

Detailed Input Data And Results

7/1	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	804	Inf	Inf	0.0%
7/2	Circulatory Right Ahead	U	N/A	N/A	-		-	-	-	-	892	Inf	Inf	0.0%
7/3	Circulatory Right	U	N/A	N/A	-		-	-	-	-	303	Inf	Inf	0.0%

Detailed Input Data And Results

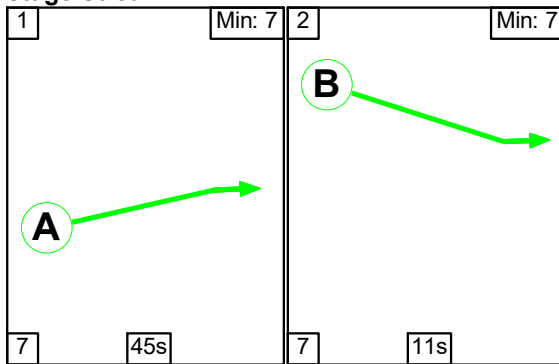
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network	-	-	0	0	0	47.9	168.9	0.0	216.8	-	-	-	-	
J1: M57 North	-	-	0	0	0	21.1	30.9	0.0	52.0	-	-	-	-	
1/1	499	499	-	-	-	0.0	0.3	-	0.3	2.4	0.2	0.3	0.4	
1/2	1260	1260	-	-	-	3.7	5.8	-	9.5	27.0	23.8	5.8	29.5	
2/1	239	217	-	-	-	2.7	14.9	-	17.6	265.5	5.2	14.9	20.2	
2/2	96	96	-	-	-	0.8	0.4	-	1.2	43.7	1.7	0.4	2.1	
3/1	730	730	-	-	-	2.5	1.6	-	4.1	20.2	9.1	1.6	10.7	
3/2+3/3	272	272	-	-	-	0.0	0.2	-	0.2	3.1	0.1	0.2	0.3	
4/1	514	514	-	-	-	3.1	2.2	-	5.3	37.3	9.1	2.2	11.4	
4/2+4/3	519	519	-	-	-	3.1	2.2	-	5.4	37.1	9.1	2.2	11.4	
5/1	529	529	-	-	-	0.6	0.3	-	0.9	6.2	3.4	0.3	3.7	
5/2	738	738	-	-	-	0.5	0.6	-	1.0	5.1	3.3	0.6	3.9	
5/3	53	53	-	-	-	0.0	0.0	-	0.0	1.8	0.0	0.0	0.0	
6/1	535	535	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	534	534	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	138	138	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/2	140	140	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1+9/2	499	499	-	-	-	4.1	2.2	-	6.4	46.1	3.5	2.2	5.7	
10/1	535	535	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/2	1264	1264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/3	272	272	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/1	1244	1244	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/2	738	738	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/3	53	53	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	

Detailed Input Data And Results

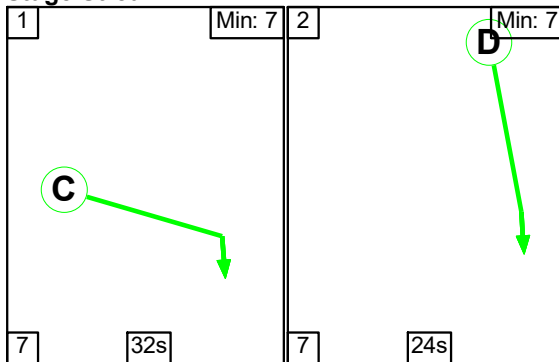
J2: M57 South	-	-	0	0	0	26.8	138.0	0.0	164.9	-	-	-	-	
1/1	112	112	-	-	-	0.9	0.3	-	1.2	37.8	2.2	0.3	2.4	
1/2	303	303	-	-	-	2.4	4.7	-	7.1	84.4	5.9	4.7	10.6	
2/1	753	753	-	-	-	1.4	0.8	-	2.2	10.4	8.2	0.8	8.9	
2/2	1251	1249	-	-	-	4.2	18.3	-	22.5	64.9	24.4	18.3	42.7	
3/1	610	610	-	-	-	1.5	0.6	-	2.0	12.0	7.0	0.6	7.5	
3/2	825	825	-	-	-	2.4	1.3	-	3.7	16.1	7.4	1.3	8.7	
4/1	167	167	-	-	-	1.1	0.3	-	1.4	29.6	2.7	0.3	3.0	
4/2	655	434	-	-	-	12.9	111.8	-	124.8	685.7	19.7	111.8	131.5	
5/1	865	865	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/2	116	116	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	690	690	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/2	802	802	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/3	303	303	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 - Randles North C1 - Randles North C1 - Randles North C2 - Randles South C2 - Randles South Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): Stream: 3 PRC for Signalled Lanes (%): Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): PRC Over All Lanes (%) -22.3 9.3 9.3 -11.3 -67.6 -67.6 Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr): 28.58 15.00 8.37 33.01 131.85 216.82 Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): 70 70 70 70 70 														

Stage Sequence Diagram

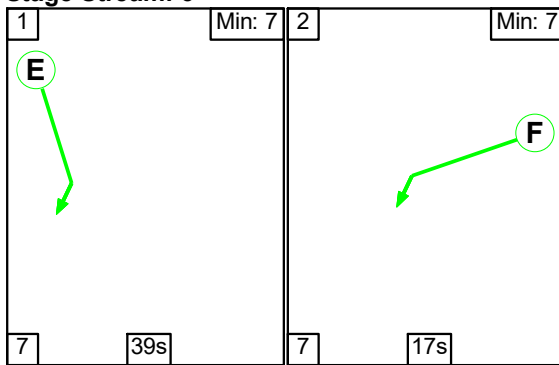
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	45	11
Change Point	11	63

Stage Stream: 2

Stage	1	2
Duration	32	24
Change Point	21	60

Detailed Input Data And Results

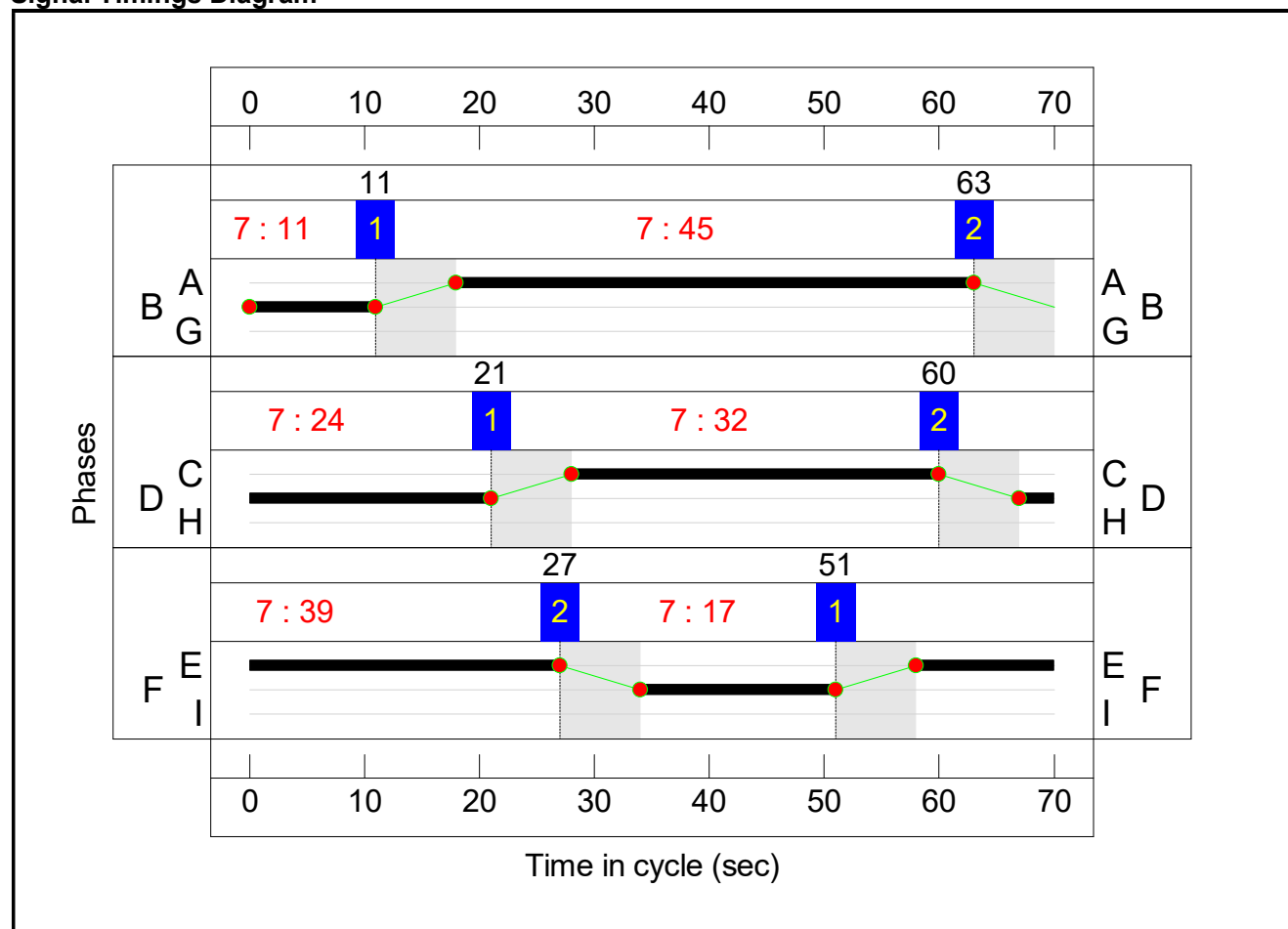
Stage Stream: 3

Stage	1	2
Duration	39	17
Change Point	51	27

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Ahead	Traffic	1	45	18	63
B	M57 SB Offslip Ahead	Traffic	1	11	0	11
C	Circulatory Right	Traffic	2	32	28	60
D	Moorgate Ahead	Traffic	2	24	67	21
E	Circulatory Ahead	Traffic	3	39	58	27
F	School Lane Left	Traffic	3	17	34	51
G	Dummy	Dummy	1			
H	Dummy	Dummy	2			
I	Dummy	Dummy	3			

Signal Timings Diagram

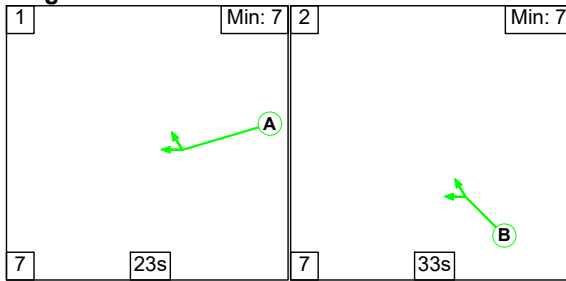


Detailed Input Data And Results

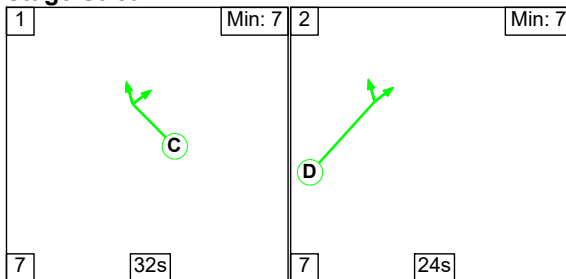
Controller :C2 - Randles South

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

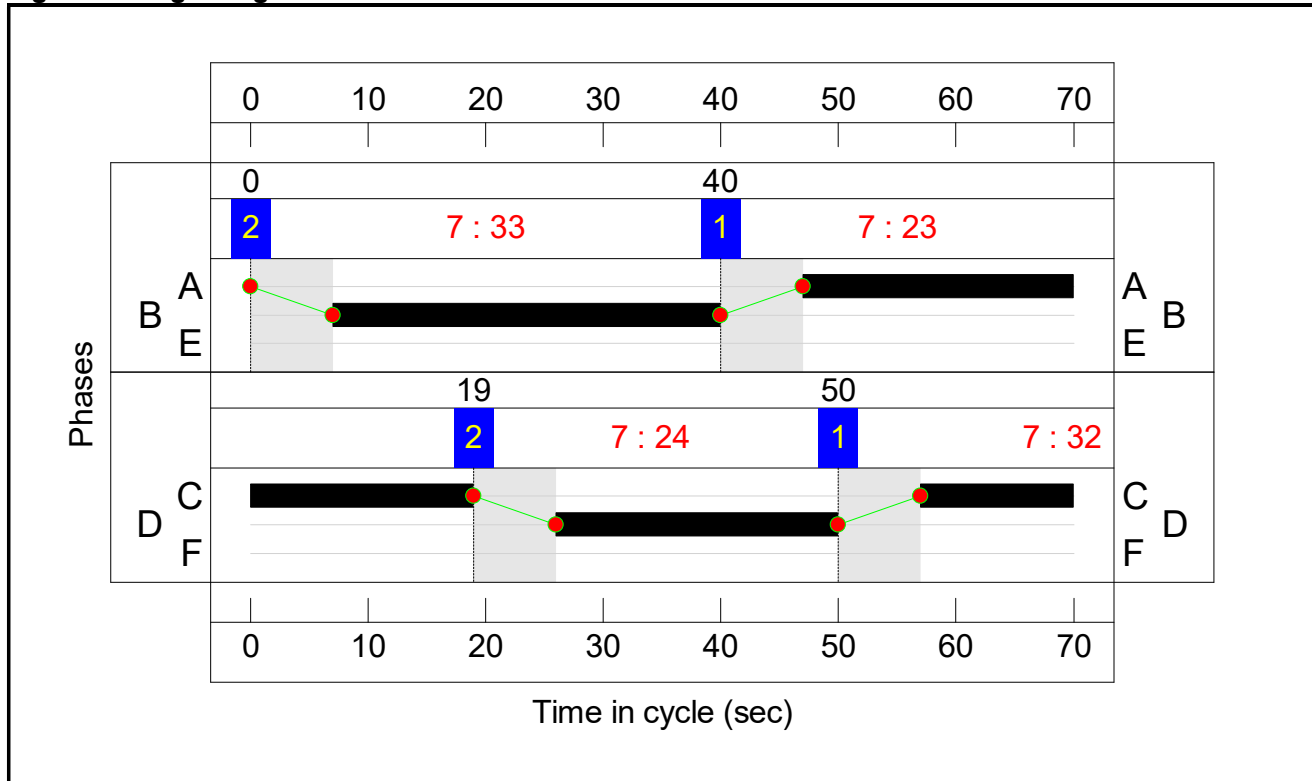
Stage	1	2
Duration	23	33
Change Point	40	0

Stage Stream: 2

Stage	1	2
Duration	32	24
Change Point	50	19

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Right Ahead	Traffic	1	23	47	0
B	M57 NB Offslip Ahead Ahead2	Traffic	1	33	7	40
C	Circulatory Right Ahead	Traffic	2	32	57	19
D	A580 Bypass Ahead Left	Traffic	2	24	26	50
E	Dummy	Dummy	1			
F	Dummy	Dummy	2			

Signal Timings Diagram**Lane Green Times**

Junction: J1: M57 North					
Lane	Description	Type	Phases	Start Green	End Green
J1:1/1	Circulatory Ahead	U	A	18	63
J1:1/2	Circulatory Ahead	U	A	18	63
J1:2/1	M57 SB Offslip Ahead	U	B	0	11
J1:2/2	M57 SB Offslip Ahead	U	B	0	11
J1:3/1	Circulatory Right	U	C	28	60
J1:3/2	Circulatory Right	U	C	28	60
J1:3/3	Circulatory Right	U	C	28	60
J1:4/1	Moorgate Ahead	U	D	67	21
J1:4/2	Moorgate Ahead	U	D	67	21
J1:4/3	Moorgate Ahead	U	D	67	21
J1:5/1	Circulatory Ahead	U	E	58	27
J1:5/2	Circulatory Ahead	U	E	58	27
J1:5/3	Circulatory Ahead	U	E	58	27
J1:9/1	School Lane Left	U	F	34	51
J1:9/2	School Lane Left	U	F	34	51

Detailed Input Data And Results

Junction: J2: M57 South					
Lane	Description	Type	Phases	Start Green	End Green
J2:1/1	Circulatory Ahead	U	A	47	0
J2:1/2	Circulatory Right Ahead	U	A	47	0
J2:2/1	M57 NB Offslip Ahead	U	B	7	40
J2:2/2	M57 NB Offslip Ahead Ahead2	U	B	7	40
J2:3/1	Circulatory Right Ahead	U	C	57	19
J2:3/2	Circulatory Right	U	C	57	19
J2:4/1	A580 Bypass Ahead Left	U	D	26	50
J2:4/2	A580 Bypass Ahead	U	D	26	50

Detailed Input Data And Results
Network Layout Diagram

Detailed Input Data And Results

KMBC Model Ref: 871275507-YU-00-XX-MO-Y-0001 P1

Cordoned Version of model to remove A580 junction as this is outside of adopted study area.

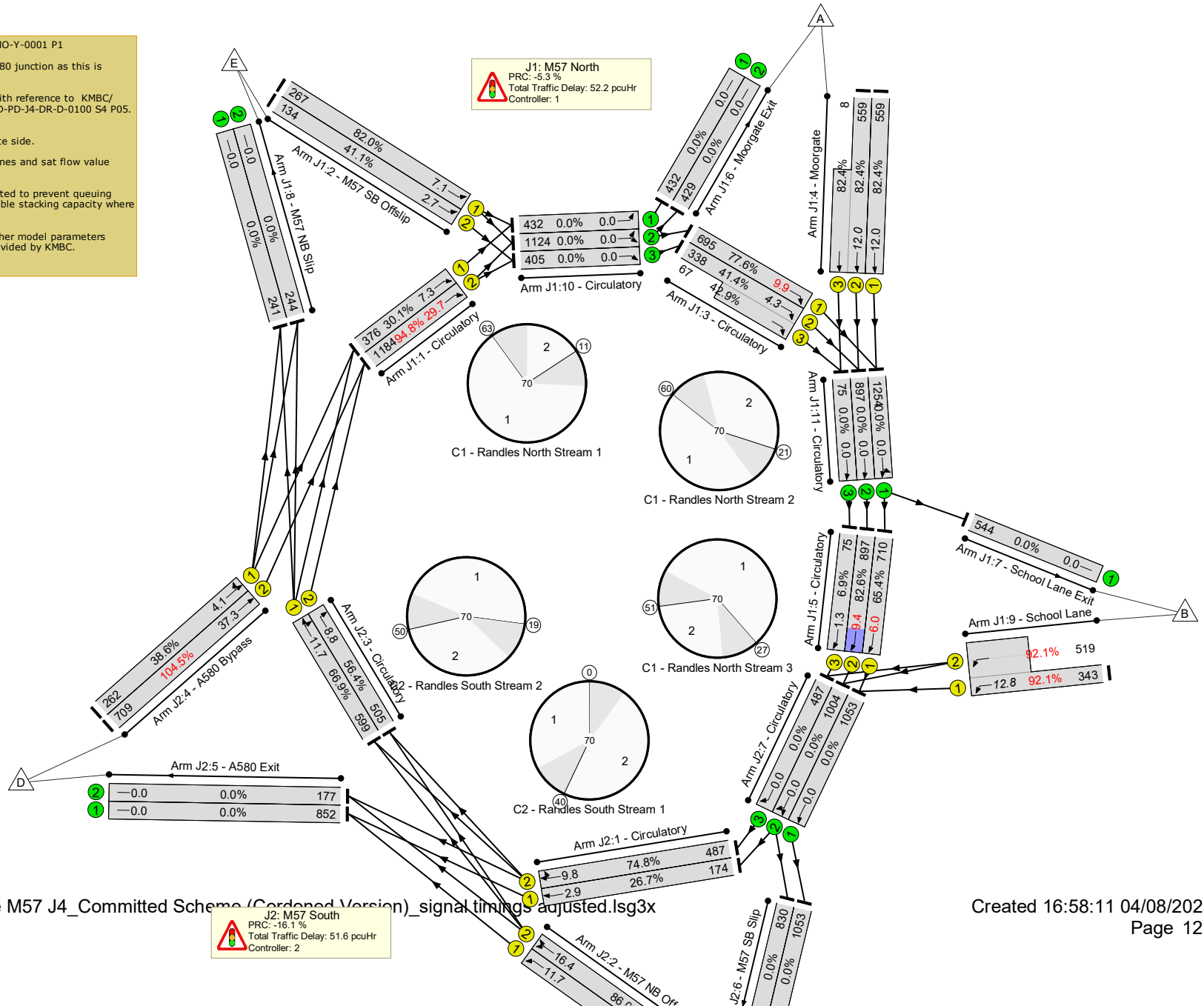
Minor amendments made to the model with reference to KMBC/ Royal Haskoning Drawing ref PC3016-RHD-PD-J4-DR-D-0100 S4 P05. Adjustments include:

Arm J1:3 - short lane switched to opposite side.

Arm J1:9 - short lane increased to two lanes and sat flow value doubled.

Signal timings have been manually adjusted to prevent queuing traffic on the circulatory exceeding available stacking capacity where practicable.

With the exception of traffic flows, all other model parameters remain the same as the based model provided by KMBC.



Randles Farm Interchange M57 J4_Committed Scheme (Cordoned Version)_signal timings adjusted.lsg3x

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Detailed Input Data And Results

Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	-	104.5%
J1: M57 North	-	-	N/A	-	-		-	-	-	-	-	-	-	94.8%
1/1	Circulatory Ahead	U	1:1	N/A	C1:A		1	45	-	-	376	1900	1249	30.1%
1/2	Circulatory Ahead	U	1:1	N/A	C1:A		1	45	-	-	1214	1900	1249	94.8%
2/1	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	11	-	-	267	1900	326	82.0%
2/2	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	11	-	-	134	1900	326	41.1%
3/1	Circulatory Right	U	1:2	N/A	C1:C		1	32	-	-	713	1900	896	77.6%
3/2+3/3	Circulatory Right	U	1:2	N/A	C1:C		1	32	-	-	417	1900:1900	816+156	41.4 : 42.9%
4/1	Moorgate Ahead	U	1:2	N/A	C1:D		1	24	-	-	559	1900	679	82.4%
4/2+4/3	Moorgate Ahead	U	1:2	N/A	C1:D		1	24	-	-	567	1900:1900	679+10	82.4 : 82.4%
5/1	Circulatory Ahead	U	1:3	N/A	C1:E		1	39	-	-	722	1900	1086	65.4%
5/2	Circulatory Ahead	U	1:3	N/A	C1:E		1	39	-	-	909	1900	1086	82.6%
5/3	Circulatory Ahead	U	1:3	N/A	C1:E		1	39	-	-	75	1900	1086	6.9%
6/1	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	432	Inf	Inf	0.0%
6/2	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	429	Inf	Inf	0.0%
7/1	School Lane Exit	U	N/A	N/A	-		-	-	-	-	550	Inf	Inf	0.0%
8/1	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	241	Inf	Inf	0.0%
8/2	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	244	Inf	Inf	0.0%

Detailed Input Data And Results

9/1+9/2	School Lane Left	U	1:3	N/A	C1:F		1	17	-	-	862	1965:4300	372+563	92.1 : 92.1%
10/1	Circulatory Left	U	N/A	N/A	-		-	-	-	-	432	Inf	Inf	0.0%
10/2	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1142	Inf	Inf	0.0%
10/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	417	Inf	Inf	0.0%
11/1	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1272	Inf	Inf	0.0%
11/2	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	909	Inf	Inf	0.0%
11/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	75	Inf	Inf	0.0%
J2: M57 South	-	-	N/A	-	-		-	-	-	-	-	-	-	104.5%
1/1	Circulatory Ahead	U	2:1	N/A	C2:A		1	23	-	-	174	1900	651	26.7%
1/2	Circulatory Right Ahead	U	2:1	N/A	C2:A		1	23	-	-	487	1900	651	74.8%
2/1	M57 NB Offslip Ahead	U	2:1	N/A	C2:B		1	33	-	-	678	1900	923	73.5%
2/2	M57 NB Offslip Ahead Ahead2	U	2:1	N/A	C2:B		1	33	-	-	794	1900	923	86.0%
3/1	Circulatory Right Ahead	U	2:2	N/A	C2:C		1	32	-	-	599	1900	896	66.9%
3/2	Circulatory Right	U	2:2	N/A	C2:C		1	32	-	-	505	1900	896	56.4%
4/1	A580 Bypass Ahead Left	U	2:2	N/A	C2:D		1	24	-	-	262	1900	679	38.6%
4/2	A580 Bypass Ahead	U	2:2	N/A	C2:D		1	24	-	-	709	1900	679	104.5%
5/1	A580 Exit	U	N/A	N/A	-		-	-	-	-	852	Inf	Inf	0.0%
5/2	A580 Exit	U	N/A	N/A	-		-	-	-	-	177	Inf	Inf	0.0%
6/1	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	1065	Inf	Inf	0.0%
6/2	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	842	Inf	Inf	0.0%

Detailed Input Data And Results

7/1	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	1065	Inf	Inf	0.0%
7/2	Circulatory Right Ahead	U	N/A	N/A	-		-	-	-	-	1016	Inf	Inf	0.0%
7/3	Circulatory Right	U	N/A	N/A	-		-	-	-	-	487	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network	-	-	0	0	0	47.9	55.9	0.0	103.9	-	-	-	-	
J1: M57 North	-	-	0	0	0	27.2	25.1	0.0	52.2	-	-	-	-	
1/1	376	376	-	-	-	1.8	0.2	-	2.1	19.6	7.1	0.2	7.3	
1/2	1184	1184	-	-	-	2.8	7.4	-	10.3	31.2	22.2	7.4	29.7	
2/1	267	267	-	-	-	2.1	2.1	-	4.2	56.6	5.0	2.1	7.1	
2/2	134	134	-	-	-	1.0	0.3	-	1.3	35.2	2.3	0.3	2.7	
3/1	695	695	-	-	-	2.7	1.7	-	4.4	22.7	8.2	1.7	9.9	
3/2+3/3	405	405	-	-	-	1.9	0.4	-	2.3	20.1	3.9	0.4	4.3	
4/1	559	559	-	-	-	3.2	2.3	-	5.4	35.0	9.8	2.3	12.0	
4/2+4/3	567	567	-	-	-	3.2	2.3	-	5.5	34.7	9.8	2.3	12.0	
5/1	710	710	-	-	-	0.9	0.9	-	1.9	9.5	5.0	0.9	6.0	
5/2	897	897	-	-	-	1.7	2.3	-	4.0	16.0	7.1	2.3	9.4	
5/3	75	75	-	-	-	0.4	0.0	-	0.4	20.3	1.3	0.0	1.3	
6/1	432	432	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	429	429	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	241	241	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/2	244	244	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1+9/2	862	862	-	-	-	5.5	5.1	-	10.6	44.2	7.7	5.1	12.8	
10/1	432	432	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/2	1124	1124	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/3	405	405	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/1	1254	1254	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/2	897	897	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/3	75	75	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	

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J2: M57 South	-	-	0	0	0	20.8	30.9	0.0	51.6	-	-	-	-	
1/1	174	174	-	-	-	0.8	0.2	-	1.0	21.2	2.7	0.2	2.9	
1/2	487	487	-	-	-	0.9	1.5	-	2.4	17.7	8.4	1.5	9.8	
2/1	678	678	-	-	-	2.7	1.4	-	4.1	21.7	10.4	1.4	11.7	
2/2	794	794	-	-	-	3.5	2.9	-	6.5	29.3	13.5	2.9	16.4	
3/1	599	599	-	-	-	2.9	1.0	-	3.9	23.3	10.7	1.0	11.7	
3/2	505	505	-	-	-	3.4	0.6	-	4.1	29.0	8.2	0.6	8.8	
4/1	262	262	-	-	-	1.2	0.3	-	1.5	21.1	3.8	0.3	4.1	
4/2	709	679	-	-	-	5.3	22.9	-	28.2	143.3	14.4	22.9	37.3	
5/1	852	852	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/2	177	177	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	1053	1053	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	830	830	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	1053	1053	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/2	1004	1004	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/3	487	487	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 - Randles North C1 - Randles North C1 - Randles North C2 - Randles South C2 - Randles South Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): Stream: 3 PRC for Signalled Lanes (%): Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): PRC Over All Lanes (%) -5.3 9.3 -2.4 4.6 -16.1 -16.1 Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr): 17.81 17.55 16.88 13.95 37.69 103.88 Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): 70 70 70 70 70 														

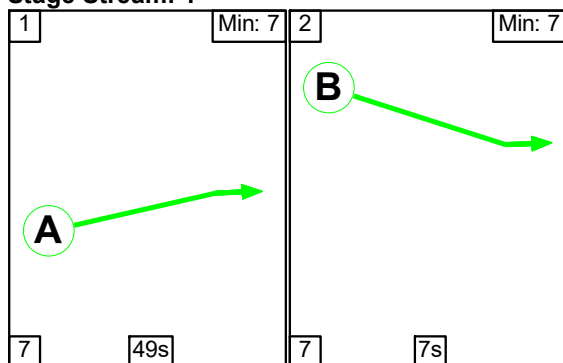
Detailed Input Data And Results

Scenario 7: '2035 No Dev AM' (FG7: '2035 No Dev AM', Plan 1: 'Network Control Plan 1')

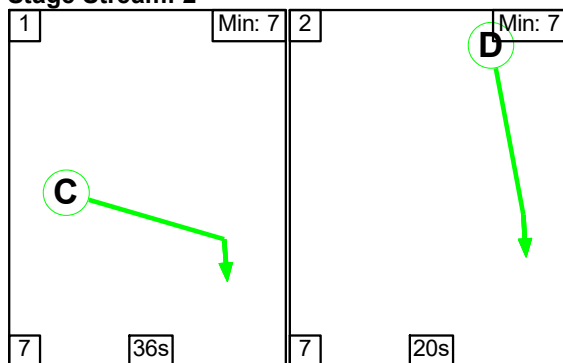
Controller :C1 - Randles North

Stage Sequence Diagram

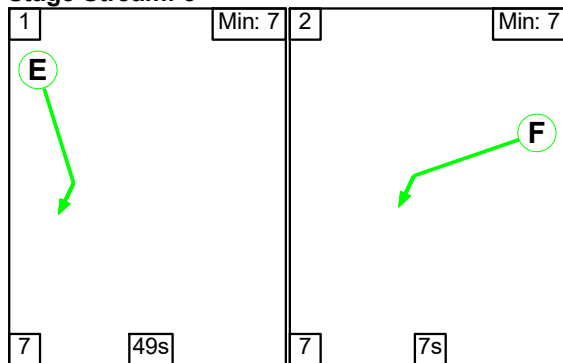
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	49	7
Change Point	63	49

Stage Stream: 2

Stage	1	2
Duration	36	20
Change Point	55	28

Detailed Input Data And Results

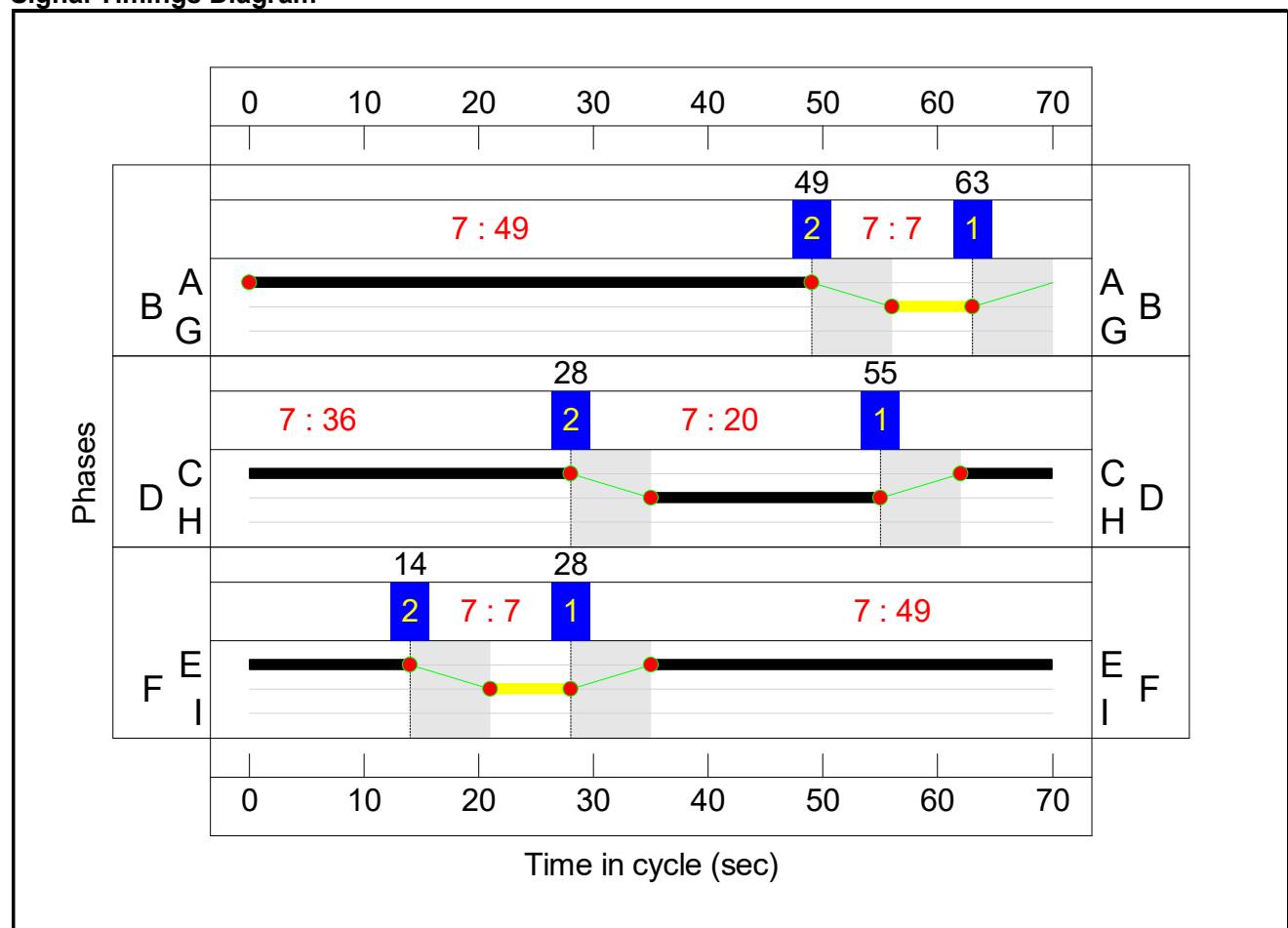
Stage Stream: 3

Stage	1	2
Duration	49	7
Change Point	28	14

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Ahead	Traffic	1	49	0	49
B	M57 SB Offslip Ahead	Traffic	1	7	56	63
C	Circulatory Right	Traffic	2	36	62	28
D	Moorgate Ahead	Traffic	2	20	35	55
E	Circulatory Ahead	Traffic	3	49	35	14
F	School Lane Left	Traffic	3	7	21	28
G	Dummy	Dummy	1			
H	Dummy	Dummy	2			
I	Dummy	Dummy	3			

Signal Timings Diagram

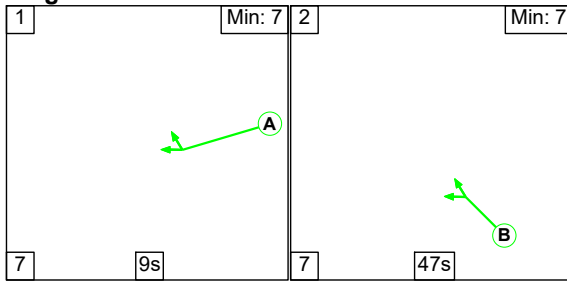


Detailed Input Data And Results

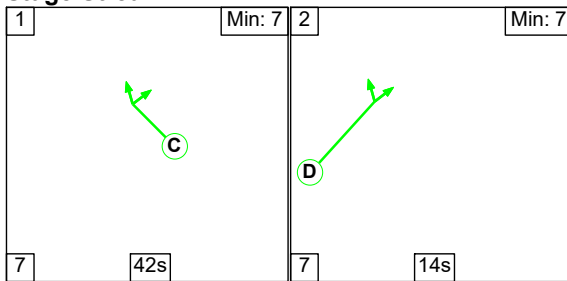
Controller :C2 - Randles South

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

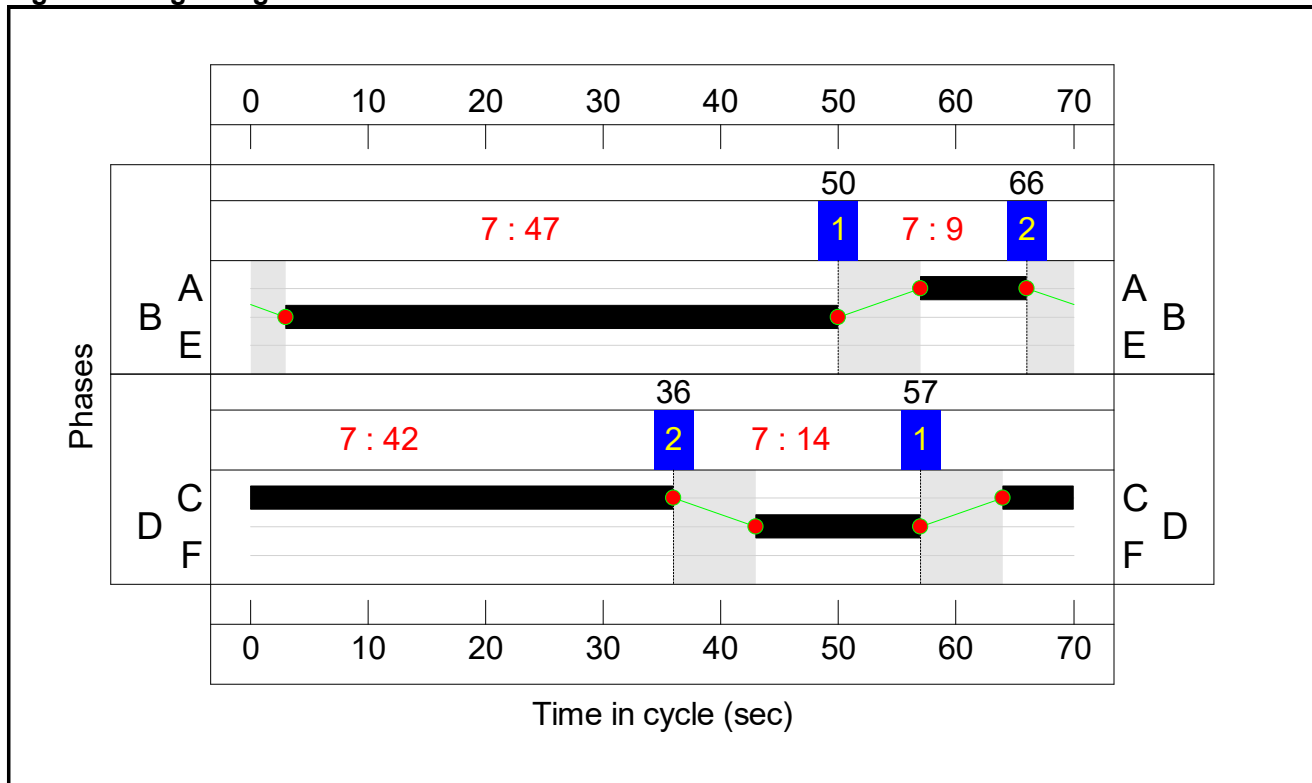
Stage	1	2
Duration	9	47
Change Point	50	66

Stage Stream: 2

Stage	1	2
Duration	42	14
Change Point	57	36

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Right Ahead	Traffic	1	9	57	66
B	M57 NB Offslip Ahead Ahead2	Traffic	1	47	3	50
C	Circulatory Right Ahead	Traffic	2	42	64	36
D	A580 Bypass Ahead Left	Traffic	2	14	43	57
E	Dummy	Dummy	1			
F	Dummy	Dummy	2			

Signal Timings Diagram**Lane Green Times**

Junction: J1: M57 North					
Lane	Description	Type	Phases	Start Green	End Green
J1:1/1	Circulatory Ahead	U	A	0	49
J1:1/2	Circulatory Ahead	U	A	0	49
J1:2/1	M57 SB Offslip Ahead	U	B	56	63
J1:2/2	M57 SB Offslip Ahead	U	B	56	63
J1:3/1	Circulatory Right	U	C	62	28
J1:3/2	Circulatory Right	U	C	62	28
J1:3/3	Circulatory Right	U	C	62	28
J1:4/1	Moorgate Ahead	U	D	35	55
J1:4/2	Moorgate Ahead	U	D	35	55
J1:4/3	Moorgate Ahead	U	D	35	55
J1:5/1	Circulatory Ahead	U	E	35	14
J1:5/2	Circulatory Ahead	U	E	35	14
J1:5/3	Circulatory Ahead	U	E	35	14
J1:9/1	School Lane Left	U	F	21	28
J1:9/2	School Lane Left	U	F	21	28

Detailed Input Data And Results

Junction: J2: M57 South					
Lane	Description	Type	Phases	Start Green	End Green
J2:1/1	Circulatory Ahead	U	A	57	66
J2:1/2	Circulatory Right Ahead	U	A	57	66
J2:2/1	M57 NB Offslip Ahead	U	B	3	50
J2:2/2	M57 NB Offslip Ahead Ahead2	U	B	3	50
J2:3/1	Circulatory Right Ahead	U	C	64	36
J2:3/2	Circulatory Right	U	C	64	36
J2:4/1	A580 Bypass Ahead Left	U	D	43	57
J2:4/2	A580 Bypass Ahead	U	D	43	57

Detailed Input Data And Results

Network Layout Diagram

Detailed Input Data And Results

KMBC Model Ref: 871275507-YU-00-XX-MO-Y-0001 P1

Cordoned Version of model to remove A580 junction as this is outside of adopted study area.

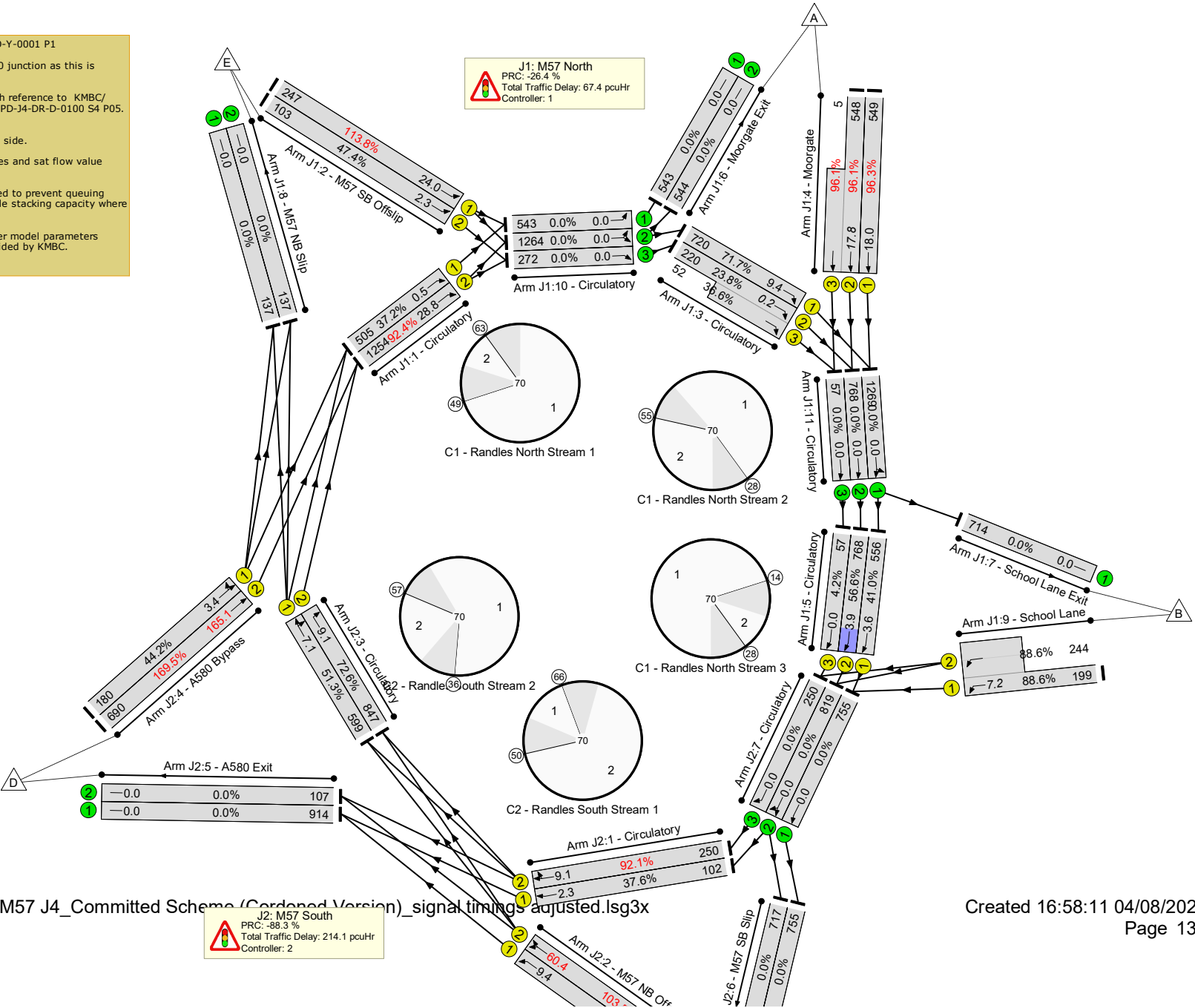
Minor amendments made to the model with reference to KMBC/ Royal Haskoning Drawing ref PC3016-RHD-PD-J4-DR-D-0100 S4 P05. Adjustments include:

Arm J1:3 - short lane switched to opposite side.

