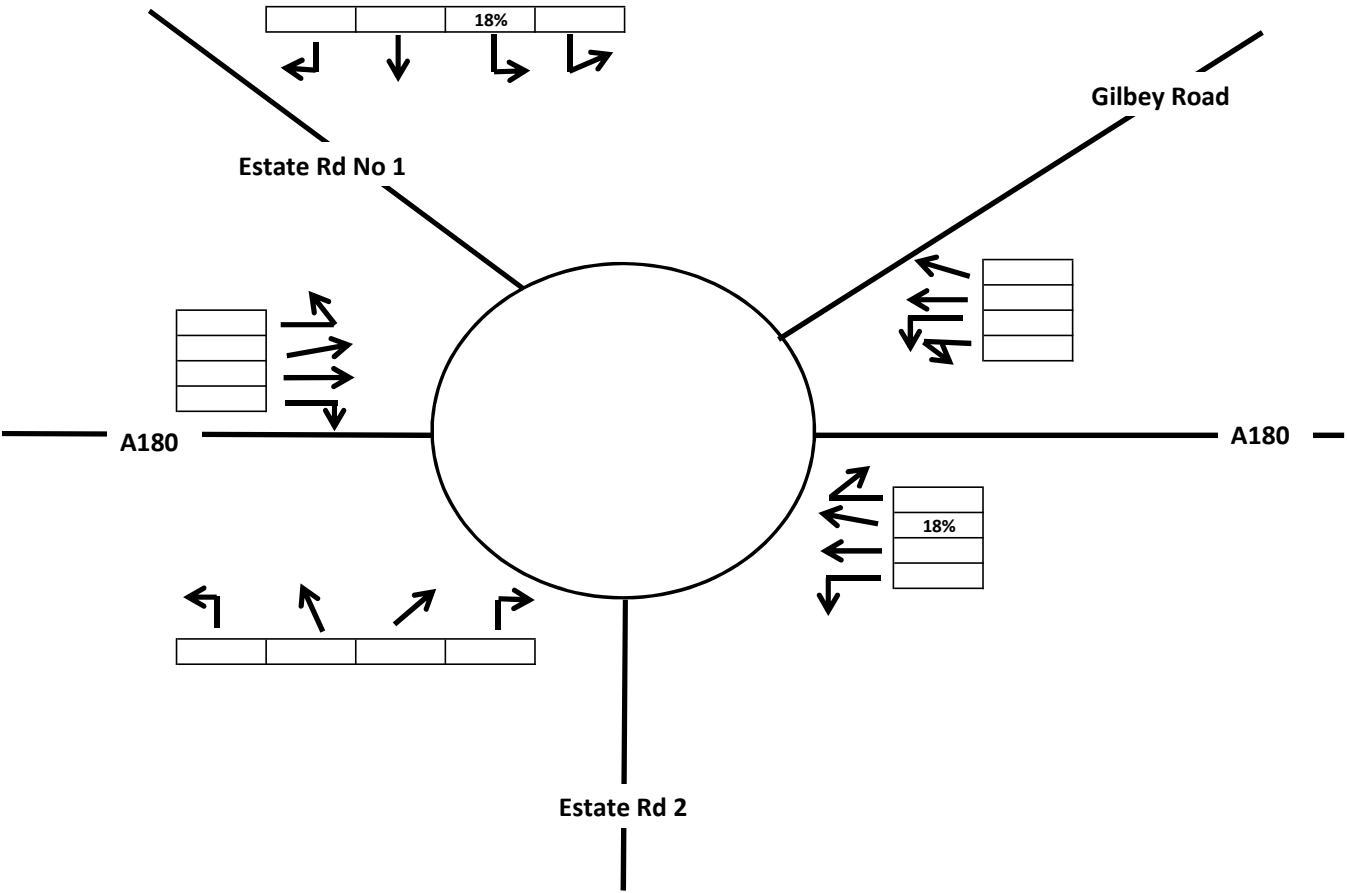
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Design	JS
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Appr'd	PF

Client:	Project:	Title:
EP SHB	South Humber Bank Energy Centre	Construction Staff Vehicle Assignment

AECOM

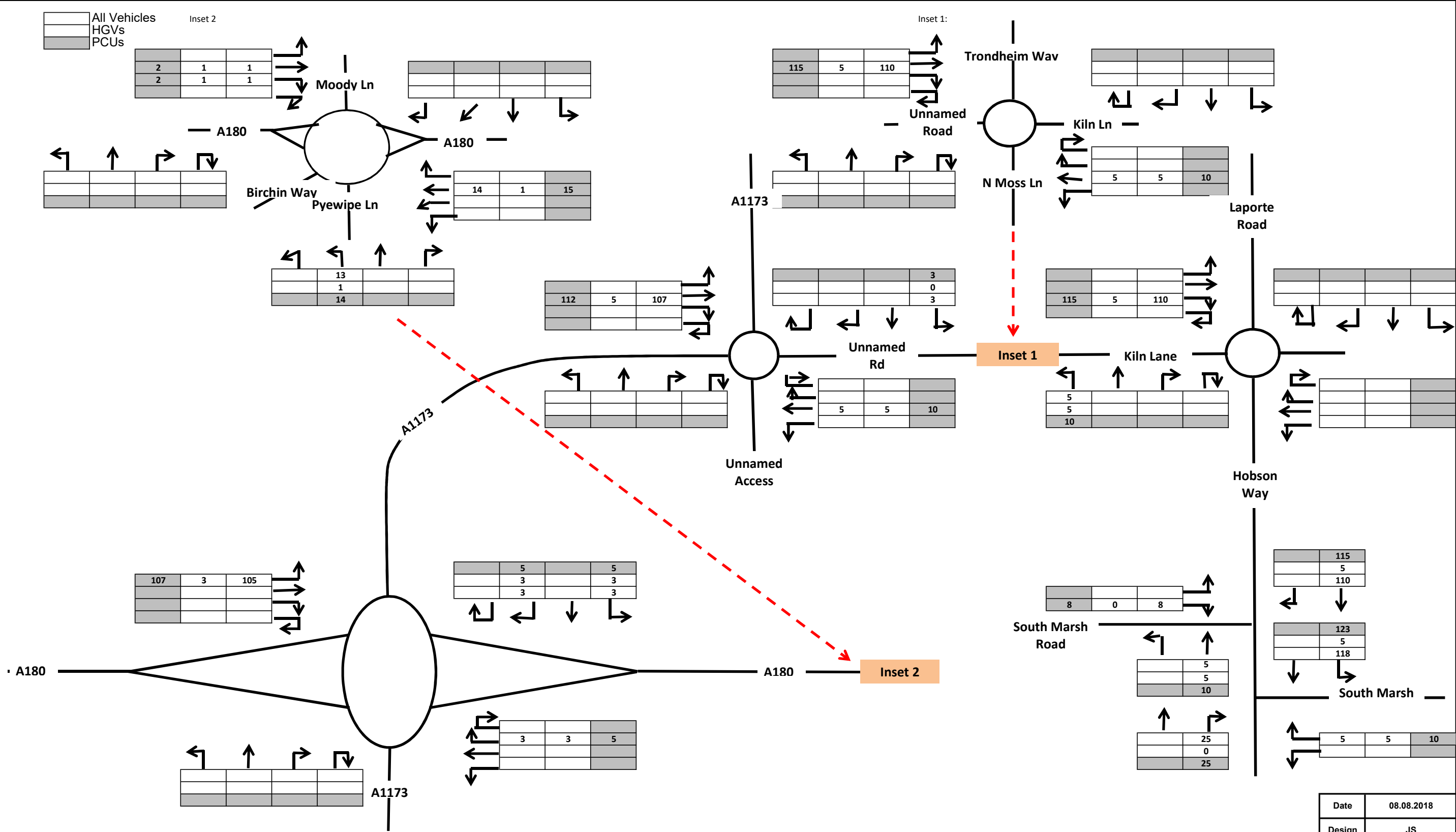
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Annex 24	A
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	All Vehicles
	HGVs
	PCUs



