

Junctions 10
ARCADY 10 - Roundabout Module
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Filename: 3 - Borrás-Wrexham-Industrial-Sandy-A534 (Increased WR Flare).j10

Path: N:\Projects 2021\P21066 - Kingmoor, Wrexham Industrial Estate\6.Technical\Models

Report generation date: 27/03/2024 14:54:12

»Observed 2022, AM
»Observed 2022, PM
»Without Dev 2027, AM
»Without Dev 2027, PM
»Without Dev 2036, AM
»Without Dev 2036, PM
»With Dev 2027, AM
»With Dev 2027, PM
»With Dev 2036, AM
»With Dev 2036, PM
»With Dev 2027 Sensitivity Test, AM
»With Dev 2027 Sensitivity Test, PM
»With Dev 2036 Sensitivity Test, AM
»With Dev 2036 Sensitivity Test, PM

File summary

File Description

Title	Borrás Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534
Location	Wrexham
Site number	
Date	13/02/2024
Version	
Status	Final
Identifier	
Client	FIREM
Jobnumber	P21066
Enumerator	GHC\b.gaze
Description	Checked by D. Stoddart

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use simulation for HCM roundabouts	Use iterations for HCM roundabouts
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 period length (min)	Time segment length (min)	Run automatically
D1	Observed 2022	AM	FLAT	07:45	09:15	90	15	✓
D2	Observed 2022	PM	FLAT	16:30	18:00	90	15	✓
D3	Without Dev 2027	AM	FLAT	07:45	09:15	90	15	✓
D4	Without Dev 2027	PM	FLAT	16:30	18:00	90	15	✓
D5	Without Dev 2036	AM	FLAT	07:45	09:15	90	15	✓
D6	Without Dev 2036	PM	FLAT	16:30	18:00	90	15	✓
D7	With Dev 2027	AM	FLAT	07:45	09:15	90	15	✓
D8	With Dev 2027	PM	FLAT	16:30	18:00	90	15	✓
D9	With Dev 2036	AM	FLAT	07:45	09:15	90	15	✓
D10	With Dev 2036	PM	FLAT	16:30	18:00	90	15	✓
D11	With Dev 2027 Sensitivity Test	AM	FLAT	07:45	09:15	90	15	✓
D12	With Dev 2027 Sensitivity Test	PM	FLAT	16:30	18:00	90	15	✓
D13	With Dev 2036 Sensitivity Test	AM	FLAT	07:45	09:15	90	15	✓
D14	With Dev 2036 Sensitivity Test	PM	FLAT	16:30	18:00	90	15	✓

Analysis Set Details

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

Observed 2022, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	5.90	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.90	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Borras Hall Lane		
2	Wrexham Road		
3	Industrial Estate Road		
4	Sandy Lane		
5	A534		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Borras Hall Lane	3.60	5.80	11.0	17.3	70.0	31.3		
2 - Wrexham Road	3.50	7.30	28.0	26.2	70.0	31.8		
3 - Industrial Estate Road	7.00	8.70	15.7	38.8	70.0	31.8		
4 - Sandy Lane	3.70	5.30	18.1	16.0	70.0	30.9		
5 - A534	7.80	10.10	5.0	32.0	70.0	31.3		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Borras Hall Lane	0.468	1479
2 - Wrexham Road	0.534	1873
3 - Industrial Estate Road	0.643	2547
4 - Sandy Lane	0.467	1476
5 - A534	0.663	2682

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)	Run automatically
D1	Observed 2022	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	68	100.000
2 - Wrexham Road		FLAT	✓	543	100.000
3 - Industrial Estate Road		FLAT	✓	560	100.000
4 - Sandy Lane		FLAT	✓	34	100.000
5 - A534		FLAT	✓	1942	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
	1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534	
From	1 - Borras Hall Lane	0	57	0	6	
	2 - Wrexham Road	3	231	3	306	
	3 - Industrial Estate Road	14	0	0	425	
	4 - Sandy Lane	4	3	0	11	
	5 - A534	3	375	1539	25	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
	1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534	
From	1 - Borras Hall Lane	0	4	0	0	
	2 - Wrexham Road	0	7	100	8	
	3 - Industrial Estate Road	0	0	0	33	
	4 - Sandy Lane	50	100	0	80	
	5 - A534	0	7	6	62	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.13	8.47	0.2	A	68	102
2 - Wrexham Road	0.54	8.43	1.3	A	543	815
3 - Industrial Estate Road	0.24	2.60	0.4	A	560	840
4 - Sandy Lane	0.03	5.88	0.1	A	34	51
5 - A534	0.75	6.05	3.2	A	1942	2913