Arm J1:9 - short lane increased to two lanes and sat flow value doubled.

Signal timings have been manually adjusted to prevent queuing traffic on the circulatory exceeding available stacking capacity where practicable.

With the exception of traffic flows, all other model parameters remain the same as the based model provided by KMBC.



Detailed Input Data And Results

Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	-	169.5%
J1: M57 North	-	-	N/A	-	-		-	-	-	-	-	-	-	113.8%
1/1	Circulatory Ahead	U	1:1	N/A	C1:A		1	49	-	-	522	1900	1357	37.2%
1/2	Circulatory Ahead	U	1:1	N/A	C1:A		1	49	-	-	1566	1900	1357	92.4%
2/1	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	7	-	-	247	1900	217	113.8%
2/2	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	7	-	-	103	1900	217	47.4%
3/1	Circulatory Right	U	1:2	N/A	C1:C		1	36	-	-	917	1900	1004	71.7%
3/2+3/3	Circulatory Right	U	1:2	N/A	C1:C		1	36	-	-	390	1900:1900	925+142	23.8 : 36.6%
4/1	Moorgate Ahead	U	1:2	N/A	C1:D		1	20	-	-	549	1900	570	96.3%
4/2+4/3	Moorgate Ahead	U	1:2	N/A	C1:D		1	20	-	-	553	1900:1900	570+5	96.1 : 96.1%
5/1	Circulatory Ahead	U	1:3	N/A	C1:E		1	49	-	-	673	1900	1357	41.0%
5/2	Circulatory Ahead	U	1:3	N/A	C1:E		1	49	-	-	886	1900	1357	56.6%
5/3	Circulatory Ahead	U	1:3	N/A	C1:E		1	49	-	-	57	1900	1357	4.2%
6/1	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	565	Inf	Inf	0.0%
6/2	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	566	Inf	Inf	0.0%
7/1	School Lane Exit	U	N/A	N/A	-		-	-	-	-	793	Inf	Inf	0.0%
8/1	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	137	Inf	Inf	0.0%
8/2	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	137	Inf	Inf	0.0%

Detailed Input Data And Results

9/1+9/2	School Lane Left	U	1:3	N/A	C1:F		1	7	-	-	443	1965:4300	225+275	88.6 : 88.6%
10/1	Circulatory Left	U	N/A	N/A	-		-	-	-	-	565	Inf	Inf	0.0%
10/2	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1483	Inf	Inf	0.0%
10/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	390	Inf	Inf	0.0%
11/1	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1466	Inf	Inf	0.0%
11/2	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	886	Inf	Inf	0.0%
11/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	57	Inf	Inf	0.0%
J2: M57 South	-	-	N/A	-	-		-	-	-	-	-	-	-	169.5%
1/1	Circulatory Ahead	U	2:1	N/A	C2:A		1	9	-	-	102	1900	271	37.6%
1/2	Circulatory Right Ahead	U	2:1	N/A	C2:A		1	9	-	-	250	1900	271	92.1%
2/1	M57 NB Offslip Ahead	U	2:1	N/A	C2:B		1	47	-	-	812	1900	1303	62.3%
2/2	M57 NB Offslip Ahead Ahead2	U	2:1	N/A	C2:B		1	47	-	-	1349	1900	1303	103.5%
3/1	Circulatory Right Ahead	U	2:2	N/A	C2:C		1	42	-	-	616	1900	1167	51.3%
3/2	Circulatory Right	U	2:2	N/A	C2:C		1	42	-	-	876	1900	1167	72.6%
4/1	A580 Bypass Ahead Left	U	2:2	N/A	C2:D		1	14	-	-	180	1900	407	44.2%
4/2	A580 Bypass Ahead	U	2:2	N/A	C2:D		1	14	-	-	690	1900	407	169.5%
5/1	A580 Exit	U	N/A	N/A	-		-	-	-	-	914	Inf	Inf	0.0%
5/2	A580 Exit	U	N/A	N/A	-		-	-	-	-	107	Inf	Inf	0.0%
6/1	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	872	Inf	Inf	0.0%
6/2	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	835	Inf	Inf	0.0%

Detailed Input Data And Results

7/1	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	872	Inf	Inf	0.0%
7/2	Circulatory Right Ahead	U	N/A	N/A	-		-	-	-	-	937	Inf	Inf	0.0%
7/3	Circulatory Right	U	N/A	N/A	-		-	-	-	-	250	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network	-	-	0	0	0	52.6	228.9	0.0	281.5	-	-	-	-	
J1: M57 North	-	-	0	0	0	21.9	45.5	0.0	67.4	-	-	-	-	
1/1	505	505	-	-	-	0.0	0.3	-	0.3	2.4	0.2	0.3	0.5	
1/2	1254	1254	-	-	-	3.6	5.5	-	9.1	26.1	23.3	5.5	28.8	
2/1	247	217	-	-	-	3.1	18.3	-	21.4	311.7	5.7	18.3	24.0	
2/2	103	103	-	-	-	0.8	0.4	-	1.3	44.7	1.9	0.4	2.3	
3/1	720	720	-	-	-	2.2	1.3	-	3.5	17.5	8.2	1.3	9.4	
3/2+3/3	272	272	-	-	-	0.0	0.2	-	0.2	2.7	0.1	0.2	0.2	
4/1	549	549	-	-	-	3.7	7.6	-	11.3	73.9	10.4	7.6	18.0	
4/2+4/3	553	553	-	-	-	3.7	7.5	-	11.1	72.6	10.4	7.5	17.8	
5/1	556	556	-	-	-	0.6	0.3	-	0.9	6.0	3.2	0.3	3.6	
5/2	768	768	-	-	-	0.5	0.7	-	1.1	5.2	3.2	0.7	3.9	
5/3	57	57	-	-	-	0.0	0.0	-	0.0	1.8	0.0	0.0	0.0	
6/1	543	543	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	137	137	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/2	137	137	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1+9/2	443	443	-	-	-	3.7	3.5	-	7.1	58.0	3.8	3.5	7.2	
10/1	543	543	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/2	1264	1264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/3	272	272	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/1	1269	1269	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/2	768	768	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/3	57	57	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	

Detailed Input Data And Results

J2: M57 South	-	-	0	0	0	30.7	183.4	0.0	214.1	-	-	-	-	
1/1	102	102	-	-	-	0.9	0.3	-	1.2	43.1	2.0	0.3	2.3	
1/2	250	250	-	-	-	2.1	4.2	-	6.3	91.0	4.9	4.2	9.1	
2/1	812	812	-	-	-	1.4	0.8	-	2.2	9.7	8.6	0.8	9.4	
2/2	1349	1303	-	-	-	5.6	33.2	-	38.8	103.5	27.1	33.2	60.4	
3/1	599	599	-	-	-	1.4	0.5	-	1.9	11.4	6.6	0.5	7.1	
3/2	847	847	-	-	-	2.4	1.3	-	3.8	16.0	7.8	1.3	9.1	
4/1	180	180	-	-	-	1.2	0.4	-	1.6	31.8	3.0	0.4	3.4	
4/2	690	407	-	-	-	15.8	142.6	-	158.4	826.5	22.5	142.6	165.1	
5/1	914	914	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/2	107	107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	755	755	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	717	717	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	755	755	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/2	819	819	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/3	250	250	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 - Randles North C1 - Randles North C1 - Randles North C2 - Randles South C2 - Randles South Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): Stream: 3 PRC for Signalled Lanes (%): Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): PRC Over All Lanes (%) -26.4 -7.0 1.6 -15.0 -88.3 -88.3 Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr): 32.09 26.11 9.19 48.50 165.65 281.53 Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): 70 70 70 70 70 														

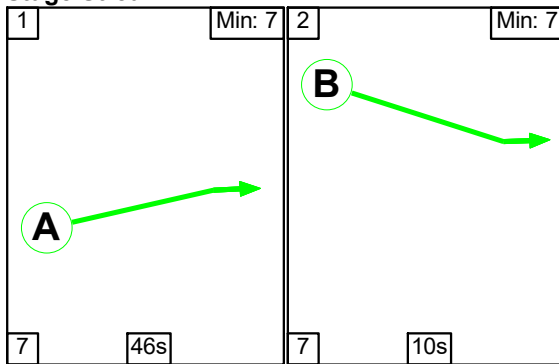
Detailed Input Data And Results

Scenario 8: '2035 No Dev PM' (FG8: '2035 No Dev PM', Plan 1: 'Network Control Plan 1')

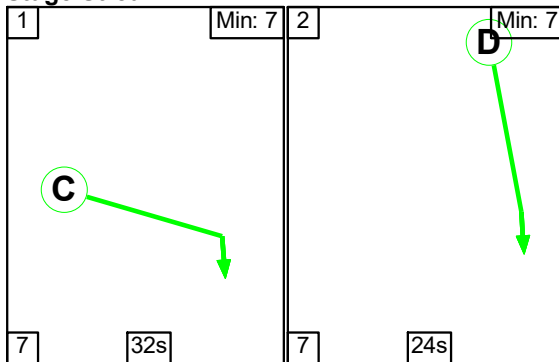
Controller :C1 - Randles North

Stage Sequence Diagram

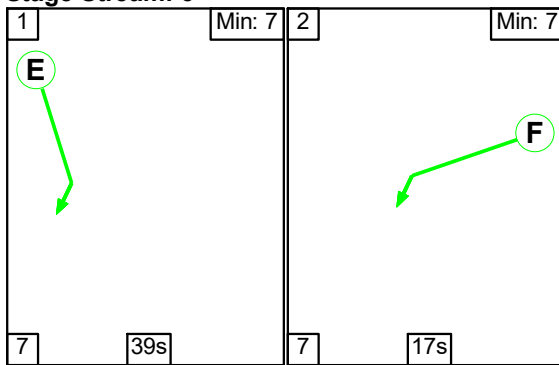
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	46	10
Change Point	11	64

Stage Stream: 2

Stage	1	2
Duration	32	24
Change Point	21	60

Detailed Input Data And Results

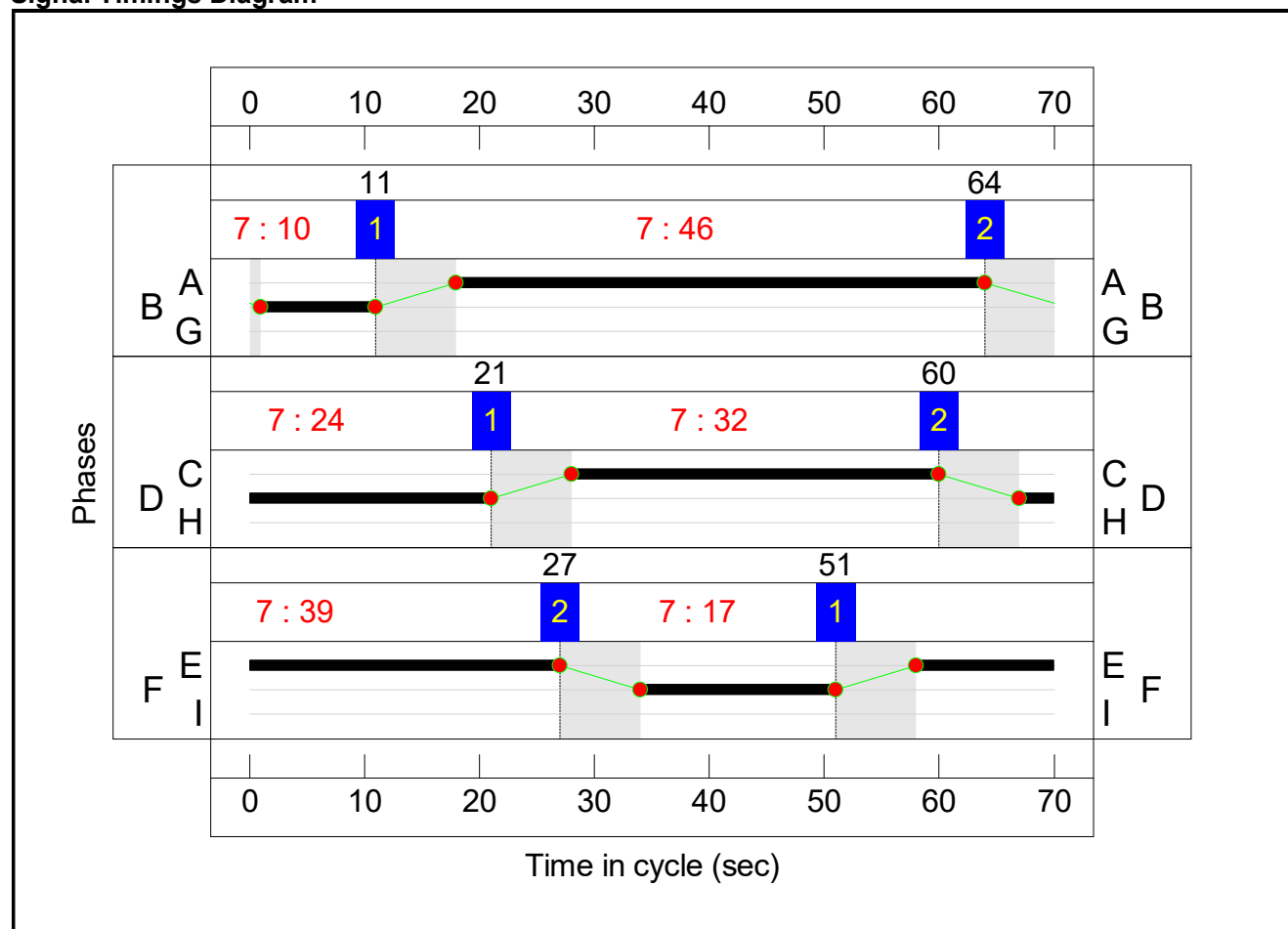
Stage Stream: 3

Stage	1	2
Duration	39	17
Change Point	51	27

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Ahead	Traffic	1	46	18	64
B	M57 SB Offslip Ahead	Traffic	1	10	1	11
C	Circulatory Right	Traffic	2	32	28	60
D	Moorgate Ahead	Traffic	2	24	67	21
E	Circulatory Ahead	Traffic	3	39	58	27
F	School Lane Left	Traffic	3	17	34	51
G	Dummy	Dummy	1			
H	Dummy	Dummy	2			
I	Dummy	Dummy	3			

Signal Timings Diagram

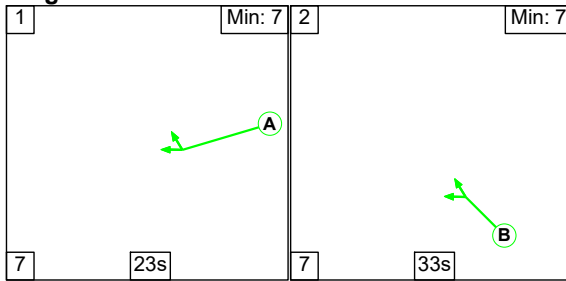


Detailed Input Data And Results

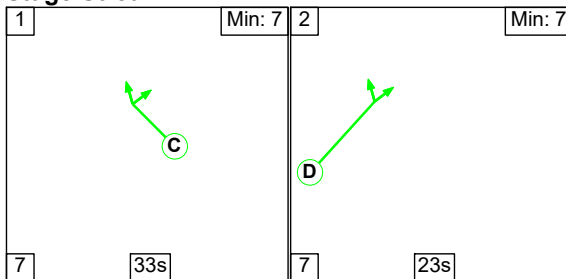
Controller :C2 - Randles South

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

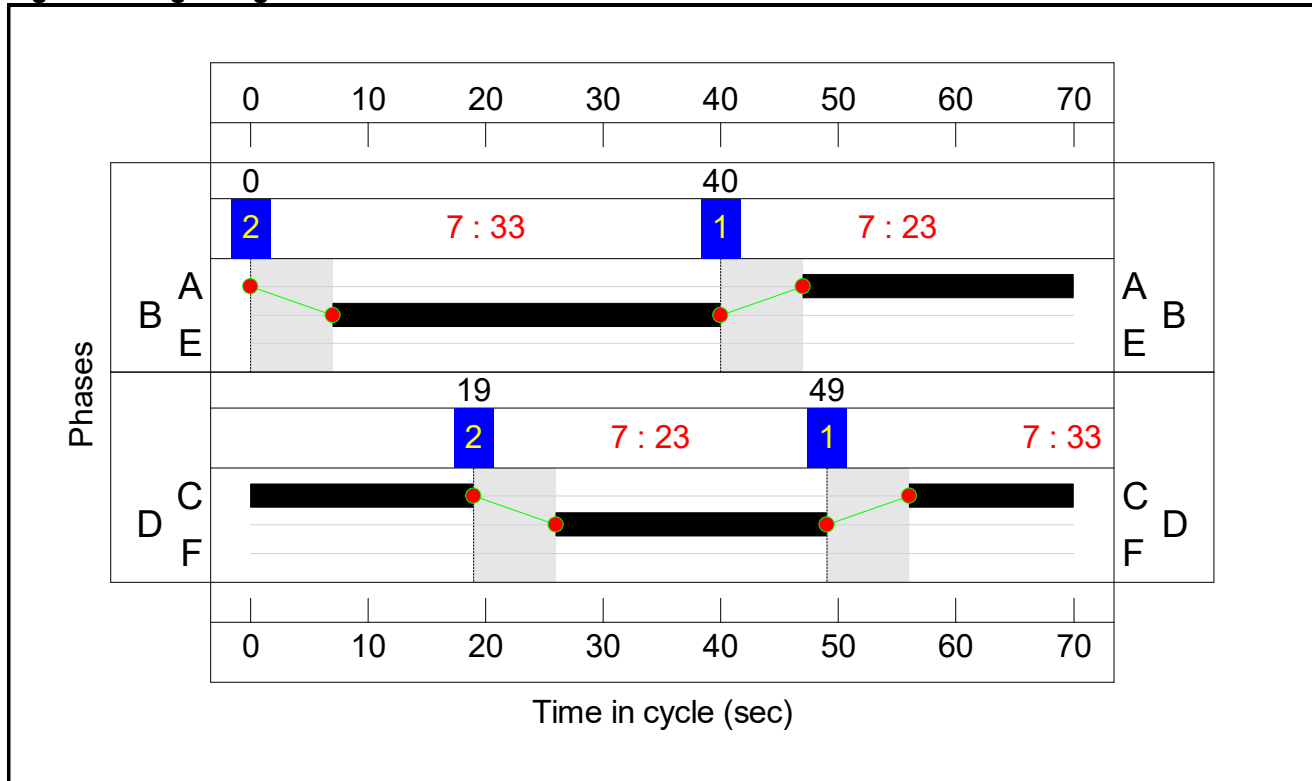
Stage	1	2
Duration	23	33
Change Point	40	0

Stage Stream: 2

Stage	1	2
Duration	33	23
Change Point	49	19

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Right Ahead	Traffic	1	23	47	0
B	M57 NB Offslip Ahead Ahead2	Traffic	1	33	7	40
C	Circulatory Right Ahead	Traffic	2	33	56	19
D	A580 Bypass Ahead Left	Traffic	2	23	26	49
E	Dummy	Dummy	1			
F	Dummy	Dummy	2			

Signal Timings Diagram**Lane Green Times**

Junction: J1: M57 North					
Lane	Description	Type	Phases	Start Green	End Green
J1:1/1	Circulatory Ahead	U	A	18	64
J1:1/2	Circulatory Ahead	U	A	18	64
J1:2/1	M57 SB Offslip Ahead	U	B	1	11
J1:2/2	M57 SB Offslip Ahead	U	B	1	11
J1:3/1	Circulatory Right	U	C	28	60
J1:3/2	Circulatory Right	U	C	28	60
J1:3/3	Circulatory Right	U	C	28	60
J1:4/1	Moorgate Ahead	U	D	67	21
J1:4/2	Moorgate Ahead	U	D	67	21
J1:4/3	Moorgate Ahead	U	D	67	21
J1:5/1	Circulatory Ahead	U	E	58	27
J1:5/2	Circulatory Ahead	U	E	58	27
J1:5/3	Circulatory Ahead	U	E	58	27
J1:9/1	School Lane Left	U	F	34	51
J1:9/2	School Lane Left	U	F	34	51

Detailed Input Data And Results

Junction: J2: M57 South					
Lane	Description	Type	Phases	Start Green	End Green
J2:1/1	Circulatory Ahead	U	A	47	0
J2:1/2	Circulatory Right Ahead	U	A	47	0
J2:2/1	M57 NB Offslip Ahead	U	B	7	40
J2:2/2	M57 NB Offslip Ahead Ahead2	U	B	7	40
J2:3/1	Circulatory Right Ahead	U	C	56	19
J2:3/2	Circulatory Right	U	C	56	19
J2:4/1	A580 Bypass Ahead Left	U	D	26	49
J2:4/2	A580 Bypass Ahead	U	D	26	49

Detailed Input Data And Results

Network Layout Diagram

Detailed Input Data And Results

KMBC Model Ref: 871275507-YU-00-XX-MO-Y-0001 P1

Cordoned Version of model to remove A580 junction as this is outside of adopted study area.

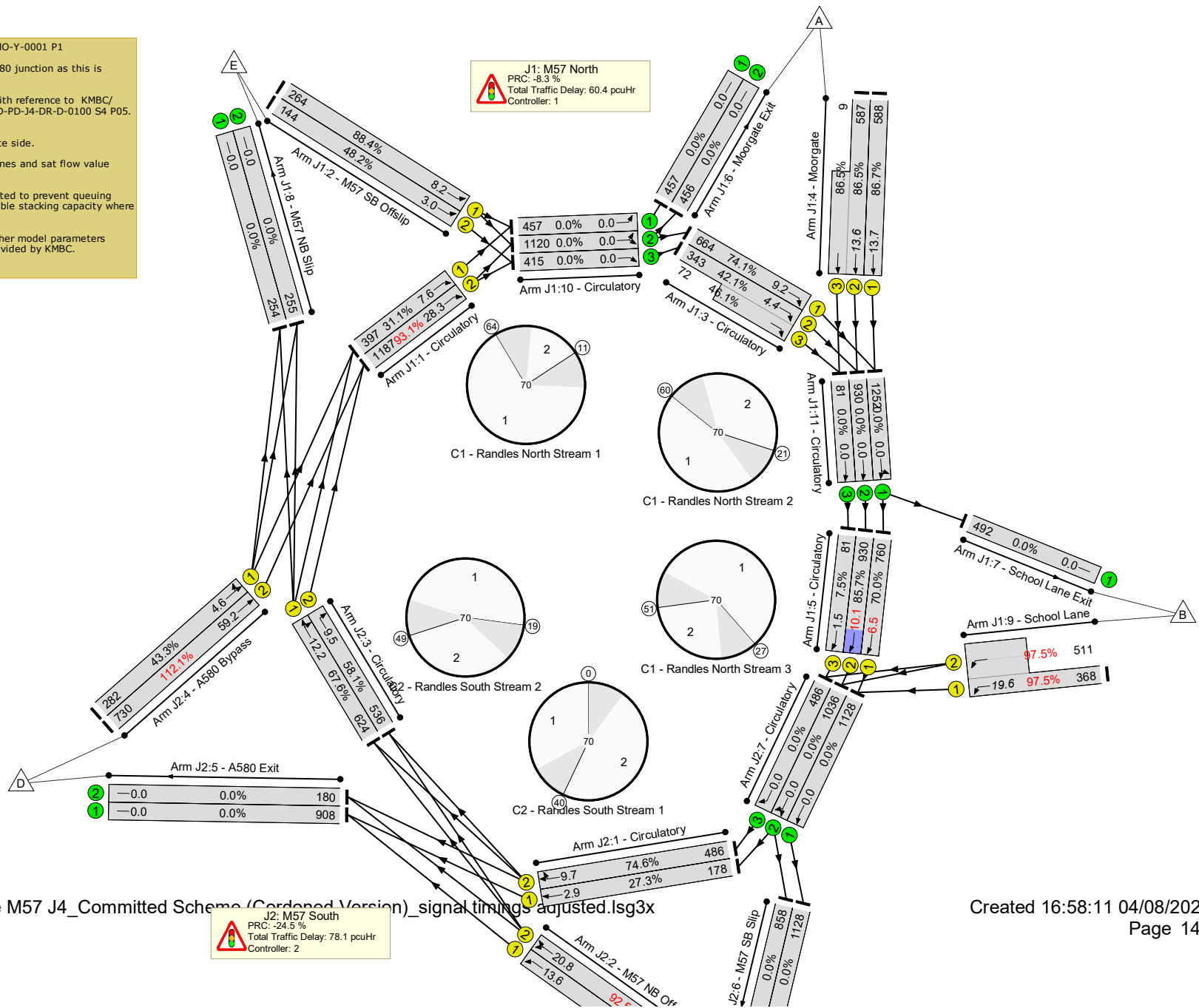
Minor amendments made to the model with reference to KMBC/ Royal Haskoning Drawing ref PC3016-RHD-PD-J4-DR-D-0100 S4 P05. Adjustments include:

Arm J1:3 - short lane switched to opposite side.

Arm J1:9 - short lane increased to two lanes and sat flow value doubled.

Signal timings have been manually adjusted to prevent queuing traffic on the circulatory exceeding available stacking capacity where practicable.

With the exception of traffic flows, all other model parameters remain the same as the based model provided by KMBC.



Detailed Input Data And Results

Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	-	112.1%
J1: M57 North	-	-	N/A	-	-		-	-	-	-	-	-	-	97.5%
1/1	Circulatory Ahead	U	1:1	N/A	C1:A		1	46	-	-	397	1900	1276	31.1%
1/2	Circulatory Ahead	U	1:1	N/A	C1:A		1	46	-	-	1266	1900	1276	93.1%
2/1	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	10	-	-	264	1900	299	88.4%
2/2	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	10	-	-	144	1900	299	48.2%
3/1	Circulatory Right	U	1:2	N/A	C1:C		1	32	-	-	710	1900	896	74.1%
3/2+3/3	Circulatory Right	U	1:2	N/A	C1:C		1	32	-	-	448	1900:1900	816+156	42.1 : 46.1%
4/1	Moorgate Ahead	U	1:2	N/A	C1:D		1	24	-	-	588	1900	679	86.7%
4/2+4/3	Moorgate Ahead	U	1:2	N/A	C1:D		1	24	-	-	596	1900:1900	679+10	86.5 : 86.5%
5/1	Circulatory Ahead	U	1:3	N/A	C1:E		1	39	-	-	793	1900	1086	70.0%
5/2	Circulatory Ahead	U	1:3	N/A	C1:E		1	39	-	-	963	1900	1086	85.7%
5/3	Circulatory Ahead	U	1:3	N/A	C1:E		1	39	-	-	81	1900	1086	7.5%
6/1	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	457	Inf	Inf	0.0%
6/2	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	456	Inf	Inf	0.0%
7/1	School Lane Exit	U	N/A	N/A	-		-	-	-	-	505	Inf	Inf	0.0%
8/1	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	254	Inf	Inf	0.0%
8/2	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	255	Inf	Inf	0.0%

Detailed Input Data And Results

9/1+9/2	School Lane Left	U	1:3	N/A	C1:F		1	17	-	-	879	1965:4300	378+524	97.5 : 97.5%
10/1	Circulatory Left	U	N/A	N/A	-		-	-	-	-	457	Inf	Inf	0.0%
10/2	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1166	Inf	Inf	0.0%
10/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	448	Inf	Inf	0.0%
11/1	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1298	Inf	Inf	0.0%
11/2	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	963	Inf	Inf	0.0%
11/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	81	Inf	Inf	0.0%
J2: M57 South	-	-	N/A	-	-		-	-	-	-	-	-	-	112.1%
1/1	Circulatory Ahead	U	2:1	N/A	C2:A		1	23	-	-	178	1900	651	27.3%
1/2	Circulatory Right Ahead	U	2:1	N/A	C2:A		1	23	-	-	486	1900	651	74.6%
2/1	M57 NB Offslip Ahead	U	2:1	N/A	C2:B		1	33	-	-	730	1900	923	79.1%
2/2	M57 NB Offslip Ahead Ahead2	U	2:1	N/A	C2:B		1	33	-	-	854	1900	923	92.5%
3/1	Circulatory Right Ahead	U	2:2	N/A	C2:C		1	33	-	-	624	1900	923	67.6%
3/2	Circulatory Right	U	2:2	N/A	C2:C		1	33	-	-	536	1900	923	58.1%
4/1	A580 Bypass Ahead Left	U	2:2	N/A	C2:D		1	23	-	-	282	1900	651	43.3%
4/2	A580 Bypass Ahead	U	2:2	N/A	C2:D		1	23	-	-	730	1900	651	112.1%
5/1	A580 Exit	U	N/A	N/A	-		-	-	-	-	908	Inf	Inf	0.0%
5/2	A580 Exit	U	N/A	N/A	-		-	-	-	-	180	Inf	Inf	0.0%
6/1	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	1161	Inf	Inf	0.0%
6/2	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	891	Inf	Inf	0.0%

Detailed Input Data And Results

7/1	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	1161	Inf	Inf	0.0%
7/2	Circulatory Right Ahead	U	N/A	N/A	-		-	-	-	-	1069	Inf	Inf	0.0%
7/3	Circulatory Right	U	N/A	N/A	-		-	-	-	-	486	Inf	Inf	0.0%

Detailed Input Data And Results

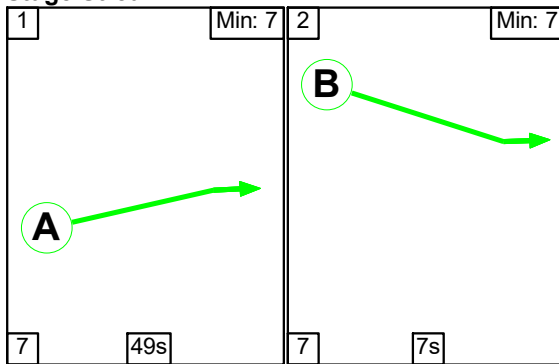
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network	-	-	0	0	0	52.1	86.4	0.0	138.5	-	-	-	-	
J1: M57 North	-	-	0	0	0	28.5	31.9	0.0	60.4	-	-	-	-	
1/1	397	397	-	-	-	2.0	0.2	-	2.2	20.1	7.4	0.2	7.6	
1/2	1187	1187	-	-	-	3.1	5.9	-	9.0	27.4	22.3	5.9	28.3	
2/1	264	264	-	-	-	2.1	3.2	-	5.3	72.8	5.0	3.2	8.2	
2/2	144	144	-	-	-	1.1	0.5	-	1.5	38.5	2.5	0.5	3.0	
3/1	664	664	-	-	-	2.5	1.4	-	3.9	21.1	7.7	1.4	9.2	
3/2+3/3	415	415	-	-	-	2.0	0.4	-	2.3	20.2	4.1	0.4	4.4	
4/1	588	588	-	-	-	3.4	3.0	-	6.5	39.6	10.6	3.0	13.7	
4/2+4/3	596	596	-	-	-	3.5	3.0	-	6.5	39.0	10.6	3.0	13.6	
5/1	760	760	-	-	-	1.0	1.2	-	2.2	10.2	5.4	1.2	6.5	
5/2	930	930	-	-	-	1.8	2.9	-	4.7	18.0	7.3	2.9	10.1	
5/3	81	81	-	-	-	0.4	0.0	-	0.5	20.2	1.4	0.0	1.5	
6/1	457	457	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	456	456	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	492	492	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	254	254	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/2	255	255	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1+9/2	879	879	-	-	-	5.7	10.2	-	15.9	65.0	9.4	10.2	19.6	
10/1	457	457	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/2	1120	1120	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/3	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/1	1252	1252	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/2	930	930	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/3	81	81	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	

Detailed Input Data And Results

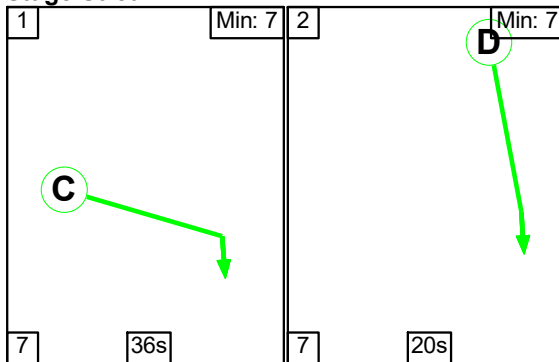
J2: M57 South	-	-	0	0	0	23.6	54.4	0.0	78.1	-	-	-	-	
1/1	178	178	-	-	-	0.9	0.2	-	1.1	22.2	2.8	0.2	2.9	
1/2	486	486	-	-	-	0.9	1.4	-	2.4	17.5	8.2	1.4	9.7	
2/1	730	730	-	-	-	3.0	1.9	-	4.9	24.2	11.8	1.9	13.6	
2/2	854	854	-	-	-	4.0	5.4	-	9.4	39.4	15.4	5.4	20.8	
3/1	624	624	-	-	-	2.9	1.0	-	4.0	23.0	11.2	1.0	12.2	
3/2	536	536	-	-	-	3.6	0.7	-	4.3	28.7	8.8	0.7	9.5	
4/1	282	282	-	-	-	1.4	0.4	-	1.8	22.6	4.2	0.4	4.6	
4/2	730	651	-	-	-	6.9	43.5	-	50.3	248.3	15.7	43.5	59.2	
5/1	908	908	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/2	180	180	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	1128	1128	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	858	858	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	1128	1128	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/2	1036	1036	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/3	486	486	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 - Randles North C1 - Randles North C1 - Randles North C2 - Randles South C2 - Randles South Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): Stream: 3 PRC for Signalled Lanes (%): Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): PRC Over All Lanes (%) -3.4 3.9 -8.3 -2.8 -24.5 -24.5 Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr): 18.11 19.16 23.14 17.72 60.36 138.49 Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): 70 70 70 70 70 														

Stage Sequence Diagram

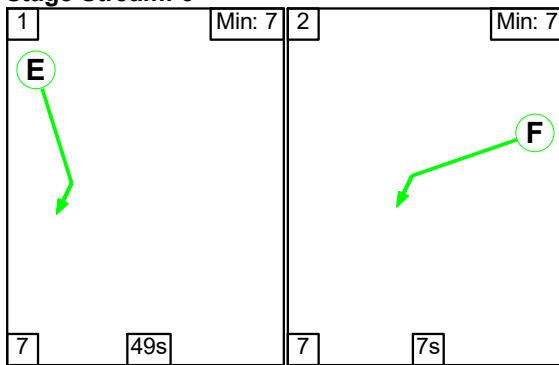
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	49	7
Change Point	63	49

Stage Stream: 2

Stage	1	2
Duration	36	20
Change Point	55	28

Detailed Input Data And Results

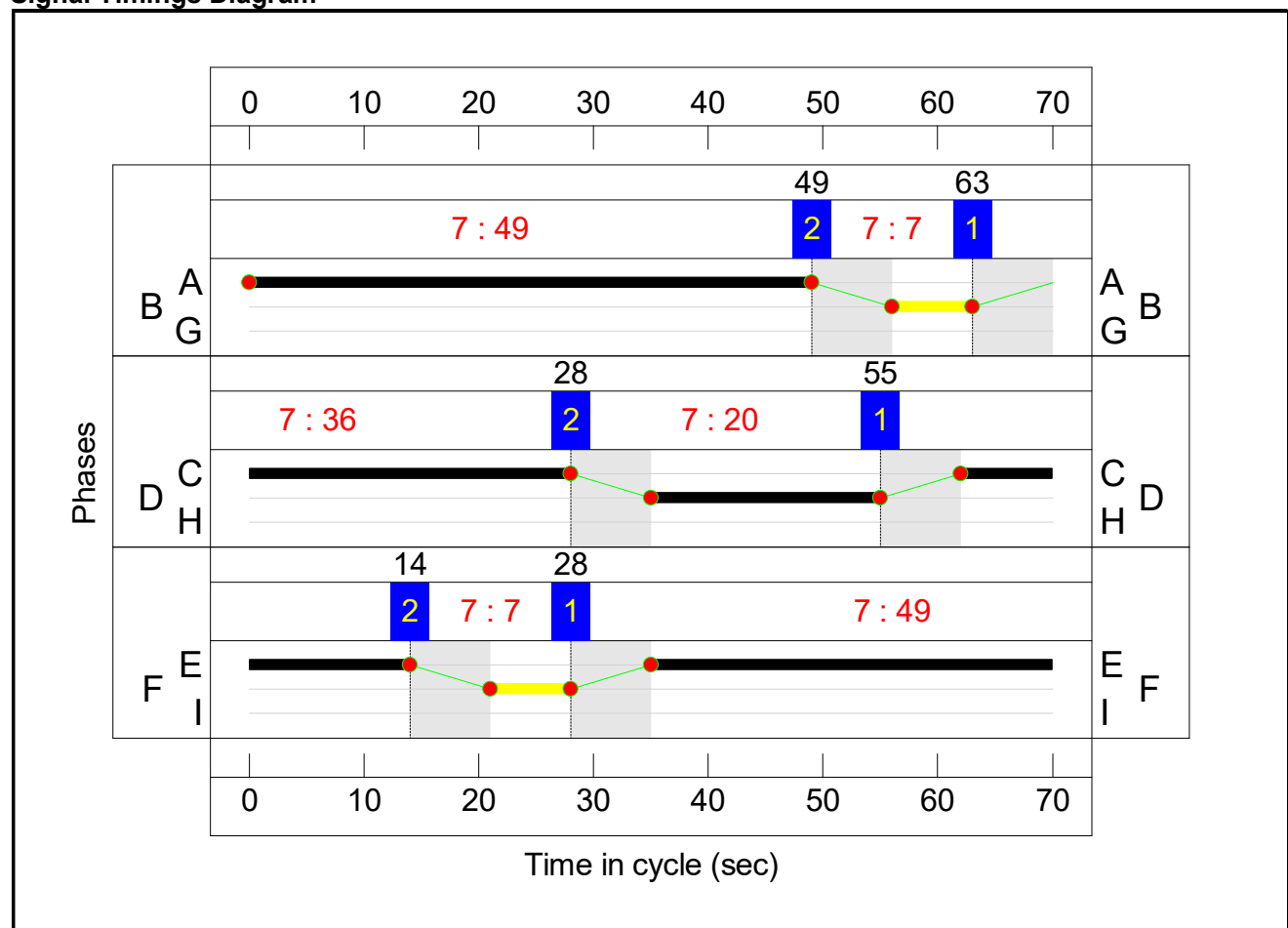
Stage Stream: 3

Stage	1	2
Duration	49	7
Change Point	28	14

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Ahead	Traffic	1	49	0	49
B	M57 SB Offslip Ahead	Traffic	1	7	56	63
C	Circulatory Right	Traffic	2	36	62	28
D	Moorgate Ahead	Traffic	2	20	35	55
E	Circulatory Ahead	Traffic	3	49	35	14
F	School Lane Left	Traffic	3	7	21	28
G	Dummy	Dummy	1			
H	Dummy	Dummy	2			
I	Dummy	Dummy	3			

Signal Timings Diagram

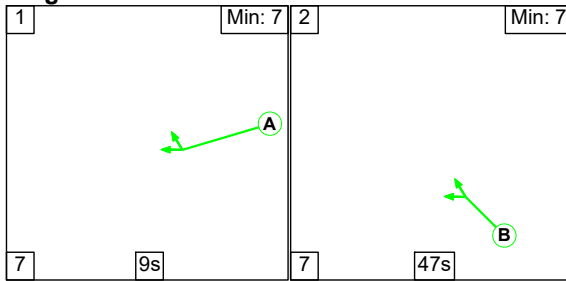


Detailed Input Data And Results

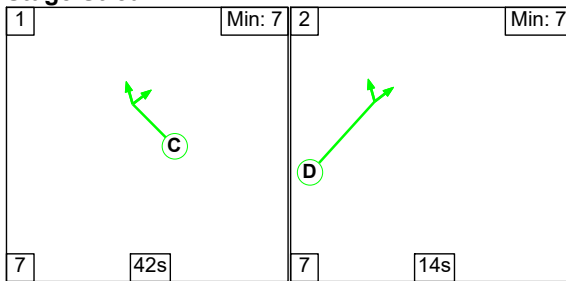
Controller :C2 - Randles South

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

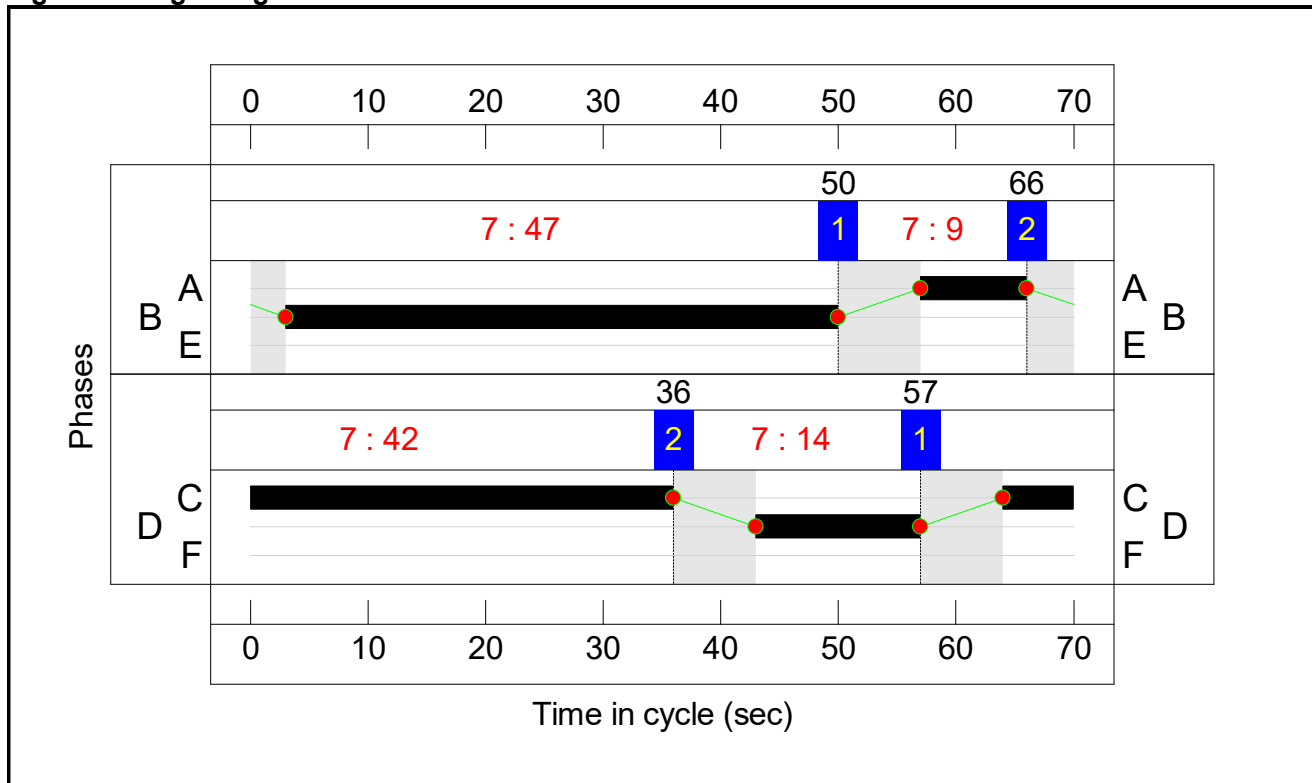
Stage	1	2
Duration	9	47
Change Point	50	66

Stage Stream: 2

Stage	1	2
Duration	42	14
Change Point	57	36

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Right Ahead	Traffic	1	9	57	66
B	M57 NB Offslip Ahead Ahead2	Traffic	1	47	3	50
C	Circulatory Right Ahead	Traffic	2	42	64	36
D	A580 Bypass Ahead Left	Traffic	2	14	43	57
E	Dummy	Dummy	1			
F	Dummy	Dummy	2			

Signal Timings Diagram**Lane Green Times**

Junction: J1: M57 North					
Lane	Description	Type	Phases	Start Green	End Green
J1:1/1	Circulatory Ahead	U	A	0	49
J1:1/2	Circulatory Ahead	U	A	0	49
J1:2/1	M57 SB Offslip Ahead	U	B	56	63
J1:2/2	M57 SB Offslip Ahead	U	B	56	63
J1:3/1	Circulatory Right	U	C	62	28
J1:3/2	Circulatory Right	U	C	62	28
J1:3/3	Circulatory Right	U	C	62	28
J1:4/1	Moorgate Ahead	U	D	35	55
J1:4/2	Moorgate Ahead	U	D	35	55
J1:4/3	Moorgate Ahead	U	D	35	55
J1:5/1	Circulatory Ahead	U	E	35	14
J1:5/2	Circulatory Ahead	U	E	35	14
J1:5/3	Circulatory Ahead	U	E	35	14
J1:9/1	School Lane Left	U	F	21	28
J1:9/2	School Lane Left	U	F	21	28

Detailed Input Data And Results

Junction: J2: M57 South					
Lane	Description	Type	Phases	Start Green	End Green
J2:1/1	Circulatory Ahead	U	A	57	66
J2:1/2	Circulatory Right Ahead	U	A	57	66
J2:2/1	M57 NB Offslip Ahead	U	B	3	50
J2:2/2	M57 NB Offslip Ahead Ahead2	U	B	3	50
J2:3/1	Circulatory Right Ahead	U	C	64	36
J2:3/2	Circulatory Right	U	C	64	36
J2:4/1	A580 Bypass Ahead Left	U	D	43	57
J2:4/2	A580 Bypass Ahead	U	D	43	57

Detailed Input Data And Results

KMBC Model Ref: 871275507-YU-00-XX-MO-Y-0001 P1

Cordoned Version of model to remove A580 junction as this is outside of adopted study area.