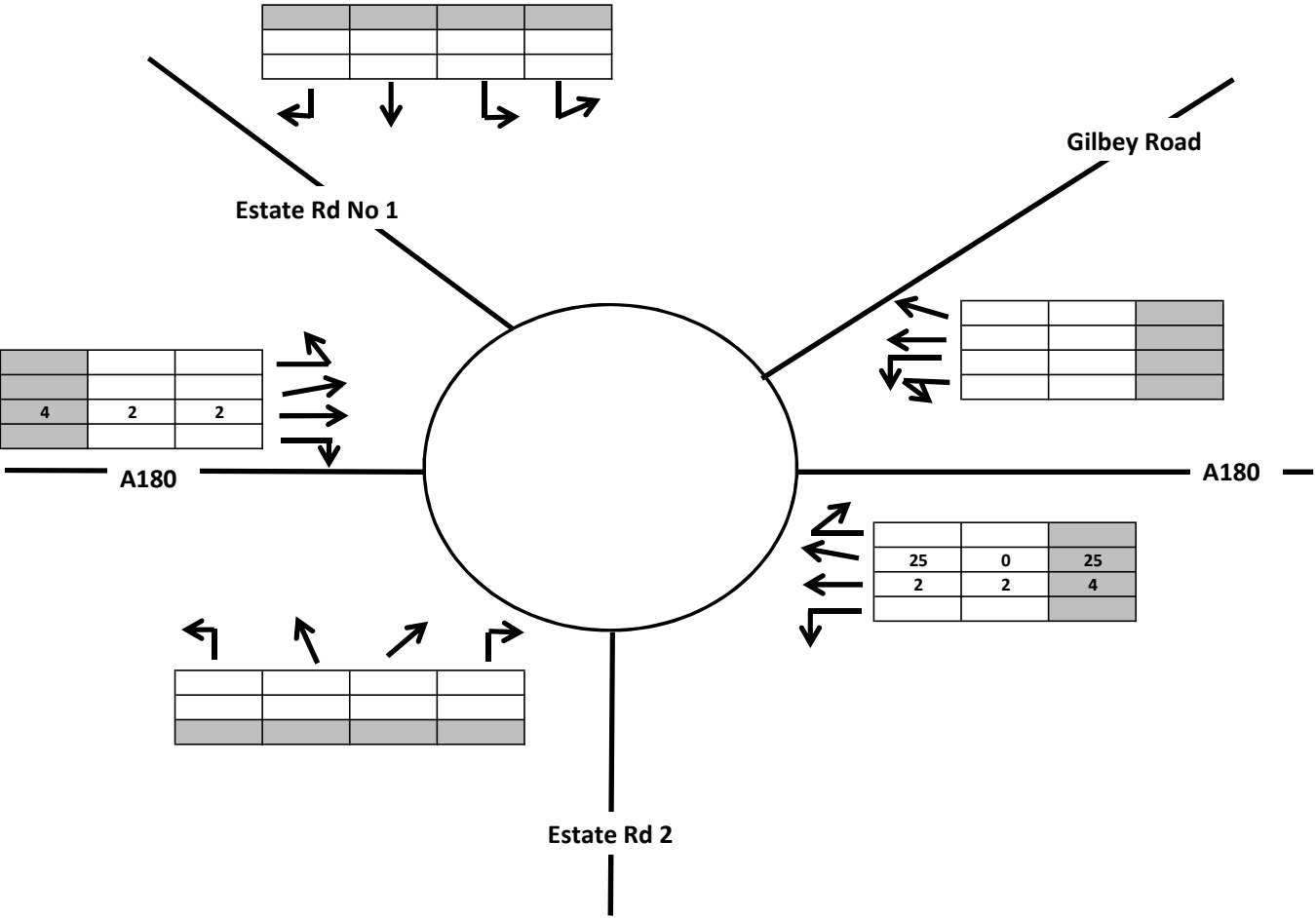
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						Design	JS
Client:	Project:	Title:		Drawing Number:		Revision:	
EP SHB	South Humber Bank Energy Centre	Construction Staff Vehicle Assignment		Annex 24		A	
						Appr'd	PF
				File:			

ANNEX 25: TOTAL CONSTRUCTION VEHICLE FLOWS DURING PEAK OF CONSTRUCTION



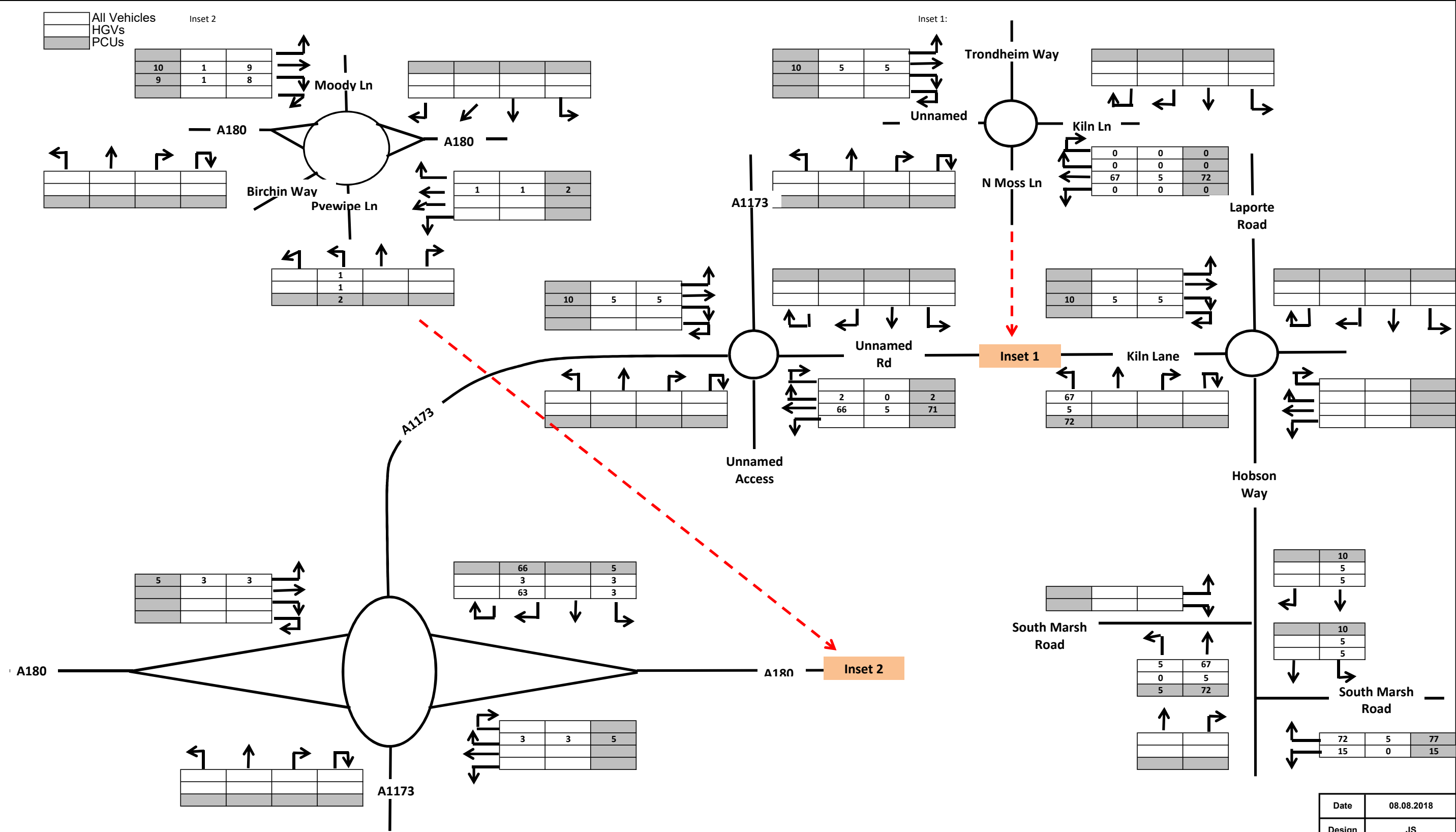
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EP SHB	South Humber Bank Energy Centre	Total Construction Development Flows - AM Peak (07:00 - 08:00)		Annex 25		A		Appr'd	PF
				File:					

	All Vehicles
	HGVs
	PCUs



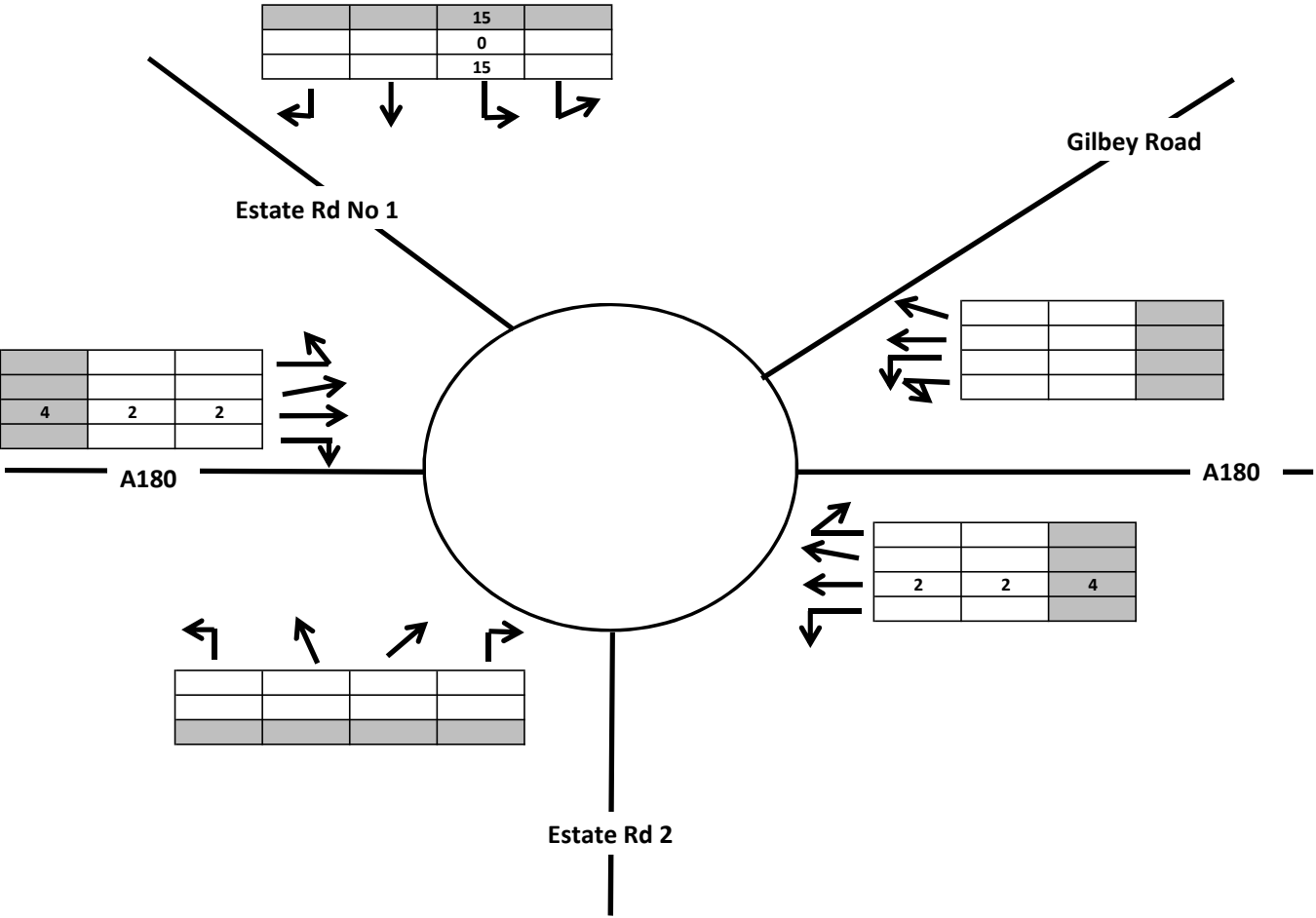
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								Design	JS
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EP SHB	South Humber Bank Energy Centre	Total Construction Development Flows - AM Peak (07:00 - 08:00)		Annex 25		A		Appr'd	PF
				File:					