Observed 2022, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	4.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.34	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	Observed 2022	PM	FLAT	16:30	18:00	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	18	100.000
2 - Wrexham Road		FLAT	✓	479	100.000
3 - Industrial Estate Road		FLAT	✓	1632	100.000
4 - Sandy Lane		FLAT	✓	30	100.000
5 - A534		FLAT	✓	807	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	3	8	0	7
	2 - Wrexham Road	4	0	100	1	374
	3 - Industrial Estate Road	65	228	0	9	1330
	4 - Sandy Lane	1	3	4	0	22
	5 - A534	5	298	503	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	0	0	0
	2 - Wrexham Road	0	0	7	0	3
	3 - Industrial Estate Road	0	3	0	75	3
	4 - Sandy Lane	0	0	0	0	5
	5 - A534	0	2	11	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.02	3.69	0.0	A	18	27
2 - Wrexham Road	0.30	3.36	0.4	A	479	719
3 - Industrial Estate Road	0.71	5.58	2.5	A	1632	2448
4 - Sandy Lane	0.06	7.33	0.1	A	30	45
5 - A534	0.33	2.31	0.5	A	807	1211

Without Dev 2027, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	15.23	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	15.23	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	Without Dev 2027	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	79	100.000
2 - Wrexham Road		FLAT	✓	568	100.000
3 - Industrial Estate Road		FLAT	✓	835	100.000
4 - Sandy Lane		FLAT	✓	34	100.000
5 - A534		FLAT	✓	2358	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	5	68	0	6
	2 - Wrexham Road	3	0	252	3	310
	3 - Industrial Estate Road	20	140	0	0	675
	4 - Sandy Lane	4	16	3	0	11
	5 - A534	3	385	1945	25	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	3	0	0
	2 - Wrexham Road	0	0	8	100	8
	3 - Industrial Estate Road	0	18	0	0	28
	4 - Sandy Lane	50	63	100	0	80
	5 - A534	0	7	7	62	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.26	16.51	0.4	C	79	119
2 - Wrexham Road	0.73	18.29	2.8	C	568	852
3 - Industrial Estate Road	0.36	3.03	0.7	A	835	1253
4 - Sandy Lane	0.04	6.73	0.1	A	34	51
5 - A534	0.92	18.90	12.1	C	2358	3537

Without Dev 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	10.76	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.76	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D4	Without Dev 2027	PM	FLAT	16:30	18:00	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	25	100.000
2 - Wrexham Road		FLAT	✓	502	100.000
3 - Industrial Estate Road		FLAT	✓	2069	100.000
4 - Sandy Lane		FLAT	✓	30	100.000
5 - A534		FLAT	✓	1088	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	3	15	0	7
	2 - Wrexham Road	4	0	115	1	382
	3 - Industrial Estate Road	77	246	0	9	1737
	4 - Sandy Lane	1	3	4	0	22
	5 - A534	5	302	780	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	0	0	0
	2 - Wrexham Road	0	0	9	0	3
	3 - Industrial Estate Road	0	3	0	75	4
	4 - Sandy Lane	0	0	0	0	5
	5 - A534	0	2	13	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.03	4.34	0.0	A	25	38
2 - Wrexham Road	0.35	4.00	0.6	A	502	753
3 - Industrial Estate Road	0.90	16.60	9.3	C	2069	3104
4 - Sandy Lane	0.09	12.38	0.1	B	30	45
5 - A534	0.44	2.88	0.9	A	1088	1632