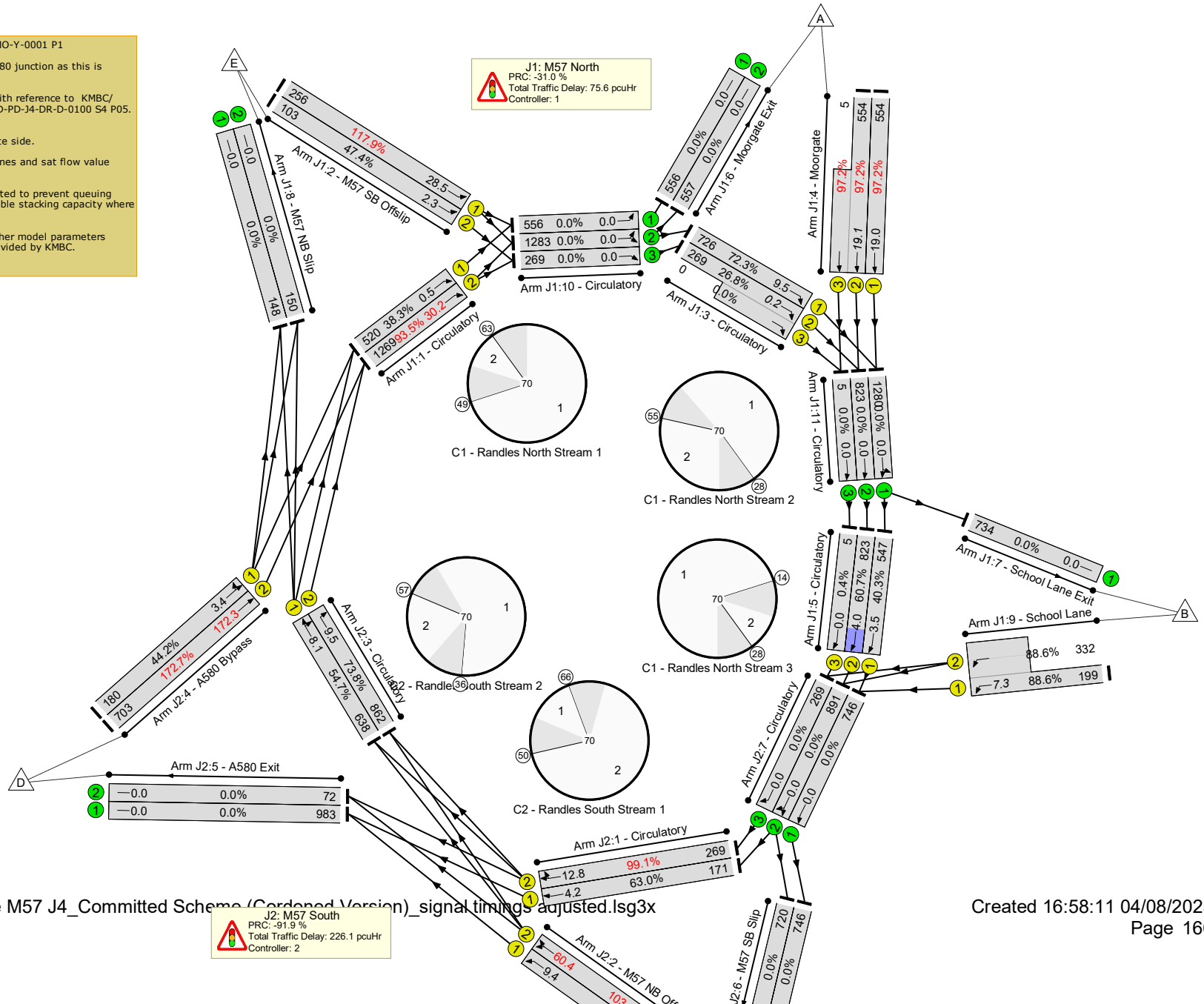
Minor amendments made to the model with reference to KMBC/ Royal Haskoning Drawing ref PC3016-RHD-PD-J4-DR-D-0100 S4 P05. Adjustments include:

Arm J1:3 - short lane switched to opposite side.

Arm J1:9 - short lane increased to two lanes and sat flow value doubled.

Signal timings have been manually adjusted to prevent queuing traffic on the circulatory exceeding available stacking capacity where practicable.

With the exception of traffic flows, all other model parameters remain the same as the based model provided by KMBC.



Detailed Input Data And Results

Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	-	172.7%
J1: M57 North	-	-	N/A	-	-		-	-	-	-	-	-	-	117.9%
1/1	Circulatory Ahead	U	1:1	N/A	C1:A		1	49	-	-	537	1900	1357	38.3%
1/2	Circulatory Ahead	U	1:1	N/A	C1:A		1	49	-	-	1594	1900	1357	93.5%
2/1	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	7	-	-	256	1900	217	117.9%
2/2	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	7	-	-	103	1900	217	47.4%
3/1	Circulatory Right	U	1:2	N/A	C1:C		1	36	-	-	939	1900	1004	72.3%
3/2+3/3	Circulatory Right	U	1:2	N/A	C1:C		1	36	-	-	390	1900:1900	1004+0	26.8 : 0.0%
4/1	Moorgate Ahead	U	1:2	N/A	C1:D		1	20	-	-	554	1900	570	97.2%
4/2+4/3	Moorgate Ahead	U	1:2	N/A	C1:D		1	20	-	-	559	1900:1900	570+5	97.2 : 97.2%
5/1	Circulatory Ahead	U	1:3	N/A	C1:E		1	49	-	-	667	1900	1357	40.3%
5/2	Circulatory Ahead	U	1:3	N/A	C1:E		1	49	-	-	944	1900	1357	60.7%
5/3	Circulatory Ahead	U	1:3	N/A	C1:E		1	49	-	-	5	1900	1357	0.4%
6/1	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	580	Inf	Inf	0.0%
6/2	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	581	Inf	Inf	0.0%
7/1	School Lane Exit	U	N/A	N/A	-		-	-	-	-	826	Inf	Inf	0.0%
8/1	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	148	Inf	Inf	0.0%
8/2	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	150	Inf	Inf	0.0%

Detailed Input Data And Results

9/1+9/2	School Lane Left	U	1:3	N/A	C1:F		1	7	-	-	531	1965:4300	225+375	88.6 : 88.6%
10/1	Circulatory Left	U	N/A	N/A	-		-	-	-	-	580	Inf	Inf	0.0%
10/2	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1520	Inf	Inf	0.0%
10/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	390	Inf	Inf	0.0%
11/1	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1493	Inf	Inf	0.0%
11/2	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	944	Inf	Inf	0.0%
11/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	5	Inf	Inf	0.0%
J2: M57 South	-	-	N/A	-	-		-	-	-	-	-	-	-	172.7%
1/1	Circulatory Ahead	U	2:1	N/A	C2:A		1	9	-	-	171	1900	271	63.0%
1/2	Circulatory Right Ahead	U	2:1	N/A	C2:A		1	9	-	-	269	1900	271	99.1%
2/1	M57 NB Offslip Ahead	U	2:1	N/A	C2:B		1	47	-	-	812	1900	1303	62.3%
2/2	M57 NB Offslip Ahead Ahead2	U	2:1	N/A	C2:B		1	47	-	-	1349	1900	1303	103.5%
3/1	Circulatory Right Ahead	U	2:2	N/A	C2:C		1	42	-	-	655	1900	1167	54.7%
3/2	Circulatory Right	U	2:2	N/A	C2:C		1	42	-	-	891	1900	1167	73.8%
4/1	A580 Bypass Ahead Left	U	2:2	N/A	C2:D		1	14	-	-	180	1900	407	44.2%
4/2	A580 Bypass Ahead	U	2:2	N/A	C2:D		1	14	-	-	703	1900	407	172.7%
5/1	A580 Exit	U	N/A	N/A	-		-	-	-	-	983	Inf	Inf	0.0%
5/2	A580 Exit	U	N/A	N/A	-		-	-	-	-	72	Inf	Inf	0.0%
6/1	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	866	Inf	Inf	0.0%
6/2	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	841	Inf	Inf	0.0%

Detailed Input Data And Results

7/1	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	866	Inf	Inf	0.0%
7/2	Circulatory Right Ahead	U	N/A	N/A	-		-	-	-	-	1012	Inf	Inf	0.0%
7/3	Circulatory Right	U	N/A	N/A	-		-	-	-	-	269	Inf	Inf	0.0%

Detailed Input Data And Results

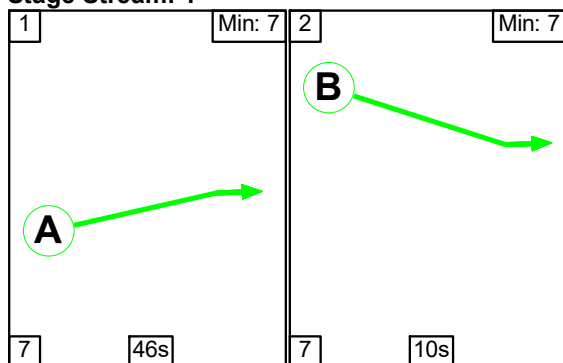
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network	-	-	0	0	0	55.4	246.4	0.0	301.8	-	-	-	-	
J1: M57 North	-	-	0	0	0	23.3	52.4	0.0	75.6	-	-	-	-	
1/1	520	520	-	-	-	0.0	0.3	-	0.3	2.4	0.2	0.3	0.5	
1/2	1269	1269	-	-	-	3.7	6.3	-	10.0	28.4	23.9	6.3	30.2	
2/1	256	217	-	-	-	3.5	22.3	-	25.8	363.1	6.2	22.3	28.5	
2/2	103	103	-	-	-	0.8	0.4	-	1.3	44.7	1.9	0.4	2.3	
3/1	726	726	-	-	-	2.2	1.3	-	3.5	17.4	8.2	1.3	9.5	
3/2+3/3	269	269	-	-	-	0.0	0.2	-	0.2	2.8	0.1	0.2	0.2	
4/1	554	554	-	-	-	3.7	8.4	-	12.2	79.0	10.6	8.4	19.0	
4/2+4/3	559	559	-	-	-	3.8	8.5	-	12.2	78.6	10.6	8.5	19.1	
5/1	547	547	-	-	-	0.6	0.3	-	0.9	6.0	3.2	0.3	3.5	
5/2	823	823	-	-	-	0.4	0.8	-	1.2	5.3	3.2	0.8	4.0	
5/3	5	5	-	-	-	0.0	0.0	-	0.0	1.3	0.0	0.0	0.0	
6/1	556	556	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	557	557	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	734	734	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	148	148	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/2	150	150	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1+9/2	531	531	-	-	-	4.4	3.5	-	8.0	54.0	3.8	3.5	7.3	
10/1	556	556	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/2	1283	1283	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/3	269	269	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/1	1280	1280	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/2	823	823	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/3	5	5	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	

Detailed Input Data And Results

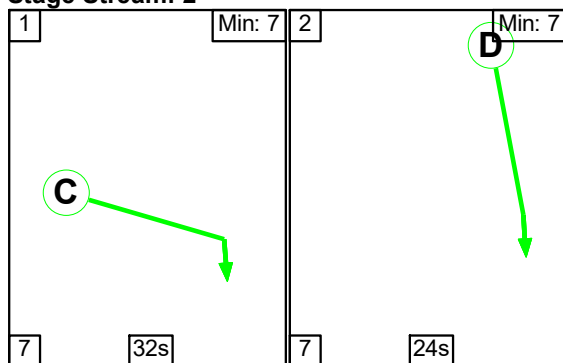
J2: M57 South	-	-	0	0	0	32.1	194.0	0.0	226.1	-	-	-	-	
1/1	171	171	-	-	-	1.7	0.8	-	2.5	52.7	3.3	0.8	4.2	
1/2	269	269	-	-	-	2.0	7.6	-	9.6	129.1	5.2	7.6	12.8	
2/1	812	812	-	-	-	1.4	0.8	-	2.2	9.7	8.6	0.8	9.4	
2/2	1349	1303	-	-	-	5.6	33.2	-	38.8	103.5	27.1	33.2	60.4	
3/1	638	638	-	-	-	1.5	0.6	-	2.1	11.6	7.5	0.6	8.1	
3/2	862	862	-	-	-	2.5	1.4	-	3.9	16.2	8.1	1.4	9.5	
4/1	180	180	-	-	-	1.2	0.4	-	1.6	31.8	3.0	0.4	3.4	
4/2	703	407	-	-	-	16.4	149.1	-	165.5	847.6	23.2	149.1	172.3	
5/1	983	983	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/2	72	72	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	746	746	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	720	720	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	746	746	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/2	891	891	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/3	269	269	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 - Randles North Stream: 1 PRC for Signalled Lanes (%): -31.0 C1 - Randles North Stream: 2 PRC for Signalled Lanes (%): -8.0 C1 - Randles North Stream: 3 PRC for Signalled Lanes (%): 1.6 C2 - Randles South Stream: 1 PRC for Signalled Lanes (%): -15.0 C2 - Randles South Stream: 2 PRC for Signalled Lanes (%): -91.9 PRC Over All Lanes (%): -91.9 Total Delay for Signalled Lanes (pcuHr): 37.45 Total Delay for Signalled Lanes (pcuHr): 28.09 Total Delay for Signalled Lanes (pcuHr): 10.09 Total Delay for Signalled Lanes (pcuHr): 53.11 Total Delay for Signalled Lanes (pcuHr): 173.03 Total Delay Over All Lanes(pcuHr): 301.76 Cycle Time (s): 70 Cycle Time (s): 70 Cycle Time (s): 70 Cycle Time (s): 70 Cycle Time (s): 70														

Stage Sequence Diagram

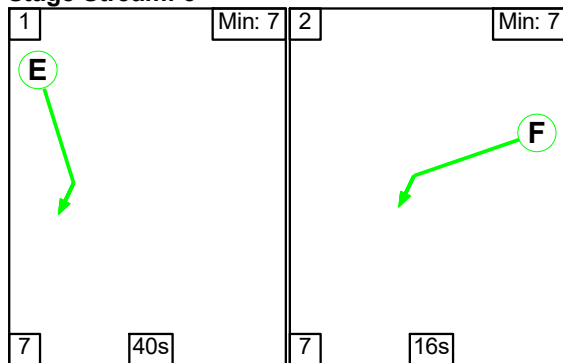
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	46	10
Change Point	11	64

Stage Stream: 2

Stage	1	2
Duration	32	24
Change Point	21	60

Detailed Input Data And Results

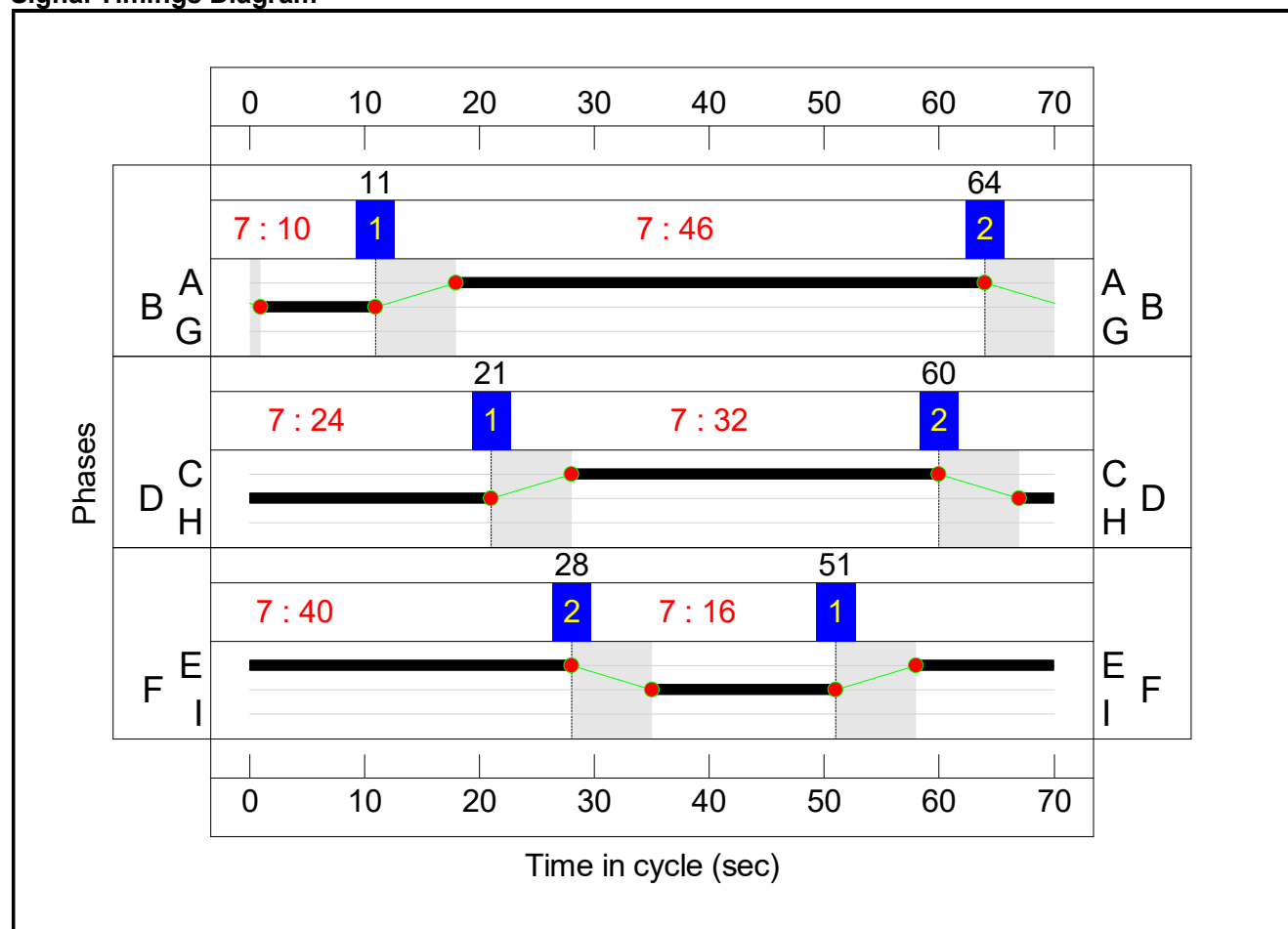
Stage Stream: 3

Stage	1	2
Duration	40	16
Change Point	51	28

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Ahead	Traffic	1	46	18	64
B	M57 SB Offslip Ahead	Traffic	1	10	1	11
C	Circulatory Right	Traffic	2	32	28	60
D	Moorgate Ahead	Traffic	2	24	67	21
E	Circulatory Ahead	Traffic	3	40	58	28
F	School Lane Left	Traffic	3	16	35	51
G	Dummy	Dummy	1			
H	Dummy	Dummy	2			
I	Dummy	Dummy	3			

Signal Timings Diagram

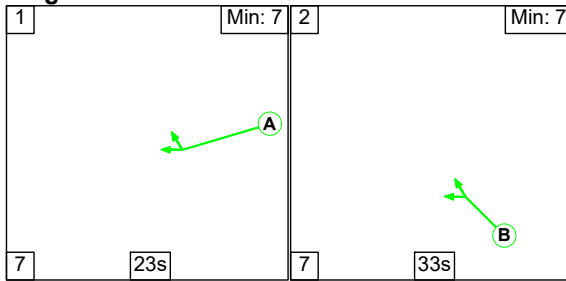


Detailed Input Data And Results

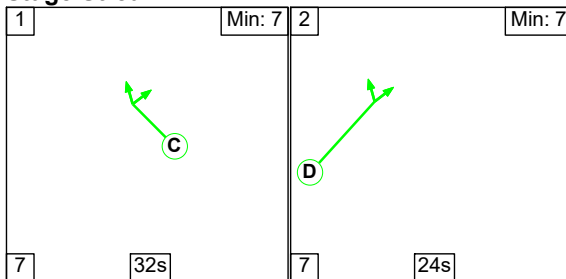
Controller :C2 - Randles South

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

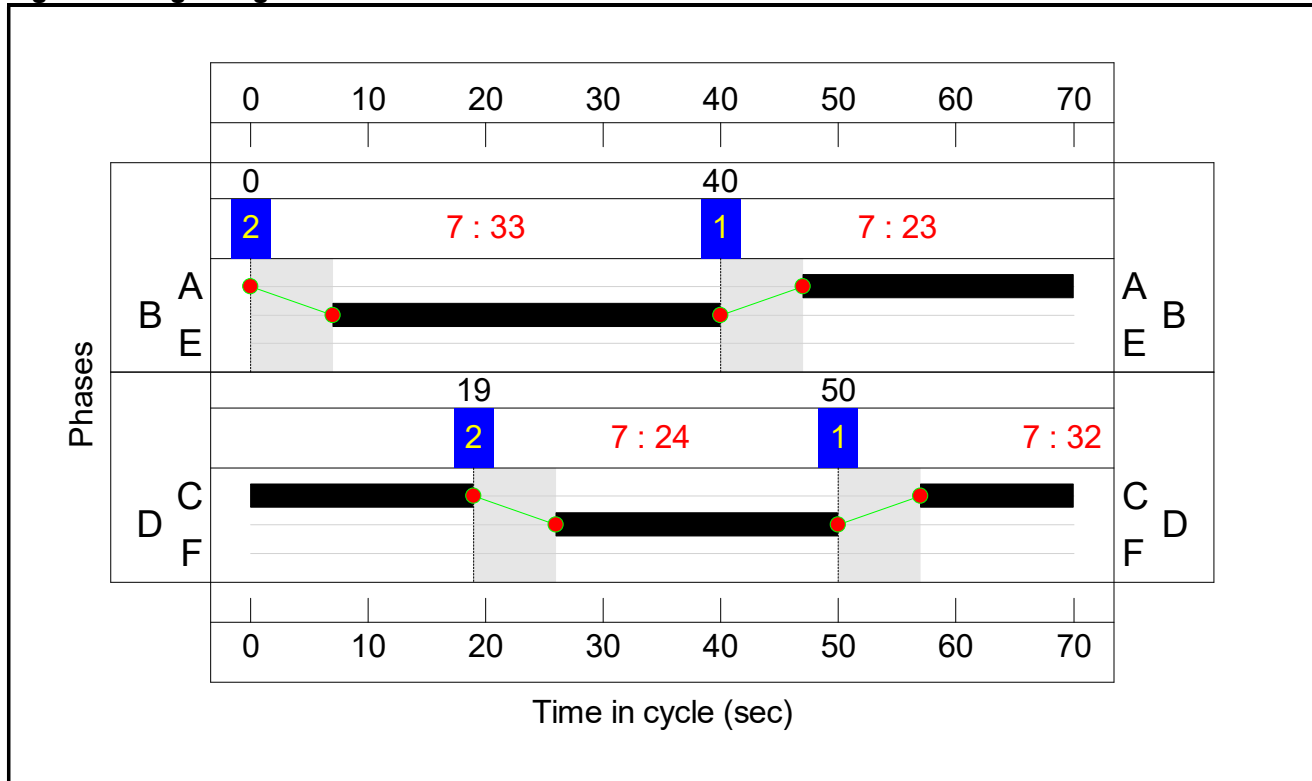
Stage	1	2
Duration	23	33
Change Point	40	0

Stage Stream: 2

Stage	1	2
Duration	32	24
Change Point	50	19

Phase Timings

Phase Name	Description	Phase	Stage Stream	Green Period 1		
				Total Green	Start Time	End Time
A	Circulatory Right Ahead	Traffic	1	23	47	0
B	M57 NB Offslip Ahead Ahead2	Traffic	1	33	7	40
C	Circulatory Right Ahead	Traffic	2	32	57	19
D	A580 Bypass Ahead Left	Traffic	2	24	26	50
E	Dummy	Dummy	1			
F	Dummy	Dummy	2			

Signal Timings Diagram**Lane Green Times**

Junction: J1: M57 North					
Lane	Description	Type	Phases	Start Green	End Green
J1:1/1	Circulatory Ahead	U	A	18	64
J1:1/2	Circulatory Ahead	U	A	18	64
J1:2/1	M57 SB Offslip Ahead	U	B	1	11
J1:2/2	M57 SB Offslip Ahead	U	B	1	11
J1:3/1	Circulatory Right	U	C	28	60
J1:3/2	Circulatory Right	U	C	28	60
J1:3/3	Circulatory Right	U	C	28	60
J1:4/1	Moorgate Ahead	U	D	67	21
J1:4/2	Moorgate Ahead	U	D	67	21
J1:4/3	Moorgate Ahead	U	D	67	21
J1:5/1	Circulatory Ahead	U	E	58	28
J1:5/2	Circulatory Ahead	U	E	58	28
J1:5/3	Circulatory Ahead	U	E	58	28
J1:9/1	School Lane Left	U	F	35	51
J1:9/2	School Lane Left	U	F	35	51

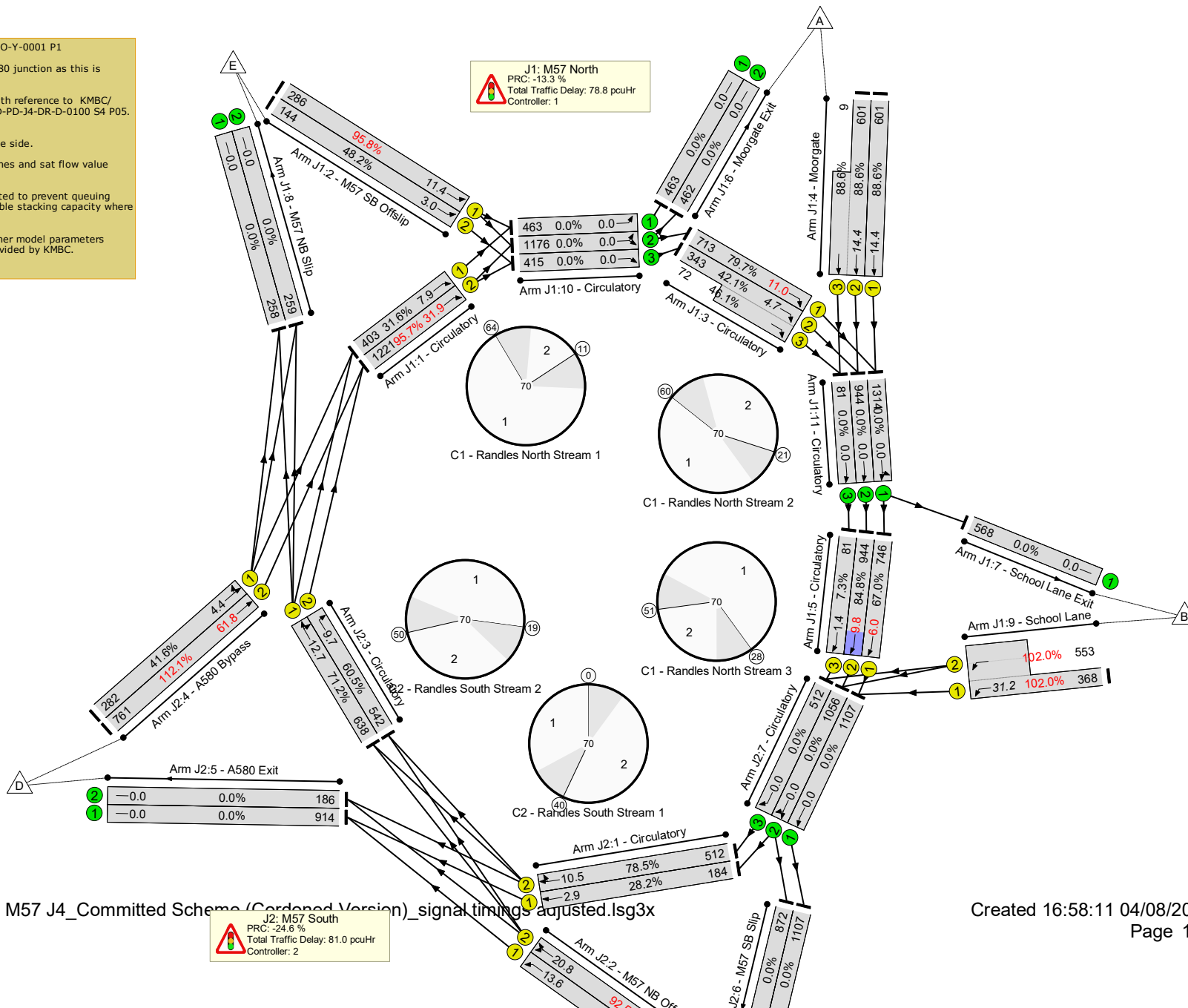
Detailed Input Data And Results

Junction: J2: M57 South					
Lane	Description	Type	Phases	Start Green	End Green
J2:1/1	Circulatory Ahead	U	A	47	0
J2:1/2	Circulatory Right Ahead	U	A	47	0
J2:2/1	M57 NB Offslip Ahead	U	B	7	40
J2:2/2	M57 NB Offslip Ahead Ahead2	U	B	7	40
J2:3/1	Circulatory Right Ahead	U	C	57	19
J2:3/2	Circulatory Right	U	C	57	19
J2:4/1	A580 Bypass Ahead Left	U	D	26	50
J2:4/2	A580 Bypass Ahead	U	D	26	50

Detailed Input Data And Results
Network Layout Diagram

[illegible]

With the exception of traffic flows, all other model parameters remain the same as the based model provided by KMBC.



Detailed Input Data And Results

Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	-	112.1%
J1: M57 North	-	-	N/A	-	-		-	-	-	-	-	-	-	102.0%
1/1	Circulatory Ahead	U	1:1	N/A	C1:A		1	46	-	-	404	1900	1276	31.6%
1/2	Circulatory Ahead	U	1:1	N/A	C1:A		1	46	-	-	1304	1900	1276	95.7%
2/1	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	10	-	-	286	1900	299	95.8%
2/2	M57 SB Offslip Ahead	U	1:1	N/A	C1:B		1	10	-	-	144	1900	299	48.2%
3/1	Circulatory Right	U	1:2	N/A	C1:C		1	32	-	-	763	1900	896	79.7%
3/2+3/3	Circulatory Right	U	1:2	N/A	C1:C		1	32	-	-	448	1900:1900	816+156	42.1 : 46.1%
4/1	Moorgate Ahead	U	1:2	N/A	C1:D		1	24	-	-	601	1900	679	88.6%
4/2+4/3	Moorgate Ahead	U	1:2	N/A	C1:D		1	24	-	-	610	1900:1900	679+10	88.6 : 88.6%
5/1	Circulatory Ahead	U	1:3	N/A	C1:E		1	40	-	-	779	1900	1113	67.0%
5/2	Circulatory Ahead	U	1:3	N/A	C1:E		1	40	-	-	977	1900	1113	84.8%
5/3	Circulatory Ahead	U	1:3	N/A	C1:E		1	40	-	-	81	1900	1113	7.3%
6/1	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	464	Inf	Inf	0.0%
6/2	Moorgate Exit	U	N/A	N/A	-		-	-	-	-	463	Inf	Inf	0.0%
7/1	School Lane Exit	U	N/A	N/A	-		-	-	-	-	585	Inf	Inf	0.0%
8/1	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	260	Inf	Inf	0.0%
8/2	M57 NB Slip	U	N/A	N/A	-		-	-	-	-	261	Inf	Inf	0.0%

Detailed Input Data And Results

9/1+9/2	School Lane Left	U	1:3	N/A	C1:F		1	16	-	-	921	1965:4300	361+542	102.0 : 102.0%
10/1	Circulatory Left	U	N/A	N/A	-		-	-	-	-	464	Inf	Inf	0.0%
10/2	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1226	Inf	Inf	0.0%
10/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	448	Inf	Inf	0.0%
11/1	Circulatory Ahead Left	U	N/A	N/A	-		-	-	-	-	1364	Inf	Inf	0.0%
11/2	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	977	Inf	Inf	0.0%
11/3	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	81	Inf	Inf	0.0%
J2: M57 South	-	-	N/A	-	-		-	-	-	-	-	-	-	112.1%
1/1	Circulatory Ahead	U	2:1	N/A	C2:A		1	23	-	-	186	1900	651	28.2%
1/2	Circulatory Right Ahead	U	2:1	N/A	C2:A		1	23	-	-	520	1900	651	78.5%
2/1	M57 NB Offslip Ahead	U	2:1	N/A	C2:B		1	33	-	-	730	1900	923	79.1%
2/2	M57 NB Offslip Ahead Ahead2	U	2:1	N/A	C2:B		1	33	-	-	854	1900	923	92.5%
3/1	Circulatory Right Ahead	U	2:2	N/A	C2:C		1	32	-	-	643	1900	896	71.2%
3/2	Circulatory Right	U	2:2	N/A	C2:C		1	32	-	-	543	1900	896	60.5%
4/1	A580 Bypass Ahead Left	U	2:2	N/A	C2:D		1	24	-	-	282	1900	679	41.6%
4/2	A580 Bypass Ahead	U	2:2	N/A	C2:D		1	24	-	-	761	1900	679	112.1%
5/1	A580 Exit	U	N/A	N/A	-		-	-	-	-	916	Inf	Inf	0.0%
5/2	A580 Exit	U	N/A	N/A	-		-	-	-	-	188	Inf	Inf	0.0%
6/1	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	1147	Inf	Inf	0.0%
6/2	M57 SB Slip	U	N/A	N/A	-		-	-	-	-	905	Inf	Inf	0.0%

Detailed Input Data And Results

7/1	Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	1147	Inf	Inf	0.0%
7/2	Circulatory Right Ahead	U	N/A	N/A	-		-	-	-	-	1091	Inf	Inf	0.0%
7/3	Circulatory Right	U	N/A	N/A	-		-	-	-	-	520	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network	-	-	0	0	0	54.4	105.4	0.0	159.8	-	-	-	-	
J1: M57 North	-	-	0	0	0	30.4	48.4	0.0	78.8	-	-	-	-	
1/1	403	403	-	-	-	2.0	0.2	-	2.2	19.9	7.7	0.2	7.9	
1/2	1221	1221	-	-	-	3.2	8.5	-	11.7	34.6	23.4	8.5	31.9	
2/1	286	286	-	-	-	2.3	5.9	-	8.2	103.3	5.5	5.9	11.4	
2/2	144	144	-	-	-	1.1	0.5	-	1.5	38.5	2.5	0.5	3.0	
3/1	713	713	-	-	-	3.0	1.9	-	4.9	24.8	9.1	1.9	11.0	
3/2+3/3	415	415	-	-	-	2.1	0.4	-	2.4	21.0	4.3	0.4	4.7	
4/1	601	601	-	-	-	3.5	3.5	-	7.1	42.4	10.9	3.5	14.4	
4/2+4/3	610	610	-	-	-	3.6	3.6	-	7.1	42.0	10.9	3.6	14.4	
5/1	746	746	-	-	-	1.0	1.0	-	2.0	9.5	5.0	1.0	6.0	
5/2	944	944	-	-	-	1.7	2.7	-	4.4	16.9	7.1	2.7	9.8	
5/3	81	81	-	-	-	0.4	0.0	-	0.5	20.1	1.4	0.0	1.4	
6/1	463	463	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	462	462	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	568	568	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	258	258	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/2	259	259	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
9/1+9/2	921	903	-	-	-	6.5	20.2	-	26.7	104.5	11.0	20.2	31.2	
10/1	463	463	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/2	1176	1176	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
10/3	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/1	1314	1314	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/2	944	944	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
11/3	81	81	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	

Detailed Input Data And Results

J2: M57 South	-	-	0	0	0	24.0	56.9	0.0	81.0	-	-	-	-	
1/1	184	184	-	-	-	0.9	0.2	-	1.1	21.3	2.7	0.2	2.9	
1/2	512	512	-	-	-	0.9	1.8	-	2.7	18.7	8.7	1.8	10.5	
2/1	730	730	-	-	-	3.0	1.9	-	4.9	24.2	11.8	1.9	13.6	
2/2	854	854	-	-	-	4.0	5.4	-	9.4	39.4	15.4	5.4	20.8	
3/1	638	638	-	-	-	3.1	1.2	-	4.3	24.5	11.5	1.2	12.7	
3/2	542	542	-	-	-	3.7	0.8	-	4.5	29.7	8.9	0.8	9.7	
4/1	282	282	-	-	-	1.3	0.4	-	1.7	21.5	4.1	0.4	4.4	
4/2	761	679	-	-	-	7.0	45.4	-	52.5	248.1	16.4	45.4	61.8	
5/1	914	914	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/2	186	186	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	1107	1107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/2	872	872	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	1107	1107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/2	1056	1056	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/3	512	512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 - Randles North C1 - Randles North C1 - Randles North C2 - Randles South C2 - Randles South Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): Stream: 3 PRC for Signalled Lanes (%): Stream: 1 PRC for Signalled Lanes (%): Stream: 2 PRC for Signalled Lanes (%): PRC Over All Lanes (%) -6.4 1.6 -13.3 -2.8 -24.6 -24.6 Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr): 23.69 21.53 33.58 18.00 62.96 159.76 Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): Cycle Time (s): 70 70 70 70 70 														

Appendix N

J2: School Lane/ Caddick Road/ Kitling Road

JUNCTIONS Modelling Outputs



Junctions 11
ARCADY 11 - Roundabout Module
Version: 11.0.0.2177 © Copyright TRL Software Limited, 2024
For sales and distribution information, program advice and maintenance, contact TRL Software: +44 (0)1344 379777 software@trl.co.uk trlsoftware.com
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: J2_School Ln-Caddick Road-Kitling Road.j11
Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025 Projects\A25007 Home Farm Road, Knowsley Village\Analysis\JUNCTIONS
Report generation date: 06/08/2025 12:58:28

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025 - Survey									
1 - School Lane (E)	D1	0.3	3.40	0.24	A	D2	0.1	2.80	0.07	A
2 - Caddick Road		0.0	3.89	0.03	A		0.1	3.05	0.12	A
3 - School Lane (W)		0.4	3.53	0.25	A		0.3	3.27	0.22	A
4 - Kitling Road		0.1	2.68	0.10	A		0.2	2.88	0.18	A
	2030 - No Dev									
1 - School Lane (E)	D3	0.4	3.49	0.25	A	D4	0.1	2.83	0.08	A
2 - Caddick Road		0.0	3.97	0.03	A		0.1	3.10	0.12	A
3 - School Lane (W)		0.4	3.62	0.26	A		0.3	3.34	0.23	A
4 - Kitling Road		0.1	2.71	0.11	A		0.2	2.95	0.19	A
	2030 - With Dev									
1 - School Lane (E)	D5	0.5	3.86	0.32	A	D6	0.1	2.94	0.11	A
2 - Caddick Road		0.0	4.17	0.03	A		0.2	3.18	0.13	A
3 - School Lane (W)		0.4	3.76	0.29	A		0.4	3.63	0.29	A
4 - Kitling Road		0.1	2.75	0.11	A		0.3	3.10	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

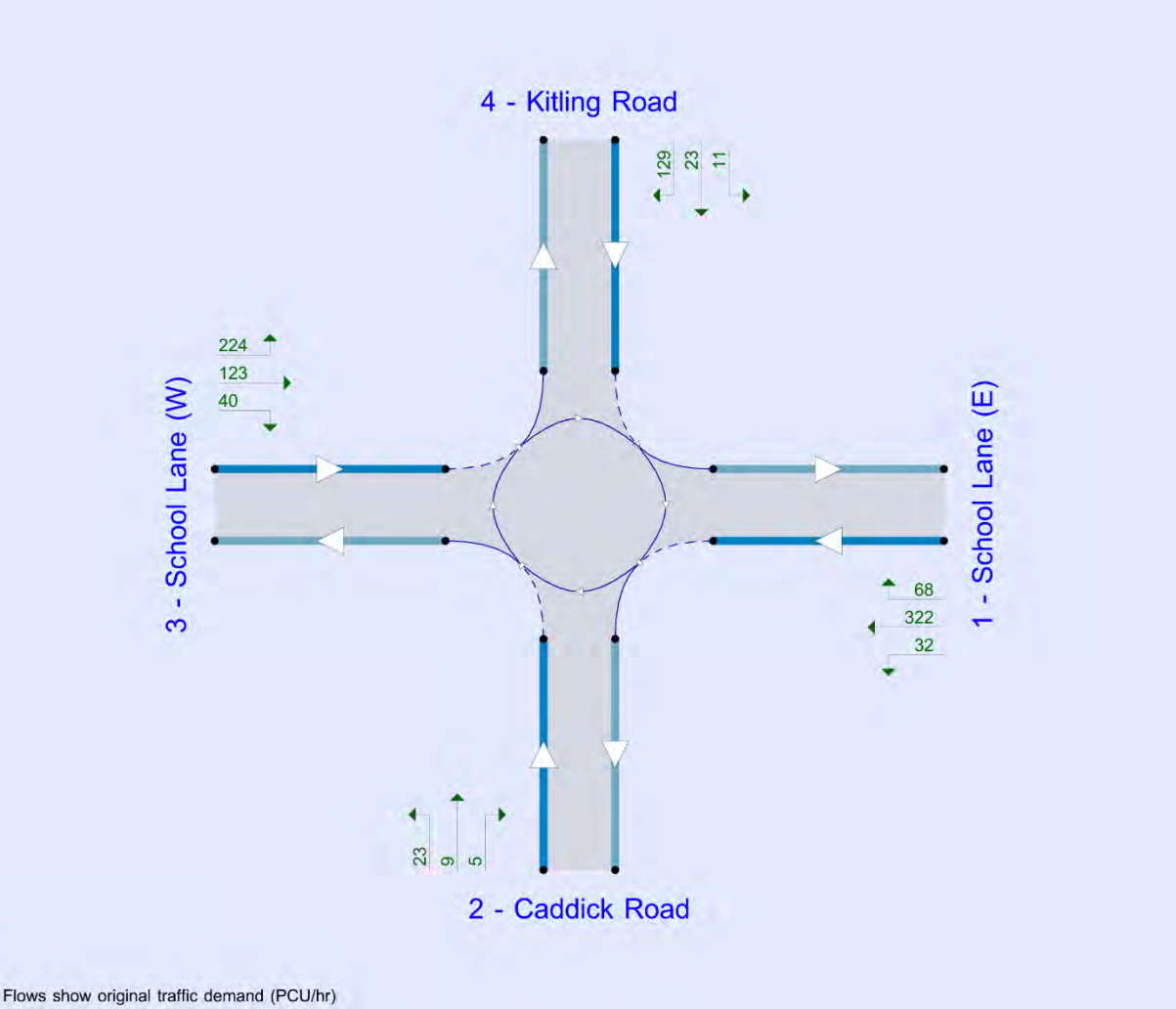
File Description

Title	
Location	
Site number	

Date	13/06/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\OliverMcLaughlin
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



Flows show original traffic demand (PCU/hr)
The junction diagram reflects the last run of Junctions.