AECOM



Client:	Project:	Title:	AECOM	Drawing Number:	Revision:	Date	08.08.2018
EP SHB	South Humber Bank Energy Centre	Total Construction Development Flows - PM Peak (16:00 - 17:00)		Annex 25	A	Design	JS
						Checked	PF
						Appr'd	PF

	All Vehicles
	HGVs
	PCUs



								Date	08.08.2018
								Design	JS
Client:	Project:	Title:		Drawing Number:		Revision:		Checked	PF
EP SHB	South Humber Bank Energy Centre	Total Construction Development Flows - PM Peak (16:00 - 17:00)		Annex 25		A		Appr'd	PF
				File:					

ANNEX 26: DELIVERY AND SERVICING PLAN

South Humber Bank Energy Centre Project

Land at the South Humber Bank Power Station site, South Marsh Road, Stallingborough, DN41 8BZ

The South Humber Bank Energy Centre Order

Transport Assessment Annex 26: Operational Delivery and Servicing Plan

The Infrastructure Planning (Environmental Impact Assessment) Regulation 2017 (as amended)

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)



Applicant: EP Waste Management Ltd
Date: April 2020

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GLOSSARY

Abbreviation	Description
DCO	Development Consent Order
ES	Environmental Statement
HGV	Heavy Goods Vehicle
km	kilometre
MW	Megawatts
SHBPS	South Humber Bank Power Station
TA	Transport Assessment

CONTENTS

1.0 INTRODUCTION.....1

2.0 DELIVERY AND SERVICING STRATEGY 2

3.0 MAINTENANCE AND OTHER CONTINGENCIES 5

ATTACHMENT: SITE LAYOUT PLAN.....6

TABLES

TABLE 2.1: TIPPING BAY REQUIREMENTS 2

FIGURES

FIGURE 2.1: HGV DESIGNATED ROUTE PLAN.....3

1.0 INTRODUCTION

- 1.1.1 This Delivery and Servicing Plan has been prepared by AECOM on behalf of EP Waste Management Limited to accompany the Transport Assessment (TA) for the proposed South Humber Bank Energy Centre, an energy from waste plant located on land at and adjoining the existing South Humber Bank Power Station, South Marsh Road, Stallingborough.
- 1.1.2 This plan demonstrates how deliveries to the Proposed Development during operation will be managed and should be read in accordance with the TA presented within Appendix 9A in Environmental Statement (ES) Volume III (Document Ref. 6.4).

2.0 DELIVERY AND SERVICING STRATEGY

2.1 Delivery Hours

- 2.1.1 The Proposed Development will receive fuel by road during the following hours:
- Monday to Sunday: 00:00 – 23:59 (excluding Christmas Day, Boxing Day and New Year's Day).
- 2.1.2 Although the above timings allow for deliveries every day of the week, it is likely that deliveries will be concentrated around the period from Monday to Friday.

2.2 Weighbridges

- 2.2.1 Incoming HGVs will enter the Site through the main entrance. They will proceed along the access road to the incoming weighbridges where the quantity of incoming fuel will be checked and recorded.
- 2.2.2 The weight of the outgoing HGVs will be recorded on separate outgoing weighbridges as they leave the Site.
- 2.2.3 Total HGV movements at the Site are estimated to be 312 in and 312 out per day and a maximum of 44 HGV deliveries during the hourly peak comprising:
- 34 fuel deliveries;
 - 1 consumables delivery; and
 - 9 bottom ash and flue gas treatment residue collections.
- 2.2.4 Four weighbridges will be installed: two incoming and two outgoing. The indicative location of the weighbridges is shown on the attached layout plan.
- 2.2.5 Should all weighbridges be occupied, there is sufficient space on the access road to allow for some queuing and an HGV holding area is to be provided to the east of the weighbridge accommodating up to approximately six HGVs. These measures combined will prevent HGV stacking on the public highway.
- 2.2.6 A separate lane to either side of the incoming and outgoing weighbridges will be provided for use by staff and visitor vehicles.

2.3 Fuel Reception

- 2.3.1 After weighing, the HGVs will proceed to the tipping hall where they will be directed to a vacant tipping bay to discharge into a bunker.
- 2.3.2 It is assumed that the average unloading time is 12 minutes, which is the total time occupying a bay, including reversing and leaving. Table 2.1 indicates that based on a peak of 34 fuel deliveries per hour, the fuel reception hall requires a minimum of 7 tipping bays.

Table 2.1: Tipping bay requirements

	TOTAL
Peak Fuel Deliveries per Hour	34 HGVs
Unloading Time per Bay	12 minutes
Minimum Bays Required	7 bays

2.3.3 However, to provide flexibility in operations, the design layout has allowed for 11 tipping bays.

2.3.4 On completion of the tipping operation, the HGVs will leave the tipping hall via a separate exit. A designated route for all vehicles on Site will reduce the risk of congestion and collisions.

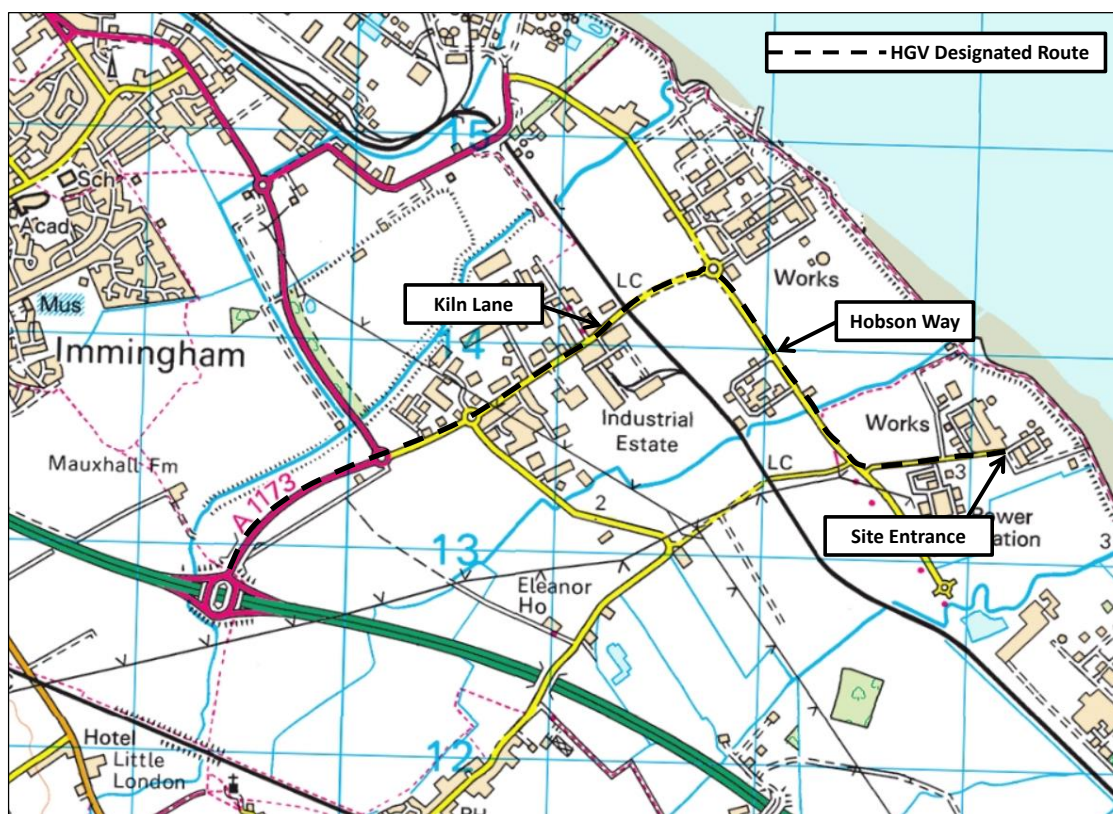
2.4 HGV Routing Agreement

2.4.1 All operational HGV traffic to/ from the Site will be required to route to/ from the A180 via the A1173, Kiln Lane, Hobson Way and South Marsh Road. This will be formalised by a routing agreement between the Applicant/ operator and the local planning authority (North East Lincolnshire Council) and will be rigorously enforced by the Applicant/ operator. The designated HGV routing plan is shown in Figure 2.1 below.