Without Dev 2036, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	22.86	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	22.86	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
DS	Without Dev 2036	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	81	100.000
2 - Wrexham Road		FLAT	✓	591	100.000
3 - Industrial Estate Road		FLAT	✓	858	100.000
4 - Sandy Lane		FLAT	✓	34	100.000
5 - A534		FLAT	✓	2432	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	5	70	0	6
	2 - Wrexham Road	3	0	262	3	323
	3 - Industrial Estate Road	21	147	0	0	690
	4 - Sandy Lane	4	16	3	0	11
	5 - A534	3	399	2005	25	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	3	0	0
	2 - Wrexham Road	0	0	8	100	8
	3 - Industrial Estate Road	0	18	0	0	28
	4 - Sandy Lane	50	63	100	0	80
	5 - A534	0	7	7	62	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.31	20.02	0.4	C	81	122
2 - Wrexham Road	0.79	24.73	4.0	C	591	887
3 - Industrial Estate Road	0.37	3.09	0.7	A	858	1287
4 - Sandy Lane	0.04	6.86	0.1	A	34	51
5 - A534	0.95	29.69	19.3	D	2432	3648

Without Dev 2036, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	14.76	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.76	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D6	Without Dev 2036	PM	FLAT	16:30	18:00	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	25	100.000
2 - Wrexham Road		FLAT	✓	519	100.000
3 - Industrial Estate Road		FLAT	✓	2131	100.000
4 - Sandy Lane		FLAT	✓	31	100.000
5 - A534		FLAT	✓	1117	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	3	15	0	7
	2 - Wrexham Road	4	0	119	1	395
	3 - Industrial Estate Road	80	254	0	9	1788
	4 - Sandy Lane	1	3	4	0	23
	5 - A534	5	313	798	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	0	0	0
	2 - Wrexham Road	0	0	9	0	3
	3 - Industrial Estate Road	0	3	0	75	4
	4 - Sandy Lane	0	0	0	0	5
	5 - A534	0	2	13	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.03	4.43	0.0	A	25	38
2 - Wrexham Road	0.36	4.11	0.6	A	519	779
3 - Industrial Estate Road	0.93	23.68	13.6	C	2131	3197
4 - Sandy Lane	0.10	14.03	0.1	B	31	47
5 - A534	0.46	2.95	0.9	A	1117	1676

With Dev 2027, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	24.75	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	24.75	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D7	With Dev 2027	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	82	100.000
2 - Wrexham Road		FLAT	✓	577	100.000
3 - Industrial Estate Road		FLAT	✓	912	100.000
4 - Sandy Lane		FLAT	✓	34	100.000
5 - A534		FLAT	✓	2446	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	5	71	0	6
	2 - Wrexham Road	3	0	261	3	310
	3 - Industrial Estate Road		147	0	0	743
	4 - Sandy Lane	4	16	3	0	11
	5 - A534	3	385	2033	25	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	3	0	0
	2 - Wrexham Road	0	0	8	100	8
	3 - Industrial Estate Road	0	19	0	0	28
	4 - Sandy Lane	50	63	100	0	80
	5 - A534	0	7	7	62	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.32	20.84	0.5	C	82	123
2 - Wrexham Road	0.79	24.97	3.9	C	577	866
3 - Industrial Estate Road	0.39	3.20	0.8	A	912	1368
4 - Sandy Lane	0.04	7.01	0.1	A	34	51
5 - A534	0.96	33.11	21.6	D	2446	3669

With Dev 2027, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	20.07	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.07	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D8	With Dev 2027	PM	FLAT	16:30	18:00	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	28	100.000
2 - Wrexham Road		FLAT	✓	507	100.000
3 - Industrial Estate Road		FLAT	✓	2188	100.000
4 - Sandy Lane		FLAT	✓	30	100.000
5 - A534		FLAT	✓	1173	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	3	18	0	7
	2 - Wrexham Road	4	0	120	1	382
	3 - Industrial Estate Road	81	254	0	9	1844
	4 - Sandy Lane	1	3	4	0	22
	5 - A534	5	302	865	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	0	0	0
	2 - Wrexham Road	0	0	10	0	3
	3 - Industrial Estate Road	0	4	0	75	5
	4 - Sandy Lane	0	0	0	0	5
	5 - A534	0	2	14	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.03	4.60	0.0	A	28	42
2 - Wrexham Road	0.36	4.24	0.6	A	507	761
3 - Industrial Estate Road	0.95	33.09	19.3	D	2188	3282
4 - Sandy Lane	0.11	15.14	0.1	C	30	45
5 - A534	0.48	3.12	1.0	A	1173	1760