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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2025 | Survey | 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	School Lane/ Caddick Road/ Kitling Road	Standard Roundabout		1, 2, 3, 4	3.34	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.34	A

Arms

Arms

Arm	Name	Description	No give-way line
1	School Lane (E)		
2	Caddick Road		
3	School Lane (W)		
4	Kitling Road		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - School Lane (E)	2.70	7.00	17.5	24.9	45.0	31.0		
2 - Caddick Road	3.90	6.10	8.5	39.5	45.0	37.0		
3 - School Lane (W)	3.70	7.20	9.5	25.7	45.0	49.0		
4 - Kitling Road	4.70	7.40	6.0	22.7	45.0	39.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - School Lane (E)	0.602	1557
2 - Caddick Road	0.598	1546
3 - School Lane (W)	0.576	1519
4 - Kitling Road	0.623	1715

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - School Lane (E)		ONE HOUR	✓	310	100.000
2 - Caddick Road		ONE HOUR	✓	32	100.000
3 - School Lane (W)		ONE HOUR	✓	332	100.000
4 - Kitling Road		ONE HOUR	✓	153	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
	1 - School Lane (E)	0	30	217	63
	2 - Caddick Road	5	0	22	5
	3 - School Lane (W)	84	38	0	210
	4 - Kitling Road	10	22	121	0

Proportions

	To				
From		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
	1 - School Lane (E)	0.00	0.10	0.70	0.20
	2 - Caddick Road	0.16	0.00	0.69	0.16
	3 - School Lane (W)	0.25	0.11	0.00	0.63
	4 - Kitling Road	0.07	0.14	0.79	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
From		1 - School	2 - Caddick Road	3 - School	4 - Kitlin

Average PCU Per Veh

	To				
From		1 - School	2 - Caddick Road	3 - School	4 - Kitlin

		l Lane (E)		l Lane (W)	g Road
	1 - School Lane (E)	0	3	4	2
	2 - Caddick Road	0	0	47	33
	3 - School Lane (W)	11	12	0	7
	4 - Kitling Road	0	0	11	0

		l Lane (E)		l Lane (W)	g Road
	1 - School Lane (E)	1.000	1.030	1.040	1.020
	2 - Caddick Road	1.000	1.000	1.470	1.330
	3 - School Lane (W)	1.110	1.120	1.000	1.070
	4 - Kitling Road	1.000	1.000	1.110	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1 - School Lane (E)	233	233
	2 - Caddick Road	24	24
	3 - School Lane (W)	250	250
	4 - Kitling Road	115	115
08:15-08:30	1 - School Lane (E)	279	279
	2 - Caddick Road	29	29
	3 - School Lane (W)	298	298
	4 - Kitling Road	138	138
08:30-08:45	1 - School Lane (E)	341	341
	2 - Caddick Road	35	35
	3 - School Lane (W)	366	366
	4 - Kitling Road	168	168
08:45-09:00	1 - School Lane (E)	341	341
	2 - Caddick Road	35	35
	3 - School Lane (W)	366	366
	4 - Kitling Road	168	168
09:00-09:15	1 - School Lane (E)	279	279
	2 - Caddick Road	29	29
	3 - School Lane (W)	298	298
	4 - Kitling Road	138	138
09:15-09:30	1 - School Lane (E)	233	233
	2 - Caddick Road	24	24
	3 - School Lane (W)	250	250
	4 - Kitling Road	115	115

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 - School Lane (E)	0.24	3.40	0.3	A	284	427
2 - Caddick Road	0.03	3.89	0.0	A	29	44
3 - School Lane (W)	0.25	3.53	0.4	A	305	457
4 - Kitling Road	0.10	2.68	0.1	A	140	211

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	233	58	136	1475	0.158	233	74	0.0	0.2	2.997	A
2 - Caddick Road	24	6	301	1366	0.018	24	68	0.0	0.0	3.616	A
3 - School Lane (W)	250	62	55	1488	0.168	249	270	0.0	0.2	3.153	A
4 - Kitling Road	115	29	95	1655	0.070	115	209	0.0	0.1	2.535	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	279	70	163	1459	0.191	278	89	0.2	0.2	3.155	A
2 - Caddick Road	29	7	360	1331	0.022	29	81	0.0	0.0	3.728	A
3 - School Lane (W)	298	75	66	1481	0.201	298	323	0.2	0.3	3.302	A
4 - Kitling Road	138	34	114	1644	0.084	137	250	0.1	0.1	2.593	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	341	85	199	1437	0.237	341	109	0.2	0.3	3.398	A
2 - Caddick Road	35	9	441	1282	0.027	35	99	0.0	0.0	3.893	A
3 - School Lane (W)	366	91	80	1473	0.248	365	396	0.3	0.4	3.527	A
4 - Kitling Road	168	42	140	1628	0.104	168	306	0.1	0.1	2.676	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	341	85	199	1437	0.238	341	109	0.3	0.3	3.399	A
2 - Caddick Road	35	9	442	1282	0.027	35	99	0.0	0.0	3.893	A
3 - School Lane (W)	366	91	80	1473	0.248	366	396	0.4	0.4	3.527	A

4 - Kitling Road	168	42	140	1628	0.104	168	306	0.1	0.1	2.676	A
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09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	279	70	163	1459	0.191	279	89	0.3	0.2	3.159	A
2 - Caddick Road	29	7	361	1330	0.022	29	81	0.0	0.0	3.732	A
3 - School Lane (W)	298	75	66	1481	0.201	299	324	0.4	0.3	3.306	A
4 - Kitling Road	138	34	114	1643	0.084	138	250	0.1	0.1	2.595	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	233	58	136	1475	0.158	234	75	0.2	0.2	3.001	A
2 - Caddick Road	24	6	302	1365	0.018	24	68	0.0	0.0	3.618	A
3 - School Lane (W)	250	62	55	1488	0.168	250	271	0.3	0.2	3.157	A
4 - Kitling Road	115	29	96	1655	0.070	115	209	0.1	0.1	2.536	A

2025 | Survey | 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	School Lane/ Caddick Road/ Kitling Road	Standard Roundabout		1, 2, 3, 4	3.05	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.05	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
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D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓
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Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - School Lane (E)		ONE HOUR	✓	89	100.000
2 - Caddick Road		ONE HOUR	✓	145	100.000
3 - School Lane (W)		ONE HOUR	✓	291	100.000
4 - Kitling Road		ONE HOUR	✓	251	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0	8	72	9
	2 - Caddick Road	42	0	80	23
	3 - School Lane (W)	184	19	0	88
	4 - Kitling Road	57	17	177	0

Proportions

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0.00	0.09	0.81	0.10
	2 - Caddick Road	0.29	0.00	0.55	0.16
	3 - School Lane (W)	0.63	0.07	0.00	0.30
	4 - Kitling Road	0.23	0.07	0.71	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0	0	3	0
	2 - Caddick Road	2	0	3	5
	3 - School Lane (W)	4	27	0	2
	4 - Kitling Road	0	6	2	0

Average PCU Per Veh

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	1.000	1.000	1.030	1.000
	2 - Caddick Road	1.020	1.000	1.030	1.050
	3 - School Lane (W)	1.040	1.270	1.000	1.020
	4 - Kitling Road	1.000	1.060	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	1 - School Lane (E)	67	67
	2 - Caddick Road	109	109

	3 - School Lane (W)	219	219
	4 - Kitling Road	189	189
16:45-17:00	1 - School Lane (E)	80	80
	2 - Caddick Road	130	130
	3 - School Lane (W)	262	262
	4 - Kitling Road	226	226
17:00-17:15	1 - School Lane (E)	98	98
	2 - Caddick Road	160	160
	3 - School Lane (W)	320	320
	4 - Kitling Road	276	276
17:15-17:30	1 - School Lane (E)	98	98
	2 - Caddick Road	160	160
	3 - School Lane (W)	320	320
	4 - Kitling Road	276	276
17:30-17:45	1 - School Lane (E)	80	80
	2 - Caddick Road	130	130
	3 - School Lane (W)	262	262
	4 - Kitling Road	226	226
17:45-18:00	1 - School Lane (E)	67	67
	2 - Caddick Road	109	109
	3 - School Lane (W)	219	219
	4 - Kitling Road	189	189

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 - School Lane (E)	0.07	2.80	0.1	A	82	123
2 - Caddick Road	0.12	3.05	0.1	A	133	200
3 - School Lane (W)	0.22	3.27	0.3	A	267	401
4 - Kitling Road	0.18	2.88	0.2	A	230	345

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	67	17	160	1461	0.046	67	212	0.0	0.0	2.644	A
2 - Caddick Road	109	27	194	1430	0.076	109	33	0.0	0.1	2.806	A
3 - School Lane (W)	219	55	56	1487	0.147	218	247	0.0	0.2	2.966	A

4 - Kitling Road	189	47	184	1600	0.118	188	90	0.0	0.1	2.596	A
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16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	80	20	191	1442	0.055	80	254	0.0	0.1	2.706	A
2 - Caddick Road	130	33	232	1408	0.093	130	40	0.1	0.1	2.903	A
3 - School Lane (W)	262	65	66	1481	0.177	261	296	0.2	0.2	3.088	A
4 - Kitling Road	226	56	220	1578	0.143	226	108	0.1	0.2	2.710	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	98	24	234	1416	0.069	98	311	0.1	0.1	2.796	A
2 - Caddick Road	160	40	284	1376	0.116	160	48	0.1	0.1	3.047	A
3 - School Lane (W)	320	80	81	1472	0.218	320	362	0.2	0.3	3.268	A
4 - Kitling Road	276	69	270	1547	0.179	276	132	0.2	0.2	2.884	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	98	24	235	1416	0.069	98	312	0.1	0.1	2.796	A
2 - Caddick Road	160	40	284	1376	0.116	160	48	0.1	0.1	3.047	A
3 - School Lane (W)	320	80	81	1472	0.218	320	362	0.3	0.3	3.268	A
4 - Kitling Road	276	69	270	1547	0.179	276	132	0.2	0.2	2.884	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	80	20	192	1442	0.056	80	255	0.1	0.1	2.707	A
2 - Caddick Road	130	33	232	1407	0.093	130	40	0.1	0.1	2.906	A
3 - School Lane (W)	262	65	67	1481	0.177	262	296	0.3	0.2	3.089	A
4 - Kitling Road	226	56	220	1577	0.143	226	108	0.2	0.2	2.711	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	67	17	160	1460	0.046	67	213	0.1	0.0	2.647	A
2 - Caddick Road	109	27	194	1430	0.076	109	33	0.1	0.1	2.809	A
3 - School Lane (W)	219	55	56	1487	0.147	219	248	0.2	0.2	2.972	A
4 - Kitling Road	189	47	185	1600	0.118	189	90	0.2	0.1	2.597	A

2030 | No Dev | 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	School Lane/ Caddick Road/ Kitling Road	Standard Roundabout		1, 2, 3, 4	3.42	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.42	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - School Lane (E)		ONE HOUR	✓	330	100.000
2 - Caddick Road		ONE HOUR	✓	37	100.000
3 - School Lane (W)		ONE HOUR	✓	353	100.000
4 - Kitling Road		ONE HOUR	✓	163	100.000

Origin-Destination Data

Demand (PCU/hr)		Proportions	
	To		To

From		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
	1 - School Lane (E)	0	32	231	67
	2 - Caddick Road	5	0	23	9
	3 - School Lane (W)	89	40	0	224
	4 - Kitling Road	11	23	129	0

From		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
	1 - School Lane (E)	0.00	0.10	0.70	0.20
	2 - Caddick Road	0.14	0.00	0.62	0.24
	3 - School Lane (W)	0.25	0.11	0.00	0.63
	4 - Kitling Road	0.07	0.14	0.79	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
	1 - School Lane (E)	0	3	4	2
	2 - Caddick Road	0	0	47	33
	3 - School Lane (W)	11	12	0	7
	4 - Kitling Road	0	0	11	0

Average PCU Per Veh

From	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
	1 - School Lane (E)	1.000	1.030	1.040	1.020
	2 - Caddick Road	1.000	1.000	1.470	1.330
	3 - School Lane (W)	1.110	1.120	1.000	1.070
	4 - Kitling Road	1.000	1.000	1.110	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1 - School Lane (E)	248	248
	2 - Caddick Road	28	28
	3 - School Lane (W)	266	266
	4 - Kitling Road	123	123
08:15-08:30	1 - School Lane (E)	297	297
	2 - Caddick Road	33	33
	3 - School Lane (W)	317	317
	4 - Kitling Road	147	147
08:30-08:45	1 - School Lane (E)	363	363
	2 - Caddick Road	41	41
	3 - School Lane (W)	389	389
	4 - Kitling Road	179	179
08:45-09:00	1 - School Lane (E)	363	363
	2 - Caddick Road	41	41
	3 - School Lane (W)	389	389
	4 - Kitling Road	179	179

09:00-09:15	1 - School Lane (E)	297	297
	2 - Caddick Road	33	33
	3 - School Lane (W)	317	317
	4 - Kitling Road	147	147
09:15-09:30	1 - School Lane (E)	248	248
	2 - Caddick Road	28	28
	3 - School Lane (W)	266	266
	4 - Kitling Road	123	123

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 - School Lane (E)	0.25	3.49	0.4	A	303	454
2 - Caddick Road	0.03	3.97	0.0	A	34	51
3 - School Lane (W)	0.26	3.62	0.4	A	324	486
4 - Kitling Road	0.11	2.71	0.1	A	150	224

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	248	62	144	1470	0.169	248	79	0.0	0.2	3.046	A
2 - Caddick Road	28	7	320	1355	0.021	28	71	0.0	0.0	3.661	A
3 - School Lane (W)	266	66	61	1484	0.179	265	287	0.0	0.2	3.203	A
4 - Kitling Road	123	31	101	1652	0.074	122	225	0.0	0.1	2.553	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	297	74	173	1453	0.204	296	94	0.2	0.3	3.220	A
2 - Caddick Road	33	8	384	1317	0.025	33	85	0.0	0.0	3.784	A
3 - School Lane (W)	317	79	73	1477	0.215	317	344	0.2	0.3	3.367	A
4 - Kitling Road	147	37	120	1640	0.089	146	269	0.1	0.1	2.615	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	363	91	211	1430	0.254	363	116	0.3	0.4	3.492	A
2 - Caddick Road	41	10	470	1265	0.032	41	105	0.0	0.0	3.967	A
3 - School Lane (W)	389	97	89	1468	0.265	388	421	0.3	0.4	3.619	A
4 - Kitling Road	179	45	147	1623	0.111	179	330	0.1	0.1	2.705	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	363	91	211	1430	0.254	363	116	0.4	0.4	3.492	A
2 - Caddick Road	41	10	470	1265	0.032	41	105	0.0	0.0	3.968	A
3 - School Lane (W)	389	97	89	1468	0.265	389	422	0.4	0.4	3.619	A
4 - Kitling Road	179	45	148	1623	0.111	179	330	0.1	0.1	2.706	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	297	74	173	1453	0.204	297	94	0.4	0.3	3.225	A
2 - Caddick Road	33	8	384	1316	0.025	33	85	0.0	0.0	3.786	A
3 - School Lane (W)	317	79	73	1477	0.215	318	345	0.4	0.3	3.372	A
4 - Kitling Road	147	37	121	1640	0.089	147	270	0.1	0.1	2.618	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	248	62	145	1470	0.169	249	79	0.3	0.2	3.050	A
2 - Caddick Road	28	7	322	1354	0.021	28	72	0.0	0.0	3.663	A
3 - School Lane (W)	266	66	61	1484	0.179	266	289	0.3	0.2	3.210	A
4 - Kitling Road	123	31	101	1652	0.074	123	226	0.1	0.1	2.554	A

2030 | No Dev | 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	School Lane/ Caddick Road/ Kitling Road	Standard Roundabout		1, 2, 3, 4	3.11	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.11	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - School Lane (E)		ONE HOUR	✓	96	100.000
2 - Caddick Road		ONE HOUR	✓	154	100.000
3 - School Lane (W)		ONE HOUR	✓	310	100.000
4 - Kitling Road		ONE HOUR	✓	267	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
	1 - School Lane (E)	0	9	77	10
	2 - Caddick Road	45	0	85	24
	3 - School Lane (W)	196	20	0	94
	4 - Kitling Road	61	18	188	0

Proportions

From	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
	1 - School Lane (E)	0.00	0.09	0.80	0.10
	2 - Caddick Road	0.29	0.00	0.55	0.16
	3 - School Lane (W)	0.63	0.06	0.00	0.30
	4 - Kitling Road	0.23	0.07	0.70	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0	0	3	0
	2 - Caddick Road	2	0	3	5
	3 - School Lane (W)	4	27	0	2
	4 - Kitling Road	0	6	2	0

Average PCU Per Veh

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	1.000	1.000	1.030	1.000
	2 - Caddick Road	1.020	1.000	1.030	1.050
	3 - School Lane (W)	1.040	1.270	1.000	1.020
	4 - Kitling Road	1.000	1.060	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	1 - School Lane (E)	72	72
	2 - Caddick Road	116	116
	3 - School Lane (W)	233	233
	4 - Kitling Road	201	201
16:45-17:00	1 - School Lane (E)	86	86
	2 - Caddick Road	138	138
	3 - School Lane (W)	279	279
	4 - Kitling Road	240	240
17:00-17:15	1 - School Lane (E)	106	106
	2 - Caddick Road	170	170
	3 - School Lane (W)	341	341
	4 - Kitling Road	294	294
17:15-17:30	1 - School Lane (E)	106	106
	2 - Caddick Road	170	170
	3 - School Lane (W)	341	341
	4 - Kitling Road	294	294
17:30-17:45	1 - School Lane (E)	86	86
	2 - Caddick Road	138	138
	3 - School Lane (W)	279	279
	4 - Kitling Road	240	240
17:45-18:00	1 - School Lane (E)	72	72
	2 - Caddick Road	116	116
	3 - School Lane (W)	233	233
	4 - Kitling Road	201	201

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 - School Lane (E)	0.08	2.83	0.1	A	88	132

2 - Caddick Road	0.12	3.10	0.1	A	141	212
3 - School Lane (W)	0.23	3.34	0.3	A	284	427
4 - Kitling Road	0.19	2.95	0.2	A	245	368

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	72	18	170	1455	0.050	72	227	0.0	0.1	2.665	A
2 - Caddick Road	116	29	206	1423	0.081	116	35	0.0	0.1	2.837	A
3 - School Lane (W)	233	58	59	1485	0.157	233	263	0.0	0.2	3.005	A
4 - Kitling Road	201	50	196	1593	0.126	200	96	0.0	0.1	2.630	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	86	22	203	1435	0.060	86	271	0.1	0.1	2.732	A
2 - Caddick Road	138	35	247	1398	0.099	138	42	0.1	0.1	2.942	A
3 - School Lane (W)	279	70	71	1478	0.189	278	314	0.2	0.2	3.138	A
4 - Kitling Road	240	60	234	1569	0.153	240	115	0.1	0.2	2.757	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	106	26	249	1407	0.075	106	332	0.1	0.1	2.831	A
2 - Caddick Road	170	42	303	1365	0.124	169	52	0.1	0.1	3.100	A
3 - School Lane (W)	341	85	87	1469	0.232	341	385	0.2	0.3	3.337	A
4 - Kitling Road	294	73	287	1536	0.191	294	141	0.2	0.2	2.950	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
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1 - School Lane (E)	106	26	249	1407	0.075	106	333	0.1	0.1	2.831	A
2 - Caddick Road	170	42	303	1365	0.124	170	52	0.1	0.1	3.101	A
3 - School Lane (W)	341	85	87	1469	0.232	341	385	0.3	0.3	3.338	A
4 - Kitling Road	294	73	287	1536	0.191	294	141	0.2	0.2	2.950	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	86	22	203	1435	0.060	86	272	0.1	0.1	2.733	A
2 - Caddick Road	138	35	247	1398	0.099	139	42	0.1	0.1	2.946	A
3 - School Lane (W)	279	70	71	1478	0.189	279	315	0.3	0.2	3.142	A
4 - Kitling Road	240	60	235	1568	0.153	240	115	0.2	0.2	2.759	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	72	18	170	1455	0.050	72	228	0.1	0.1	2.668	A
2 - Caddick Road	116	29	207	1422	0.082	116	35	0.1	0.1	2.838	A
3 - School Lane (W)	233	58	60	1485	0.157	234	264	0.2	0.2	3.009	A
4 - Kitling Road	201	50	197	1592	0.126	201	96	0.2	0.1	2.634	A

2030 | With Dev | 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	School Lane/ Caddick Road/ Kitling Road	Standard Roundabout		1, 2, 3, 4	3.65	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.65	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - School Lane (E)		ONE HOUR	✓	422	100.000
2 - Caddick Road		ONE HOUR	✓	37	100.000
3 - School Lane (W)		ONE HOUR	✓	387	100.000
4 - Kitling Road		ONE HOUR	✓	163	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0	32	322	68
	2 - Caddick Road	5	0	23	9
	3 - School Lane (W)	123	40	0	224
	4 - Kitling Road	11	23	129	0

Proportions

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0.00	0.08	0.76	0.16
	2 - Caddick Road	0.14	0.00	0.62	0.24
	3 - School Lane (W)	0.32	0.10	0.00	0.58
	4 - Kitling Road	0.07	0.14	0.79	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0	3	4	2
	2 - Caddick Road	0	0	47	33
	3 - School Lane (W)	11	12	0	7
	4 - Kitling Road	0	0	11	0

Average PCU Per Veh

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	1.000	1.030	1.040	1.020
	2 - Caddick Road	1.000	1.000	1.470	1.330
	3 - School Lane (W)	1.110	1.120	1.000	1.070
	4 - Kitling Road	1.000	1.000	1.110	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1 - School Lane (E)	318	318
	2 - Caddick Road	28	28
	3 - School Lane (W)	291	291
	4 - Kitling Road	123	123
08:15-08:30	1 - School Lane (E)	379	379
	2 - Caddick Road	33	33
	3 - School Lane (W)	348	348
	4 - Kitling Road	147	147
08:30-08:45	1 - School Lane (E)	465	465
	2 - Caddick Road	41	41
	3 - School Lane (W)	426	426
	4 - Kitling Road	179	179
08:45-09:00	1 - School Lane (E)	465	465
	2 - Caddick Road	41	41
	3 - School Lane (W)	426	426
	4 - Kitling Road	179	179
09:00-09:15	1 - School Lane (E)	379	379
	2 - Caddick Road	33	33
	3 - School Lane (W)	348	348
	4 - Kitling Road	147	147
09:15-09:30	1 - School Lane (E)	318	318
	2 - Caddick Road	28	28
	3 - School Lane (W)	291	291
	4 - Kitling Road	123	123

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 - School Lane (E)	0.32	3.86	0.5	A	387	581
2 - Caddick Road	0.03	4.17	0.0	A	34	51
3 - School Lane (W)	0.29	3.76	0.4	A	355	533
4 - Kitling Road	0.11	2.75	0.1	A	150	224

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	318	79	144	1470	0.216	317	104	0.0	0.3	3.229	A

2 - Caddick Road	28	7	389	1313	0.021	28	71	0.0	0.0	3.778	A
3 - School Lane (W)	291	73	62	1484	0.196	290	356	0.0	0.3	3.277	A
4 - Kitling Road	123	31	126	1636	0.075	122	226	0.0	0.1	2.580	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	379	95	173	1453	0.261	379	125	0.3	0.4	3.472	A
2 - Caddick Road	33	8	466	1267	0.026	33	85	0.0	0.0	3.936	A
3 - School Lane (W)	348	87	74	1477	0.236	348	426	0.3	0.3	3.467	A
4 - Kitling Road	147	37	151	1621	0.090	146	270	0.1	0.1	2.649	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	465	116	211	1430	0.325	464	153	0.4	0.5	3.860	A
2 - Caddick Road	41	10	571	1205	0.034	41	104	0.0	0.0	4.173	A
3 - School Lane (W)	426	107	90	1467	0.290	426	521	0.3	0.4	3.756	A
4 - Kitling Road	179	45	185	1600	0.112	179	331	0.1	0.1	2.750	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	465	116	211	1430	0.325	465	153	0.5	0.5	3.863	A
2 - Caddick Road	41	10	571	1205	0.034	41	105	0.0	0.0	4.174	A
3 - School Lane (W)	426	107	90	1467	0.290	426	522	0.4	0.4	3.759	A
4 - Kitling Road	179	45	185	1599	0.112	179	331	0.1	0.1	2.750	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	379	95	173	1453	0.261	380	125	0.5	0.4	3.476	A
2 - Caddick Road	33	8	467	1267	0.026	33	86	0.0	0.0	3.940	A
3 - School Lane (W)	348	87	74	1477	0.236	348	427	0.4	0.3	3.472	A

4 - Kitling Road	147	37	151	1620	0.090	147	271	0.1	0.1	2.652	A
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09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	318	79	145	1470	0.216	318	105	0.4	0.3	3.240	A
2 - Caddick Road	28	7	391	1312	0.021	28	72	0.0	0.0	3.785	A
3 - School Lane (W)	291	73	62	1484	0.196	292	357	0.3	0.3	3.284	A
4 - Kitling Road	123	31	127	1636	0.075	123	227	0.1	0.1	2.581	A

2030 | With Dev | 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	School Lane/ Caddick Road/ Kitling Road	Standard Roundabout		1, 2, 3, 4	3.31	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.31	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - School Lane (E)		ONE HOUR	✓	139	100.000
2 - Caddick Road		ONE HOUR	✓	155	100.000
3 - School Lane (W)		ONE HOUR	✓	393	100.000
4 - Kitling Road		ONE HOUR	✓	268	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0	10	119	10
	2 - Caddick Road	46	0	85	24
	3 - School Lane (W)	279	20	0	94
	4 - Kitling Road	62	18	188	0

Proportions

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0.00	0.07	0.86	0.07
	2 - Caddick Road	0.30	0.00	0.55	0.15
	3 - School Lane (W)	0.71	0.05	0.00	0.24
	4 - Kitling Road	0.23	0.07	0.70	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	0	0	3	0
	2 - Caddick Road	2	0	3	5
	3 - School Lane (W)	4	27	0	2
	4 - Kitling Road	0	6	2	0

Average PCU Per Veh

	To				
		1 - School Lane (E)	2 - Caddick Road	3 - School Lane (W)	4 - Kitling Road
From	1 - School Lane (E)	1.000	1.000	1.030	1.000
	2 - Caddick Road	1.020	1.000	1.030	1.050
	3 - School Lane (W)	1.040	1.270	1.000	1.020
	4 - Kitling Road	1.000	1.060	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	1 - School Lane (E)	105	105
	2 - Caddick Road	117	117
	3 - School Lane (W)	296	296
	4 - Kitling Road	202	202
16:45-17:00	1 - School Lane (E)	125	125
	2 - Caddick Road	139	139
	3 - School Lane (W)	353	353
	4 - Kitling Road	241	241
17:00-17:15	1 - School Lane (E)	153	153
	2 - Caddick Road	171	171
	3 - School Lane (W)	433	433
	4 - Kitling Road	295	295
17:15-17:30	1 - School Lane (E)	153	153
	2 - Caddick Road	171	171

	3 - School Lane (W)	433	433
	4 - Kitling Road	295	295
17:30-17:45	1 - School Lane (E)	125	125
	2 - Caddick Road	139	139
	3 - School Lane (W)	353	353
	4 - Kitling Road	241	241
17:45-18:00	1 - School Lane (E)	105	105
	2 - Caddick Road	117	117
	3 - School Lane (W)	296	296
	4 - Kitling Road	202	202

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 - School Lane (E)	0.11	2.94	0.1	A	128	191
2 - Caddick Road	0.13	3.18	0.2	A	142	213
3 - School Lane (W)	0.29	3.63	0.4	A	361	541
4 - Kitling Road	0.20	3.10	0.3	A	246	369

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	105	26	170	1455	0.072	104	290	0.0	0.1	2.733	A
2 - Caddick Road	117	29	238	1404	0.083	116	36	0.0	0.1	2.880	A
3 - School Lane (W)	296	74	60	1485	0.199	295	294	0.0	0.3	3.158	A
4 - Kitling Road	202	50	259	1553	0.130	201	96	0.0	0.2	2.708	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	125	31	203	1435	0.087	125	348	0.1	0.1	2.818	A
2 - Caddick Road	139	35	285	1376	0.101	139	43	0.1	0.1	2.998	A
3 - School Lane (W)	353	88	72	1478	0.239	353	352	0.3	0.3	3.343	A

4 - Kitling Road	241	60	310	1522	0.158	241	115	0.2	0.2	2.860	A
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17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	153	38	249	1407	0.109	153	426	0.1	0.1	2.942	A
2 - Caddick Road	171	43	349	1338	0.128	171	53	0.1	0.2	3.176	A
3 - School Lane (W)	433	108	88	1469	0.295	432	431	0.3	0.4	3.627	A
4 - Kitling Road	295	74	379	1478	0.200	295	141	0.2	0.3	3.096	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	153	38	249	1407	0.109	153	426	0.1	0.1	2.943	A
2 - Caddick Road	171	43	349	1337	0.128	171	53	0.2	0.2	3.177	A
3 - School Lane (W)	433	108	88	1468	0.295	433	432	0.4	0.4	3.630	A
4 - Kitling Road	295	74	380	1478	0.200	295	141	0.3	0.3	3.097	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	125	31	203	1435	0.087	125	348	0.1	0.1	2.821	A
2 - Caddick Road	139	35	285	1376	0.101	139	43	0.2	0.1	2.999	A
3 - School Lane (W)	353	88	72	1478	0.239	354	353	0.4	0.3	3.346	A
4 - Kitling Road	241	60	311	1521	0.158	241	115	0.3	0.2	2.864	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - School Lane (E)	105	26	170	1455	0.072	105	292	0.1	0.1	2.734	A
2 - Caddick Road	117	29	239	1403	0.083	117	36	0.1	0.1	2.884	A
3 - School Lane (W)	296	74	60	1485	0.199	296	295	0.3	0.3	3.164	A
4 - Kitling Road	202	50	260	1553	0.130	202	96	0.2	0.2	2.712	A

Appendix O

J3: Knowsley Lane/ School Lane/ Tithebarn Road

JUNCTIONS Modelling Outputs



Junctions 11									
PICADY 11 - Priority Intersection Module									
Version: 11.0.0.2177									
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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
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Filename: J3_Knowsley Rd-School Ln-Tithebarn Rd.j11

Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025 Projects\A25007 Home Farm Road, Knowsley Village\Analysis\JUNCTIONS

Report generation date: 31/07/2025 11:54:17

»2025 | Survey | AM
 »2025 | Survey | PM
 »2030 | No Dev | AM
 »2030 | No Dev | PM
 »2030 | With Dev | AM
 »2030 | With Dev | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025 - Survey									
Stream B-ACD	D1	0.6	22.21	0.39	C	D2	0.3	20.35	0.20	C
Stream A-BCD		0.3	5.02	0.11	A		0.0	4.40	0.02	A
Stream D-A		0.0	7.83	0.04	A		0.0	9.22	0.04	A
Stream D-BC		0.5	17.21	0.30	C		4.4	57.04	0.84	F
Stream C-ABD		0.0	4.22	0.02	A		0.1	5.32	0.05	A
	2030 - No Dev									
Stream B-ACD	D3	0.8	25.64	0.44	D	D4	0.3	23.01	0.22	C
Stream A-BCD		0.3	4.99	0.13	A		0.0	4.34	0.03	A
Stream D-A		0.0	8.10	0.04	A		0.1	9.75	0.04	A
Stream D-BC		0.6	19.18	0.34	C		7.7	92.65	0.92	F
Stream C-ABD		0.0	4.16	0.03	A		0.1	5.29	0.05	A
	2030 - With Dev									
Stream B-ACD	D5	1.0	32.74	0.50	D	D6	0.4	33.06	0.29	D
Stream A-BCD		0.4	5.09	0.14	A		0.0	4.30	0.03	A
Stream D-A		0.1	8.83	0.05	A		0.1	9.93	0.04	A
Stream D-BC		1.0	27.09	0.50	D		40.0	353.11	1.20	F
Stream C-ABD		0.0	3.94	0.03	A		0.1	5.34	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.

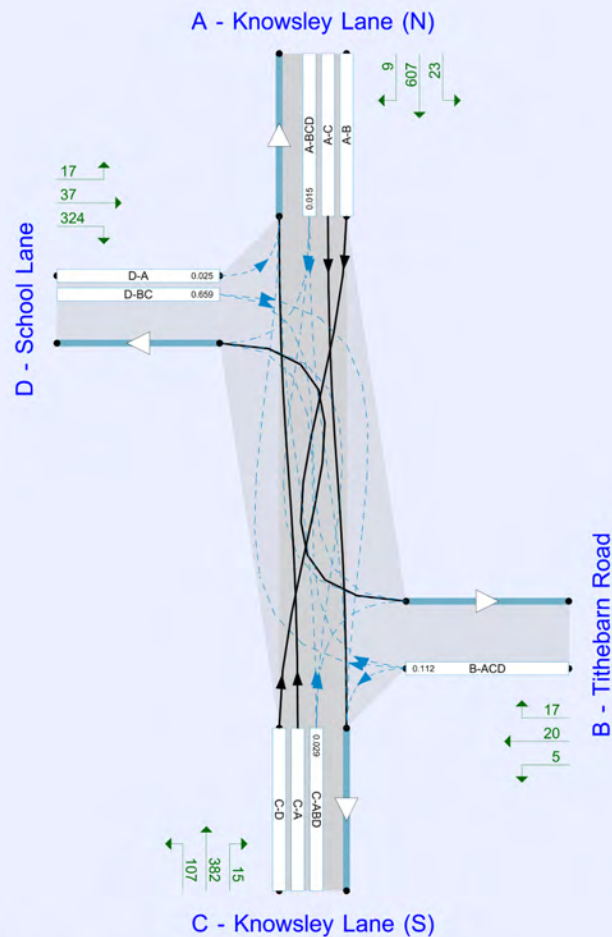
File summary

File Description

Title	
Location	
Site number	
Date	12/06/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\OliverMcLaughlin
Description	

Units

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



Analysis Options

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

Demand Set Summary

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2025 | Survey | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ School Lane/ Tithebarn Road	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		3.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.22	A

Arms

Arms

Arm	Name	Description	Arm type
A	Knowsley Lane (N)		Major
B	Tithebarn Road		Minor
C	Knowsley Lane (S)		Major
D	School Lane		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A - Knowsley Lane (N)	6.00			250.0	✓	0.00
C - Knowsley Lane (S)	6.00			190.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B - Tithebarn Road	One lane	3.08			0	0
D - School Lane	Two lanes		3.56	4.00	48	81

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
A-D	719	-	-	-	0.278	0.278	0.278	-	0.278	-	-
B-AD	482	0.088	0.222	-	-	-	0.140	0.317	0.140	0.088	0.222
B-C	629	0.096	0.244	-	-	-	-	-	-	0.096	0.244
C-B	684	0.265	0.265	-	-	-	-	-	-	0.265	0.265
D-A	713	-	-	-	0.276	0.109	0.276	-	0.109	-	-
D-BC	587	0.170	0.170	0.386	0.270	0.107	0.270	-	0.107	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	502	100.000
B - Tithebarn Road		ONE HOUR	✓	94	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	615	100.000
D - School Lane		ONE HOUR	✓	109	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	16	449	37
	B - Tithebarn Road	17	0	7	70
	C - Knowsley Lane (S)	407	7	0	201
	D - School Lane	19	26	64	0

Proportions

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D Sch Lan
	A - Knowsley Lane (N)	0.00	0.03	0.89	0.0
	B - Tithebarn Road	0.18	0.00	0.07	0.7
	C - Knowsley Lane (S)	0.66	0.01	0.00	0.3
	D - School Lane	0.17	0.24	0.59	0.0

Vehicle Mix

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

Heavy Vehicle %

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	7	3	9
	B - Tithebarn Road	0	0	0	0
	C - Knowsley Lane (S)	5	0	0	4
	D - School Lane	6	4	10	0

Average PCU Per Veh

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D Sch Lan
	A - Knowsley Lane (N)	1.000	1.070	1.030	1.0
	B - Tithebarn Road	1.000	1.000	1.000	1.0
	C - Knowsley Lane (S)	1.050	1.000	1.000	1.0
	D - School Lane	1.060	1.040	1.100	1.0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	378	378
	B - Tithebarn Road	71	71
	C - Knowsley Lane (S)	463	463
	D - School Lane	82	82
08:15-08:30	A - Knowsley Lane (N)	451	451
	B - Tithebarn Road	85	85
	C - Knowsley Lane (S)	553	553
	D - School Lane	98	98
08:30-08:45	A - Knowsley Lane (N)	553	553
	B - Tithebarn Road	103	103
	C - Knowsley Lane (S)	677	677
	D - School Lane	120	120
08:45-09:00	A - Knowsley Lane (N)	553	553
	B - Tithebarn Road	103	103
	C - Knowsley Lane (S)	677	677
	D - School Lane	120	120
09:00-09:15	A - Knowsley Lane (N)	451	451
	B - Tithebarn Road	85	85
	C - Knowsley Lane (S)	553	553
	D - School Lane	98	98
09:15-09:30	A - Knowsley Lane (N)	378	378
	B - Tithebarn Road	71	71
	C - Knowsley Lane (S)	463	463
	D - School Lane	82	82

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-ACD	0.39	22.21	0.6	C	86	129
A-BCD	0.11	5.02	0.3	A	72	107
A-B					13	20
A-C					376	563
D-A	0.04	7.83	0.0	A	17	26
D-BC	0.30	17.21	0.5	C	83	124
C-ABD	0.02	4.22	0.0	A	17	25
C-D					181	272
C-A					367	550

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	71	18	0.00	337	0.210	70	0.0	0.3	13.399	B
ABCD	49	12	0.00	812	0.060	49	0.0	0.1	5.019	A
AB	11	3	0.00			11				
AC	318	79	0.00			318				
D-A	14	4	0.00	577	0.025	14	0.0	0.0	6.776	A
D-BC	68	17	0.00	408	0.166	67	0.0	0.2	11.379	B
C-ABD	11	3	0.00	885	0.012	11	0.0	0.0	4.214	A
C-D	149	37	0.00			149				
C-A	303	76	0.00			303				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	85	21	0.00	307	0.275	84	0.3	0.4	16.097	C
ABCD	67	17	0.00	836	0.080	67	0.1	0.2	4.969	A
AB	13	3	0.00			13				
AC	371	93	0.00			371				
D-A	17	4	0.00	549	0.031	17	0.0	0.0	7.173	A
D-BC	81	20	0.00	374	0.217	81	0.2	0.3	13.280	B
C-ABD	15	4	0.00	931	0.016	15	0.0	0.0	4.033	A
C-D	178	44	0.00			178				
C-A	360	90	0.00			360				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	103	26	0.00	266	0.390	103	0.4	0.6	21.940	C
ABCD	99	25	0.00	874	0.113	98	0.2	0.3	4.913	A
AB	16	4	0.00			16				
AC	438	110	0.00			438				
D-A	21	5	0.00	509	0.041	21	0.0	0.0	7.824	A
D-BC	99	25	0.00	326	0.304	98	0.3	0.5	17.092	C
C-ABD	24	6	0.00	997	0.024	23	0.0	0.0	3.805	A
C-D	216	54	0.00			216				
C-A	438	109	0.00			438				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	103	26	0.00	265	0.390	103	0.6	0.6	22.210	C
ABCD	99	25	0.00	874	0.113	99	0.3	0.3	4.909	A
AB	16	4	0.00			16				
AC	438	109	0.00			438				
D-A	21	5	0.00	508	0.041	21	0.0	0.0	7.831	A
D-BC	99	25	0.00	325	0.305	99	0.5	0.5	17.206	C
C-ABD	24	6	0.00	997	0.024	24	0.0	0.0	3.814	A
C-D	216	54	0.00			216				
C-A	438	109	0.00			438				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	85	21	0.00	307	0.275	85	0.6	0.4	16.321	C
ABCD	67	17	0.00	836	0.080	67	0.3	0.2	4.952	A
AB	13	3	0.00			13				
AC	371	93	0.00			371				
D-A	17	4	0.00	548	0.031	17	0.0	0.0	7.183	A
D-BC	81	20	0.00	373	0.217	82	0.5	0.3	13.384	B
C-ABD	15	4	0.00	930	0.016	15	0.0	0.0	4.051	A
C-D	178	44	0.00			178				
C-A	360	90	0.00			360				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	71	18	0.00	337	0.210	71	0.4	0.3	13.569	B
ABCD	49	12	0.00	812	0.061	49	0.2	0.1	5.017	A
AB	11	3	0.00			11				
AC	317	79	0.00			317				
D-A	14	4	0.00	577	0.025	14	0.0	0.0	6.788	A
D-BC	68	17	0.00	408	0.166	68	0.3	0.2	11.469	B
C-ABD	11	3	0.00	885	0.012	11	0.0	0.0	4.224	A
C-D	149	37	0.00			149				
C-A	303	76	0.00			303				

2025 | Survey | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ School Lane/ Tithebarn Road	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		12.75	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.75	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	572	100.000
B - Tithebarn Road		ONE HOUR	✓	41	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	418	100.000
D - School Lane		ONE HOUR	✓	290	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	22	542	8
	B - Tithebarn Road	17	0	5	19
	C - Knowsley Lane (S)	344	14	0	60
	D - School Lane	16	50	224	0

Proportions

	To				
		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
From	A - Knowsley Lane (N)	0.00	0.04	0.95	0.0
	B - Tithebarn Road	0.41	0.00	0.12	0.4
	C - Knowsley Lane (S)	0.82	0.03	0.00	0.1
	D - School Lane	0.06	0.17	0.77	0.0

Vehicle Mix

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

Heavy Vehicle %

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	5	4	14
	B - Tithebarn Road	13	0	0	0
	C - Knowsley Lane (S)	3	8	0	2
	D - School Lane	14	2	3	0