2.4.2 Various outline contingency plans are set out in Section 3. In addition, given that the lifetime of the plant is potentially in excess of 30 years, should a more appropriate HGV route become available for any reason, prior approval of the new route(s) would be sought via the submission of an updated Delivery and Servicing Plan to the local planning authority.

2.4.3 In the event of the closure of South Marsh Road or the Site entrance for an emergency or for reasons beyond the operator's control, access will be via the existing South Humber Bank Power Station entrance on Hobson Way.

Figure 2.1: HGV designated route plan



2.4.4 The operator will encourage the public to report any incidents regarding any breaches of the routing agreement to the operator's management team together

with information on the location of the HGV, direction of travel and its number plate/ operator. This information will allow the operator to take appropriate action to avoid any future incidents.

3.0 MAINTENANCE AND OTHER CONTINGENCIES

3.1 Maintenance

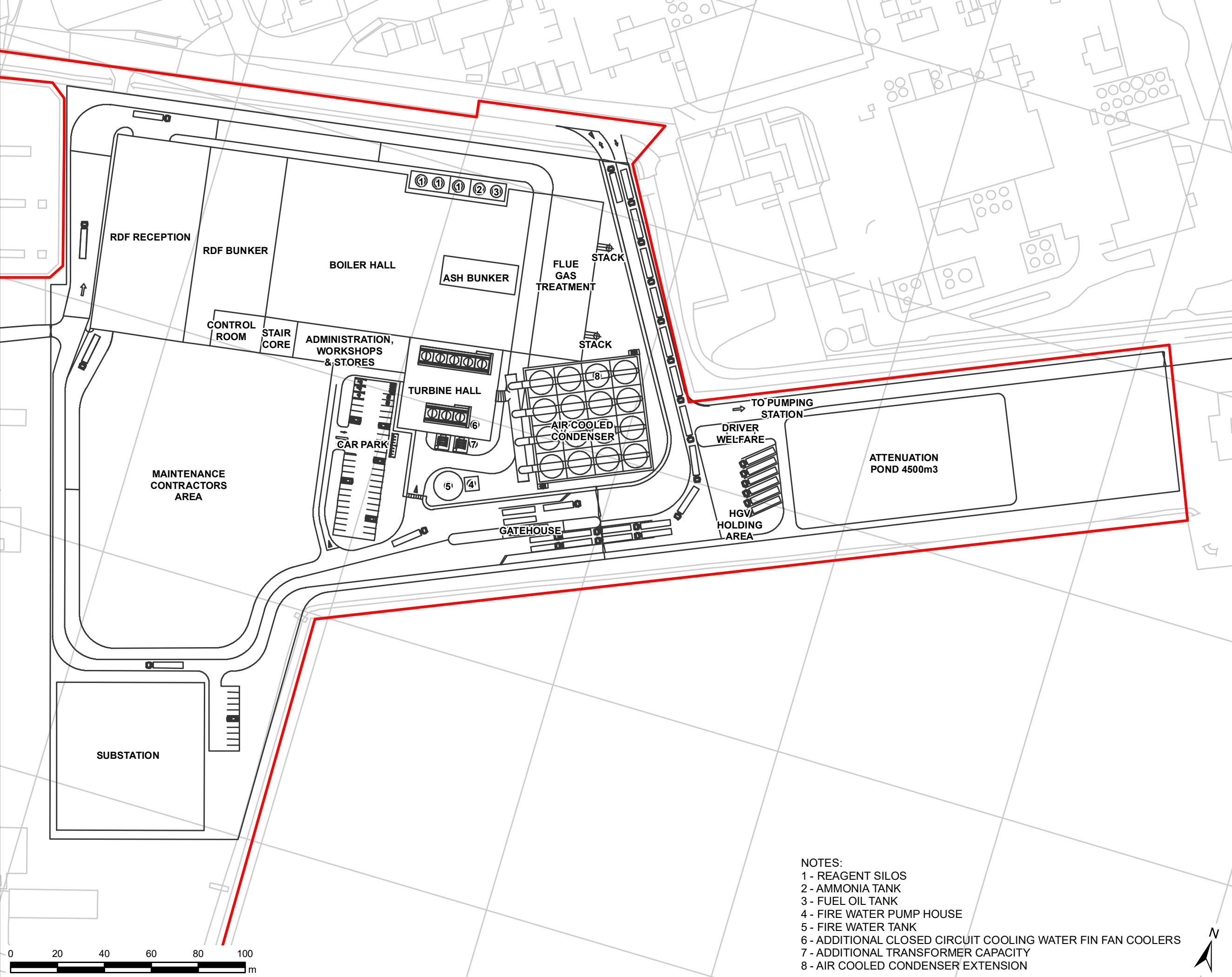
- 3.1.1 It is expected that each year the Proposed Development will be taken offline for approximately three weeks to allow for invasive maintenance activities such as internal inspection of the boiler, and approximately every five to six years it will be taken offline for a major outage for substantial maintenance activities such as replacement of sections of the boiler.

3.2 Contingency

- 3.2.1 In the event of an unforeseen issue with the plant, HGVs would not be held at the gatehouse but in the short term would continue to deposit fuel into the bunker as normal (utilising the spare capacity in the fuel bunker which is sized to hold up to four days of fuel). If the plant problem continued for a longer period, fuel deliveries would be stopped at source preventing HGVs queueing on Site.
- 3.2.2 In the event of a weighbridge failure resulting in HGVs being held at the gatehouse, the design layout incorporates a level of resilience with the provision of four weighbridges and barriers and a wide access road. Also, there is space for a least 21 HGVs to queue between the Site entrance and the gatehouse. If necessary, HGVs would be allowed to queue on any available hardstanding areas within the Site (beyond the gatehouse) to prevent queuing onto the public highway in the event of a major failure such as all inbound and outbound weighbridges failing at once. In such an event, suppliers would be told to stop sending fuel until the problem is resolved. As such, no scenario is envisaged where HGVs would queue onto the public highway.
- 3.2.3 In the event of the closure of South Marsh Road or the Site entrance for an emergency or for reasons beyond the operator's control, contingency plans will include (not limited to) taking access to the Proposed Development via the existing South Humber Bank Power Station entrance on Hobson Way.
- 3.2.4 In the event of the closure of the A180 in the Site vicinity, diversionary routes will be required. It is anticipated for those deliveries arriving from the west, HGVs will join the A160 at the Brocklesby Interchange before continuing on the A1173 Manby Road/ Kings Road heading south to the A1173/ Kiln Lane Roundabout. For those deliveries arriving from Grimsby and Cleethorpes to the south-east, HGVs will use the A1136 and continue on the B1210 Stallingborough Road before joining the A1173 which crosses over the A180.

ATTACHMENT: SITE LAYOUT PLAN

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LEGEND

Order Limits

— Proposed Development

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Purpose of Issue

ENVIRONMENTAL STATEMENT

Client

EP WASTE MANAGEMENT LTD

Project Title

**SOUTH HUMBER BANK
ENERGY CENTRE DCO**

Application Document Ref

**PROPOSED
DEVELOPMENT LAYOUT**

Drawn LC	Checked LK	Approved KC	Date 06/04/2020
AECOM Internal Project No. 60580855		Scale @ A3 1:1,500	

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Drawing Ref

FIGURE 4.1

Rev

NOTES:

- 1 - REAGENT SILOS
- 2 - AMMONIA TANK
- 3 - FUEL OIL TANK
- 4 - FIRE WATER PUMP HOUSE
- 5 - FIRE WATER TANK
- 6 - ADDITIONAL CLOSED CIRCUIT COOLING WATER FIN FAN COOLERS
- 7 - ADDITIONAL TRANSFORMER CAPACITY
- 8 - AIR COOLED CONDENSER EXTENSION

0 20 40 60 80 100

m



ANNEX 27: FRAMEWORK CONSTRUCTION WORKER TRAVEL PLAN

South Humber Bank Energy Centre Project

Planning Inspectorate Reference: EN010107

Land at the South Humber Bank Power Station site, South Marsh Road, Stallingborough, DN41 8BZ

The South Humber Bank Energy Centre Order

Transport Assessment Annex 27: Framework Construction Worker Travel Plan

The Infrastructure Planning (Environmental Impact Assessment) Regulation 2017 (as amended) Regulation

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)



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GLOSSARY

Abbreviation	Description
CIHT	Chartered Institution of Highways and Transportation
CWTP	Construction Worker Travel Plan
DCO	Development Consent Order
km	kilometre
MW	Megawatts
Q	Quarter
SHBPS	South Humber Bank Power Station

CONTENTS

1.0	INTRODUCTION.....	1
2.0	BACKGROUND	2
3.0	PROPOSED DEVELOPMENT	6
4.0	OBJECTIVES	9
5.0	ROLES AND RESPONSIBILITIES	10
6.0	TRAVEL PLAN MEASURES	11
7.0	TARGETS.....	13
8.0	MONITORING.....	14