With Dev 2036, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	47.51	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	47.51	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D9	With Dev 2036	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	84	100.000
2 - Wrexham Road		FLAT	✓	600	100.000
3 - Industrial Estate Road		FLAT	✓	936	100.000
4 - Sandy Lane		FLAT	✓	34	100.000
5 - A534		FLAT	✓	2520	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	5	73	0	6
	2 - Wrexham Road	3	0	271	3	323
	3 - Industrial Estate Road	23	154	0	0	759
	4 - Sandy Lane	4	16	3	0	11
	5 - A534	3	399	2093	25	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	3	0	0
	2 - Wrexham Road	0	0	8	100	8
	3 - Industrial Estate Road	0	19	0	0	28
	4 - Sandy Lane	50	63	100	0	80
	5 - A534	0	7	7	62	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.37	25.99	0.6	D	84	126
2 - Wrexham Road	0.85	36.78	5.9	E	600	900
3 - Industrial Estate Road	0.40	3.27	0.9	A	936	1404
4 - Sandy Lane	0.04	7.15	0.1	A	34	51
5 - A534	0.99	67.76	46.1	F	2520	3780

With Dev 2036, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	36.82	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	36.82	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D10	With Dev 2036	PM	FLAT	16:30	18:00	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	28	100.000
2 - Wrexham Road		FLAT	✓	524	100.000
3 - Industrial Estate Road		FLAT	✓	2249	100.000
4 - Sandy Lane		FLAT	✓	31	100.000
5 - A534		FLAT	✓	1201	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	3	18	0	7
	2 - Wrexham Road	4	0	124	1	395
	3 - Industrial Estate Road	84	262	0	9	1894
	4 - Sandy Lane	1	3	4	0	23
	5 - A534	5	313	882	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	0	0	0
	2 - Wrexham Road	0	0	9	0	3
	3 - Industrial Estate Road	0	4	0	75	5
	4 - Sandy Lane	0	0	0	0	5
	5 - A534	0	2	14	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.04	4.70	0.0	A	28	42
2 - Wrexham Road	0.38	4.36	0.6	A	524	786
3 - Industrial Estate Road	0.98	63.00	38.0	F	2249	3374
4 - Sandy Lane	0.13	17.41	0.1	C	31	47
5 - A534	0.49	3.20	1.1	A	1201	1802

With Dev 2027 Sensitivity Test, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	46.42	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	46.42	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D11	With Dev 2027 Sensitivity Test	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	86	100.000
2 - Wrexham Road		FLAT	✓	580	100.000
3 - Industrial Estate Road		FLAT	✓	909	100.000
4 - Sandy Lane		FLAT	✓	34	100.000
5 - A534		FLAT	✓	2521	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	5	75	0	6
	2 - Wrexham Road	3	0	264	3	310
	3 - Industrial Estate Road	21	151	0	0	737
	4 - Sandy Lane	4	16	3	0	11
	5 - A534	3	385	2108	25	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borrás Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borrás Hall Lane	0	0	3	0	0
	2 - Wrexham Road	0	0	8	100	8
	3 - Industrial Estate Road	0	21	0	0	30
	4 - Sandy Lane	50	63	100	0	80
	5 - A534	0	7	7	62	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borrás Hall Lane	0.38	26.24	0.6	D	86	129
2 - Wrexham Road	0.84	33.53	5.2	D	580	870
3 - Industrial Estate Road	0.39	3.25	0.8	A	909	1364
4 - Sandy Lane	0.04	7.00	0.1	A	34	51
5 - A534	0.99	66.18	45.0	F	2521	3782