Average PCU Per Veh

From	To				
		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	1.000	1.050	1.040	1.1
	B - Tithebarn Road	1.130	1.000	1.000	1.0
	C - Knowsley Lane (S)	1.030	1.080	1.000	1.0
	D - School Lane	1.140	1.020	1.030	1.0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (N)	431	431
	B - Tithebarn Road	31	31
	C - Knowsley Lane (S)	315	315
	D - School Lane	218	218
16:45-17:00	A - Knowsley Lane (N)	514	514
	B - Tithebarn Road	37	37
	C - Knowsley Lane (S)	376	376
	D - School Lane	261	261
17:00-17:15	A - Knowsley Lane (N)	630	630
	B - Tithebarn Road	45	45
	C - Knowsley Lane (S)	460	460
	D - School Lane	319	319
17:15-17:30	A - Knowsley Lane (N)	630	630
	B - Tithebarn Road	45	45
	C - Knowsley Lane (S)	460	460
	D - School Lane	319	319
17:30-17:45	A - Knowsley Lane (N)	514	514
	B - Tithebarn Road	37	37
	C - Knowsley Lane (S)	376	376
	D - School Lane	261	261
17:45-18:00	A - Knowsley Lane (N)	431	431
	B - Tithebarn Road	31	31
	C - Knowsley Lane (S)	315	315
	D - School Lane	218	218

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-ACD	0.20	20.35	0.3	C	38	56
ABCD	0.02	4.40	0.0	A	17	25
AB					20	30
AC					488	733
D-A	0.04	9.22	0.0	A	15	22
D-BC	0.84	57.04	4.4	F	251	377
C-ABD	0.05	5.32	0.1	A	26	40
C-D					53	80
C-A					304	456

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	31	8	0.00	318	0.097	30	0.0	0.1	13.140	B
ABCD	11	3	0.00	903	0.013	11	0.0	0.0	4.402	A
A-B	16	4	0.00			16				
A-C	403	101	0.00			403				
D-A	12	3	0.00	556	0.022	12	0.0	0.0	7.544	A
D-BC	206	52	0.00	432	0.477	203	0.0	0.9	15.874	C
C-ABD	18	5	0.00	734	0.025	18	0.0	0.0	5.322	A
C-D	44	11	0.00			44				
C-A	253	63	0.00			253				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	37	9	0.00	282	0.131	37	0.1	0.2	15.400	C
ABCD	16	4	0.00	944	0.016	16	0.0	0.0	4.214	A
A-B	19	5	0.00			19				
A-C	479	120	0.00			479				
D-A	14	4	0.00	520	0.028	14	0.0	0.0	8.120	A
D-BC	246	62	0.00	402	0.612	244	0.9	1.5	22.972	C
C-ABD	25	6	0.00	749	0.033	24	0.0	0.0	5.245	A
C-D	52	13	0.00			52				
C-A	299	75	0.00			299				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	45	11	0.00	233	0.194	45	0.2	0.2	20.058	C
ABCD	23	6	0.00	1003	0.023	23	0.0	0.0	3.964	A
A-B	24	6	0.00			24				
A-C	583	146	0.00			583				
D-A	18	4	0.00	467	0.038	18	0.0	0.0	9.132	A
D-BC	302	75	0.00	361	0.836	292	1.5	4.0	47.910	E
C-ABD	36	9	0.00	775	0.047	36	0.0	0.1	5.128	A
C-D	63	16	0.00			63				
C-A	361	90	0.00			361				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	45	11	0.00	231	0.196	45	0.2	0.3	20.353	C
ABCD	23	6	0.00	1003	0.023	23	0.0	0.0	3.952	A
A-B	24	6	0.00			24				
A-C	583	146	0.00			583				
D-A	18	4	0.00	463	0.038	18	0.0	0.0	9.219	A
D-BC	302	75	0.00	361	0.836	300	4.0	4.4	57.042	F
C-ABD	37	9	0.00	773	0.047	37	0.1	0.1	5.134	A
C-D	63	16	0.00			63				
C-A	361	90	0.00			361				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	37	9	0.00	279	0.132	37	0.3	0.2	15.651	C
ABCD	16	4	0.00	944	0.017	16	0.0	0.0	4.184	A
AB	19	5	0.00			19				
AC	479	120	0.00			479				
D-A	14	4	0.00	514	0.028	14	0.0	0.0	8.213	A
D-BC	246	62	0.00	402	0.612	257	4.4	1.7	27.133	D
C-ABD	25	6	0.00	746	0.033	25	0.1	0.0	5.247	A
C-D	52	13	0.00			52				
C-A	299	75	0.00			299				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	31	8	0.00	316	0.098	31	0.2	0.1	13.263	B
ABCD	11	3	0.00	903	0.013	11	0.0	0.0	4.388	A
AB	16	4	0.00			16				
AC	403	101	0.00			403				
D-A	12	3	0.00	553	0.022	12	0.0	0.0	7.585	A
D-BC	206	52	0.00	432	0.477	209	1.7	1.0	16.817	C
C-ABD	18	5	0.00	732	0.025	18	0.0	0.0	5.325	A
C-D	44	11	0.00			44				
C-A	253	63	0.00			253				

2030 | No Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ School Lane/ Tithebarn Road	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		3.62	A

Junction Network

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	534	100.000
B - Tithebarn Road		ONE HOUR	✓	100	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	654	100.000
D - School Lane		ONE HOUR	✓	116	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	17	478	39
	B - Tithebarn Road	18	0	7	75
	C - Knowsley Lane (S)	433	7	0	214
	D - School Lane	20	28	68	0

Proportions

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D Sch Lan
	A - Knowsley Lane (N)	0.00	0.03	0.90	0.0
	B - Tithebarn Road	0.18	0.00	0.07	0.7
	C - Knowsley Lane (S)	0.66	0.01	0.00	0.3
	D - School Lane	0.17	0.24	0.59	0.0

Vehicle Mix

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

Heavy Vehicle %

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	7	3	9
	B - Tithebarn Road	0	0	0	0
	C - Knowsley Lane (S)	5	0	0	4
	D - School Lane	6	4	10	0

Average PCU Per Veh

From	To				
		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	1.000	1.070	1.030	1.0
	B - Tithebarn Road	1.000	1.000	1.000	1.0
	C - Knowsley Lane (S)	1.050	1.000	1.000	1.0
	D - School Lane	1.060	1.040	1.100	1.0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	402	402
	B - Tithebarn Road	75	75
	C - Knowsley Lane (S)	492	492
	D - School Lane	87	87
08:15-08:30	A - Knowsley Lane (N)	480	480
	B - Tithebarn Road	90	90
	C - Knowsley Lane (S)	588	588
	D - School Lane	104	104
08:30-08:45	A - Knowsley Lane (N)	588	588
	B - Tithebarn Road	110	110
	C - Knowsley Lane (S)	720	720
	D - School Lane	128	128
08:45-09:00	A - Knowsley Lane (N)	588	588
	B - Tithebarn Road	110	110
	C - Knowsley Lane (S)	720	720
	D - School Lane	128	128
09:00-09:15	A - Knowsley Lane (N)	480	480
	B - Tithebarn Road	90	90
	C - Knowsley Lane (S)	588	588
	D - School Lane	104	104
09:15-09:30	A - Knowsley Lane (N)	402	402
	B - Tithebarn Road	75	75
	C - Knowsley Lane (S)	492	492
	D - School Lane	87	87

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-ACD	0.44	25.64	0.8	D	92	138
ABCD	0.13	4.99	0.3	A	80	120
AB					14	21
AC					396	594
D-A	0.04	8.10	0.0	A	18	28
D-BC	0.34	19.18	0.6	C	88	132
C-ABD	0.03	4.16	0.0	A	18	27
C-D					193	289
C-A					390	585

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	75	19	0.00	327	0.230	74	0.0	0.3	14.174	B
ABCD	54	13	0.00	820	0.066	53	0.0	0.1	4.993	A
A-B	12	3	0.00			12				
A-C	336	84	0.00			336				
D-A	15	4	0.00	568	0.027	15	0.0	0.0	6.895	A
D-BC	72	18	0.00	397	0.182	71	0.0	0.2	11.922	B
C-ABD	11	3	0.00	900	0.013	11	0.0	0.0	4.151	A
C-D	159	40	0.00			159				
C-A	322	80	0.00			322				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	90	22	0.00	295	0.305	89	0.3	0.4	17.469	C
ABCD	74	19	0.00	847	0.088	74	0.1	0.2	4.944	A
A-B	14	3	0.00			14				
A-C	392	98	0.00			392				
D-A	18	4	0.00	538	0.033	18	0.0	0.0	7.343	A
D-BC	86	22	0.00	360	0.240	86	0.2	0.3	14.191	B
C-ABD	16	4	0.00	949	0.017	16	0.0	0.0	3.962	A
C-D	189	47	0.00			189				
C-A	383	96	0.00			383				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	110	28	0.00	251	0.440	109	0.4	0.7	25.176	D
ABCD	112	28	0.00	888	0.126	111	0.2	0.3	4.898	A
A-B	16	4	0.00			16				
A-C	460	115	0.00			460				
D-A	22	6	0.00	494	0.045	22	0.0	0.0	8.086	A
D-BC	106	26	0.00	309	0.342	105	0.3	0.5	19.001	C
C-ABD	26	6	0.00	1021	0.025	26	0.0	0.0	3.725	A
C-D	230	57	0.00			230				
C-A	465	116	0.00			465				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	110	28	0.00	250	0.440	110	0.7	0.8	25.637	D
ABCD	112	28	0.00	888	0.126	112	0.3	0.3	4.894	A
A-B	16	4	0.00			16				
A-C	459	115	0.00			459				
D-A	22	6	0.00	493	0.045	22	0.0	0.0	8.097	A
D-BC	106	26	0.00	309	0.342	106	0.5	0.6	19.177	C
C-ABD	26	6	0.00	1021	0.025	26	0.0	0.0	3.734	A
C-D	230	57	0.00			230				
C-A	465	116	0.00			465				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	90	22	0.00	294	0.305	91	0.8	0.5	17.810	C
ABCD	75	19	0.00	847	0.088	75	0.3	0.2	4.929	A
AB	14	3	0.00			14				
AC	392	98	0.00			392				
D-A	18	4	0.00	537	0.033	18	0.0	0.0	7.355	A
D-BC	86	22	0.00	360	0.240	87	0.6	0.3	14.341	B
C-ABD	16	4	0.00	949	0.017	16	0.0	0.0	3.979	A
C-D	189	47	0.00			189				
C-A	383	96	0.00			383				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	75	19	0.00	327	0.231	76	0.5	0.3	14.392	B
ABCD	54	14	0.00	819	0.066	54	0.2	0.1	4.990	A
AB	12	3	0.00			12				
AC	336	84	0.00			336				
D-A	15	4	0.00	567	0.027	15	0.0	0.0	6.911	A
D-BC	72	18	0.00	397	0.182	73	0.3	0.2	12.037	B
C-ABD	12	3	0.00	900	0.013	12	0.0	0.0	4.162	A
C-D	159	40	0.00			159				
C-A	322	80	0.00			322				

2030 | No Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ School Lane/ Tithebarn Road	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		20.22	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.22	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	608	100.000
B - Tithebarn Road		ONE HOUR	✓	43	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	445	100.000
D - School Lane		ONE HOUR	✓	308	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	23	576	9
	B - Tithebarn Road	18	0	5	20
	C - Knowsley Lane (S)	366	15	0	64
	D - School Lane	17	53	238	0

Proportions

	To				
		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
From	A - Knowsley Lane (N)	0.00	0.04	0.95	0.0
	B - Tithebarn Road	0.42	0.00	0.12	0.4
	C - Knowsley Lane (S)	0.82	0.03	0.00	0.1
	D - School Lane	0.06	0.17	0.77	0.0

Vehicle Mix

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

Heavy Vehicle %

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	5	4	14
	B - Tithebarn Road	13	0	0	0
	C - Knowsley Lane (S)	3	8	0	2
	D - School Lane	14	2	3	0

Average PCU Per Veh

From	To				
		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	1.000	1.050	1.040	1.1
	B - Tithebarn Road	1.130	1.000	1.000	1.0
	C - Knowsley Lane (S)	1.030	1.080	1.000	1.0
	D - School Lane	1.140	1.020	1.030	1.0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (N)	458	458
	B - Tithebarn Road	32	32
	C - Knowsley Lane (S)	335	335
	D - School Lane	232	232
16:45-17:00	A - Knowsley Lane (N)	547	547
	B - Tithebarn Road	39	39
	C - Knowsley Lane (S)	400	400
	D - School Lane	277	277
17:00-17:15	A - Knowsley Lane (N)	669	669
	B - Tithebarn Road	47	47
	C - Knowsley Lane (S)	490	490
	D - School Lane	339	339
17:15-17:30	A - Knowsley Lane (N)	669	669
	B - Tithebarn Road	47	47
	C - Knowsley Lane (S)	490	490
	D - School Lane	339	339
17:30-17:45	A - Knowsley Lane (N)	547	547
	B - Tithebarn Road	39	39
	C - Knowsley Lane (S)	400	400
	D - School Lane	277	277
17:45-18:00	A - Knowsley Lane (N)	458	458
	B - Tithebarn Road	32	32
	C - Knowsley Lane (S)	335	335
	D - School Lane	232	232

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-ACD	0.22	23.01	0.3	C	39	59
ABCD	0.03	4.34	0.0	A	20	30
AB					21	31
AC					517	776
D-A	0.04	9.75	0.1	A	16	23
D-BC	0.92	92.65	7.7	F	267	401
C-ABD	0.05	5.29	0.1	A	30	45
C-D					56	84
C-A					322	483

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	32	8	0.00	306	0.106	32	0.0	0.1	13.793	B
ABCD	13	3	0.00	916	0.015	13	0.0	0.0	4.341	A
A-B	17	4	0.00			17				
A-C	427	107	0.00			427				
D-A	13	3	0.00	545	0.023	13	0.0	0.0	7.709	A
D-BC	219	55	0.00	423	0.518	215	0.0	1.1	17.484	C
C-ABD	20	5	0.00	739	0.027	20	0.0	0.0	5.291	A
C-D	47	12	0.00			47				
C-A	268	67	0.00			268				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	39	10	0.00	268	0.144	38	0.1	0.2	16.491	C
ABCD	18	5	0.00	960	0.019	18	0.0	0.0	4.147	A
A-B	20	5	0.00			20				
A-C	508	127	0.00			508				
D-A	15	4	0.00	505	0.030	15	0.0	0.0	8.372	A
D-BC	262	65	0.00	391	0.670	258	1.1	1.9	27.231	D
C-ABD	28	7	0.00	756	0.037	28	0.0	0.1	5.210	A
C-D	55	14	0.00			55				
C-A	317	79	0.00			317				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	47	12	0.00	215	0.220	47	0.2	0.3	22.431	C
ABCD	28	7	0.00	1024	0.027	28	0.0	0.0	3.892	A
A-B	25	6	0.00			25				
A-C	617	154	0.00			617				
D-A	19	5	0.00	447	0.042	19	0.0	0.0	9.577	A
D-BC	320	80	0.00	347	0.925	303	1.9	6.2	67.693	F
C-ABD	42	10	0.00	785	0.053	42	0.1	0.1	5.088	A
C-D	67	17	0.00			67				
C-A	381	95	0.00			381				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	47	12	0.00	212	0.224	47	0.3	0.3	23.014	C
ABCD	28	7	0.00	1024	0.027	28	0.0	0.0	3.882	A
A-B	25	6	0.00			25				
A-C	617	154	0.00			617				
D-A	19	5	0.00	440	0.043	19	0.0	0.1	9.747	A
D-BC	320	80	0.00	346	0.925	315	6.2	7.7	92.654	F
C-ABD	42	11	0.00	781	0.054	42	0.1	0.1	5.107	A
C-D	67	17	0.00			67				
C-A	381	95	0.00			381				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	39	10	0.00	262	0.147	39	0.3	0.2	16.989	C
ABCD	18	5	0.00	960	0.019	19	0.0	0.0	4.117	A
AB	20	5	0.00			20				
AC	508	127	0.00			508				
D-A	15	4	0.00	495	0.031	15	0.1	0.0	8.559	A
D-BC	262	65	0.00	390	0.670	283	7.7	2.3	39.605	E
C-ABD	28	7	0.00	751	0.037	28	0.1	0.1	5.229	A
C-D	55	14	0.00			55				
C-A	317	79	0.00			317				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	32	8	0.00	304	0.107	33	0.2	0.1	13.961	B
ABCD	13	3	0.00	916	0.015	13	0.0	0.0	4.325	A
AB	17	4	0.00			17				
AC	427	107	0.00			427				
D-A	13	3	0.00	541	0.024	13	0.0	0.0	7.765	A
D-BC	219	55	0.00	422	0.519	224	2.3	1.2	19.018	C
C-ABD	20	5	0.00	737	0.027	20	0.1	0.0	5.295	A
C-D	47	12	0.00			47				
C-A	268	67	0.00			268				

2030 | With Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ School Lane/ Tithebarn Road	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		4.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.82	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	546	100.000
B - Tithebarn Road		ONE HOUR	✓	101	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	775	100.000
D - School Lane		ONE HOUR	✓	150	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	17	490	39
	B - Tithebarn Road	18	0	8	75
	C - Knowsley Lane (S)	461	8	0	306
	D - School Lane	20	28	102	0

Proportions

	To				
		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
From	A - Knowsley Lane (N)	0.00	0.03	0.90	0.0
	B - Tithebarn Road	0.18	0.00	0.08	0.7
	C - Knowsley Lane (S)	0.59	0.01	0.00	0.3
	D - School Lane	0.13	0.19	0.68	0.0

Vehicle Mix

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

Heavy Vehicle %

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	7	3	9
	B - Tithebarn Road	0	0	0	0
	C - Knowsley Lane (S)	5	0	0	4
	D - School Lane	6	4	10	0

Average PCU Per Veh

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D Sch Lan
	A - Knowsley Lane (N)	1.000	1.070	1.030	1.0
	B - Tithebarn Road	1.000	1.000	1.000	1.0
	C - Knowsley Lane (S)	1.050	1.000	1.000	1.0
	D - School Lane	1.060	1.040	1.100	1.0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	411	411
	B - Tithebarn Road	76	76
	C - Knowsley Lane (S)	583	583
	D - School Lane	113	113
08:15-08:30	A - Knowsley Lane (N)	491	491
	B - Tithebarn Road	91	91
	C - Knowsley Lane (S)	697	697
	D - School Lane	135	135
08:30-08:45	A - Knowsley Lane (N)	601	601
	B - Tithebarn Road	111	111
	C - Knowsley Lane (S)	853	853
	D - School Lane	165	165
08:45-09:00	A - Knowsley Lane (N)	601	601
	B - Tithebarn Road	111	111
	C - Knowsley Lane (S)	853	853
	D - School Lane	165	165
09:00-09:15	A - Knowsley Lane (N)	491	491
	B - Tithebarn Road	91	91
	C - Knowsley Lane (S)	697	697
	D - School Lane	135	135
09:15-09:30	A - Knowsley Lane (N)	411	411
	B - Tithebarn Road	76	76
	C - Knowsley Lane (S)	583	583
	D - School Lane	113	113

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-ACD	0.50	32.74	1.0	D	93	139
ABCD	0.14	5.09	0.4	A	85	127
A-B					14	21
A-C					402	603
D-A	0.05	8.83	0.1	A	18	28
D-BC	0.50	27.09	1.0	D	119	179
C-ABD	0.03	3.94	0.0	A	25	37
C-D					274	411
C-A					412	619

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	76	19	0.00	308	0.247	75	0.0	0.3	15.369	C
ABCD	56	14	0.00	806	0.069	55	0.0	0.1	5.088	A
A-B	12	3	0.00			12				
A-C	343	86	0.00			343				
D-A	15	4	0.00	545	0.028	15	0.0	0.0	7.202	A
D-BC	98	24	0.00	382	0.256	96	0.0	0.4	13.607	B
C-ABD	15	4	0.00	956	0.016	15	0.0	0.0	3.932	A
C-D	227	57	0.00			227				
C-A	342	85	0.00			342				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	91	23	0.00	271	0.335	90	0.3	0.5	19.779	C
ABCD	78	19	0.00	832	0.094	78	0.1	0.2	5.060	A
A-B	14	3	0.00			14				
A-C	399	100	0.00			399				
D-A	18	4	0.00	508	0.035	18	0.0	0.0	7.783	A
D-BC	117	29	0.00	342	0.341	116	0.4	0.5	17.223	C
C-ABD	22	6	0.00	1018	0.022	22	0.0	0.0	3.722	A
C-D	269	67	0.00			269				
C-A	405	101	0.00			405				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	111	28	0.00	221	0.503	109	0.5	0.9	31.673	D
ABCD	120	30	0.00	872	0.138	119	0.2	0.4	5.046	A
A-B	16	4	0.00			16				
A-C	465	116	0.00			465				
D-A	22	6	0.00	455	0.048	22	0.0	0.1	8.807	A
D-BC	143	36	0.00	288	0.498	141	0.5	1.0	26.398	D
C-ABD	37	9	0.00	1109	0.033	37	0.0	0.0	3.470	A
C-D	326	81	0.00			326				
C-A	491	123	0.00			491				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	111	28	0.00	221	0.504	111	0.9	1.0	32.737	D
ABCD	120	30	0.00	872	0.138	120	0.4	0.4	5.046	A
A-B	16	4	0.00			16				
A-C	465	116	0.00			465				
D-A	22	6	0.00	454	0.049	22	0.1	0.1	8.833	A
D-BC	143	36	0.00	287	0.499	143	1.0	1.0	27.087	D
C-ABD	37	9	0.00	1108	0.034	37	0.0	0.0	3.476	A
C-D	326	81	0.00			326				
C-A	491	123	0.00			491				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	91	23	0.00	271	0.335	93	1.0	0.5	20.410	C
ABCD	78	20	0.00	832	0.094	79	0.4	0.2	5.048	A
AB	14	3	0.00			14				
AC	399	100	0.00			399				
D-A	18	4	0.00	507	0.035	18	0.1	0.0	7.810	A
D-BC	117	29	0.00	342	0.342	119	1.0	0.6	17.670	C
C-ABD	22	6	0.00	1017	0.022	23	0.0	0.0	3.739	A
C-D	269	67	0.00			269				
C-A	405	101	0.00			405				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	76	19	0.00	307	0.248	77	0.5	0.3	15.674	C
ABCD	56	14	0.00	806	0.070	56	0.2	0.1	5.088	A
AB	12	3	0.00			12				
AC	343	86	0.00			343				
D-A	15	4	0.00	543	0.028	15	0.0	0.0	7.225	A
D-BC	98	24	0.00	382	0.256	99	0.6	0.4	13.845	B
C-ABD	15	4	0.00	955	0.016	15	0.0	0.0	3.942	A
C-D	227	57	0.00			227				
C-A	341	85	0.00			341				

2030 | With Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Arm D Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ School Lane/ Tithebarn Road	Right-Left Stagger	Two-way	Two-way	Two-way	Two-way		82.75	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	82.75	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	639	100.000
B - Tithebarn Road		ONE HOUR	✓	42	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	504	100.000
D - School Lane		ONE HOUR	✓	378	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	23	607	9
	B - Tithebarn Road	17	0	5	20
	C - Knowsley Lane (S)	382	15	0	107
	D - School Lane	17	37	324	0

Proportions

	To				
		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
From	A - Knowsley Lane (N)	0.00	0.04	0.95	0.0
	B - Tithebarn Road	0.40	0.00	0.12	0.4
	C - Knowsley Lane (S)	0.76	0.03	0.00	0.2
	D - School Lane	0.04	0.10	0.86	0.0

Vehicle Mix

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

Heavy Vehicle %

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D - School Lane
	A - Knowsley Lane (N)	0	5	4	14
	B - Tithebarn Road	13	0	0	0
	C - Knowsley Lane (S)	3	8	0	2
	D - School Lane	14	2	3	0

Average PCU Per Veh

	To				
From		A - Knowsley Lane (N)	B - Tithebarn Road	C - Knowsley Lane (S)	D Sch Lan
	A - Knowsley Lane (N)	1.000	1.050	1.040	1.1
	B - Tithebarn Road	1.130	1.000	1.000	1.0
	C - Knowsley Lane (S)	1.030	1.080	1.000	1.0
	D - School Lane	1.140	1.020	1.030	1.0

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (N)	481	481
	B - Tithebarn Road	32	32
	C - Knowsley Lane (S)	379	379
	D - School Lane	285	285
16:45-17:00	A - Knowsley Lane (N)	574	574
	B - Tithebarn Road	38	38
	C - Knowsley Lane (S)	453	453
	D - School Lane	340	340
17:00-17:15	A - Knowsley Lane (N)	704	704
	B - Tithebarn Road	46	46
	C - Knowsley Lane (S)	555	555
	D - School Lane	416	416
17:15-17:30	A - Knowsley Lane (N)	704	704
	B - Tithebarn Road	46	46
	C - Knowsley Lane (S)	555	555
	D - School Lane	416	416
17:30-17:45	A - Knowsley Lane (N)	574	574
	B - Tithebarn Road	38	38
	C - Knowsley Lane (S)	453	453
	D - School Lane	340	340
17:45-18:00	A - Knowsley Lane (N)	481	481
	B - Tithebarn Road	32	32
	C - Knowsley Lane (S)	379	379
	D - School Lane	285	285

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-ACD	0.29	33.06	0.4	D	39	58
ABCD	0.03	4.30	0.0	A	21	32
AB					21	31
AC					545	817
D-A	0.04	9.93	0.1	A	16	23
D-BC	1.20	353.11	40.0	F	331	497
C-ABD	0.06	5.34	0.1	A	35	52
C-D					94	140
C-A					334	501

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	32	8	0.00	281	0.112	31	0.0	0.1	15.074	C
ABCD	14	3	0.00	922	0.015	14	0.0	0.0	4.305	A
A-B	17	4	0.00			17				
A-C	450	113	0.00			450				
D-A	13	3	0.00	517	0.025	13	0.0	0.0	8.132	A
D-BC	272	68	0.00	412	0.659	264	0.0	1.8	24.037	C
C-ABD	22	6	0.00	755	0.029	22	0.0	0.0	5.176	A
C-D	78	20	0.00			78				
C-A	279	70	0.00			279				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	38	9	0.00	237	0.159	38	0.1	0.2	18.876	C
ABCD	20	5	0.00	969	0.020	20	0.0	0.0	4.105	A
A-B	20	5	0.00			20				
A-C	535	134	0.00			535				
D-A	15	4	0.00	469	0.033	15	0.0	0.0	9.040	A
D-BC	325	81	0.00	378	0.858	314	1.8	4.5	50.638	F
C-ABD	31	8	0.00	777	0.040	31	0.0	0.1	5.077	A
C-D	92	23	0.00			92				
C-A	330	82	0.00			330				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	46	12	0.00	176	0.263	46	0.2	0.4	28.800	D
ABCD	30	8	0.00	1036	0.029	30	0.0	0.0	3.844	A
A-B	25	6	0.00			25				
A-C	649	162	0.00			649				
D-A	19	5	0.00	432	0.043	19	0.0	0.1	9.927	A
D-BC	397	99	0.00	331	1.200	324	4.5	23.0	178.525	F
C-ABD	49	12	0.00	812	0.061	49	0.1	0.1	4.940	A
C-D	111	28	0.00			111				
C-A	395	99	0.00			395				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	46	12	0.00	160	0.289	46	0.4	0.4	33.056	D
ABCD	30	8	0.00	1036	0.029	30	0.0	0.0	3.835	A
A-B	25	6	0.00			25				
A-C	649	162	0.00			649				
D-A	19	5	0.00	432	0.043	19	0.1	0.1	9.932	A
D-BC	397	99	0.00	331	1.201	329	23.0	40.0	353.111	F
C-ABD	51	13	0.00	798	0.064	51	0.1	0.1	5.033	A
C-D	110	28	0.00			110				
C-A	394	98	0.00			394				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	38	9	0.00	205	0.185	38	0.4	0.2	22.822	C
ABCD	20	5	0.00	968	0.020	20	0.0	0.0	4.077	A
AB	20	5	0.00			20				
AC	535	134	0.00			535				
D-A	15	4	0.00	451	0.034	15	0.1	0.0	9.427	A
D-BC	325	81	0.00	378	0.859	368	40.0	29.0	335.877	F
C-ABD	33	8	0.00	746	0.044	33	0.1	0.1	5.283	A
C-D	92	23	0.00			92				
C-A	328	82	0.00			328				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	32	8	0.00	256	0.123	32	0.2	0.2	16.861	C
ABCD	14	3	0.00	922	0.015	14	0.0	0.0	4.289	A
AB	17	4	0.00			17				
AC	450	113	0.00			450				
D-A	13	3	0.00	473	0.027	13	0.0	0.0	8.910	A
D-BC	272	68	0.00	412	0.660	378	29.0	2.5	138.645	F
C-ABD	23	6	0.00	731	0.031	23	0.1	0.0	5.343	A
C-D	78	20	0.00			78				
C-A	279	70	0.00			279				



Appendix P

J3: Knowsley Lane/ School Lane/ Tithebarn Road

LinSig Modelling Outputs (Proposed Mitigation)

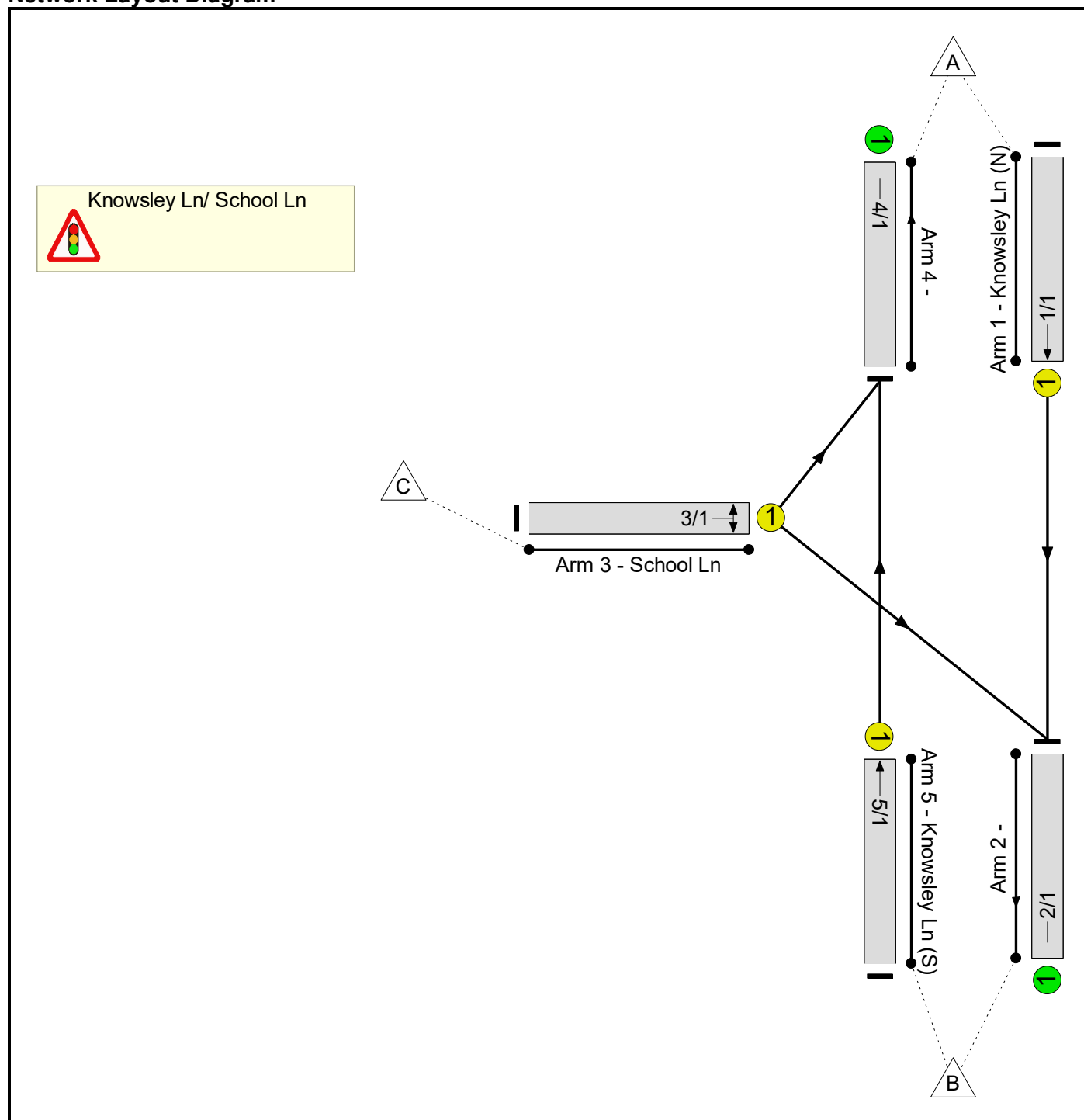


Detailed Input Data And Results
Detailed Input Data And Results

User and Project Details

Project:	A25007
Title:	School Lane Proposed
Location:	
Client:	Hallam Land Limited
Additional detail:	
File name:	J2_Knowsley Ln-School Ln_mitigation layout.lsg3x
Author:	
Company:	Astute Transport Planning
Address:	
Linsig Version:	3, 3, 0, 6

Network Layout Diagram



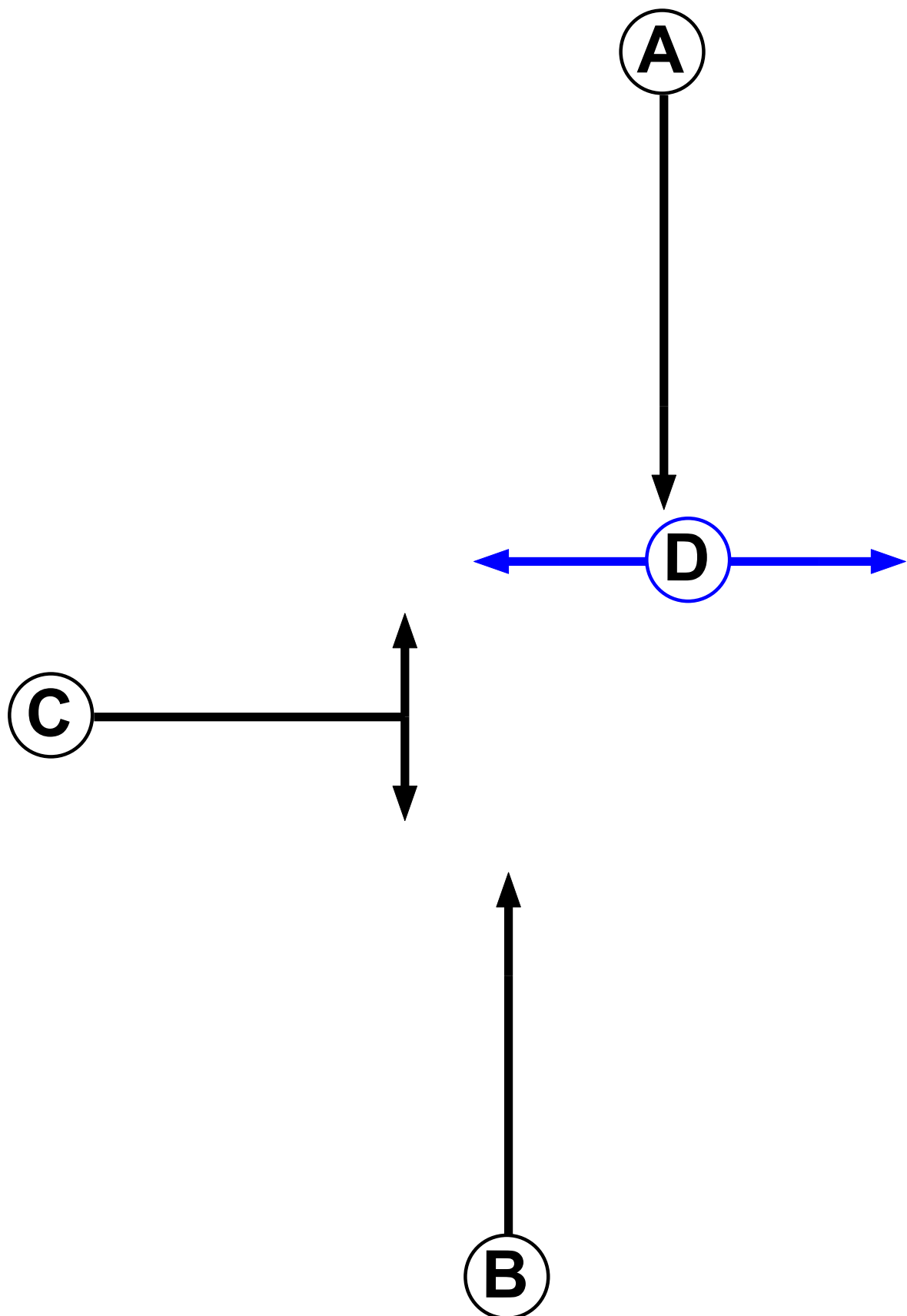
Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	2030 Base + Dev AM	2030 Base + Dev AM	Network Control Plan 1	08:00 - 09:00	90	61.3	7.06
2	2030 Base + Dev PM	2030 Base + Dev PM	Network Control Plan 1	16:30 - 17:30	90	9.5	14.16

Controller Summary

Controller	Type	SCN	Stage Stream	Num Phases	Num Stages	Controls Junctions	Controller Notes
C1	Gen		Stage Stream 1	4	3	Knowsley Ln/ School Ln	

Phase Diagram



Phase Input Data

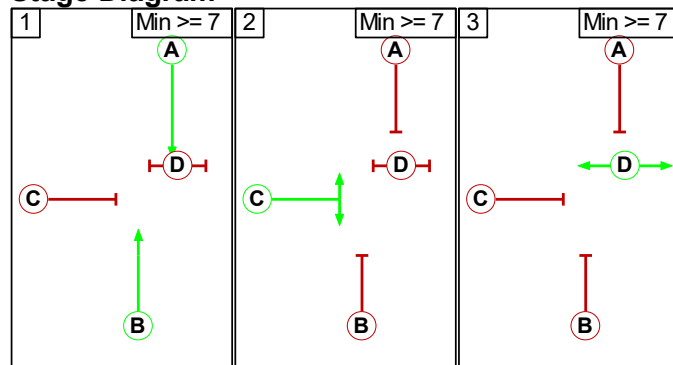
Phase Name	Phase Type	Assoc. Phase	Street Min (s)	Cont Min (s)
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Pedestrian		7	7

Phase Intergreens Matrix

Terminating Phase	Starting Phase				
		A	B	C	D
	A			7	5
	B			8	8
	C	6	6		7
	D	9	9	9	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C
3	D

Stage Diagram**Phase Delays**

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

Prohibited Stage Change

From Stage	To Stage		
	1	2	3
	1	8	8
	2	6	7
	3	9	9

Lane Input Data

Junction: Knowsley Ln/ School Ln												
Lane	Lane Type	Phases	Start Disp. (s)	End Disp. (s)	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient (%)	Nearside Lane	Turns	Turning Radius (m)
1/1 (Knowsley Ln (N))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (School Ln)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Right Arm 4 Left	13.50 16.00
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1 (Knowsley Ln (S))	U	B	2	3	60.0	Geom	-	2.70	0.00	N	Arm 4 Ahead	Inf

Give-Way Lane Input Data

Junction: Knowsley Ln/ School Ln

There are no Opposed Lanes in this Junction

Lane Connector Input Data

Junction: Knowsley Ln/ School Ln				
Org Lane	Dest Lane	Junction	Modelled Mean Cruise Time (s)	Platoon Dispersion
1/1	2/1	Internal	5	35
3/1	2/1	Internal	5	35
3/1	4/1	Internal	5	35
5/1	4/1	Internal	5	35

Scenario 1: '2030 Base + Dev AM' (FG1: '2030 Base + Dev AM', Plan 1: 'Network Control Plan 1')

Lane Saturation Flows

Junction: Knowsley Ln/ School Ln								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Ln (N))	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
2/1	Infinite Saturation Flow						Inf	Inf
3/1 (School Ln)	3.00	0.00	Y	Arm 2 Right	13.50	86.7 %	1727	1727
				Arm 4 Left	16.00	13.3 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Knowsley Ln (S))	2.70	0.00	N	Arm 4 Ahead	Inf	100.0 %	2025	2025

Bonus Green Times

No Bonus Greens are defined For Scenario 1

Scenario 2: '2030 Base + Dev PM' (FG2: '2030 Base + Dev PM', Plan 1: 'Network Control Plan 1')

Lane Saturation Flows

Junction: Knowsley Ln/ School Ln								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Ln (N))	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
2/1	Infinite Saturation Flow						Inf	Inf
3/1 (School Ln)	3.00	0.00	Y	Arm 2 Right	13.50	95.5 %	1725	1725
				Arm 4 Left	16.00	4.5 %		
4/1	Infinite Saturation Flow						Inf	Inf
5/1 (Knowsley Ln (S))	2.70	0.00	N	Arm 4 Ahead	Inf	100.0 %	2025	2025

Bonus Green Times

No Bonus Greens are defined For Scenario 2

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2030 Base + Dev AM'	08:00	09:00	01:00	
2: '2030 Base + Dev PM'	16:30	17:30	01:00	

Traffic Flows, Desired**FG1: '2030 Base + Dev AM'****Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	546	0	546
	B	461	0	0	461
	C	20	130	0	150
	Tot.	481	676	0	1157

FG2: '2030 Base + Dev PM'**Desired Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	639	0	639
	B	382	0	0	382
	C	17	361	0	378
	Tot.	399	1000	0	1399

Scenario 1: '2030 Base + Dev AM' (FG1: '2030 Base + Dev AM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Actual****Actual Flow :**

	Destination				
		A	B	C	Tot.
Origin	A	0	546	0	546
	B	461	0	0	461
	C	20	130	0	150
	Tot.	481	676	0	1157

Traffic Flows, Difference**Difference :**

	Destination				
		A	B	C	Tot.
Origin	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	Tot.	0	0	0	0

Detailed Input Data And Results

Scenario 2: '2030 Base + Dev PM' (FG2: '2030 Base + Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	639	0	639
	B	382	0	0	382
	C	17	361	0	378
	Tot.	399	1000	0	1399

Traffic Flows, Difference

Difference :

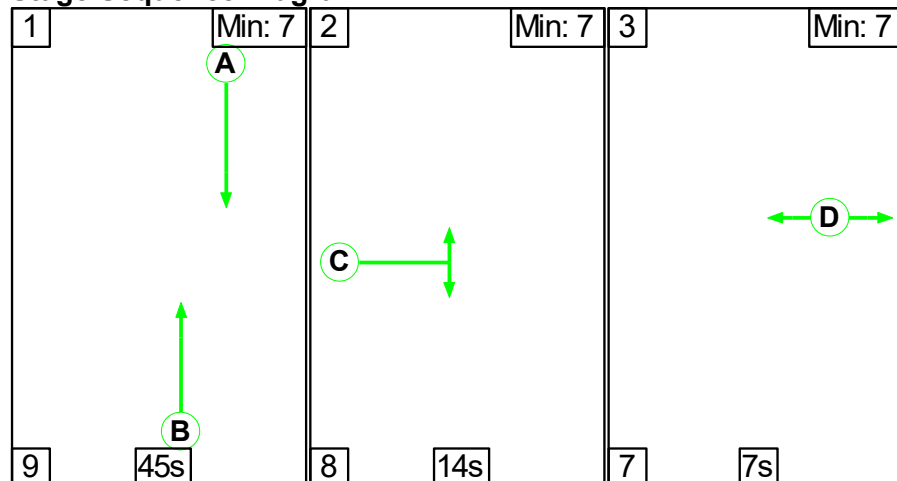
	Destination				
		A	B	C	Tot.
Origin	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	Tot.	0	0	0	0

Traffic Lane Flows

Lane	Scenario 1: 2030 Base + Dev AM	Scenario 2: 2030 Base + Dev PM
Junction: Knowsley Ln/ School Ln		
1/1	546	639
2/1	676	1000
3/1	150	378
4/1	481	399
5/1	461	382

Scenario 1: '2030 Base + Dev AM' (FG1: '2030 Base + Dev AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