TABLES

TABLE 2.1: BUS SERVICE FREQUENCY.....	5
TABLE 2.2: SUMMARY OF RAIL FREQUENCY	5
TABLE 3.1: DAILY CONSTRUCTION WORKER VEHICLE GENERATIONS	7
TABLE 3.2: DAILY VEHICLE PROFILE DURING PEAK OF CONSTRUCTION.....	7

FIGURES

FIGURE 2.1: SITE LOCATION.....	2
FIGURE 2.2: 1 KM/ 2 KM WALKING CATCHMENT AREA	3
FIGURE 2.3: 5 KM/ 8 KM CYCLING CATCHMENT AREA	4

1.0 INTRODUCTION

- 1.1.1 This Framework Construction Worker Travel Plan (CWTP) has been prepared by AECOM on behalf of EP Waste Management Limited to accompany a Transport Assessment for the proposed South Humber Bank Energy Centre, Stallingborough, North East Lincolnshire.
- 1.1.2 The Framework CWTP is designed to promote and encourage the use of sustainable transport modes and reduce reliance on the private car during the construction phase of the development, which is expected to take 36 months.
- 1.1.3 EP Waste Management Limited is committed to the sustainable development agenda and realise that the success of the travel plan will be based on its enthusiasm and commitment to ensure that the chosen contractor encourages and promotes the suggested measures detailed within this report to their workers. The Framework CWTP sets out the aims, objectives and measures to promote sustainable travel to the Site.
- 1.1.4 This document is a Framework CWTP. The appointed contractor will be required to use this as the starting point for their final CWTP and demonstrate how the targets defined in this Framework CWTP will be achieved. It also identifies the suggested measures to be implemented by the contractor.
- 1.1.5 Following this introduction the Framework CWTP is structured as follows:
- Section 2 provides background information including the Site location and accessibility;
 - Section 3 describes the Proposed Development;
 - Section 4 presents the final CWTP objectives;
 - Section 5 sets out the roles and responsibilities;
 - Section 6 describes the proposed measures;
 - Section 7 describes the process for setting targets; and
 - Section 8 outlines the proposed monitoring of the final CWTP.

2.0 BACKGROUND

2.1 Site Description

- 2.1.1 The Site is located off South Marsh Road, Stallingborough, North East Lincolnshire approximately 3 km north-west of Grimsby. The Main Development Area is located on vacant land within the boundary of the existing South Humber Bank Power Station (SHBPS). The Site location is shown in Figure 2.1.
- 2.1.2 South Marsh Road provides highway access to SHBPS, and also to Synthomer (UK) Limited and the NEWLINCS Integrated Waste Management Facility (both located north of the Site), and for the Environment Agency to access parts of the Humber Estuary flood defences (to the east of the Site).

Figure 2.1: Site location



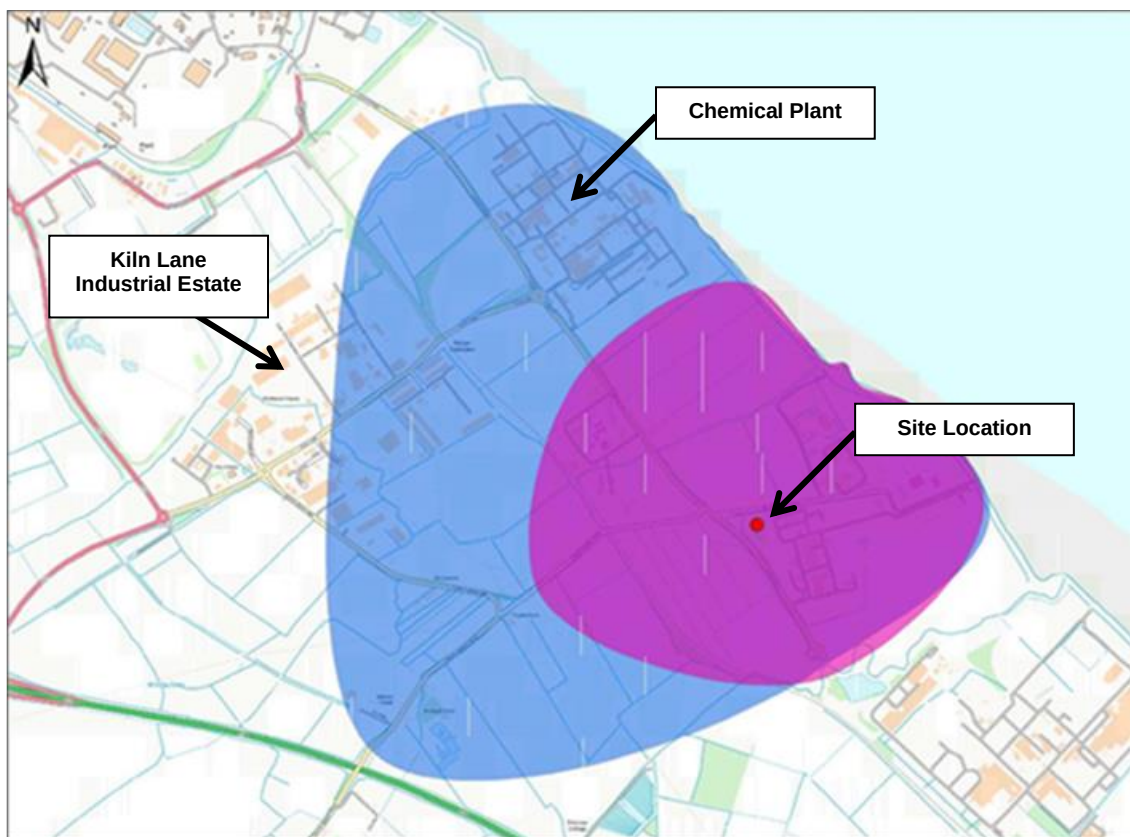
2.2 Accessibility

- 2.2.1 The accessibility of the Proposed Development has been reviewed with respect to opportunities for walking, cycling and the availability of public transport.
- 2.2.2 The Site is located in a remote location on the southern bank of the Humber Estuary. Given its location and the construction working hours, opportunities to access the Site by sustainable modes are limited.
- 2.2.3 Notwithstanding, this section considers the opportunities to walk, cycle or use public transport to access the construction Site.

2.3 Walking

- 2.3.1 The Chartered Institution of Highways and Transportation (CIHT) document 'Providing for Journeys on Foot' suggests a maximum walking distance of 2 km. Figure 2.2 below shows a 1 km and 2 km walking catchment area from the Proposed Development.

Figure 2.2: 1 km/ 2 km walking catchment area

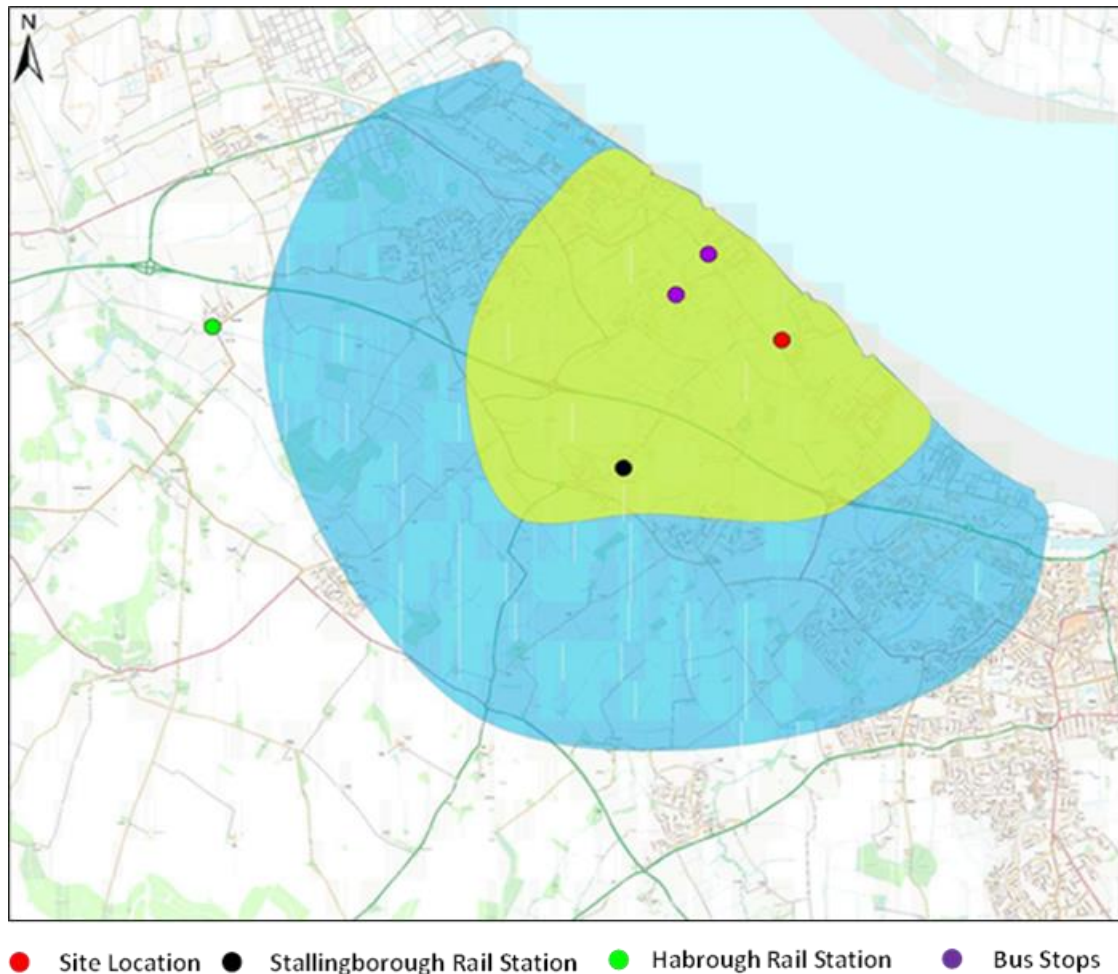


- 2.3.2 Figure 2.2 shows that there are no residential areas (except for a small number of isolated properties) within a 2 km walking distance of the Site. In terms of pedestrian facilities in the vicinity of the Site, a footway approximately 2 m wide is provided along the western kerb line of Hobson Way.
- 2.3.3 In summary it is not anticipated that walking trips would likely represent a practical travel mode for construction workers.