With Dev 2027 Sensitivity Test, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borrás Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	33.66	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	33.66	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D12	With Dev 2027 Sensitivity Test	PM	FLAT	16:30	18:00	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		FLAT	✓	26	100.000
2 - Wrexham Road		FLAT	✓	505	100.000
3 - Industrial Estate Road		FLAT	✓	2247	100.000
4 - Sandy Lane		FLAT	✓	30	100.000
5 - A534		FLAT	✓	1149	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borrás Hall Lane	0	3	16	0	7
	2 - Wrexham Road	4	0	118	1	382
	3 - Industrial Estate Road	84	258	0	9	1896
	4 - Sandy Lane	1	3	4	0	22
	5 - A534	5	302	841	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	0	0	0
	2 - Wrexham Road	0	0	10	0	3
	3 - Industrial Estate Road	0	4	0	75	5
	4 - Sandy Lane	0	0	0	0	5
	5 - A534	0	2	14	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.03	4.53	0.0	A	26	39
2 - Wrexham Road	0.36	4.17	0.6	A	505	758
3 - Industrial Estate Road	0.98	56.48	33.9	F	2247	3371
4 - Sandy Lane	0.12	16.87	0.1	C	30	45
5 - A534	0.47	3.07	1.0	A	1149	1724

With Dev 2036 Sensitivity Test, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borras Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	100.83	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	100.83	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D13	With Dev 2036 Sensitivity Test	AM	FLAT	07:45	09:15	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borras Hall Lane		FLAT	✓	88	100.000
2 - Wrexham Road		FLAT	✓	603	100.000
3 - Industrial Estate Road		FLAT	✓	932	100.000
4 - Sandy Lane		FLAT	✓	34	100.000
5 - A534		FLAT	✓	2595	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	5	77	0	6
	2 - Wrexham Road	3	0	274	3	323
	3 - Industrial Estate Road	22	158	0	0	752
	4 - Sandy Lane	4	16	3	0	11
	5 - A534	3	399	2168	25	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

	To					
		1 - Borrás Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borrás Hall Lane	0	0	3	0	0
	2 - Wrexham Road	0	0	8	100	8
	3 - Industrial Estate Road	0	21	0	0	30
	4 - Sandy Lane	50	63	100	0	80
	5 - A534	0	7	7	62	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borrás Hall Lane	0.42	30.22	0.7	D	88	132
2 - Wrexham Road	0.88	47.26	7.6	E	603	905
3 - Industrial Estate Road	0.40	3.32	0.9	A	932	1398
4 - Sandy Lane	0.04	7.14	0.1	A	34	51
5 - A534	1.02	151.93	111.1	F	2595	3893

With Dev 2036 Sensitivity Test, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Borrás Hall Lane/Wrexham Road/Industrial Estate Road/Sandy Lane/A534	Standard Roundabout		1, 2, 3, 4, 5	71.73	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	71.73	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D14	With Dev 2036 Sensitivity Test	PM	FLAT	16:30	18:00	90	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		FLAT	✓	26	100.000
2 - Wrexham Road		FLAT	✓	522	100.000
3 - Industrial Estate Road		FLAT	✓	2308	100.000
4 - Sandy Lane		FLAT	✓	31	100.000
5 - A534		FLAT	✓	1178	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borrás Hall Lane	0	3	16	0	7
	2 - Wrexham Road	4	0	122	1	395
	3 - Industrial Estate Road	87	266	0	9	1946
	4 - Sandy Lane	1	3	4	0	23
	5 - A534	5	313	859	1	0

Vehicle Mix

HV data entry mode	PCU Factor for a HV (PCU)
HV Percentages	2.00

Heavy Vehicle %

		To				
		1 - Borras Hall Lane	2 - Wrexham Road	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534
From	1 - Borras Hall Lane	0	0	0	0	0
	2 - Wrexham Road	0	0	9	0	3
	3 - Industrial Estate Road	0	4	0	75	5
	4 - Sandy Lane	0	0	0	0	5
	5 - A534	0	2	14	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - Borras Hall Lane	0.03	4.62	0.0	A	26	39
2 - Wrexham Road	0.37	4.29	0.6	A	522	783
3 - Industrial Estate Road	1.01	123.45	79.3	F	2308	3462
4 - Sandy Lane	0.13	18.74	0.2	C	31	47
5 - A534	0.48	3.15	1.0	A	1178	1767