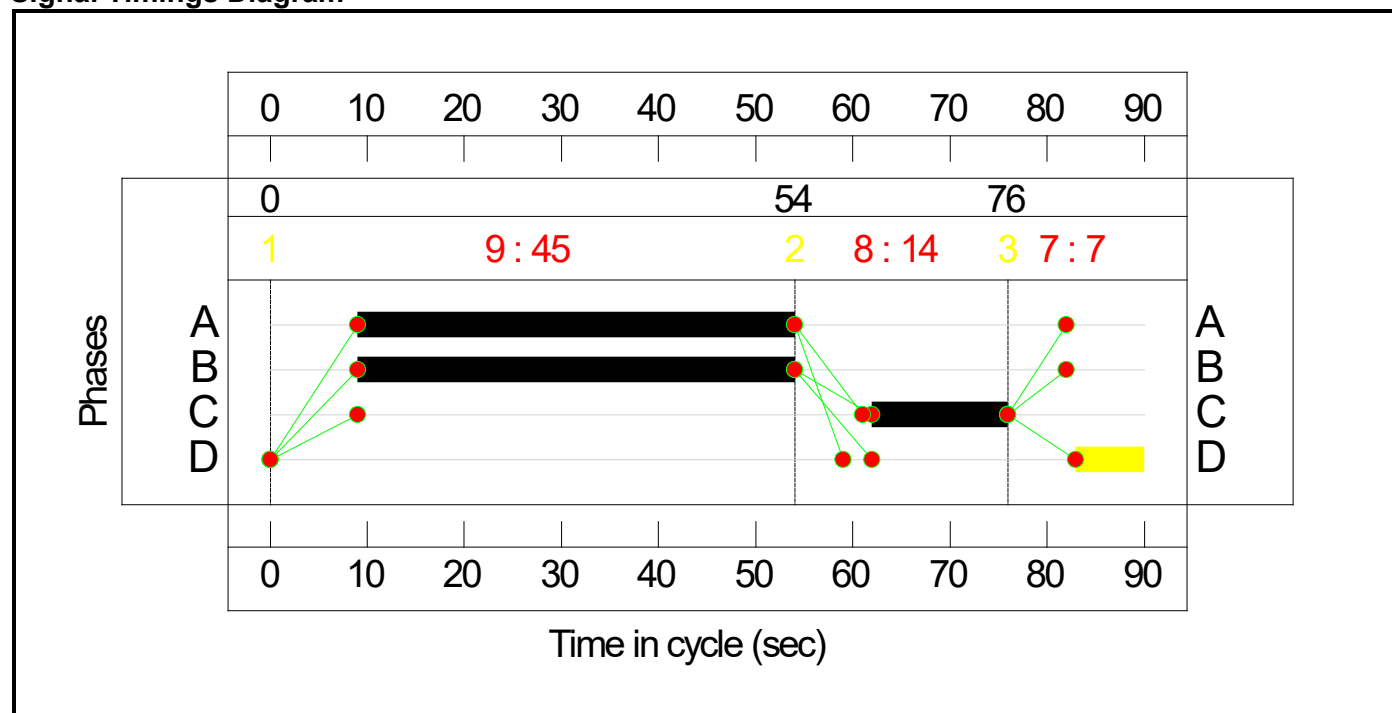


Stage Timings

Stage	1	2	3
Duration	45	14	7
Change Point	0	54	76

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Ln (N) Ahead	Traffic	45	9	54
B	Knowsley Ln (S) Ahead	Traffic	45	9	54
C	School Ln Right Left	Traffic	14	62	76
D	Pedestrians across	Pedestrian	7	83	0

Signal Timings Diagram**Lane Green Times**

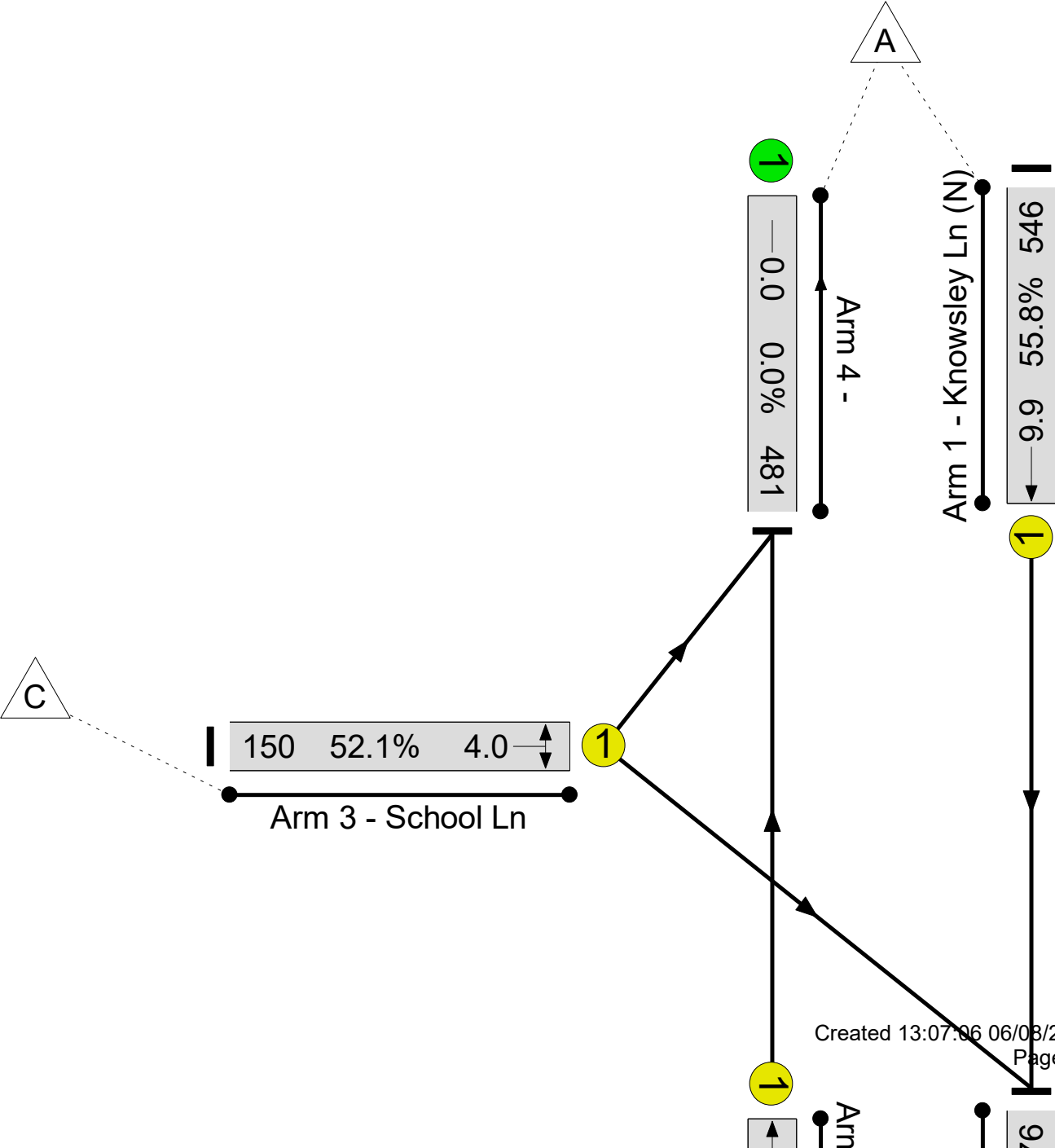
Junction: Knowsley Ln/ School Ln					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Ln (N) Ahead	U	A	9	54
3/1	School Ln Right Left	U	C	62	76
5/1	Knowsley Ln (S) Ahead	U	B	9	54



Knowsley Ln/ School Ln

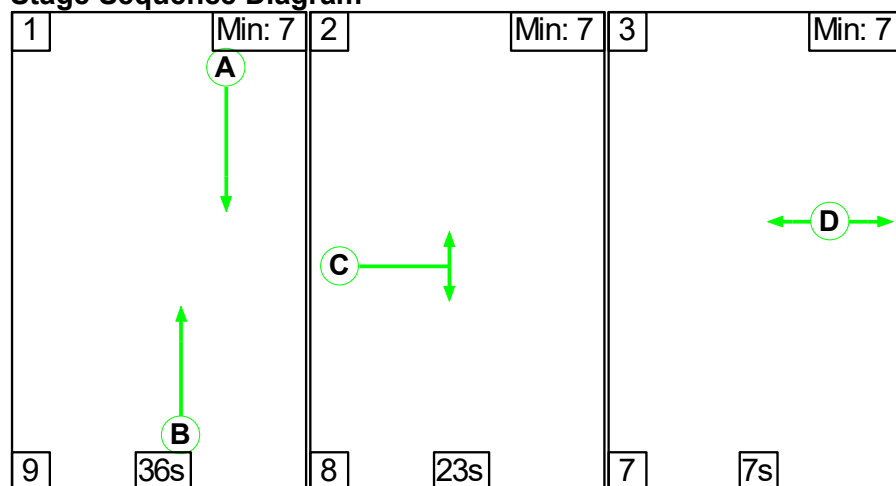
PRC: 61.3 %

Total Traffic Delay: 7.1 pcuHr



Network Results

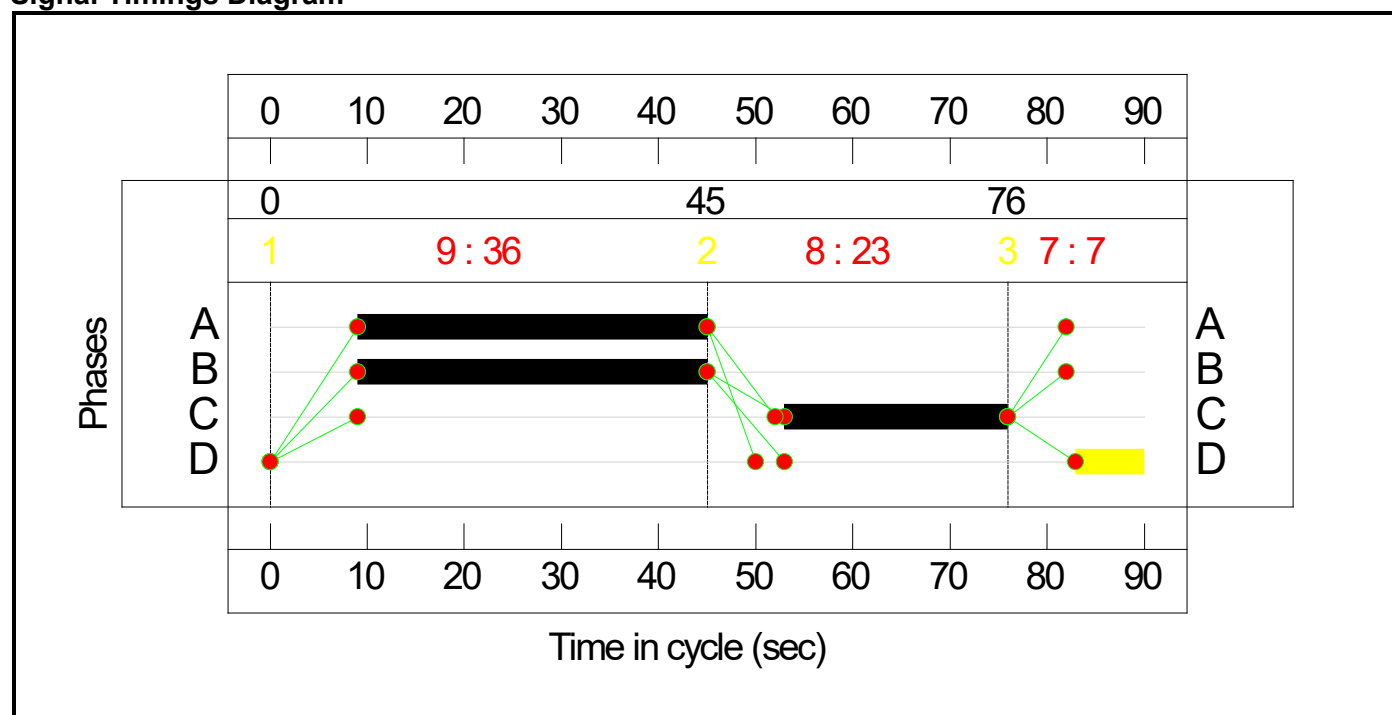
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: School Lane Proposed	-	-	N/A	-	-		-	-	-	-	-	-	-	55.8%
Knowsley Ln/ School Ln	-	-	N/A	-	-		-	-	-	-	-	-	-	55.8%
1/1	Knowsley Ln (N) Ahead	U	N/A	N/A	A		1	45	-	-	546	1915	979	55.8%
2/1		U	N/A	N/A	-		-	-	-	-	676	Inf	Inf	0.0%
3/1	School Ln Right Left	U	N/A	N/A	C		1	14	-	-	150	1727	288	52.1%
4/1		U	N/A	N/A	-		-	-	-	-	481	Inf	Inf	0.0%
5/1	Knowsley Ln (S) Ahead	U	N/A	N/A	B		1	45	-	-	461	2025	1035	44.5%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: School Lane Proposed	-	-	0	0	0	5.5	1.6	0.0	7.1	-	-	-	-	
Knowsley Ln/ School Ln	-	-	0	0	0	5.5	1.6	0.0	7.1	-	-	-	-	
1/1	546	546	-	-	-	2.3	0.6	-	2.9	19.2	9.3	0.6	9.9	
2/1	676	676	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	150	150	-	-	-	1.4	0.5	-	2.0	47.2	3.4	0.5	4.0	
4/1	481	481	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	461	461	-	-	-	1.8	0.4	-	2.2	17.1	7.2	0.4	7.6	
C1					PRC for Signalled Lanes (%):	61.3	Total Delay for Signalled Lanes (pcuHr):			7.06	Cycle Time (s): 90			
					PRC Over All Lanes (%):	61.3	Total Delay Over All Lanes(pcuHr):			7.06				

Stage Sequence Diagram**Stage Timings**

Stage	1	2	3
Duration	36	23	7
Change Point	0	45	76

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Ln (N) Ahead	Traffic	36	9	45
B	Knowsley Ln (S) Ahead	Traffic	36	9	45
C	School Ln Right Left	Traffic	23	53	76
D	Pedestrians across	Pedestrian	7	83	0

Signal Timings Diagram

Lane Green Times

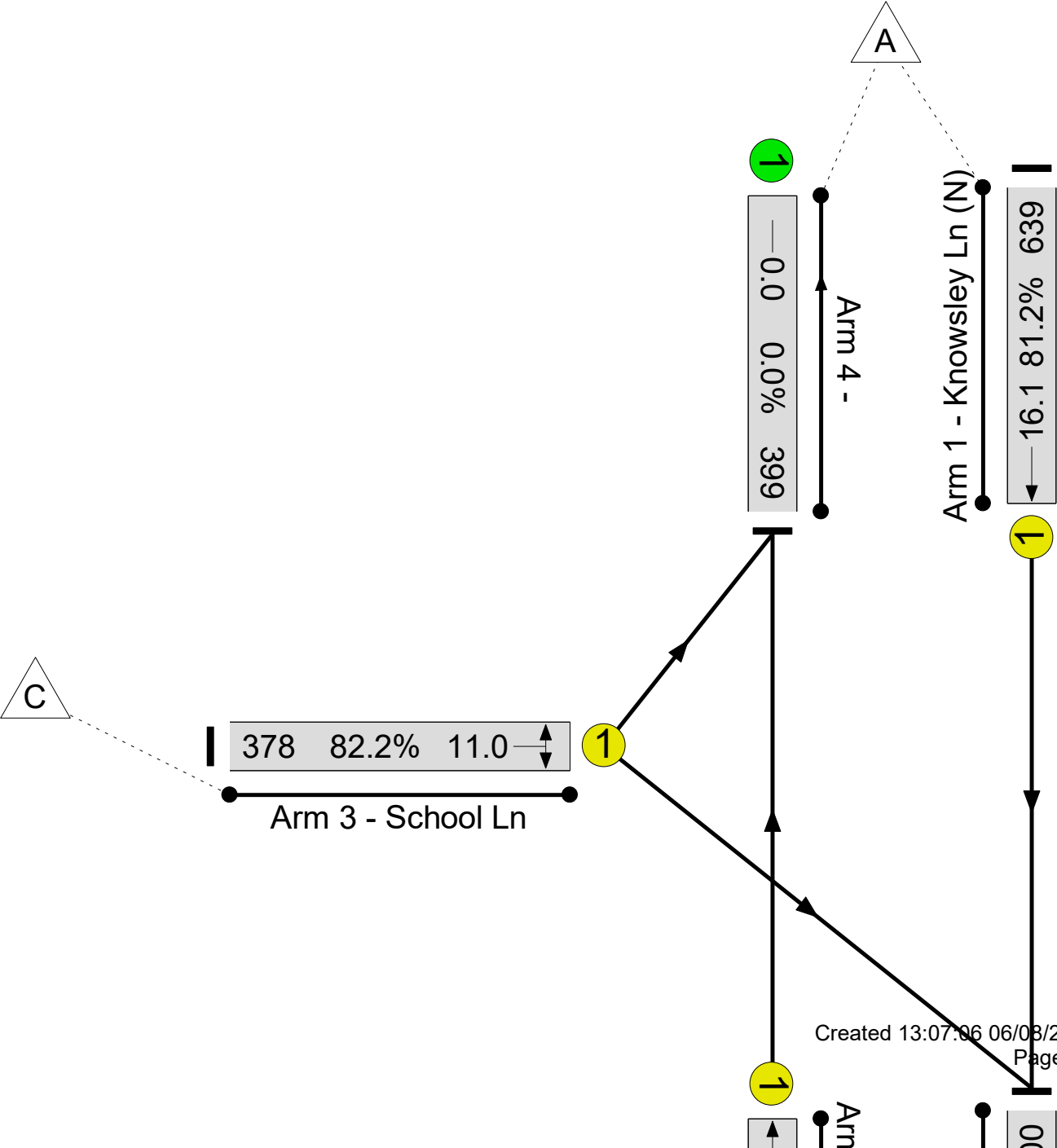
Junction: Knowsley Ln/ School Ln					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Ln (N) Ahead	U	A	9	45
3/1	School Ln Right Left	U	C	53	76
5/1	Knowsley Ln (S) Ahead	U	B	9	45



Knowsley Ln/ School Ln

PRC: 9.5 %

Total Traffic Delay: 14.2 pcuHr



Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: School Lane Proposed	-	-	N/A	-	-		-	-	-	-	-	-	-	82.2%
Knowsley Ln/ School Ln	-	-	N/A	-	-		-	-	-	-	-	-	-	82.2%
1/1	Knowsley Ln (N) Ahead	U	N/A	N/A	A		1	36	-	-	639	1915	787	81.2%
2/1		U	N/A	N/A	-		-	-	-	-	1000	Inf	Inf	0.0%
3/1	School Ln Right Left	U	N/A	N/A	C		1	23	-	-	378	1725	460	82.2%
4/1		U	N/A	N/A	-		-	-	-	-	399	Inf	Inf	0.0%
5/1	Knowsley Ln (S) Ahead	U	N/A	N/A	B		1	36	-	-	382	2025	832	45.9%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: School Lane Proposed	-	-	0	0	0	9.5	4.7	0.0	14.2	-	-	-	-	
Knowsley Ln/ School Ln	-	-	0	0	0	9.5	4.7	0.0	14.2	-	-	-	-	
1/1	639	639	-	-	-	4.2	2.1	-	6.3	35.2	14.0	2.1	16.1	
2/1	1000	1000	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
3/1	378	378	-	-	-	3.3	2.2	-	5.4	51.8	8.8	2.2	11.0	
4/1	399	399	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
5/1	382	382	-	-	-	2.0	0.4	-	2.5	23.2	6.9	0.4	7.3	
C1			PRC for Signalled Lanes (%):		9.5	Total Delay for Signalled Lanes (pcuHr):			14.16	Cycle Time (s):		90		
			PRC Over All Lanes (%):		9.5	Total Delay Over All Lanes(pcuHr):			14.16					

Appendix Q

J4: Knowsley Lane/ Sugar Lane - JUNCTIONS Modelling Outputs



Junctions 11										
PICADY 11 - Priority Intersection Module										
Version: 11.0.0.2177										
© Copyright TRL Software Limited, 2024										
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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com										
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: J4_Knowsley Ln-Sugar Ln.j11

Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025 Projects\A25007 Home Farm Road, Knowsley Village\Analysis\JUNCTIONS

Report generation date: 31/07/2025 12:05:51

- »2025 | Survey | AM
- »2025 | Survey | PM
- »2030 | No Dev | AM
- »2030 | No Dev | PM
- »2030 | With Dev | AM
- »2030 | With Dev | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025 - Survey									
Stream B-AC	D1	0.8	15.80	0.44	C	D2	0.6	13.53	0.36	B
Stream C-AB		0.4	8.56	0.27	A		0.3	9.15	0.24	A
	2030 - No Dev									
Stream B-AC	D3	1.0	18.48	0.49	C	D4	0.7	15.29	0.41	C
Stream C-AB		0.4	9.00	0.29	A		0.4	9.71	0.26	A
	2030 - With Dev									
Stream B-AC	D5	1.4	25.66	0.59	D	D6	0.9	20.02	0.48	C
Stream C-AB		0.6	10.05	0.36	B		0.4	10.96	0.30	B

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

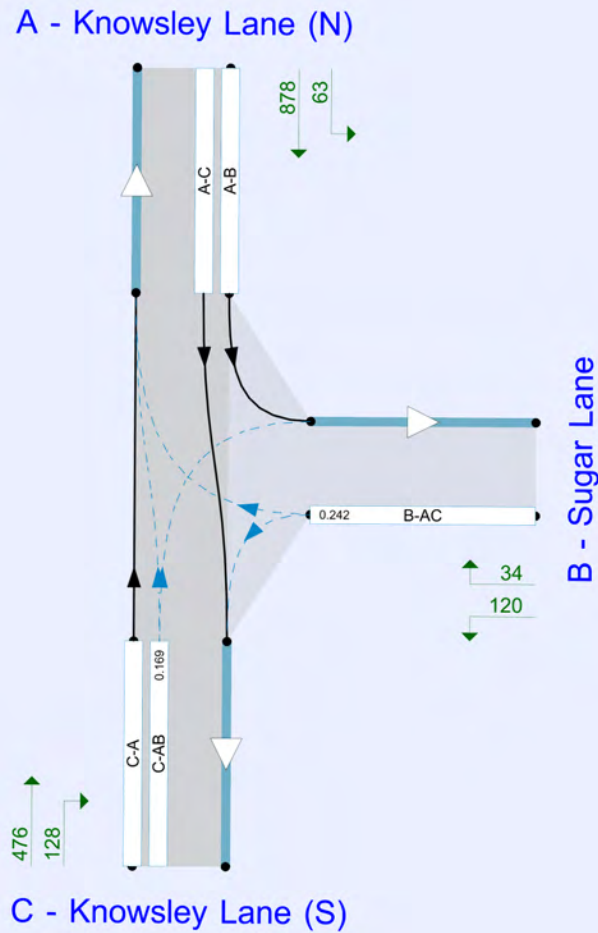
File summary

File Description

Title	
Location	
Site number	
Date	13/06/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\OliverMcLaughlin
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



Flows show original traffic demand (PCU/hr)
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2025 | Survey | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Sugar Ln	T-Junction	Two-way	Two-way	Two-way		2.65	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.65	A

Arms

Arms

Arm	Name	Description	Arm type
A	Knowsley Lane (N)		Major
B	Sugar Lane		Minor
C	Knowsley Lane (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Knowsley Lane (S)	6.35		✓	3.90	150.0	✓	4.20

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Sugar Lane	One lane	3.92	110	96

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	614	0.110	0.279	0.175	0.398
B-C	747	0.113	0.285	-	-
C-B	783	0.299	0.299	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	576	100.000
B - Sugar Lane		ONE HOUR	✓	163	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	701	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	46	530
	B - Sugar Lane	59	0	104
	C - Knowsley Lane (S)	557	144	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0.00	0.08	0.92
	B - Sugar Lane	0.36	0.00	0.64
	C - Knowsley Lane (S)	0.79	0.21	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	2	4
	B - Sugar Lane	2	0	2
	C - Knowsley Lane (S)	5	4	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	1.000	1.020	1.040
	B - Sugar Lane	1.020	1.000	1.020
	C - Knowsley Lane (S)	1.050	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	434	434
	B - Sugar Lane	123	123
	C - Knowsley Lane (S)	528	528
08:15-08:30	A - Knowsley Lane (N)	518	518
	B - Sugar Lane	147	147
	C - Knowsley Lane (S)	630	630
08:30-08:45	A - Knowsley Lane (N)	634	634
	B - Sugar Lane	179	179
	C - Knowsley Lane (S)	772	772
08:45-09:00	A - Knowsley Lane (N)	634	634
	B - Sugar Lane	179	179
	C - Knowsley Lane (S)	772	772
09:00-09:15	A - Knowsley Lane (N)	518	518
	B - Sugar Lane	147	147
	C - Knowsley Lane (S)	630	630
09:15-09:30	A - Knowsley Lane (N)	434	434
	B - Sugar Lane	123	123
	C - Knowsley Lane (S)	528	528

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-AC	0.44	15.80	0.8	C	150	224
C-AB	0.27	8.56	0.4	A	132	199
C-A					511	766
A-B					42	63
A-C					486	730

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	0.00	510	0.241	121	0.0	0.3	9.416	A
C-AB	108	27	0.00	654	0.166	108	0.0	0.2	6.845	A
C-A	419	105	0.00			419				
A-B	35	9	0.00			35				
A-C	399	100	0.00			399				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	147	37	0.00	470	0.312	146	0.3	0.5	11.300	B
C-AB	130	32	0.00	629	0.206	129	0.2	0.3	7.487	A
C-A	501	125	0.00			501				
A-B	41	10	0.00			41				
A-C	476	119	0.00			476				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	179	45	0.00	412	0.436	178	0.5	0.8	15.629	C
C-AB	159	40	0.00	597	0.267	159	0.3	0.4	8.546	A
C-A	612	153	0.00			612				
A-B	51	13	0.00			51				
A-C	584	146	0.00			584				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	179	45	0.00	412	0.436	179	0.8	0.8	15.796	C
C-AB	159	40	0.00	597	0.267	159	0.4	0.4	8.563	A
C-A	612	153	0.00			612				
A-B	51	13	0.00			51				
A-C	584	146	0.00			584				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	147	37	0.00	470	0.312	148	0.8	0.5	11.430	B
C-AB	130	32	0.00	629	0.206	130	0.4	0.3	7.508	A
C-A	501	125	0.00			501				
A-B	41	10	0.00			41				
A-C	476	119	0.00			476				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	123	31	0.00	510	0.241	123	0.5	0.3	9.514	A
C-AB	108	27	0.00	654	0.166	109	0.3	0.2	6.873	A
C-A	419	105	0.00			419				
A-B	35	9	0.00			35				
A-C	399	100	0.00			399				

2025 | Survey | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Sugar Ln	T-Junction	Two-way	Two-way	Two-way		2.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.06	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	775	100.000
B - Sugar Lane		ONE HOUR	✓	138	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	507	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	59	716
	B - Sugar Lane	32	0	106
	C - Knowsley Lane (S)	391	116	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0.00	0.08	0.92
	B - Sugar Lane	0.23	0.00	0.77
	C - Knowsley Lane (S)	0.77	0.23	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	2	4
	B - Sugar Lane	0	0	1
	C - Knowsley Lane (S)	3	2	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	1.000	1.020	1.040
	B - Sugar Lane	1.000	1.000	1.010
	C - Knowsley Lane (S)	1.030	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (N)	583	583
	B - Sugar Lane	104	104
	C - Knowsley Lane (S)	382	382
16:45-17:00	A - Knowsley Lane (N)	697	697
	B - Sugar Lane	124	124
	C - Knowsley Lane (S)	456	456
17:00-17:15	A - Knowsley Lane (N)	853	853
	B - Sugar Lane	152	152
	C - Knowsley Lane (S)	558	558
17:15-17:30	A - Knowsley Lane (N)	853	853
	B - Sugar Lane	152	152
	C - Knowsley Lane (S)	558	558
17:30-17:45	A - Knowsley Lane (N)	697	697
	B - Sugar Lane	124	124
	C - Knowsley Lane (S)	456	456
17:45-18:00	A - Knowsley Lane (N)	583	583
	B - Sugar Lane	104	104
	C - Knowsley Lane (S)	382	382

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-AC	0.36	13.53	0.6	B	127	190
C-AB	0.24	9.15	0.3	A	107	160
C-A					359	538
A-B					54	81
A-C					657	986

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	104	26	0.00	519	0.200	103	0.0	0.2	8.699	A
C-AB	87	22	0.00	609	0.143	87	0.0	0.2	7.023	A
C-A	294	74	0.00			294				
A-B	44	11	0.00			44				
A-C	539	135	0.00			539				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	124	31	0.00	479	0.259	124	0.2	0.3	10.208	B
C-AB	104	26	0.00	575	0.181	104	0.2	0.2	7.791	A
C-A	351	88	0.00			351				
A-B	53	13	0.00			53				
A-C	644	161	0.00			644				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	152	38	0.00	420	0.362	151	0.3	0.6	13.446	B
C-AB	128	32	0.00	529	0.242	128	0.2	0.3	9.129	A
C-A	430	108	0.00			430				
A-B	65	16	0.00			65				
A-C	788	197	0.00			788				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	152	38	0.00	420	0.362	152	0.6	0.6	13.533	B
C-AB	128	32	0.00	529	0.242	128	0.3	0.3	9.148	A
C-A	430	108	0.00			430				
A-B	65	16	0.00			65				
A-C	788	197	0.00			788				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	124	31	0.00	479	0.259	125	0.6	0.4	10.283	B
C-AB	104	26	0.00	575	0.181	105	0.3	0.2	7.811	A
C-A	351	88	0.00			351				
A-B	53	13	0.00			53				
A-C	644	161	0.00			644				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	104	26	0.00	519	0.200	104	0.4	0.3	8.760	A
C-AB	87	22	0.00	609	0.143	88	0.2	0.2	7.049	A
C-A	294	74	0.00			294				
A-B	44	11	0.00			44				
A-C	539	135	0.00			539				

2030 | No Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Sugar Ln	T-Junction	Two-way	Two-way	Two-way		3.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.00	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	613	100.000
B - Sugar Lane		ONE HOUR	✓	174	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	746	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	49	564
	B - Sugar Lane	63	0	111
	C - Knowsley Lane (S)	593	153	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0.00	0.08	0.92
	B - Sugar Lane	0.36	0.00	0.64
	C - Knowsley Lane (S)	0.79	0.21	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	2	4
	B - Sugar Lane	2	0	2
	C - Knowsley Lane (S)	5	4	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	1.000	1.020	1.040
	B - Sugar Lane	1.020	1.000	1.020
	C - Knowsley Lane (S)	1.050	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	461	461
	B - Sugar Lane	131	131
	C - Knowsley Lane (S)	562	562
08:15-08:30	A - Knowsley Lane (N)	551	551
	B - Sugar Lane	156	156
	C - Knowsley Lane (S)	671	671
08:30-08:45	A - Knowsley Lane (N)	675	675
	B - Sugar Lane	192	192
	C - Knowsley Lane (S)	821	821
08:45-09:00	A - Knowsley Lane (N)	675	675
	B - Sugar Lane	192	192
	C - Knowsley Lane (S)	821	821
09:00-09:15	A - Knowsley Lane (N)	551	551
	B - Sugar Lane	156	156
	C - Knowsley Lane (S)	671	671
09:15-09:30	A - Knowsley Lane (N)	461	461
	B - Sugar Lane	131	131
	C - Knowsley Lane (S)	562	562

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-AC	0.49	18.48	1.0	C	160	239
C-AB	0.29	9.00	0.4	A	141	211
C-A					544	815
A-B					45	67
A-C					518	776

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	131	33	0.00	497	0.263	130	0.0	0.4	9.948	A
C-AB	115	29	0.00	646	0.179	114	0.0	0.2	7.036	A
C-A	446	112	0.00			446				
A-B	37	9	0.00			37				
A-C	425	106	0.00			425				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	39	0.00	454	0.344	156	0.4	0.5	12.276	B
C-AB	138	34	0.00	620	0.222	138	0.2	0.3	7.760	A
C-A	533	133	0.00			533				
A-B	44	11	0.00			44				
A-C	507	127	0.00			507				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	192	48	0.00	390	0.491	190	0.5	0.9	18.183	C
C-AB	170	42	0.00	586	0.290	169	0.3	0.4	8.977	A
C-A	652	163	0.00			652				
A-B	54	13	0.00			54				
A-C	621	155	0.00			621				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	192	48	0.00	390	0.491	192	0.9	1.0	18.484	C
C-AB	170	42	0.00	586	0.290	170	0.4	0.4	8.998	A
C-A	652	163	0.00			652				
A-B	54	13	0.00			54				
A-C	621	155	0.00			621				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	156	39	0.00	454	0.345	158	1.0	0.5	12.481	B
C-AB	138	34	0.00	620	0.222	138	0.4	0.3	7.787	A
C-A	533	133	0.00			533				
A-B	44	11	0.00			44				
A-C	507	127	0.00			507				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	131	33	0.00	497	0.264	132	0.5	0.4	10.072	B
C-AB	115	29	0.00	646	0.179	116	0.3	0.2	7.069	A
C-A	446	112	0.00			446				
A-B	37	9	0.00			37				
A-C	425	106	0.00			425				

2030 | No Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Sugar Ln	T-Junction	Two-way	Two-way	Two-way		2.28	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.28	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	824	100.000
B - Sugar Lane		ONE HOUR	✓	147	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	539	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	63	761
	B - Sugar Lane	34	0	113
	C - Knowsley Lane (S)	416	123	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0.00	0.08	0.92
	B - Sugar Lane	0.23	0.00	0.77
	C - Knowsley Lane (S)	0.77	0.23	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	2	4
	B - Sugar Lane	0	0	1
	C - Knowsley Lane (S)	3	2	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	1.000	1.020	1.040
	B - Sugar Lane	1.000	1.000	1.010
	C - Knowsley Lane (S)	1.030	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (N)	620	620
	B - Sugar Lane	111	111
	C - Knowsley Lane (S)	406	406
16:45-17:00	A - Knowsley Lane (N)	741	741
	B - Sugar Lane	132	132
	C - Knowsley Lane (S)	485	485
17:00-17:15	A - Knowsley Lane (N)	907	907
	B - Sugar Lane	162	162
	C - Knowsley Lane (S)	593	593
17:15-17:30	A - Knowsley Lane (N)	907	907
	B - Sugar Lane	162	162
	C - Knowsley Lane (S)	593	593
17:30-17:45	A - Knowsley Lane (N)	741	741
	B - Sugar Lane	132	132
	C - Knowsley Lane (S)	485	485
17:45-18:00	A - Knowsley Lane (N)	620	620
	B - Sugar Lane	111	111
	C - Knowsley Lane (S)	406	406

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-AC	0.41	15.29	0.7	C	135	202
C-AB	0.26	9.71	0.4	A	113	170
C-A					382	572
A-B					58	87
A-C					698	1047

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	0.00	506	0.219	110	0.0	0.3	9.120	A
C-AB	93	23	0.00	598	0.155	92	0.0	0.2	7.246	A
C-A	313	78	0.00			313				
A-B	47	12	0.00			47				
A-C	573	143	0.00			573				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	0.00	463	0.286	132	0.3	0.4	10.940	B
C-AB	111	28	0.00	562	0.197	110	0.2	0.2	8.123	A
C-A	374	93	0.00			374				
A-B	57	14	0.00			57				
A-C	684	171	0.00			684				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	162	40	0.00	399	0.406	161	0.4	0.7	15.156	C
C-AB	136	34	0.00	514	0.265	135	0.2	0.4	9.691	A
C-A	458	114	0.00			458				
A-B	69	17	0.00			69				
A-C	838	209	0.00			838				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	162	40	0.00	399	0.406	162	0.7	0.7	15.295	C
C-AB	136	34	0.00	514	0.264	136	0.4	0.4	9.714	A
C-A	458	114	0.00			458				
A-B	69	17	0.00			69				
A-C	838	209	0.00			838				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	0.00	463	0.286	133	0.7	0.4	11.046	B
C-AB	111	28	0.00	562	0.197	111	0.4	0.3	8.147	A
C-A	374	93	0.00			374				
A-B	57	14	0.00			57				
A-C	684	171	0.00			684				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	0.00	506	0.219	111	0.4	0.3	9.199	A
C-AB	93	23	0.00	598	0.155	93	0.3	0.2	7.274	A
C-A	313	78	0.00			313				
A-B	47	12	0.00			47				
A-C	573	143	0.00			573				

2030 | With Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Sugar Ln	T-Junction	Two-way	Two-way	Two-way		3.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.79	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	659	100.000
B - Sugar Lane		ONE HOUR	✓	185	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	897	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	49	610
	B - Sugar Lane	63	0	122
	C - Knowsley Lane (S)	714	183	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0.00	0.07	0.93
	B - Sugar Lane	0.34	0.00	0.66
	C - Knowsley Lane (S)	0.80	0.20	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	2	4
	B - Sugar Lane	2	0	2
	C - Knowsley Lane (S)	5	4	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	1.000	1.020	1.040
	B - Sugar Lane	1.020	1.000	1.020
	C - Knowsley Lane (S)	1.050	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	496	496
	B - Sugar Lane	139	139
	C - Knowsley Lane (S)	675	675
08:15-08:30	A - Knowsley Lane (N)	592	592
	B - Sugar Lane	166	166
	C - Knowsley Lane (S)	806	806
08:30-08:45	A - Knowsley Lane (N)	726	726
	B - Sugar Lane	204	204
	C - Knowsley Lane (S)	988	988
08:45-09:00	A - Knowsley Lane (N)	726	726
	B - Sugar Lane	204	204
	C - Knowsley Lane (S)	988	988
09:00-09:15	A - Knowsley Lane (N)	592	592
	B - Sugar Lane	166	166
	C - Knowsley Lane (S)	806	806
09:15-09:30	A - Knowsley Lane (N)	496	496
	B - Sugar Lane	139	139
	C - Knowsley Lane (S)	675	675

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-AC	0.59	25.66	1.4	D	170	255
C-AB	0.36	10.05	0.6	B	170	255
C-A					653	980
A-B					45	67
A-C					560	840

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	35	0.00	476	0.293	138	0.0	0.4	10.798	B
C-AB	138	35	0.00	636	0.217	137	0.0	0.3	7.485	A
C-A	537	134	0.00			537				
A-B	37	9	0.00			37				
A-C	459	115	0.00			459				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	42	0.00	425	0.391	165	0.4	0.6	14.091	B
C-AB	165	41	0.00	609	0.271	165	0.3	0.4	8.418	A
C-A	641	160	0.00			641				
A-B	44	11	0.00			44				
A-C	548	137	0.00			548				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	204	51	0.00	346	0.588	201	0.6	1.4	24.723	C
C-AB	206	51	0.00	578	0.356	205	0.4	0.6	10.010	B
C-A	782	195	0.00			782				
A-B	54	13	0.00			54				
A-C	672	168	0.00			672				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	204	51	0.00	346	0.588	204	1.4	1.4	25.659	D
C-AB	206	51	0.00	578	0.356	206	0.6	0.6	10.051	B
C-A	782	195	0.00			782				
A-B	54	13	0.00			54				
A-C	672	168	0.00			672				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	166	42	0.00	425	0.392	169	1.4	0.7	14.529	B
C-AB	165	41	0.00	609	0.271	166	0.6	0.4	8.463	A
C-A	641	160	0.00			641				
A-B	44	11	0.00			44				
A-C	548	137	0.00			548				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	139	35	0.00	476	0.293	140	0.7	0.4	10.982	B
C-AB	138	35	0.00	636	0.217	138	0.4	0.3	7.530	A
C-A	537	134	0.00			537				
A-B	37	9	0.00			37				
A-C	459	115	0.00			459				

2030 | With Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Sugar Ln	T-Junction	Two-way	Two-way	Two-way		2.64	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.64	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	941	100.000
B - Sugar Lane		ONE HOUR	✓	154	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	604	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	63	878
	B - Sugar Lane	34	0	120
	C - Knowsley Lane (S)	476	128	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0.00	0.07	0.93
	B - Sugar Lane	0.22	0.00	0.78
	C - Knowsley Lane (S)	0.79	0.21	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	2	4
	B - Sugar Lane	0	0	1
	C - Knowsley Lane (S)	3	2	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Sugar Lane	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	1.000	1.020	1.040
	B - Sugar Lane	1.000	1.000	1.010
	C - Knowsley Lane (S)	1.030	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (N)	708	708
	B - Sugar Lane	116	116
	C - Knowsley Lane (S)	455	455
16:45-17:00	A - Knowsley Lane (N)	846	846
	B - Sugar Lane	138	138
	C - Knowsley Lane (S)	543	543
17:00-17:15	A - Knowsley Lane (N)	1036	1036
	B - Sugar Lane	170	170
	C - Knowsley Lane (S)	665	665
17:15-17:30	A - Knowsley Lane (N)	1036	1036
	B - Sugar Lane	170	170
	C - Knowsley Lane (S)	665	665
17:30-17:45	A - Knowsley Lane (N)	846	846
	B - Sugar Lane	138	138
	C - Knowsley Lane (S)	543	543
17:45-18:00	A - Knowsley Lane (N)	708	708
	B - Sugar Lane	116	116
	C - Knowsley Lane (S)	455	455

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-AC	0.48	20.02	0.9	C	141	212
C-AB	0.30	10.96	0.4	B	118	177
C-A					436	655
A-B					58	87
A-C					806	1209

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	116	29	0.00	478	0.242	115	0.0	0.3	9.938	A
C-AB	96	24	0.00	572	0.169	96	0.0	0.2	7.700	A
C-A	358	90	0.00			358				
A-B	47	12	0.00			47				
A-C	661	165	0.00			661				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	138	35	0.00	428	0.324	138	0.3	0.5	12.488	B
C-AB	115	29	0.00	531	0.217	115	0.2	0.3	8.817	A
C-A	428	107	0.00			428				
A-B	57	14	0.00			57				
A-C	789	197	0.00			789				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	170	42	0.00	351	0.484	168	0.5	0.9	19.653	C
C-AB	142	35	0.00	477	0.298	141	0.3	0.4	10.922	B
C-A	523	131	0.00			523				
A-B	69	17	0.00			69				
A-C	967	242	0.00			967				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	170	42	0.00	351	0.484	169	0.9	0.9	20.019	C
C-AB	142	35	0.00	477	0.298	142	0.4	0.4	10.958	B
C-A	523	131	0.00			523				
A-B	69	17	0.00			69				
A-C	967	242	0.00			967				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	138	35	0.00	427	0.324	140	0.9	0.5	12.699	B
C-AB	115	29	0.00	531	0.217	116	0.4	0.3	8.855	A
C-A	428	107	0.00			428				
A-B	57	14	0.00			57				
A-C	789	197	0.00			789				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	116	29	0.00	478	0.242	117	0.5	0.3	10.050	B
C-AB	96	24	0.00	572	0.169	97	0.3	0.2	7.737	A
C-A	358	90	0.00			358				
A-B	47	12	0.00			47				
A-C	661	165	0.00			661				

Appendix R

J5: Knowsley Lane/ Home Farm Road

JUNCTIONS Modelling Outputs



Junctions 11										
PICADY 11 - Priority Intersection Module										
Version: 11.0.0.2177										
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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com										
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: J5_Knowsley Ln-Home Farm Rd.j11

Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025 Projects\A25007 Home Farm Road, Knowsley Village\Analysis\JUNCTIONS

Report generation date: 31/07/2025 13:31:33

- »2025 | Survey | AM
- »2025 | Survey | PM
- »2030 | No Dev | AM
- »2030 | No Dev | PM
- »2030 | With Dev | AM
- »2030 | With Dev | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025 - Survey									
Stream B-AC	D1	0.1	10.22	0.11	B	D2	0.1	10.92	0.05	B
Stream C-AB		0.2	4.36	0.10	A		0.1	4.92	0.06	A
	2030 - No Dev									
Stream B-AC	D3	0.1	10.66	0.12	B	D4	0.1	11.45	0.06	B
Stream C-AB		0.2	4.29	0.11	A		0.1	4.88	0.06	A
	2030 - With Dev									
Stream B-AC	D5	0.1	11.61	0.13	B	D6	0.1	13.27	0.06	B
Stream C-AB		0.4	4.01	0.14	A		0.1	4.78	0.08	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