2.4 Cycling

- 2.4.1 Cycling is considered to be a viable alternative to that of the private car for journeys up to 8 km, providing a healthy and environmentally friendly form of transport.
- 2.4.2 In respect of acceptable cycle distances, 'Local Transport Note 2/08: Cycling Infrastructure Design', published by the Department for Transport states that many utility cycle trips are less than 3 miles (approximately 5 km), but for commuter journeys a distance of 5 miles (approximately 8 km) is not uncommon.
- 2.4.3 Taking this into account, a plan illustrating the indicative 5 km and 8 km cycle catchment area from the Proposed Development is shown in Figure 2.3.

Figure 2.3: 5 km/ 8 km cycling catchment area



2.4.4 Figure 2.3 shows Healing, Great Coates, Stallingborough, and parts of Immingham are within an 8 km cycle distance of the Site. Due to the nature of construction and as set out in Table 11.4 of the Transport Assessment in Appendix 9A of ES Report Volume III (Document Ref. 6.4), the number of workers originating from these areas is expected to be minimal.

2.4.5 Within the vicinity of the Site there are no dedicated traffic-free cycle routes. Whilst this is not considered to be an issue for experienced cyclists, the surrounding road network is regularly used by HGVs given its industrial nature and therefore may not represent an attractive option for less experienced cyclists.

2.5 Bus

2.5.1 The CIHT guidance document 'Planning for Public Transport in Developments' recommends that 400 m is the desirable walking distance to a bus stop from a new development. The nearest bus stop to the Site is located approximately 1.9 km to the north of the Site on Laporte Road, outside of the acceptable walking distance.

2.5.2 This bus stop is served by the 5M bus service. The frequency of this service is shown in Table 2.1.

Table 2.1: Bus service frequency

SERVICE	ROUTE	FREQUENCY		
		MON - FRI	SAT	SUN
5M	Immingham - Grimsby	06:49, 07:49. 16:15 & 17:10	No Service	No Service

2.5.3 In summary this bus stop is located outside of the acceptable walking distance to a bus stop and given the low frequency of service represents an unattractive option for construction workers. In addition there are no footways present on South Marsh Road between the junction with Hobson Way and the Site.

2.6 Rail

2.6.1 The nearest railway station to the Site is Stallingborough approximately 3.2 km south west of the Site (see Figure 2.3). Whilst the station is located outside the acceptable 2 km walking catchment area, multi modal journeys using rail and cycling could be utilised.

2.6.2 Stallingborough station is on the Cleethorpes to Barton on Humber line and provides a two hourly service in each direction Monday to Saturday.

2.6.3 Rail services are operated by Northern. Table 2.2 Illustrates the rail frequency from Stallingborough rail station

Table 2.2: Summary of rail frequency

SERVICE	MONDAY TO SATURDAY FREQUENCY	SUNDAY FREQUENCY
Barton On Humber	2 hours	2 to 3 hours
Cleethorpes (via Grimsby)	2 hours (once per hour during morning peak)	2 to 3 hours

3.0 PROPOSED DEVELOPMENT

3.1 Development Description

- 3.1.1 The Proposed Development is an energy from waste power station which will generate energy through the controlled combustion of refuse derived fuel (RDF) with a gross electrical output of up to 95 MW.

3.2 Construction Programme

- 3.2.1 It is anticipated that construction could commence in Q2 2020 at the earliest and last circa 36 months.

3.3 Construction Phase Site Worker Traffic Generation

- 3.3.1 During construction, the Proposed Development would require a maximum of 750 workers per day at the peak of construction.
- 3.3.2 The standard construction working hours for the Proposed Development will be 07:00 to 19:00 Monday to Saturday. Key exceptions to these working hours could include activities that be carried out continuously (such as concrete slip-forming) and internal non-noisy activities, where they comply with any restrictions agreed with NELC.
- 3.3.3 In relation to traffic generation associated with construction workers, an average occupancy of two workers per vehicle has been applied. This occupancy rate has been accepted by transport stakeholders on other recent power station construction projects including Eggborough Combined Cycle Gas Turbine (CCGT) and Knottingley CCGT and is therefore considered robust. The resulting construction worker traffic volumes throughout construction are set out in Table 3.1.

Table 3.1: Daily construction worker vehicle generations

YEAR OF CONSTRUCTION	DAILY WORKFORCE	DAILY VEHICLE GENERATIONS
Q2 2020	80	40
Q3 2020	170	85
Q4 2020	295	148
Q1 2021	590	295
Q2 2021	750	375
Q3 2021	750	375
Q4 2021	750	375
Q1 2022	750	375
Q2 2022	530	265
Q3 2022	360	180
Q4 2022	225	113
Q1 2023	140	70

3.3.4 Table 3.2 illustrates the daily vehicle arrival and departure profile during the peak of construction where the daily workforce is estimated to be up to 750 workers.

Table 3.2: Daily vehicle profile during peak of construction

HOUR BEGINNING	% OF DAILY INBOUND	% OF DAILY OUTBOUND	ARRIVALS	DEPARTURES
06:00	42%	0%	158	0
07:00	37%	0%	138	0
08:00	12%	0%	45	0
09:00	9%	0%	34	0
16:00	0%	22%	0	82
17:00	0%	26%	0	98
18:00	0%	47%	0	176
19:00	0%	5%	0	19
Total	100%	100%	375	375

3.4 Access Proposals

- 3.4.1 All construction workers will arrive and depart the Proposed Development via a construction site entrance that is expected to be located off South Marsh Road to the east of the South Humber Bank Power Station entrance.

3.5 Car Parking Provision

- 3.5.1 Parking demand will vary throughout the construction phase and an area of hardstanding will be set aside within the Site to accommodate parking for construction workers as required.

4.0 OBJECTIVES

- 4.1.1 The final CWTP will act in helping the environment by reducing the number of trips made to and from the construction site by private car. All staff during construction will be made aware of the measures included in the final CWTP so that benefits can be delivered and the number of car borne trips can be reduced by promoting car sharing and minibus use.
- 4.1.2 The final CWTP will aim to ensure all construction staff are aware of the advantages and potential for travel by more sustainable and environmentally friendly modes of transport through raising awareness and the provision of information identifying travel options and the necessary contact information.
- 4.1.3 The primary objectives which are of most relevance during the construction period of the proposed development are to:
- ensure that an appropriate package of measures is employed to encourage sustainable transport behaviour;
 - reduce car usage (particularly single occupancy journeys);
 - raise awareness of the sustainable transport measures serving construction site; and
 - minimise the impacts of traffic on sensitive locations.

5.0 ROLES AND RESPONSIBILITIES

- 5.1.1 The Travel Plan Co-ordinator has a key role to play in managing, monitoring and implementing the individual measures within the CWTP.
- 5.1.2 A Travel Plan Co-ordinator will be appointed by the contractor to manage and deliver the CWTP. The Travel Plan Co-ordinator's contact details will be supplied to North East Lincolnshire Council and Highways England.
- 5.1.3 The Travel Plan Co-ordinator will work closely with the Site manager who has overall responsibility for the Site.
- 5.1.4 The responsibilities of EP Waste Management Limited will primarily include:
- contractually committing the contractor to finalise the CWTP and to comply with the guidelines outlined within it.
- 5.1.5 The responsibilities of the Travel Plan Co-ordinator will primarily include:
- ensuring the obligations of contractors/ sub-contractors related to the CWTP are adhered to;
 - ensuring the travel plan notice board is located in a prominent position and that the information is kept up to date;
 - monitoring parking to ensure no parking on any public highway leading to the Site;
 - being based on the Site;
 - acting as the key point of contact for issues related to construction traffic;
 - reviewing cycle parking provision on a regular basis;
 - engaging with local stakeholders;
 - monitoring performance against the targets of the final CWTP; and
 - implementing additional measures if not delivering on targets set.
- 5.1.6 The contractor will be responsible for managing how their workers travel to and from the Site. Given the limited number of parking spaces to be provided, the contractor's responsibilities will primarily include:
- providing a Travel Plan Co-ordinator to oversee the management and delivery of the CWTP;
 - encouraging and promoting the use of sustainable transport measures included within the final CWTP; and
 - organising crew minibuses to transport workers to and from the Site if appropriate.

6.0 TRAVEL PLAN MEASURES

6.1 General

- 6.1.1 To encourage sustainable travel behaviour by construction staff throughout the period of construction, it is important that an appropriate package of measures is introduced.
- 6.1.2 The measures should primarily aim to minimise the level of construction worker traffic and then whenever possible minimise the impact and disruption on the remaining traffic and local road network.