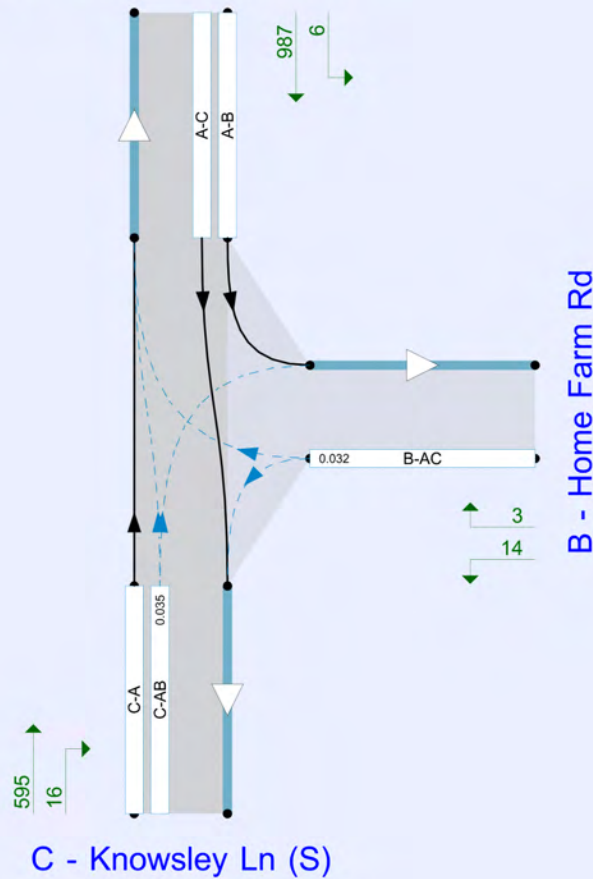
File Description

Title	
Location	
Site number	
Date	13/06/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\OliverMcLaughlin
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

A - Knowsley Lane (N)



Flows show original traffic demand (PCU/hr)
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2025 | Survey | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Home Farm Rd	T-Junction	Two-way	Two-way	Two-way		0.50	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.50	A

Arms

Arms

Arm	Name	Description	Arm type
A	Knowsley Lane (N)		Major
B	Home Farm Rd		Minor
C	Knowsley Ln (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Knowsley Ln (S)	6.25			112.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Home Farm Rd	One lane	2.94	0	17

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	483	0.088	0.221	0.139	0.316
B-C	631	0.095	0.240	-	-
C-B	639	0.245	0.245	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	672	100.000
B - Home Farm Rd		ONE HOUR	✓	39	100.000
C - Knowsley Ln (S)		ONE HOUR	✓	721	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	9	663
	B - Home Farm Rd	4	0	35
	C - Knowsley Ln (S)	698	23	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0.00	0.01	0.99
	B - Home Farm Rd	0.10	0.00	0.90
	C - Knowsley Ln (S)	0.97	0.03	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	0	6
	B - Home Farm Rd	33	0	0
	C - Knowsley Ln (S)	4	0	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	1.000	1.000	1.060
	B - Home Farm Rd	1.330	1.000	1.000
	C - Knowsley Ln (S)	1.040	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	506	506
	B - Home Farm Rd	29	29
	C - Knowsley Ln (S)	543	543
08:15-08:30	A - Knowsley Lane (N)	604	604
	B - Home Farm Rd	35	35
	C - Knowsley Ln (S)	648	648
08:30-08:45	A - Knowsley Lane (N)	740	740
	B - Home Farm Rd	43	43
	C - Knowsley Ln (S)	794	794
08:45-09:00	A - Knowsley Lane (N)	740	740
	B - Home Farm Rd	43	43
	C - Knowsley Ln (S)	794	794
09:00-09:15	A - Knowsley Lane (N)	604	604
	B - Home Farm Rd	35	35
	C - Knowsley Ln (S)	648	648
09:15-09:30	A - Knowsley Lane (N)	506	506
	B - Home Farm Rd	29	29
	C - Knowsley Ln (S)	543	543

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-AC	0.11	10.22	0.1	B	36	54
C-AB	0.10	4.36	0.2	A	68	102
C-A					594	890
A-B					8	12
A-C					608	913

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	0.00	474	0.062	29	0.0	0.1	8.291	A
C-AB	42	11	0.00	890	0.047	42	0.0	0.1	4.342	A
C-A	501	125	0.00			501				
A-B	7	2	0.00			7				
A-C	499	125	0.00			499				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	0.00	446	0.079	35	0.1	0.1	8.988	A
C-AB	61	15	0.00	947	0.065	61	0.1	0.1	4.164	A
C-A	587	147	0.00			587				
A-B	8	2	0.00			8				
A-C	596	149	0.00			596				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	11	0.00	404	0.106	43	0.1	0.1	10.216	B
C-AB	100	25	0.00	1031	0.097	100	0.1	0.2	3.976	A
C-A	694	173	0.00			694				
A-B	10	2	0.00			10				
A-C	730	182	0.00			730				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	43	11	0.00	404	0.106	43	0.1	0.1	10.223	B
C-AB	100	25	0.00	1031	0.097	100	0.2	0.2	3.985	A
C-A	694	173	0.00			694				
A-B	10	2	0.00			10				
A-C	730	182	0.00			730				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	0.00	446	0.079	35	0.1	0.1	9.001	A
C-AB	62	15	0.00	948	0.065	62	0.2	0.1	4.183	A
C-A	586	147	0.00			586				
A-B	8	2	0.00			8				
A-C	596	149	0.00			596				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	0.00	474	0.062	29	0.1	0.1	8.306	A
C-AB	42	11	0.00	890	0.048	43	0.1	0.1	4.356	A
C-A	500	125	0.00			500				
A-B	7	2	0.00			7				
A-C	499	125	0.00			499				

2025 | Survey | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Home Farm Rd	T-Junction	Two-way	Two-way	Two-way		0.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.26	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	818	100.000
B - Home Farm Rd		ONE HOUR	✓	16	100.000
C - Knowsley Ln (S)		ONE HOUR	✓	514	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	6	812
	B - Home Farm Rd	3	0	13
	C - Knowsley Ln (S)	499	15	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0.00	0.01	0.99
	B - Home Farm Rd	0.19	0.00	0.81
	C - Knowsley Ln (S)	0.97	0.03	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	20	3
	B - Home Farm Rd	0	0	0
	C - Knowsley Ln (S)	2	0	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	1.000	1.200	1.030
	B - Home Farm Rd	1.000	1.000	1.000
	C - Knowsley Ln (S)	1.020	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (N)	616	616
	B - Home Farm Rd	12	12
	C - Knowsley Ln (S)	387	387
16:45-17:00	A - Knowsley Lane (N)	735	735
	B - Home Farm Rd	14	14
	C - Knowsley Ln (S)	462	462
17:00-17:15	A - Knowsley Lane (N)	901	901
	B - Home Farm Rd	18	18
	C - Knowsley Ln (S)	566	566
17:15-17:30	A - Knowsley Lane (N)	901	901
	B - Home Farm Rd	18	18
	C - Knowsley Ln (S)	566	566
17:30-17:45	A - Knowsley Lane (N)	735	735
	B - Home Farm Rd	14	14
	C - Knowsley Ln (S)	462	462
17:45-18:00	A - Knowsley Lane (N)	616	616
	B - Home Farm Rd	12	12
	C - Knowsley Ln (S)	387	387

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-AC	0.05	10.92	0.1	B	15	22
C-AB	0.06	4.92	0.1	A	34	51
C-A					438	657
A-B					6	8
A-C					745	1118

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	0.00	430	0.028	12	0.0	0.0	8.601	A
C-AB	22	6	0.00	762	0.029	22	0.0	0.0	4.914	A
C-A	365	91	0.00			365				
A-B	5	1	0.00			5				
A-C	611	153	0.00			611				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	0.00	396	0.036	14	0.0	0.0	9.425	A
C-AB	31	8	0.00	793	0.039	31	0.0	0.1	4.774	A
C-A	431	108	0.00			431				
A-B	5	1	0.00			5				
A-C	730	182	0.00			730				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	18	4	0.00	347	0.051	18	0.0	0.1	10.921	B
C-AB	48	12	0.00	840	0.057	48	0.1	0.1	4.599	A
C-A	518	130	0.00			518				
A-B	7	2	0.00			7				
A-C	894	224	0.00			894				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	18	4	0.00	347	0.051	18	0.1	0.1	10.923	B
C-AB	48	12	0.00	840	0.057	48	0.1	0.1	4.605	A
C-A	518	129	0.00			518				
A-B	7	2	0.00			7				
A-C	894	224	0.00			894				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	14	4	0.00	396	0.036	14	0.1	0.0	9.428	A
C-AB	31	8	0.00	793	0.039	31	0.1	0.1	4.786	A
C-A	431	108	0.00			431				
A-B	5	1	0.00			5				
A-C	730	182	0.00			730				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12	3	0.00	430	0.028	12	0.0	0.0	8.607	A
C-AB	22	6	0.00	762	0.029	22	0.1	0.0	4.920	A
C-A	365	91	0.00			365				
A-B	5	1	0.00			5				
A-C	611	153	0.00			611				

2030 | No Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Home Farm Rd	T-Junction	Two-way	Two-way	Two-way		0.52	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.52	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	716	100.000
B - Home Farm Rd		ONE HOUR	✓	41	100.000
C - Knowsley Ln (S)		ONE HOUR	✓	767	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	10	706
	B - Home Farm Rd	4	0	37
	C - Knowsley Ln (S)	743	24	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0.00	0.01	0.99
	B - Home Farm Rd	0.10	0.00	0.90
	C - Knowsley Ln (S)	0.97	0.03	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	0	6
	B - Home Farm Rd	33	0	0
	C - Knowsley Ln (S)	4	0	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	1.000	1.000	1.060
	B - Home Farm Rd	1.330	1.000	1.000
	C - Knowsley Ln (S)	1.040	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	539	539
	B - Home Farm Rd	31	31
	C - Knowsley Ln (S)	577	577
08:15-08:30	A - Knowsley Lane (N)	644	644
	B - Home Farm Rd	37	37
	C - Knowsley Ln (S)	690	690
08:30-08:45	A - Knowsley Lane (N)	788	788
	B - Home Farm Rd	45	45
	C - Knowsley Ln (S)	844	844
08:45-09:00	A - Knowsley Lane (N)	788	788
	B - Home Farm Rd	45	45
	C - Knowsley Ln (S)	844	844
09:00-09:15	A - Knowsley Lane (N)	644	644
	B - Home Farm Rd	37	37
	C - Knowsley Ln (S)	690	690
09:15-09:30	A - Knowsley Lane (N)	539	539
	B - Home Farm Rd	31	31
	C - Knowsley Ln (S)	577	577

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-AC	0.12	10.66	0.1	B	38	56
C-AB	0.11	4.29	0.2	A	78	116
C-A					626	939
A-B					9	14
A-C					648	972

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	0.00	467	0.066	31	0.0	0.1	8.456	A
C-AB	47	12	0.00	909	0.052	47	0.0	0.1	4.277	A
C-A	530	133	0.00			530				
A-B	8	2	0.00			8				
A-C	532	133	0.00			532				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	0.00	436	0.085	37	0.1	0.1	9.237	A
C-AB	69	17	0.00	971	0.072	69	0.1	0.1	4.097	A
C-A	620	155	0.00			620				
A-B	9	2	0.00			9				
A-C	635	159	0.00			635				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45	11	0.00	391	0.115	45	0.1	0.1	10.654	B
C-AB	116	29	0.00	1062	0.109	115	0.1	0.2	3.919	A
C-A	729	182	0.00			729				
A-B	11	3	0.00			11				
A-C	777	194	0.00			777				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45	11	0.00	391	0.115	45	0.1	0.1	10.663	B
C-AB	116	29	0.00	1062	0.109	116	0.2	0.2	3.928	A
C-A	728	182	0.00			728				
A-B	11	3	0.00			11				
A-C	777	194	0.00			777				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37	9	0.00	436	0.085	37	0.1	0.1	9.250	A
C-AB	70	17	0.00	971	0.072	70	0.2	0.1	4.118	A
C-A	620	155	0.00			620				
A-B	9	2	0.00			9				
A-C	635	159	0.00			635				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	31	8	0.00	467	0.066	31	0.1	0.1	8.471	A
C-AB	47	12	0.00	909	0.052	47	0.1	0.1	4.289	A
C-A	530	133	0.00			530				
A-B	8	2	0.00			8				
A-C	532	133	0.00			532				

2030 | No Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Home Farm Rd	T-Junction	Two-way	Two-way	Two-way		0.28	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.28	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	869	100.000
B - Home Farm Rd		ONE HOUR	✓	17	100.000
C - Knowsley Ln (S)		ONE HOUR	✓	546	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	6	863
	B - Home Farm Rd	3	0	14
	C - Knowsley Ln (S)	530	16	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0.00	0.01	0.99
	B - Home Farm Rd	0.18	0.00	0.82
	C - Knowsley Ln (S)	0.97	0.03	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	20	3
	B - Home Farm Rd	0	0	0
	C - Knowsley Ln (S)	2	0	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	1.000	1.200	1.030
	B - Home Farm Rd	1.000	1.000	1.000
	C - Knowsley Ln (S)	1.020	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (N)	654	654
	B - Home Farm Rd	13	13
	C - Knowsley Ln (S)	411	411
16:45-17:00	A - Knowsley Lane (N)	781	781
	B - Home Farm Rd	15	15
	C - Knowsley Ln (S)	491	491
17:00-17:15	A - Knowsley Lane (N)	957	957
	B - Home Farm Rd	19	19
	C - Knowsley Ln (S)	601	601
17:15-17:30	A - Knowsley Lane (N)	957	957
	B - Home Farm Rd	19	19
	C - Knowsley Ln (S)	601	601
17:30-17:45	A - Knowsley Lane (N)	781	781
	B - Home Farm Rd	15	15
	C - Knowsley Ln (S)	491	491
17:45-18:00	A - Knowsley Lane (N)	654	654
	B - Home Farm Rd	13	13
	C - Knowsley Ln (S)	411	411

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-AC	0.06	11.45	0.1	B	16	23
C-AB	0.06	4.88	0.1	A	39	58
C-A					462	694
A-B					6	8
A-C					792	1188

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	0.00	422	0.030	13	0.0	0.0	8.784	A
C-AB	25	6	0.00	772	0.032	25	0.0	0.0	4.870	A
C-A	386	97	0.00			386				
A-B	5	1	0.00			5				
A-C	650	162	0.00			650				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	0.00	386	0.040	15	0.0	0.0	9.707	A
C-AB	35	9	0.00	806	0.044	35	0.0	0.1	4.725	A
C-A	456	114	0.00			456				
A-B	5	1	0.00			5				
A-C	776	194	0.00			776				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	0.00	333	0.056	19	0.0	0.1	11.443	B
C-AB	55	14	0.00	857	0.065	55	0.1	0.1	4.547	A
C-A	546	136	0.00			546				
A-B	7	2	0.00			7				
A-C	950	238	0.00			950				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	0.00	333	0.056	19	0.1	0.1	11.448	B
C-AB	56	14	0.00	857	0.065	56	0.1	0.1	4.552	A
C-A	546	136	0.00			546				
A-B	7	2	0.00			7				
A-C	950	238	0.00			950				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	0.00	386	0.040	15	0.1	0.0	9.713	A
C-AB	35	9	0.00	806	0.044	36	0.1	0.1	4.738	A
C-A	455	114	0.00			455				
A-B	5	1	0.00			5				
A-C	776	194	0.00			776				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	0.00	422	0.030	13	0.0	0.0	8.791	A
C-AB	25	6	0.00	772	0.032	25	0.1	0.0	4.878	A
C-A	386	96	0.00			386				
A-B	5	1	0.00			5				
A-C	650	162	0.00			650				

2030 | With Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Home Farm Rd	T-Junction	Two-way	Two-way	Two-way		0.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.55	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	773	100.000
B - Home Farm Rd		ONE HOUR	✓	42	100.000
C - Knowsley Ln (S)		ONE HOUR	✓	919	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	10	763
	B - Home Farm Rd	4	0	38
	C - Knowsley Ln (S)	894	25	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0.00	0.01	0.99
	B - Home Farm Rd	0.10	0.00	0.90
	C - Knowsley Ln (S)	0.97	0.03	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	0	6
	B - Home Farm Rd	33	0	0
	C - Knowsley Ln (S)	4	0	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	1.000	1.000	1.060
	B - Home Farm Rd	1.330	1.000	1.000
	C - Knowsley Ln (S)	1.040	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	582	582
	B - Home Farm Rd	32	32
	C - Knowsley Ln (S)	692	692
08:15-08:30	A - Knowsley Lane (N)	695	695
	B - Home Farm Rd	38	38
	C - Knowsley Ln (S)	826	826
08:30-08:45	A - Knowsley Lane (N)	851	851
	B - Home Farm Rd	46	46
	C - Knowsley Ln (S)	1012	1012
08:45-09:00	A - Knowsley Lane (N)	851	851
	B - Home Farm Rd	46	46
	C - Knowsley Ln (S)	1012	1012
09:00-09:15	A - Knowsley Lane (N)	695	695
	B - Home Farm Rd	38	38
	C - Knowsley Ln (S)	826	826
09:15-09:30	A - Knowsley Lane (N)	582	582
	B - Home Farm Rd	32	32
	C - Knowsley Ln (S)	692	692

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-AC	0.13	11.61	0.1	B	39	58
C-AB	0.14	4.01	0.4	A	107	160
C-A					737	1105
A-B					9	14
A-C					700	1050

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	0.00	452	0.070	31	0.0	0.1	8.752	A
C-AB	60	15	0.00	984	0.061	59	0.0	0.1	3.998	A
C-A	632	158	0.00			632				
A-B	8	2	0.00			8				
A-C	574	144	0.00			574				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	38	9	0.00	417	0.090	38	0.1	0.1	9.706	A
C-AB	93	23	0.00	1063	0.087	92	0.1	0.2	3.813	A
C-A	734	183	0.00			734				
A-B	9	2	0.00			9				
A-C	686	171	0.00			686				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	12	0.00	364	0.127	46	0.1	0.1	11.592	B
C-AB	167	42	0.00	1180	0.142	167	0.2	0.4	3.671	A
C-A	844	211	0.00			844				
A-B	11	3	0.00			11				
A-C	840	210	0.00			840				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	12	0.00	364	0.127	46	0.1	0.1	11.609	B
C-AB	168	42	0.00	1180	0.142	168	0.4	0.4	3.678	A
C-A	844	211	0.00			844				
A-B	11	3	0.00			11				
A-C	840	210	0.00			840				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	38	9	0.00	417	0.090	38	0.1	0.1	9.721	A
C-AB	93	23	0.00	1064	0.087	94	0.4	0.2	3.837	A
C-A	733	183	0.00			733				
A-B	9	2	0.00			9				
A-C	686	171	0.00			686				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	0.00	452	0.070	32	0.1	0.1	8.769	A
C-AB	60	15	0.00	984	0.061	60	0.2	0.1	4.013	A
C-A	632	158	0.00			632				
A-B	8	2	0.00			8				
A-C	574	144	0.00			574				

2030 | With Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Ln-Home Farm Rd	T-Junction	Two-way	Two-way	Two-way		0.28	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.28	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	993	100.000
B - Home Farm Rd		ONE HOUR	✓	17	100.000
C - Knowsley Ln (S)		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	6	987
	B - Home Farm Rd	3	0	14
	C - Knowsley Ln (S)	595	16	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0.00	0.01	0.99
	B - Home Farm Rd	0.18	0.00	0.82
	C - Knowsley Ln (S)	0.97	0.03	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	0	20	3
	B - Home Farm Rd	0	0	0
	C - Knowsley Ln (S)	2	0	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Home Farm Rd	C - Knowsley Ln (S)
	A - Knowsley Lane (N)	1.000	1.200	1.030
	B - Home Farm Rd	1.000	1.000	1.000
	C - Knowsley Ln (S)	1.020	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (N)	748	748
	B - Home Farm Rd	13	13
	C - Knowsley Ln (S)	460	460
16:45-17:00	A - Knowsley Lane (N)	893	893
	B - Home Farm Rd	15	15
	C - Knowsley Ln (S)	549	549
17:00-17:15	A - Knowsley Lane (N)	1093	1093
	B - Home Farm Rd	19	19
	C - Knowsley Ln (S)	673	673
17:15-17:30	A - Knowsley Lane (N)	1093	1093
	B - Home Farm Rd	19	19
	C - Knowsley Ln (S)	673	673
17:30-17:45	A - Knowsley Lane (N)	893	893
	B - Home Farm Rd	15	15
	C - Knowsley Ln (S)	549	549
17:45-18:00	A - Knowsley Lane (N)	748	748
	B - Home Farm Rd	13	13
	C - Knowsley Ln (S)	460	460

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-AC	0.06	13.27	0.1	B	16	23
C-AB	0.08	4.78	0.1	A	45	68
C-A					516	773
A-B					6	8
A-C					906	1359

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	0.00	396	0.032	13	0.0	0.0	9.378	A
C-AB	28	7	0.00	790	0.035	28	0.0	0.0	4.773	A
C-A	432	108	0.00			432				
A-B	5	1	0.00			5				
A-C	743	186	0.00			743				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	0.00	354	0.043	15	0.0	0.0	10.630	B
C-AB	41	10	0.00	830	0.049	40	0.0	0.1	4.613	A
C-A	509	127	0.00			509				
A-B	5	1	0.00			5				
A-C	887	222	0.00			887				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	0.00	290	0.065	19	0.0	0.1	13.258	B
C-AB	67	17	0.00	891	0.075	67	0.1	0.1	4.426	A
C-A	606	151	0.00			606				
A-B	7	2	0.00			7				
A-C	1087	272	0.00			1087				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	0.00	290	0.065	19	0.1	0.1	13.268	B
C-AB	67	17	0.00	891	0.075	67	0.1	0.1	4.433	A
C-A	606	151	0.00			606				
A-B	7	2	0.00			7				
A-C	1087	272	0.00			1087				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	15	4	0.00	354	0.043	15	0.1	0.0	10.639	B
C-AB	41	10	0.00	831	0.049	41	0.1	0.1	4.625	A
C-A	509	127	0.00			509				
A-B	5	1	0.00			5				
A-C	887	222	0.00			887				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	0.00	396	0.032	13	0.0	0.0	9.386	A
C-AB	28	7	0.00	790	0.035	28	0.1	0.0	4.780	A
C-A	432	108	0.00			432				
A-B	5	1	0.00			5				
A-C	743	186	0.00			743				

Appendix S

J6: Knowsley Lane/ Stockbridge Lane

JUNCTIONS Modelling Outputs



Junctions 11										
PICADY 11 - Priority Intersection Module										
Version: 11.0.0.2177										
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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com										
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: J6_Knowsley Ln-Stockbridge Ln.j11

Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025 Projects\A25007 Home Farm Road, Knowsley Village\Analysis\JUNCTIONS

Report generation date: 31/07/2025 13:51:35

- »2025 | Survey | AM
- »2025 | Survey | PM
- »2030 | No Dev | AM
- »2030 | No Dev | PM
- »2030 | With Dev | AM
- »2030 | With Dev | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025 - Survey									
Stream B-AC	D1	81.5	656.88	1.42	F	D2	49.1	435.24	1.31	F
Stream C-AB		31.9	137.74	1.04	F		61.3	226.41	1.12	F
	2030 - No Dev									
Stream B-AC	D3	140.4	1196.88	1.72	F	D4	100.1	1029.86	1.65	F
Stream C-AB		58.5	235.93	1.13	F		96.6	400.08	1.21	F
	2030 - With Dev									
Stream B-AC	D5	222.0	2191.28	2.39	F	D6	179.3	2007.69	2.29	F
Stream C-AB		111.9	502.66	1.26	F		136.5	593.83	1.30	F

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

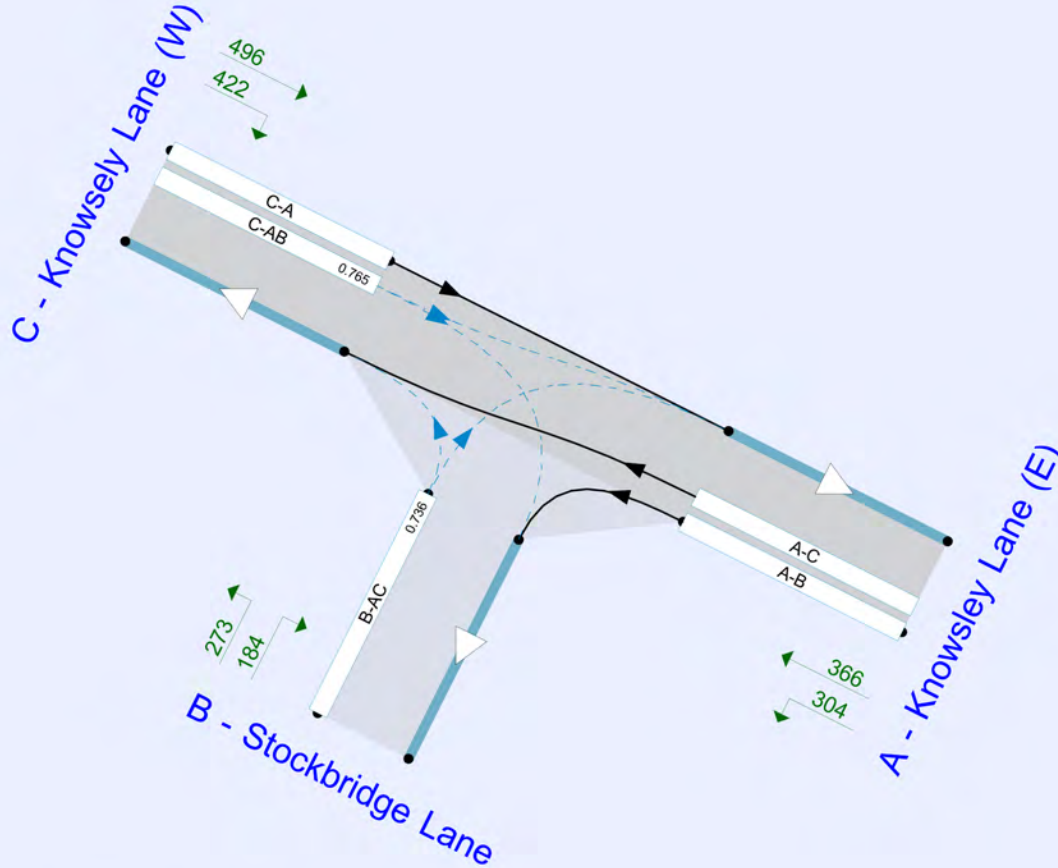
File summary

File Description

Title	
Location	
Site number	
Date	13/06/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\OliverMcLaughlin
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



Flows show original traffic demand (PCU/hr)
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2025 | Survey | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Stockbridge Lane	T-Junction	Two-way	Two-way	Two-way		219.23	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	219.23	F

Arms

Arms

Arm	Name	Description	Arm type
A	Knowsley Lane (E)		Major
B	Stockbridge Lane		Minor
C	Knowsley Lane (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Knowsley Lane (W)	7.10			120.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Stockbridge Lane	One lane	4.10	30	115

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	604	0.105	0.266	0.167	0.380
B-C	773	0.112	0.284	-	-
C-B	643	0.237	0.237	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (E)		ONE HOUR	✓	651	100.000
B - Stockbridge Lane		ONE HOUR	✓	475	100.000
C - Knowsely Lane (W)		ONE HOUR	✓	709	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	From			
	A - Knowsley Lane (E)	0	218	433
	B - Stockbridge Lane	172	0	303
	C - Knowsely Lane (W)	357	352	0

Proportions

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	From			
	A - Knowsley Lane (E)	0.00	0.33	0.67
	B - Stockbridge Lane	0.36	0.00	0.64
	C - Knowsely Lane (W)	0.50	0.50	0.00

Vehicle Mix

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

Heavy Vehicle %

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	From			
	A - Knowsley Lane (E)	0	4	5
	B - Stockbridge Lane	2	0	1
	C - Knowsely Lane (W)	6	4	0

Average PCU Per Veh

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	From			
	A - Knowsley Lane (E)	1.000	1.040	1.050
	B - Stockbridge Lane	1.020	1.000	1.010
	C - Knowsely Lane (W)	1.060	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (E)	490	490
	B - Stockbridge Lane	358	358
	C - Knowsely Lane (W)	534	534
08:15-08:30	A - Knowsley Lane (E)	585	585
	B - Stockbridge Lane	427	427
	C - Knowsely Lane (W)	637	637
08:30-08:45	A - Knowsley Lane (E)	717	717
	B - Stockbridge Lane	523	523
	C - Knowsely Lane (W)	781	781
08:45-09:00	A - Knowsley Lane (E)	717	717
	B - Stockbridge Lane	523	523
	C - Knowsely Lane (W)	781	781
09:00-09:15	A - Knowsley Lane (E)	585	585
	B - Stockbridge Lane	427	427
	C - Knowsely Lane (W)	637	637
09:15-09:30	A - Knowsley Lane (E)	490	490
	B - Stockbridge Lane	358	358
	C - Knowsely Lane (W)	534	534

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-AC	1.42	656.88	81.5	F	436	654
C-AB	1.04	137.74	31.9	F	601	902
C-A					49	74
A-B					200	300
A-C					397	596

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	358	89	0.00	504	0.710	348	0.0	2.3	22.396	C
C-AB	424	106	0.00	717	0.591	416	0.0	1.9	12.376	B
C-A	110	27	0.00			110				
A-B	164	41	0.00			164				
A-C	326	81	0.00			326				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	427	107	0.00	457	0.935	407	2.3	7.2	58.267	F
C-AB	566	141	0.00	738	0.767	557	1.9	4.2	20.675	C
C-A	72	18	0.00			72				
A-B	196	49	0.00			196				
A-C	389	97	0.00			389				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	523	131	0.00	386	1.355	383	7.2	42.2	256.743	F
C-AB	781	195	0.00	751	1.039	714	4.2	20.9	73.121	F
C-A	0	0	0.00			0				
A-B	240	60	0.00			240				
A-C	477	119	0.00			477				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	523	131	0.00	368	1.423	367	42.2	81.2	584.568	F
C-AB	781	195	0.00	753	1.037	737	20.9	31.9	137.737	F
C-A	0	0	0.00			0				
A-B	240	60	0.00			240				
A-C	477	119	0.00			477				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	427	107	0.00	429	0.996	426	81.2	81.5	656.876	F
C-AB	624	156	0.00	782	0.798	722	31.9	7.3	85.957	F
C-A	14	3	0.00			14				
A-B	196	49	0.00			196				
A-C	389	97	0.00			389				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	358	89	0.00	498	0.719	492	81.5	48.0	477.357	F
C-AB	434	109	0.00	727	0.597	455	7.3	2.2	15.073	C
C-A	100	25	0.00			100				
A-B	164	41	0.00			164				
A-C	326	81	0.00			326				

2025 | Survey | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Stockbridge Lane	T-Junction	Two-way	Two-way	Two-way		195.08	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	195.08	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (E)		ONE HOUR	✓	578	100.000
B - Stockbridge Lane		ONE HOUR	✓	399	100.000
C - Knowsely Lane (W)		ONE HOUR	✓	820	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0	286	292
	B - Stockbridge Lane	173	0	226
	C - Knowsely Lane (W)	439	381	0

Proportions

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0.00	0.49	0.51
	B - Stockbridge Lane	0.43	0.00	0.57
	C - Knowsely Lane (W)	0.54	0.46	0.00

Vehicle Mix

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

Heavy Vehicle %

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
	From			
	A - Knowsley Lane (E)	0	1	1
	B - Stockbridge Lane	2	0	2
	C - Knowsley Lane (W)	3	2	0

Average PCU Per Veh

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
	From			
	A - Knowsley Lane (E)	1.000	1.010	1.010
	B - Stockbridge Lane	1.020	1.000	1.020
	C - Knowsley Lane (W)	1.030	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (E)	435	435
	B - Stockbridge Lane	300	300
	C - Knowsley Lane (W)	617	617
16:45-17:00	A - Knowsley Lane (E)	520	520
	B - Stockbridge Lane	359	359
	C - Knowsley Lane (W)	737	737
17:00-17:15	A - Knowsley Lane (E)	636	636
	B - Stockbridge Lane	439	439
	C - Knowsley Lane (W)	903	903
17:15-17:30	A - Knowsley Lane (E)	636	636
	B - Stockbridge Lane	439	439
	C - Knowsley Lane (W)	903	903
17:30-17:45	A - Knowsley Lane (E)	520	520
	B - Stockbridge Lane	359	359
	C - Knowsley Lane (W)	737	737
17:45-18:00	A - Knowsley Lane (E)	435	435
	B - Stockbridge Lane	300	300
	C - Knowsley Lane (W)	617	617

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-AC	1.31	435.24	49.1	F	366	549
C-AB	1.12	226.41	61.3	F	717	1075
C-A					35	53
A-B					262	394
A-C					268	402

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	300	75	0.00	491	0.611	294	0.0	1.5	18.117	C
C-AB	502	125	0.00	771	0.650	492	0.0	2.5	12.994	B
C-A	116	29	0.00			116				
A-B	215	54	0.00			215				
A-C	220	55	0.00			220				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	359	90	0.00	444	0.808	350	1.5	3.6	36.483	E
C-AB	682	170	0.00	804	0.848	666	2.5	6.5	26.190	D
C-A	55	14	0.00			55				
A-B	257	64	0.00			257				
A-C	263	66	0.00			263				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	439	110	0.00	371	1.186	361	3.6	23.1	159.413	F
C-AB	903	226	0.00	805	1.122	785	6.5	35.9	107.512	F
C-A	0	0	0.00			0				
A-B	315	79	0.00			315				
A-C	321	80	0.00			321				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	439	110	0.00	336	1.306	335	23.1	49.1	392.567	F
C-AB	903	226	0.00	806	1.120	801	35.9	61.3	226.411	F
C-A	0	0	0.00			0				
A-B	315	79	0.00			315				
A-C	321	80	0.00			321				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	359	90	0.00	383	0.937	375	49.1	45.0	435.237	F
C-AB	737	184	0.00	840	0.878	820	61.3	40.5	221.173	F
C-A	0	0	0.00			0				
A-B	257	64	0.00			257				
A-C	263	66	0.00			263				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	300	75	0.00	455	0.661	444	45.0	9.0	227.600	F
C-AB	575	144	0.00	832	0.691	723	40.5	3.5	69.461	F
C-A	42	11	0.00			42				
A-B	215	54	0.00			215				
A-C	220	55	0.00			220				

2030 | No Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Stockbridge Lane	T-Junction	Two-way	Two-way	Two-way		396.53	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	396.53	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	No Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (E)		ONE HOUR	✓	693	100.000
B - Stockbridge Lane		ONE HOUR	✓	505	100.000
C - Knowsely Lane (W)		ONE HOUR	✓	755	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0	232	461
	B - Stockbridge Lane	183	0	322
	C - Knowsely Lane (W)	380	375	0

Proportions

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0.00	0.33	0.67
	B - Stockbridge Lane	0.36	0.00	0.64
	C - Knowsely Lane (W)	0.50	0.50	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	A - Knowsley Lane (E)	0	4	5
	B - Stockbridge Lane	2	0	1
	C - Knowsely Lane (W)	6	4	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	A - Knowsley Lane (E)	1.000	1.040	1.050
	B - Stockbridge Lane	1.020	1.000	1.010
	C - Knowsely Lane (W)	1.060	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (E)	522	522
	B - Stockbridge Lane	380	380
	C - Knowsely Lane (W)	568	568
08:15-08:30	A - Knowsley Lane (E)	623	623
	B - Stockbridge Lane	454	454
	C - Knowsely Lane (W)	679	679
08:30-08:45	A - Knowsley Lane (E)	763	763
	B - Stockbridge Lane	556	556
	C - Knowsely Lane (W)	831	831
08:45-09:00	A - Knowsley Lane (E)	763	763
	B - Stockbridge Lane	556	556
	C - Knowsely Lane (W)	831	831
09:00-09:15	A - Knowsley Lane (E)	623	623
	B - Stockbridge Lane	454	454
	C - Knowsely Lane (W)	679	679
09:15-09:30	A - Knowsley Lane (E)	522	522
	B - Stockbridge Lane	380	380
	C - Knowsely Lane (W)	568	568

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-AC	1.72	1196.88	140.4	F	463	695
C-AB	1.13	235.93	58.5	F	661	992
C-A					32	47
A-B					213	319
A-C					423	635

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	380	95	0.00	489	0.778	368	0.0	3.1	27.889	D
C-AB	467	117	0.00	723	0.646	458	0.0	2.4	13.969	B
C-A	101	25	0.00			101				
A-B	175	44	0.00			175				
A-C	347	87	0.00			347				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	454	113	0.00	437	1.038	414	3.1	13.2	93.485	F
C-AB	630	157	0.00	746	0.844	614	2.4	6.2	27.918	D
C-A	49	12	0.00			49				
A-B	209	52	0.00			209				
A-C	414	104	0.00			414				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	556	139	0.00	357	1.559	356	13.2	63.2	421.976	F
C-AB	831	208	0.00	738	1.127	719	6.2	34.3	112.895	F
C-A	0	0	0.00			0				
A-B	255	64	0.00			255				
A-C	508	127	0.00			508				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	556	139	0.00	323	1.724	322	63.2	121.6	952.499	F
C-AB	831	208	0.00	739	1.125	734	34.3	58.5	235.928	F
C-A	0	0	0.00			0				
A-B	255	64	0.00			255				
A-C	508	127	0.00			508				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	454	113	0.00	379	1.197	379	121.6	140.4	1196.884	F
C-AB	679	170	0.00	780	0.870	761	58.5	37.9	226.183	F
C-A	0	0	0.00			0				
A-B	209	52	0.00			209				
A-C	414	104	0.00			414				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	380	95	0.00	456	0.835	452	140.4	122.3	1046.217	F
C-AB	529	132	0.00	777	0.680	667	37.9	3.3	68.578	F
C-A	40	10	0.00			40				
A-B	175	44	0.00			175				
A-C	347	87	0.00			347				

2030 | No Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Stockbridge Lane	T-Junction	Two-way	Two-way	Two-way		406.57	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	406.57	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2030	No Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (E)		ONE HOUR	✓	614	100.000
B - Stockbridge Lane		ONE HOUR	✓	424	100.000
C - Knowsely Lane (W)		ONE HOUR	✓	872	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0	304	310
	B - Stockbridge Lane	184	0	240
	C - Knowsely Lane (W)	467	405	0

Proportions

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0.00	0.50	0.50
	B - Stockbridge Lane	0.43	0.00	0.57
	C - Knowsely Lane (W)	0.54	0.46	0.00

Vehicle Mix

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

Heavy Vehicle %

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0	1	1
	B - Stockbridge Lane	2	0	2
	C - Knowsely Lane (W)	3	2	0

Average PCU Per Veh

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	1.000	1.010	1.010
	B - Stockbridge Lane	1.020	1.000	1.020
	C - Knowsely Lane (W)	1.030	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (E)	462	462
	B - Stockbridge Lane	319	319
	C - Knowsely Lane (W)	656	656
16:45-17:00	A - Knowsley Lane (E)	552	552
	B - Stockbridge Lane	381	381
	C - Knowsely Lane (W)	784	784
17:00-17:15	A - Knowsley Lane (E)	676	676
	B - Stockbridge Lane	467	467
	C - Knowsely Lane (W)	960	960
17:15-17:30	A - Knowsley Lane (E)	676	676
	B - Stockbridge Lane	467	467
	C - Knowsely Lane (W)	960	960
17:30-17:45	A - Knowsley Lane (E)	552	552
	B - Stockbridge Lane	381	381
	C - Knowsely Lane (W)	784	784
17:45-18:00	A - Knowsley Lane (E)	462	462
	B - Stockbridge Lane	319	319
	C - Knowsely Lane (W)	656	656

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-AC	1.65	1029.86	100.1	F	389	584
C-AB	1.21	400.08	96.6	F	780	1169
C-A					21	31
A-B					279	418
A-C					284	427

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	319	80	0.00	477	0.669	312	0.0	1.9	21.314	C
C-AB	555	139	0.00	781	0.710	542	0.0	3.2	15.081	C
C-A	102	25	0.00			102				
A-B	229	57	0.00			229				
A-C	233	58	0.00			233				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	381	95	0.00	424	0.898	366	1.9	5.7	52.816	F
C-AB	762	191	0.00	817	0.933	731	3.2	10.9	39.700	E
C-A	22	5	0.00			22				
A-B	273	68	0.00			273				
A-C	279	70	0.00			279				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	467	117	0.00	339	1.375	336	5.7	38.4	273.345	F
C-AB	960	240	0.00	794	1.210	785	10.9	54.7	161.604	F
C-A	0	0	0.00			0				
A-B	335	84	0.00			335				
A-C	341	85	0.00			341				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	467	117	0.00	283	1.647	283	38.4	84.3	754.956	F
C-AB	960	240	0.00	794	1.209	793	54.7	96.6	348.557	F
C-A	0	0	0.00			0				
A-B	335	84	0.00			335				
A-C	341	85	0.00			341				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	381	95	0.00	318	1.197	318	84.3	100.1	1029.857	F
C-AB	784	196	0.00	831	0.944	818	96.6	87.9	400.085	F
C-A	0	0	0.00			0				
A-B	273	68	0.00			273				
A-C	279	70	0.00			279				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	319	80	0.00	389	0.821	385	100.1	83.6	859.586	F
C-AB	656	164	0.00	856	0.767	842	87.9	41.5	275.954	F
C-A	0	0	0.00			0				
A-B	229	57	0.00			229				
A-C	233	58	0.00			233				

2030 | With Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Stockbridge Lane	T-Junction	Two-way	Two-way	Two-way		746.20	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	746.20	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (E)		ONE HOUR	✓	716	100.000
B - Stockbridge Lane		ONE HOUR	✓	519	100.000
C - Knowsely Lane (W)		ONE HOUR	✓	851	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0	232	484
	B - Stockbridge Lane	183	0	336
	C - Knowsely Lane (W)	441	410	0

Proportions

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0.00	0.32	0.68
	B - Stockbridge Lane	0.35	0.00	0.65
	C - Knowsely Lane (W)	0.52	0.48	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	A - Knowsley Lane (E)	0	4	5
	B - Stockbridge Lane	2	0	1
	C - Knowsely Lane (W)	6	4	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	A - Knowsley Lane (E)	1.000	1.040	1.050
	B - Stockbridge Lane	1.020	1.000	1.010
	C - Knowsely Lane (W)	1.060	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (E)	539	539
	B - Stockbridge Lane	391	391
	C - Knowsely Lane (W)	641	641
08:15-08:30	A - Knowsley Lane (E)	644	644
	B - Stockbridge Lane	467	467
	C - Knowsely Lane (W)	765	765
08:30-08:45	A - Knowsley Lane (E)	788	788
	B - Stockbridge Lane	571	571
	C - Knowsely Lane (W)	937	937
08:45-09:00	A - Knowsley Lane (E)	788	788
	B - Stockbridge Lane	571	571
	C - Knowsely Lane (W)	937	937
09:00-09:15	A - Knowsley Lane (E)	644	644
	B - Stockbridge Lane	467	467
	C - Knowsely Lane (W)	765	765
09:15-09:30	A - Knowsley Lane (E)	539	539
	B - Stockbridge Lane	391	391
	C - Knowsely Lane (W)	641	641

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-AC	2.39	2191.28	222.0	F	476	714
C-AB	1.26	502.66	111.9	F	765	1148
C-A					15	23
A-B					213	319
A-C					444	666