6.2 Proposed Measures to Reduce the Level of Traffic

Car Parking

- 6.2.1 The availability of car parking has a major influence on the means of transport people use for their journeys and is therefore an important travel plan measure in promoting sustainable travel to and from the Site.
- 6.2.2 It is proposed that sections of the car park will be gradually opened up, to make sure that the number of vehicles is controlled, and that sustainable transport options are promoted throughout the course of construction.
- 6.2.3 It is proposed that car parking at the Site will be monitored with restricted access.
- 6.2.4 In arranging the layout of the car park, it is proposed that the spaces closest to the construction site/ offices will be designated for car sharers and minibuses.

Minibus

- 6.2.5 Given the restriction on the number of car parking spaces provided, contractors will be encouraged to provide minibuses for transporting their workers from key points of construction worker origin to the Site. This will have the benefit of reducing the number of vehicular trips on the local road network. For example many construction workers will find local accommodation. The locations of accommodation chosen by these workers are likely to provide suitable pick up locations for the minibus.
- 6.2.6 The contractor will be requested to encourage the use of common accommodation locations by workers that are not from the local area, to encourage the use of shared transport modes such as minibus.
- 6.2.7 The contractor will be requested to provide minibuses and to organise where the minibuses will pick up workers and at what times if appropriate.

Car Sharing

- 6.2.8 The contractor will be encouraged to set up and manage a car share scheme for its workers. In construction projects, car sharing is often popular amongst workers due to the financial and social benefits it can provide. It is expected that some workers will be away from home and may welcome the companionship of other colleagues.
- 6.2.9 In emergencies, the Travel Plan Co-ordinator should provide a guaranteed lift home for car sharers. The provision should be extended for emergency situations for staff who cycle to the Site.

Cycling

- 6.2.10 Although cycling to the Site is likely to have limited appeal to construction site personnel (due to carrying PPE etc.) secure parking for bicycles will be provided within the temporary car park. Construction staff that cycle to work will also have access to shower and changing facilities and lockers to store clothing, cycle helmets etc.

On-Site Storage

- 6.2.11 An on Site storage facility is usually provided by contractors. Providing this facility would encourage construction workers to store their tools on Site. This would reduce the amount of tools they need to carry each day and would assist those workers who are considering cycling or car sharing as a potential travel mode.

6.3 Minimising the Impact on the Local Road Network

Signage Strategy

- 6.3.1 In order to ensure that construction vehicles unable to park on Site do not park on the public highway in the vicinity of the Site, clear and appropriate signage will be required on South Marsh Road. The signage will indicate no parking is permitted on the road and the potential penalties for those who do.

Staggered Working Hours

- 6.3.2 It is understood that the start and finishing hours of contractors may vary according to discipline. This should help to ensure that the flow of construction worker traffic is either outside of, or spread across the AM and PM Peak, thereby minimising the impact on any particular time period.

Travel Plan Communication

- 6.3.3 Details of the sustainable transport options available for accessing the Site will be provided in an information pack and presented to construction workers prior to them starting work at the Site. This will raise awareness of the initiatives being implemented and also allow staff to register an interest in the schemes. The contractor will be responsible for ensuring all construction workers receive the information pack prior to starting work on Site.
- 6.3.4 The contractor will be encouraged to ensure that all construction workers receive an introductory briefing on the travel plan when they commence work. This will be incorporated into the Site safety briefing and will include the provision of the following information:
- designated access and exit routes to the Site;
 - details of sustainable transport measures available for accessing the Site; and
 - parking arrangements.
- 6.3.5 The provision of such a meeting should ensure that each worker is fully aware of the CWTP and the respective sustainable transport measures contained within it.

7.0 TARGETS

- 7.1.1 Without management, construction industry standards suggest a typical vehicle occupancy of 1.35 which would result in 555 vehicles arriving and departing the Site per day at the peak of construction.
- 7.1.2 One of the prime objectives of an active CWTP is to set clear and realistic targets. The main target to be achieved during the construction of the Proposed Development is as follows:
- to achieve a car occupancy of two workers per vehicle over the duration of the construction project. Up until handover of the Proposed Development, no more than one car or van should be parked on Site for every two people registered on Site per day.
- 7.1.3 The Travel Plan Co-ordinator will monitor parking utilisation at the Site reviewing the split between cars, vans and minibuses. Ensuring that this target is met is dependent on the contractor encouraging its workers to travel to and from the Site by sustainable options provided in the final CWTP. If monitoring (see Section 8 below) finds that the target is not being met, this will result in the implementation of additional measures to ensure the CWTP stays on course to meet its overall objectives.
- 7.1.4 This target represents a 32% reduction in vehicles arriving at the Site when compared to the industry standard.

8.0 MONITORING

- 8.1.1 Monitoring the final CWTP will be central to ensuring its aims are delivered in practice throughout the construction timeframe. Effective monitoring should guarantee that failures or changing conditions are identified at the earliest point and that remedial action (i.e. identifying additional measures, providing incentives, marketing campaign to promote the CWTP) can be taken, to ensure that the CWTP stays on course to meet its overall objectives.
- 8.1.2 The Travel Plan Co-ordinator will be responsible for monitoring the final CWTP, to ensure an efficient and effective execution of the measures, and to refine the measures where necessary to cope with the changes in demand over the life of the construction project.
- 8.1.3 An important part of the monitoring strategy will be obtaining feedback from employees of the Principal Contractor, North East Lincolnshire Council and local occupiers regarding any issues with construction worker traffic. The appointment of a Travel Plan Co-ordinator will ensure that an appropriate person is available and can react to such feedback.
- 8.1.4 Furthermore, employees will be given the chance to offer their suggestions and ideas via a suggestion box/ an informal discussion with the Travel Plan Co-ordinator, while review meetings will be held at regular intervals with construction worker representatives to ensure any issues are dealt with effectively.
- 8.1.5 The Travel Plan Co-ordinator will monitor the total number of construction workers on-site and the number of parking spaces provided to ensure car occupancy targets are being met. It is anticipated that monitoring will be undertaken on one day per month throughout construction with a six monthly monitoring report prepared by the Travel Plan Co-ordinator and submitted to North East Lincolnshire Council's Travel Plan Officer. In addition, monitoring of the local road network will be undertaken by the Travel Plan Co-ordinator periodically during construction to ensure no parking on the public highway leading to the Site.

ANNEX 28: FRAMEWORK CONSTRUCTION TRAFFIC MANAGEMENT PLAN

South Humber Bank Energy Centre Project

Planning Inspectorate Reference: EN010107

South Marsh Road, Stallingborough, DN41 8BZ

The South Humber Bank Energy Centre Order

Transport Assessment Annex 28: Framework Construction Traffic Management Plan

The Infrastructure Planning (Environmental Impact Assessment) Regulation 2017 (as amended)

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)



Applicant: EP Waste Management Ltd
Date: April 2020

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GLOSSARY

Abbreviation	Description
AIL	Abnormal indivisible load
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
HGV	Heavy Goods Vehicle
km	kilometre
MW	Megawatts
Q	Quarter
SHBPS	South Humber Bank Power Station

CONTENTS

1.0 INTRODUCTION 1

2.0 BACKGROUND.....2

3.0 MEASURES TO CONTROL HGV ROUTING AND IMPACT 4

4.0 ABNORMAL INDIVISIBLE LOADS 6

5.0 MONITORING.....7

6.0 CONSULTATION 8

TABLES

TABLE 2.1: CONSTRUCTION HGV MOVEMENTS 3

FIGURES

FIGURE 2.1: SITE LOCATION 2

FIGURE 3.1: HGV DESIGNATED ROUTE PLAN.....4

1.0 INTRODUCTION

1.1 Overview

- 1.1.1 This Framework Construction Traffic Management Plan (CTMP) has been prepared by AECOM on behalf of EP Waste Management Limited to accompany the Transport Assessment for the proposed South Humber Bank Energy Centre, an energy from waste plant located on land within the boundary of the existing South Humber Bank Power Station, South Marsh Road, Stallingborough.
- 1.1.2 The Site is located to the north of the A180 and is accessed via the A1173, Kiln Lane, Hobson Way and South Marsh Road.
- 1.1.3 The construction of the Proposed Development will generate a volume of HGVs delivering plant and machinery, concrete and aggregates, steelwork, bricks and block work and other general construction materials. A number of abnormal indivisible loads (AILs) will also be generated by the construction of the Proposed Development which will require notification via the usual procedures.
- 1.1.4 This document is a Framework CTMP. The appointed contractor will be required to use this framework document as the starting point for the final CTMP.
- 1.1.5 Following this introduction the Framework CTMP is structured as follows:
- Section 2 describes the Proposed Development including the construction programme and the HGV generation;
 - Section 3 describes the proposed measures to control HGV routing and impact;
 - Section 4 describes the proposed AIL route;
 - Section 5 provides the monitoring strategy; and
 - Section 6 describes the planned liaison with key stakeholders.

2.0 BACKGROUND

2.1 Site Description

- 2.1.1 The Site is located off South Marsh Road, Stallingborough, North East Lincolnshire approximately 3 km north-west of Grimsby. The Main Development Area is located on vacant land within the boundary of the existing South Humber Bank Power Station. Its location in relation to the surrounding area and the strategic road network is shown in Figure 2.1.
- 2.1.2 South Marsh Road provides highway access to the SHBPS, and also to Synthomer (UK) Limited and the NEWLINCS Integrated Waste Management Facility (both located north of the Site), and for the Environment Agency to parts of the Humber Estuary flood defences (to the east of the Site).

Figure 2.1: Site location



2.2 Development Description

- 2.2.1 The Proposed Development is an energy from waste power station which will generate energy through the controlled combustion of refuse derived fuel (RDF) and with a gross electrical output of up to 95 MW.

2.3 Construction Programme

- 2.3.1 It is anticipated that construction could commence in Q2 2020 at the earliest or Q3 2026 at the latest and last circa 36 months.

2.4 Construction Phase Site Worker Traffic Generation

- 2.4.1 For construction worker traffic generation and the proposed measures to be implemented to encourage sustainable travel modes, please refer to the Framework Construction Workers Travel Plan (at Annex 27 of this Transport Assessment).

2.5 Construction Phase HGV Traffic Generation

- 2.5.1 The volume of HGVs on the network is predicted to be at its maximum of 412 two-way daily vehicle movements (206 in and 206 out) during Q2 2020 of construction and is associated with the possible removal of the top 2 m of ground within the Main Development Area and replacing with imported compacted engineering fill to improve bearing capacity. During the remainder of the construction period HGV movements will vary between 18 and 116 daily two-way movements as shown in Table 2.1.

Table 2.1: Construction HGV movements

YEAR OF CONSTRUCTION	DAILY TWO-WAY HGV MOVEMENTS
Q2 2020	412
Q3 2020	80
Q4 2020	94
Q1 2021	108
Q2 2021	116
Q3 2021	70
Q4 2021	64
Q1 2022	52
Q2 2022	34
Q3 2022	18
Q4 2022	32
Q1 2023	26

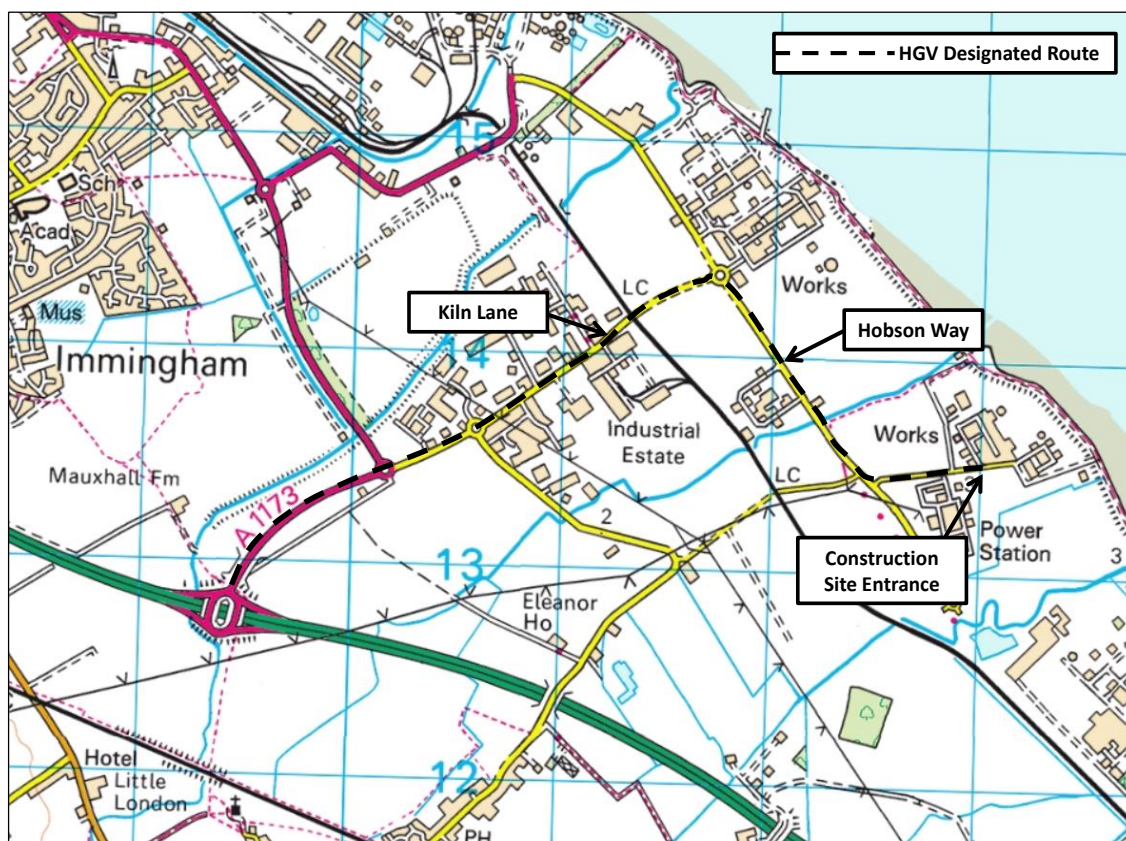
3.0 MEASURES TO CONTROL HGV ROUTING AND IMPACT

3.1 Designated Route to Site

3.1.1 It is proposed that all construction HGVs associated with the construction of the Proposed Development will arrive and depart the Site via the construction site entrance located off South Marsh Road. All HGVs associated with the construction of the Proposed Development will be required to arrive and depart the Site towards the A180 via Hobson Way, Kiln Lane and the A1173, unless new designated route/s are approved in writing by the local planning authority via the submission by the Applicant of a new Construction Traffic Management Plan (which shall accord with this Framework document in all other respects).

3.1.2 The designated HGV routing plan is shown in Figure 3.1 below.

Figure 3.1: HGV designated route plan



3.1.3 The HGV routing plan will be distributed to all drivers during their induction. It will be a condition of contract between EP Waste Management Limited and the appointed contractor to ensure that all HGV deliveries to the Site are instructed to use the designated route to access and egress the construction site. Sanctions will be put in place to deal with non-compliance.

3.2 Construction Programme / Site Hours

3.2.1 Construction at the Site is programmed to be carried out over a 36 month period.

3.2.2 In order to minimise the disruption to the public the standard construction hours will be:

- Monday – Saturday: 07:00 – 19:00.

3.2.3 It is proposed that HGV deliveries will be made during these hours wherever possible.

3.3 Wheel Cleaning Facility

3.3.1 In the interests of highway safety, wheel cleaning facilities will be installed on-site from the start of the construction phase. All HGVs leaving the construction site will be required to wheel wash when exiting the Site. The need for this measure should be periodically reviewed throughout the construction period.

3.4 Advanced Warning Signs

3.4.1 Advance warning signage will be erected on South Marsh Road prior to the construction site entrance to warn drivers of the construction access ahead and the potential for slow turning vehicles. An example of the proposed signage is shown below.



3.4.2 The appointed contractor will be required to maintain all signage.

3.5 Contact Name and Number

3.5.1 A 24 hour contact name and number will be established by the contractor and displayed on a notice board at the construction site entrance points.

4.0 ABNORMAL INDIVISIBLE LOADS

- 4.1.1 A number of AILs will need to be brought into the construction site over the construction period. The Site is part of the existing power station site so there is a history of abnormal load access to the Site.
- 4.1.2 The ports of Immingham, Hull and Goole are situated near to the Proposed Development. Detailed consideration will be given to the appropriate port and AIL routes during detailed design once final details of the size and origin of loads are known.
- 4.1.3 Abnormal Loads Officers at Highways England and the North East Lincolnshire Council will be consulted at the earliest opportunity on the programme and plan for the delivery of AILs via the usual notification procedures. This requires an application to be made to North East Lincolnshire Council a minimum of 10 working days between the application and the date of the first movements in order to assess the application and to put in place any specific traffic management that may be required. Network Rail will also be consulted in advance to confirm that the AIL route is viable and to agree a strategy to protect Network Rail asset(s) from any potential damage caused by abnormal loads.
- 4.1.4 The public will also be made aware of when abnormal load deliveries are taking place via social media, local radio and the local press.

5.0 MONITORING

- 5.1.1 Monitoring will be undertaken by the appointed contractor to assess the effectiveness of the measures included in the final CTMP to control the routing and impact of construction HGVs. Monitoring will also provide a firm basis upon which to answer queries and complaints regarding the HGV traffic impact during construction. A 24 hour contact name and number will be established by the contractor and displayed at the Site.
- 5.1.2 The appointed contractor will maintain gatehouse records of construction HGVs entering and leaving the Site and they will be available to North East Lincolnshire Council on request.
- 5.1.3 Should any complaints be raised by members of the public with regards to construction HGVs not using the dedicated HGV route to the Site, gatehouse records will be used to identify the offending HGV involved and appropriate sanctions put in place to ensure no repeat events.

6.0 CONSULTATION

- 6.1.1 A formal process of liaison between all relevant parties (Principal Contractor, North East Lincolnshire Council Highways and Highways England) is proposed to:
- establish a channel of communication between the contractor and the regulating authorities;
 - make all parties aware of the results of monitoring of the final CTMP;
 - provide a route by which any complaints can be communicated and dealt with;
 - provide a route through which transport related issues can be identified and dealt with; and
 - provide prior notice of significant events e.g. delivery of abnormal loads, in accordance with standard protocols.
- 6.1.2 It is proposed that a short written report is prepared on behalf of the contractor on a six monthly basis and circulated to all key stakeholders.
- 6.1.3 Any comments generated by the report will be circulated to all key stakeholders and a meeting may be held if required.