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	391	98	0.00	473	0.826	375	0.0	3.9	33.316	D
C-AB	552	138	0.00	752	0.734	538	0.0	3.6	17.140	C
C-A	88	22	0.00			88				
A-B	175	44	0.00			175				
A-C	364	91	0.00			364				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	467	117	0.00	414	1.126	402	3.9	20.0	135.322	F
C-AB	761	190	0.00	784	0.971	720	3.6	13.9	50.711	F
C-A	4	1	0.00			4				
A-B	209	52	0.00			209				
A-C	435	109	0.00			435				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	571	143	0.00	313	1.826	313	20.0	84.8	709.127	F
C-AB	937	234	0.00	744	1.259	738	13.9	63.5	200.284	F
C-A	0	0	0.00			0				
A-B	255	64	0.00			255				
A-C	533	133	0.00			533				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	571	143	0.00	239	2.390	239	84.8	167.9	1921.126	F
C-AB	937	234	0.00	744	1.259	743	63.5	111.9	426.744	F
C-A	0	0	0.00			0				
A-B	255	64	0.00			255				
A-C	533	133	0.00			533				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	467	117	0.00	280	1.665	280	167.9	214.5	2121.577	F
C-AB	765	191	0.00	788	0.971	777	111.9	108.8	502.657	F
C-A	0	0	0.00			0				
A-B	209	52	0.00			209				
A-C	435	109	0.00			435				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	391	98	0.00	361	1.084	360	214.5	222.0	2191.279	F
C-AB	641	160	0.00	818	0.783	807	108.8	67.2	391.294	F
C-A	0	0	0.00			0				
A-B	175	44	0.00			175				
A-C	364	91	0.00			364				

2030 | With Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Stockbridge Lane	T-Junction	Two-way	Two-way	Two-way		710.61	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	710.61	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (E)		ONE HOUR	✓	670	100.000
B - Stockbridge Lane		ONE HOUR	✓	457	100.000
C - Knowsely Lane (W)		ONE HOUR	✓	918	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0	304	366
	B - Stockbridge Lane	184	0	273
	C - Knowsely Lane (W)	496	422	0

Proportions

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
From	A - Knowsley Lane (E)	0.00	0.45	0.55
	B - Stockbridge Lane	0.40	0.00	0.60
	C - Knowsely Lane (W)	0.54	0.46	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	A - Knowsley Lane (E)	0	1	1
	B - Stockbridge Lane	2	0	2
	C - Knowsely Lane (W)	3	2	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsely Lane (W)
	A - Knowsley Lane (E)	1.000	1.010	1.010
	B - Stockbridge Lane	1.020	1.000	1.020
	C - Knowsely Lane (W)	1.030	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (E)	504	504
	B - Stockbridge Lane	344	344
	C - Knowsely Lane (W)	691	691
16:45-17:00	A - Knowsley Lane (E)	602	602
	B - Stockbridge Lane	411	411
	C - Knowsely Lane (W)	825	825
17:00-17:15	A - Knowsley Lane (E)	738	738
	B - Stockbridge Lane	503	503
	C - Knowsely Lane (W)	1011	1011
17:15-17:30	A - Knowsley Lane (E)	738	738
	B - Stockbridge Lane	503	503
	C - Knowsely Lane (W)	1011	1011
17:30-17:45	A - Knowsley Lane (E)	602	602
	B - Stockbridge Lane	411	411
	C - Knowsely Lane (W)	825	825
17:45-18:00	A - Knowsley Lane (E)	504	504
	B - Stockbridge Lane	344	344
	C - Knowsely Lane (W)	691	691

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-AC	2.29	2007.69	179.3	F	419	629
C-AB	1.30	593.83	136.5	F	828	1242
C-A					15	22
A-B					279	418
A-C					336	504

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	344	86	0.00	468	0.736	334	0.0	2.5	25.806	D
C-AB	604	151	0.00	788	0.765	587	0.0	4.2	17.739	C
C-A	88	22	0.00			88				
A-B	229	57	0.00			229				
A-C	276	69	0.00			276				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	411	103	0.00	409	1.004	379	2.5	10.4	84.195	F
C-AB	825	206	0.00	819	1.007	770	4.2	18.1	60.067	F
C-A	0	0	0.00			0				
A-B	273	68	0.00			273				
A-C	329	82	0.00			329				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	503	126	0.00	306	1.646	305	10.4	60.0	505.810	F
C-AB	1011	253	0.00	780	1.295	776	18.1	76.7	230.560	F
C-A	0	0	0.00			0				
A-B	335	84	0.00			335				
A-C	403	101	0.00			403				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	503	126	0.00	220	2.288	220	60.0	130.8	1583.101	F
C-AB	1011	253	0.00	780	1.295	780	76.7	134.5	487.608	F
C-A	0	0	0.00			0				
A-B	335	84	0.00			335				
A-C	403	101	0.00			403				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	411	103	0.00	243	1.688	243	130.8	172.7	1943.915	F
C-AB	825	206	0.00	821	1.006	817	134.5	136.5	593.825	F
C-A	0	0	0.00			0				
A-B	273	68	0.00			273				
A-C	329	82	0.00			329				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	344	86	0.00	318	1.083	318	172.7	179.3	2007.693	F
C-AB	691	173	0.00	849	0.814	840	136.5	99.3	503.503	F
C-A	0	0	0.00			0				
A-B	229	57	0.00			229				
A-C	276	69	0.00			276				

Appendix T

J6: Knowsley Lane/ Stockbridge Lane JUNCTIONS Modelling Outputs (Proposed Mitigation)



Junctions 11									
PICADY 11 - Priority Intersection Module									
Version: 11.0.0.2177									
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+44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
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Filename: J6_Knowsley Ln-Stockbridge Ln_0102-001.j11

Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025 Projects\A25007 Home Farm Road, Knowsley Village\Analysis\JUNCTIONS

Report generation date: 31/07/2025 14:39:35

»2030 | With Dev | AM

»2030 | With Dev | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2030 - With Dev										
Stream B-AC	D5	175.1	1479.68	1.90	F	D6	118.5	1061.81	1.68	F
Stream C-AB		11.9	52.06	0.92	F		12.3	49.60	0.92	E

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

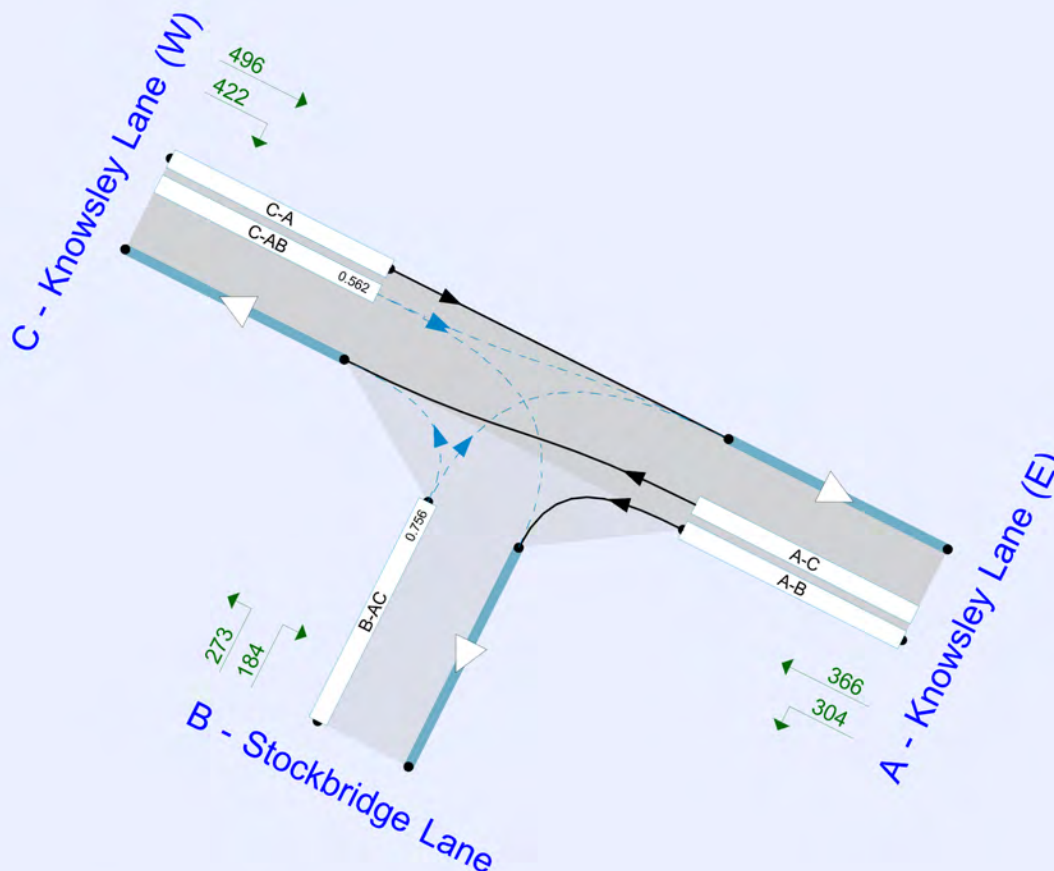
File summary

File Description

Title	
Location	
Site number	
Date	13/06/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\OliverMcLaughlin
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



Flows show original traffic demand (PCU/hr)
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2030 | With Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Stockbridge Lane	T-Junction	Two-way	Two-way	Two-way		381.26	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	381.26	F

Arms

Arms

Arm	Name	Description	Arm type
A	Knowsley Lane (E)		Major
B	Stockbridge Lane		Minor
C	Knowsley Lane (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Knowsley Lane (W)	6.50		✓	3.00	120.0	✓	6.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Stockbridge Lane	One lane	3.95	30	115

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	596	0.106	0.268	0.169	0.383
B-C	763	0.114	0.289	-	-
C-B	699	0.265	0.265	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (E)		ONE HOUR	✓	716	100.000
B - Stockbridge Lane		ONE HOUR	✓	519	100.000
C - Knowsley Lane (W)		ONE HOUR	✓	851	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
	From			
	A - Knowsley Lane (E)	0	232	484
	B - Stockbridge Lane	183	0	336
	C - Knowsley Lane (W)	441	410	0

Proportions

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
	From			
	A - Knowsley Lane (E)	0.00	0.32	0.68
	B - Stockbridge Lane	0.35	0.00	0.65
	C - Knowsley Lane (W)	0.52	0.48	0.00

Vehicle Mix

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

Heavy Vehicle %

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
	From			
	A - Knowsley Lane (E)	0	4	5
	B - Stockbridge Lane	2	0	1
	C - Knowsley Lane (W)	6	4	0

Average PCU Per Veh

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
	From			
	A - Knowsley Lane (E)	1.000	1.040	1.050
	B - Stockbridge Lane	1.020	1.000	1.010
	C - Knowsley Lane (W)	1.060	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (E)	539	539
	B - Stockbridge Lane	391	391
	C - Knowsley Lane (W)	641	641
08:15-08:30	A - Knowsley Lane (E)	644	644
	B - Stockbridge Lane	467	467
	C - Knowsley Lane (W)	765	765
08:30-08:45	A - Knowsley Lane (E)	788	788
	B - Stockbridge Lane	571	571
	C - Knowsley Lane (W)	937	937
08:45-09:00	A - Knowsley Lane (E)	788	788
	B - Stockbridge Lane	571	571
	C - Knowsley Lane (W)	937	937
09:00-09:15	A - Knowsley Lane (E)	644	644
	B - Stockbridge Lane	467	467
	C - Knowsley Lane (W)	765	765
09:15-09:30	A - Knowsley Lane (E)	539	539
	B - Stockbridge Lane	391	391
	C - Knowsley Lane (W)	641	641

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-AC	1.90	1479.68	175.1	F	476	714
C-AB	0.92	52.06	11.9	F	482	723
C-A					299	448
A-B					213	319
A-C					444	666

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	391	98	0.00	460	0.849	373	0.0	4.3	36.777	E
C-AB	315	79	0.00	568	0.555	310	0.0	1.3	14.268	B
C-A	326	81	0.00			326				
A-B	175	44	0.00			175				
A-C	364	91	0.00			364				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	467	117	0.00	402	1.160	393	4.3	22.9	154.378	F
C-AB	403	101	0.00	578	0.697	399	1.3	2.4	20.488	C
C-A	362	91	0.00			362				
A-B	209	52	0.00			209				
A-C	435	109	0.00			435				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	571	143	0.00	310	1.844	310	22.9	88.3	672.964	F
C-AB	728	182	0.00	790	0.922	701	2.4	9.2	37.315	E
C-A	209	52	0.00			209				
A-B	255	64	0.00			255				
A-C	533	133	0.00			533				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	571	143	0.00	300	1.902	300	88.3	156.1	1479.680	F
C-AB	728	182	0.00	791	0.920	718	9.2	11.9	52.061	F
C-A	209	52	0.00			209				
A-B	255	64	0.00			255				
A-C	533	133	0.00			533				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	467	117	0.00	390	1.195	390	156.1	175.1	1445.954	F
C-AB	403	101	0.00	580	0.694	439	11.9	2.9	32.783	D
C-A	362	91	0.00			362				
A-B	209	52	0.00			209				
A-C	435	109	0.00			435				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	391	98	0.00	457	0.855	454	175.1	159.2	1324.945	F
C-AB	315	79	0.00	568	0.554	321	2.9	1.4	15.544	C
C-A	326	81	0.00			326				
A-B	175	44	0.00			175				
A-C	364	91	0.00			364				

2030 | With Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Stockbridge Lane	T-Junction	Two-way	Two-way	Two-way		250.68	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	250.68	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2030	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (E)		ONE HOUR	✓	670	100.000
B - Stockbridge Lane		ONE HOUR	✓	457	100.000
C - Knowsley Lane (W)		ONE HOUR	✓	918	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
From	A - Knowsley Lane (E)	0	304	366
	B - Stockbridge Lane	184	0	273
	C - Knowsley Lane (W)	496	422	0

Proportions

	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
From	A - Knowsley Lane (E)	0.00	0.45	0.55
	B - Stockbridge Lane	0.40	0.00	0.60
	C - Knowsley Lane (W)	0.54	0.46	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
	A - Knowsley Lane (E)	0	1	1
	B - Stockbridge Lane	2	0	2
	C - Knowsley Lane (W)	3	2	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (E)	B - Stockbridge Lane	C - Knowsley Lane (W)
	A - Knowsley Lane (E)	1.000	1.010	1.010
	B - Stockbridge Lane	1.020	1.000	1.020
	C - Knowsley Lane (W)	1.030	1.020	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	A - Knowsley Lane (E)	504	504
	B - Stockbridge Lane	344	344
	C - Knowsley Lane (W)	691	691
16:45-17:00	A - Knowsley Lane (E)	602	602
	B - Stockbridge Lane	411	411
	C - Knowsley Lane (W)	825	825
17:00-17:15	A - Knowsley Lane (E)	738	738
	B - Stockbridge Lane	503	503
	C - Knowsley Lane (W)	1011	1011
17:15-17:30	A - Knowsley Lane (E)	738	738
	B - Stockbridge Lane	503	503
	C - Knowsley Lane (W)	1011	1011
17:30-17:45	A - Knowsley Lane (E)	602	602
	B - Stockbridge Lane	411	411
	C - Knowsley Lane (W)	825	825
17:45-18:00	A - Knowsley Lane (E)	504	504
	B - Stockbridge Lane	344	344
	C - Knowsley Lane (W)	691	691

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-AC	1.68	1061.81	118.5	F	419	629
C-AB	0.92	49.60	12.3	E	507	760
C-A					336	503
A-B					279	418
A-C					336	504

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	344	86	0.00	455	0.756	333	0.0	2.8	27.995	D
C-AB	325	81	0.00	578	0.562	320	0.0	1.3	13.950	B
C-A	366	92	0.00			366				
A-B	229	57	0.00			229				
A-C	276	69	0.00			276				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	411	103	0.00	398	1.032	374	2.8	12.0	95.637	F
C-AB	419	105	0.00	596	0.703	414	1.3	2.4	19.874	C
C-A	407	102	0.00			407				
A-B	273	68	0.00			273				
A-C	329	82	0.00			329				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	503	126	0.00	309	1.631	308	12.0	60.9	453.870	F
C-AB	777	194	0.00	842	0.923	749	2.4	9.5	35.358	E
C-A	234	58	0.00			234				
A-B	335	84	0.00			335				
A-C	403	101	0.00			403				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	503	126	0.00	299	1.683	299	60.9	112.0	919.096	F
C-AB	777	194	0.00	843	0.922	766	9.5	12.3	49.597	E
C-A	234	58	0.00			234				
A-B	335	84	0.00			335				
A-C	403	101	0.00			403				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	411	103	0.00	385	1.066	385	112.0	118.5	1061.807	F
C-AB	419	105	0.00	597	0.701	456	12.3	3.0	32.366	D
C-A	407	102	0.00			407				
A-B	273	68	0.00			273				
A-C	329	82	0.00			329				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	344	86	0.00	451	0.762	448	118.5	92.6	850.114	F
C-AB	325	81	0.00	579	0.561	331	3.0	1.4	15.222	C
C-A	366	92	0.00			366				
A-B	229	57	0.00			229				
A-C	276	69	0.00			276				

Appendix U

J7: Seth Powell Way / Stockbridge Lane / Waterpark Drive - M57 Junction 3 JUNCTIONS Modelling Outputs



Junctions 11		
ARCADY 11 - Roundabout Module		
Version: 11.0.0.2177		
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Filename: J7_Seth Powell Way-Stockbridge Lane-Waterpark Drive (M57 J3).j11

Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025 Projects\A25007 Home Farm Road, Knowsley Village\Analysis\JUNCTIONS

Report generation date: 31/07/2025 15:09:58

-
- »2025 | Survey | AM
 - »2025 | Survey | PM
 - »2028 | No Dev | AM
 - »2028 | No Dev | PM
 - »2028 | With Dev | AM
 - »2028 | With Dev | PM
 - »2035 | No Dev | AM
 - »2035 | No Dev | PM
 - »2035 | With Dev | AM
 - »2035 | With Dev | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2025 - Survey									
1 - Stockbridge Lane	D1	3.2	15.24	0.76	C	D2	3.5	16.61	0.78	C
2 - Seth Powell Way		4.1	15.80	0.81	C		4.8	18.59	0.84	C
3 - Waterpark Drive		6.8	28.23	0.88	D		3.1	14.43	0.76	B
4 - M57 Slips		1.2	4.78	0.54	A		1.2	4.80	0.55	A
	2028 - No Dev									
1 - Stockbridge Lane	D3	4.0	18.69	0.80	C	D4	4.5	20.87	0.83	C
2 - Seth Powell Way		5.3	19.95	0.85	C		6.5	24.48	0.88	C
3 - Waterpark Drive		10.4	41.47	0.93	E		3.8	17.26	0.80	C
4 - M57 Slips		1.3	5.11	0.56	A		1.4	5.13	0.57	A
	2028 - With Dev									
1 - Stockbridge Lane	D5	5.1	22.95	0.84	C	D6	5.1	23.07	0.84	C
2 - Seth Powell Way		5.8	21.62	0.86	C		7.6	28.23	0.90	D
3 - Waterpark Drive		11.4	45.07	0.94	E		4.4	19.51	0.82	C
4 - M57 Slips		1.3	5.16	0.56	A		1.4	5.27	0.58	A
	2035 - No Dev									
1 - Stockbridge Lane	D7	7.6	33.63	0.90	D	D8	9.3	41.06	0.92	E
2 - Seth Powell Way		11.1	39.44	0.94	E		15.8	54.75	0.97	F
3 - Waterpark Drive		31.4	103.70	1.03	F		6.7	28.44	0.88	D
4 - M57 Slips		1.6	5.86	0.61	A		1.7	6.03	0.63	A
	2035 - With Dev									
1 - Stockbridge Lane	D9	10.9	46.56	0.94	E	D10	11.3	48.41	0.94	E
2 - Seth Powell Way		12.6	44.16	0.95	E		19.7	65.44	0.99	F
3 - Waterpark Drive		34.9	112.87	1.04	F		8.0	33.47	0.90	D
4 - M57 Slips		1.6	5.91	0.61	A		1.8	6.21	0.64	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.

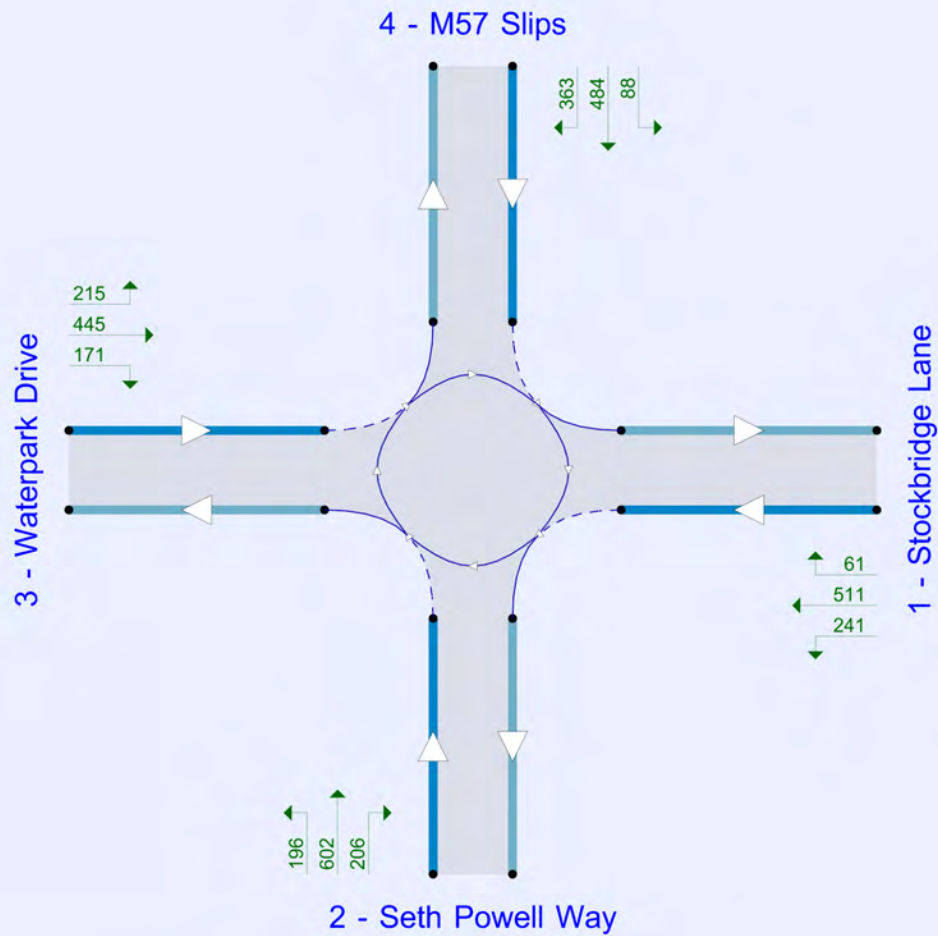
File summary

File Description

Title	
Location	
Site number	
Date	26/06/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\OliverMcLaughlin
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



Flows show original traffic demand (PCU/hr)

The junction diagram reflects the last run of Junctions.

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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓
D3	2028	No Dev	AM	ONE HOUR	08:00	09:30	15	✓
D4	2028	No Dev	PM	ONE HOUR	16:30	18:00	15	✓
D5	2028	With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D6	2028	With Dev	PM	ONE HOUR	16:30	18:00	15	✓
D7	2035	No Dev	AM	ONE HOUR	08:00	09:30	15	✓
D8	2035	No Dev	PM	ONE HOUR	16:30	18:00	15	✓
D9	2035	With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D10	2035	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

2025 | Survey | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	16.15	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	16.15	C

Arms

Arms

Arm	Name	Description	No give-way line
1	Stockbridge Lane		
2	Seth Powell Way		
3	Waterpark Drive		
4	M57 Slips		

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 - Stockbridge Lane	3.50	6.90	9.7	23.0	72.5	51.0		
2 - Seth Powell Way	3.80	7.40	50.0	3.0	72.5	20.0		
3 - Waterpark Drive	3.40	5.90	15.0	27.0	72.5	53.0		
4 - M57 Slips	7.40	7.40	0.0	25.0	72.5	51.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Stockbridge Lane	0.440	1443
2 - Seth Powell Way	0.415	1544
3 - Waterpark Drive	0.437	1422
4 - M57 Slips	0.542	2101

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2025	Survey	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	701	100.000
2 - Seth Powell Way		ONE HOUR	✓	880	100.000
3 - Waterpark Drive		ONE HOUR	✓	843	100.000
4 - M57 Slips		ONE HOUR	✓	812	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	212	416	73
	2 - Seth Powell Way	161	0	177	542
	3 - Waterpark Drive	411	151	0	281
	4 - M57 Slips	73	474	265	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.30	0.59	0.10
	2 - Seth Powell Way	0.18	0.00	0.20	0.62
	3 - Waterpark Drive	0.49	0.18	0.00	0.33
	4 - M57 Slips	0.09	0.58	0.33	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	2	3	0
	2 - Seth Powell Way	0	0	3	3
	3 - Waterpark Drive	1	2	0	1
	4 - M57 Slips	1	3	4	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.020	1.030	1.000
	2 - Seth Powell Way	1.000	1.000	1.030	1.030
	3 - Waterpark Drive	1.010	1.020	1.000	1.010
	4 - M57 Slips	1.010	1.030	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1 - Stockbridge Lane	528	528
	2 - Seth Powell Way	663	663
	3 - Waterpark Drive	635	635
	4 - M57 Slips	611	611
08:15-08:30	1 - Stockbridge Lane	630	630
	2 - Seth Powell Way	791	791
	3 - Waterpark Drive	758	758
	4 - M57 Slips	730	730
08:30-08:45	1 - Stockbridge Lane	772	772
	2 - Seth Powell Way	969	969
	3 - Waterpark Drive	928	928
	4 - M57 Slips	894	894
08:45-09:00	1 - Stockbridge Lane	772	772
	2 - Seth Powell Way	969	969
	3 - Waterpark Drive	928	928
	4 - M57 Slips	894	894
09:00-09:15	1 - Stockbridge Lane	630	630
	2 - Seth Powell Way	791	791
	3 - Waterpark Drive	758	758
	4 - M57 Slips	730	730
09:15-09:30	1 - Stockbridge Lane	528	528
	2 - Seth Powell Way	663	663
	3 - Waterpark Drive	635	635
	4 - M57 Slips	611	611

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 - Stockbridge Lane	0.76	15.24	3.2	C	643	965
2 - Seth Powell Way	0.81	15.80	4.1	C	808	1211
3 - Waterpark Drive	0.88	28.23	6.8	D	774	1160
4 - M57 Slips	0.54	4.78	1.2	A	745	1118

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	528	132	667	1150	0.459	524	482	0.0	0.9	5.864	A
2 - Seth Powell Way	663	166	565	1310	0.506	658	627	0.0	1.0	5.627	A
3 - Waterpark Drive	635	159	581	1168	0.543	630	642	0.0	1.2	6.709	A
4 - M57 Slips	611	153	540	1808	0.338	609	670	0.0	0.5	3.093	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	630	158	799	1092	0.577	628	578	0.9	1.4	7.915	A
2 - Seth Powell Way	791	198	676	1264	0.626	789	751	1.0	1.7	7.720	A
3 - Waterpark Drive	758	189	695	1118	0.678	754	769	1.2	2.1	9.913	A
4 - M57 Slips	730	182	647	1750	0.417	729	803	0.5	0.7	3.634	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	772	193	975	1014	0.761	765	700	1.4	3.1	14.429	B
2 - Seth Powell Way	969	242	825	1202	0.806	960	916	1.7	3.9	14.712	B
3 - Waterpark Drive	928	232	846	1052	0.882	912	938	2.1	6.2	23.567	C
4 - M57 Slips	894	224	783	1676	0.533	892	975	0.7	1.2	4.727	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	772	193	979	1012	0.763	771	709	3.1	3.2	15.235	C
2 - Seth Powell Way	969	242	830	1200	0.808	968	921	3.9	4.1	15.800	C
3 - Waterpark Drive	928	232	854	1049	0.885	926	944	6.2	6.8	28.226	D
4 - M57 Slips	894	224	794	1670	0.535	894	985	1.2	1.2	4.784	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	630	158	805	1089	0.579	637	591	3.2	1.4	8.279	A
2 - Seth Powell Way	791	198	683	1261	0.628	800	759	4.1	1.8	8.169	A
3 - Waterpark Drive	758	189	706	1114	0.681	776	778	6.8	2.2	11.346	B
4 - M57 Slips	730	182	664	1741	0.419	732	818	1.2	0.8	3.688	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	528	132	672	1148	0.460	530	488	1.4	0.9	5.987	A
2 - Seth Powell Way	663	166	569	1308	0.507	665	632	1.8	1.1	5.763	A
3 - Waterpark Drive	635	159	587	1166	0.544	639	648	2.2	1.2	6.964	A
4 - M57 Slips	611	153	547	1804	0.339	612	678	0.8	0.5	3.117	A

2025 | Survey | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	13.54	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.54	B

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2025	Survey	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	713	100.000
2 - Seth Powell Way		ONE HOUR	✓	884	100.000
3 - Waterpark Drive		ONE HOUR	✓	729	100.000
4 - M57 Slips		ONE HOUR	✓	837	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	208	450	55
	2 - Seth Powell Way	170	0	175	539
	3 - Waterpark Drive	384	153	0	192
	4 - M57 Slips	79	433	325	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.29	0.63	0.08
	2 - Seth Powell Way	0.19	0.00	0.20	0.61
	3 - Waterpark Drive	0.53	0.21	0.00	0.26
	4 - M57 Slips	0.09	0.52	0.39	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	0	1	4
	2 - Seth Powell Way	2	0	0	1
	3 - Waterpark Drive	2	2	0	1
	4 - M57 Slips	0	1	1	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.000	1.010	1.040
	2 - Seth Powell Way	1.020	1.000	1.000	1.010
	3 - Waterpark Drive	1.020	1.020	1.000	1.010
	4 - M57 Slips	1.000	1.010	1.010	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	1 - Stockbridge Lane	537	537
	2 - Seth Powell Way	666	666
	3 - Waterpark Drive	549	549
	4 - M57 Slips	630	630
16:45-17:00	1 - Stockbridge Lane	641	641
	2 - Seth Powell Way	795	795
	3 - Waterpark Drive	655	655
	4 - M57 Slips	752	752
17:00-17:15	1 - Stockbridge Lane	785	785
	2 - Seth Powell Way	973	973
	3 - Waterpark Drive	803	803
	4 - M57 Slips	922	922
17:15-17:30	1 - Stockbridge Lane	785	785
	2 - Seth Powell Way	973	973
	3 - Waterpark Drive	803	803
	4 - M57 Slips	922	922
17:30-17:45	1 - Stockbridge Lane	641	641
	2 - Seth Powell Way	795	795
	3 - Waterpark Drive	655	655
	4 - M57 Slips	752	752
17:45-18:00	1 - Stockbridge Lane	537	537
	2 - Seth Powell Way	666	666
	3 - Waterpark Drive	549	549
	4 - M57 Slips	630	630

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 - Stockbridge Lane	0.78	16.61	3.5	C	654	981
2 - Seth Powell Way	0.84	18.59	4.8	C	811	1217
3 - Waterpark Drive	0.76	14.43	3.1	B	669	1003
4 - M57 Slips	0.55	4.80	1.2	A	768	1152

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	537	134	683	1143	0.470	533	474	0.0	0.9	5.929	A
2 - Seth Powell Way	666	166	622	1286	0.517	661	595	0.0	1.1	5.778	A
3 - Waterpark Drive	549	137	571	1172	0.468	545	711	0.0	0.9	5.809	A
4 - M57 Slips	630	158	529	1814	0.347	628	588	0.0	0.5	3.058	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	641	160	818	1083	0.592	639	567	0.9	1.4	8.134	A
2 - Seth Powell Way	795	199	744	1235	0.643	792	712	1.1	1.8	8.145	A
3 - Waterpark Drive	655	164	684	1123	0.584	653	852	0.9	1.4	7.762	A
4 - M57 Slips	752	188	634	1757	0.428	752	704	0.5	0.8	3.608	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	785	196	1000	1003	0.783	777	691	1.4	3.4	15.579	C
2 - Seth Powell Way	973	243	908	1168	0.834	962	870	1.8	4.6	16.853	C
3 - Waterpark Drive	803	201	832	1059	0.758	796	1038	1.4	3.0	13.628	B
4 - M57 Slips	922	230	772	1682	0.548	920	856	0.8	1.2	4.751	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	785	196	1003	1002	0.784	784	696	3.4	3.5	16.614	C
2 - Seth Powell Way	973	243	913	1165	0.835	972	874	4.6	4.8	18.595	C
3 - Waterpark Drive	803	201	840	1055	0.761	802	1045	3.0	3.1	14.427	B
4 - M57 Slips	922	230	778	1679	0.549	922	865	1.2	1.2	4.795	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	641	160	822	1081	0.593	649	575	3.5	1.5	8.553	A
2 - Seth Powell Way	795	199	753	1232	0.645	806	718	4.8	1.9	8.770	A
3 - Waterpark Drive	655	164	697	1118	0.586	662	862	3.1	1.5	8.151	A
4 - M57 Slips	752	188	643	1752	0.429	754	716	1.2	0.8	3.648	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	537	134	687	1141	0.471	539	478	1.5	0.9	6.062	A
2 - Seth Powell Way	666	166	627	1284	0.518	669	599	1.9	1.1	5.937	A
3 - Waterpark Drive	549	137	578	1170	0.469	551	718	1.5	0.9	5.945	A
4 - M57 Slips	630	158	535	1811	0.348	631	594	0.8	0.5	3.082	A

2028 | No Dev | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	21.56	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	21.56	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028	No Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	728	100.000
2 - Seth Powell Way		ONE HOUR	✓	914	100.000
3 - Waterpark Drive		ONE HOUR	✓	876	100.000
4 - M57 Slips		ONE HOUR	✓	843	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	220	432	76
	2 - Seth Powell Way	167	0	184	563
	3 - Waterpark Drive	427	157	0	292
	4 - M57 Slips	76	492	275	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.30	0.59	0.10
	2 - Seth Powell Way	0.18	0.00	0.20	0.62
	3 - Waterpark Drive	0.49	0.18	0.00	0.33
	4 - M57 Slips	0.09	0.58	0.33	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	2	3	0
	2 - Seth Powell Way	0	0	3	3
	3 - Waterpark Drive	1	2	0	1
	4 - M57 Slips	1	3	4	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.020	1.030	1.000
	2 - Seth Powell Way	1.000	1.000	1.030	1.030
	3 - Waterpark Drive	1.010	1.020	1.000	1.010
	4 - M57 Slips	1.010	1.030	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1 - Stockbridge Lane	548	548
	2 - Seth Powell Way	688	688
	3 - Waterpark Drive	659	659
	4 - M57 Slips	635	635
08:15-08:30	1 - Stockbridge Lane	654	654
	2 - Seth Powell Way	822	822
	3 - Waterpark Drive	788	788
	4 - M57 Slips	758	758
08:30-08:45	1 - Stockbridge Lane	802	802
	2 - Seth Powell Way	1006	1006
	3 - Waterpark Drive	964	964
	4 - M57 Slips	928	928
08:45-09:00	1 - Stockbridge Lane	802	802
	2 - Seth Powell Way	1006	1006
	3 - Waterpark Drive	964	964
	4 - M57 Slips	928	928
09:00-09:15	1 - Stockbridge Lane	654	654
	2 - Seth Powell Way	822	822
	3 - Waterpark Drive	788	788
	4 - M57 Slips	758	758
09:15-09:30	1 - Stockbridge Lane	548	548
	2 - Seth Powell Way	688	688
	3 - Waterpark Drive	659	659
	4 - M57 Slips	635	635

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 - Stockbridge Lane	0.80	18.69	4.0	C	668	1002
2 - Seth Powell Way	0.85	19.95	5.3	C	839	1258
3 - Waterpark Drive	0.93	41.47	10.4	E	804	1206
4 - M57 Slips	0.56	5.11	1.3	A	774	1160

Main Results for each time segment

08:00 - 08:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	548	137	693	1138	0.481	544	501	0.0	0.9	6.167	A
2 - Seth Powell Way	688	172	586	1301	0.529	684	651	0.0	1.1	5.932	A
3 - Waterpark Drive	659	165	603	1159	0.569	654	667	0.0	1.3	7.151	A
4 - M57 Slips	635	159	561	1796	0.353	632	696	0.0	0.6	3.185	A

08:15 - 08:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	654	164	829	1078	0.607	652	600	0.9	1.5	8.596	A
2 - Seth Powell Way	822	205	702	1253	0.656	819	779	1.1	1.9	8.431	A
3 - Waterpark Drive	788	197	722	1107	0.712	783	799	1.3	2.4	11.110	B
4 - M57 Slips	758	189	672	1737	0.436	757	833	0.6	0.8	3.787	A

08:30 - 08:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	802	200	1011	998	0.803	792	723	1.5	3.8	17.199	C
2 - Seth Powell Way	1006	252	855	1189	0.846	994	948	1.9	5.0	17.836	C
3 - Waterpark Drive	964	241	877	1039	0.928	939	972	2.4	8.7	30.779	D
4 - M57 Slips	928	232	808	1663	0.558	926	1008	0.8	1.3	5.028	A

08:45 - 09:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	802	200	1016	996	0.805	801	734	3.8	4.0	18.694	C
2 - Seth Powell Way	1006	252	862	1187	0.848	1005	955	5.0	5.3	19.953	C
3 - Waterpark Drive	964	241	886	1035	0.932	958	980	8.7	10.4	41.470	E
4 - M57 Slips	928	232	822	1655	0.561	928	1022	1.3	1.3	5.108	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	654	164	838	1074	0.609	664	620	4.0	1.6	9.178	A
2 - Seth Powell Way	822	205	711	1249	0.658	835	791	5.3	2.0	9.173	A
3 - Waterpark Drive	788	197	736	1100	0.716	818	810	10.4	2.7	14.209	B
4 - M57 Slips	758	189	698	1722	0.440	760	856	1.3	0.8	3.865	A

09:15 - 09:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	548	137	697	1136	0.482	551	508	1.6	1.0	6.324	A
2 - Seth Powell Way	688	172	592	1299	0.530	692	657	2.0	1.2	6.107	A
3 - Waterpark Drive	659	165	610	1156	0.571	665	673	2.7	1.4	7.495	A
4 - M57 Slips	635	159	569	1792	0.354	636	705	0.8	0.6	3.215	A

2028 | No Dev | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	16.88	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	16.88	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028	No Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	740	100.000
2 - Seth Powell Way		ONE HOUR	✓	917	100.000
3 - Waterpark Drive		ONE HOUR	✓	756	100.000
4 - M57 Slips		ONE HOUR	✓	868	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	216	467	57
	2 - Seth Powell Way	176	0	182	559
	3 - Waterpark Drive	398	159	0	199
	4 - M57 Slips	82	449	337	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.29	0.63	0.08
	2 - Seth Powell Way	0.19	0.00	0.20	0.61
	3 - Waterpark Drive	0.53	0.21	0.00	0.26
	4 - M57 Slips	0.09	0.52	0.39	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	0	1	4
	2 - Seth Powell Way	2	0	0	1
	3 - Waterpark Drive	2	2	0	1
	4 - M57 Slips	0	1	1	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.000	1.010	1.040
	2 - Seth Powell Way	1.020	1.000	1.000	1.010
	3 - Waterpark Drive	1.020	1.020	1.000	1.010
	4 - M57 Slips	1.000	1.010	1.010	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	1 - Stockbridge Lane	557	557
	2 - Seth Powell Way	690	690
	3 - Waterpark Drive	569	569
	4 - M57 Slips	653	653
16:45-17:00	1 - Stockbridge Lane	665	665
	2 - Seth Powell Way	824	824
	3 - Waterpark Drive	680	680
	4 - M57 Slips	780	780
17:00-17:15	1 - Stockbridge Lane	815	815
	2 - Seth Powell Way	1010	1010
	3 - Waterpark Drive	832	832
	4 - M57 Slips	956	956
17:15-17:30	1 - Stockbridge Lane	815	815
	2 - Seth Powell Way	1010	1010
	3 - Waterpark Drive	832	832
	4 - M57 Slips	956	956
17:30-17:45	1 - Stockbridge Lane	665	665
	2 - Seth Powell Way	824	824
	3 - Waterpark Drive	680	680
	4 - M57 Slips	780	780
17:45-18:00	1 - Stockbridge Lane	557	557
	2 - Seth Powell Way	690	690
	3 - Waterpark Drive	569	569
	4 - M57 Slips	653	653

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 - Stockbridge Lane	0.83	20.87	4.5	C	679	1019
2 - Seth Powell Way	0.88	24.48	6.5	C	841	1262
3 - Waterpark Drive	0.80	17.26	3.8	C	694	1041
4 - M57 Slips	0.57	5.13	1.4	A	796	1195

Main Results for each time segment

16:30 - 16:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	557	139	709	1131	0.492	553	491	0.0	1.0	6.245	A
2 - Seth Powell Way	690	173	645	1277	0.541	686	617	0.0	1.2	6.105	A
3 - Waterpark Drive	569	142	592	1163	0.489	565	738	0.0	1.0	6.087	A
4 - M57 Slips	653	163	548	1804	0.362	651	609	0.0	0.6	3.145	A

16:45 - 17:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	665	166	848	1070	0.622	663	588	1.0	1.6	8.864	A
2 - Seth Powell Way	824	206	772	1224	0.674	821	739	1.2	2.0	8.946	A
3 - Waterpark Drive	680	170	709	1112	0.611	677	884	1.0	1.6	8.373	A
4 - M57 Slips	780	195	657	1745	0.447	779	730	0.6	0.8	3.759	A

17:00 - 17:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	815	204	1037	987	0.826	804	715	1.6	4.3	18.873	C
2 - Seth Powell Way	1010	252	940	1154	0.875	994	901	2.0	5.9	20.894	C
3 - Waterpark Drive	832	208	859	1047	0.795	824	1075	1.6	3.6	15.869	C
4 - M57 Slips	956	239	798	1668	0.573	954	885	0.8	1.3	5.068	A

17:15 - 17:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	815	204	1040	985	0.827	814	721	4.3	4.5	20.873	C
2 - Seth Powell Way	1010	252	947	1151	0.877	1007	907	5.9	6.5	24.477	C
3 - Waterpark Drive	832	208	870	1042	0.799	832	1085	3.6	3.8	17.262	C
4 - M57 Slips	956	239	806	1664	0.574	956	896	1.3	1.4	5.130	A

17:30 - 17:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	665	166	853	1068	0.623	676	598	4.5	1.7	9.542	A
2 - Seth Powell Way	824	206	783	1219	0.676	842	747	6.5	2.2	10.039	B
3 - Waterpark Drive	680	170	727	1105	0.615	688	898	3.8	1.7	8.976	A
4 - M57 Slips	780	195	669	1738	0.449	782	746	1.4	0.8	3.808	A

17:45 - 18:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	557	139	713	1129	0.493	560	496	1.7	1.0	6.411	A
2 - Seth Powell Way	690	173	651	1274	0.542	694	622	2.2	1.2	6.308	A
3 - Waterpark Drive	569	142	600	1160	0.491	572	745	1.7	1.0	6.254	A
4 - M57 Slips	653	163	555	1800	0.363	654	617	0.8	0.6	3.175	A

2028 | With Dev | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	23.92	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	23.92	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028	With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	763	100.000
2 - Seth Powell Way		ONE HOUR	✓	921	100.000
3 - Waterpark Drive		ONE HOUR	✓	882	100.000
4 - M57 Slips		ONE HOUR	✓	843	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	238	449	76
	2 - Seth Powell Way	174	0	184	563
	3 - Waterpark Drive	433	157	0	292
	4 - M57 Slips	76	492	275	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.31	0.59	0.10
	2 - Seth Powell Way	0.19	0.00	0.20	0.61
	3 - Waterpark Drive	0.49	0.18	0.00	0.33
	4 - M57 Slips	0.09	0.58	0.33	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	2	3	0
	2 - Seth Powell Way	0	0	3	3
	3 - Waterpark Drive	1	2	0	1
	4 - M57 Slips	1	3	4	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.020	1.030	1.000
	2 - Seth Powell Way	1.000	1.000	1.030	1.030
	3 - Waterpark Drive	1.010	1.020	1.000	1.010
	4 - M57 Slips	1.010	1.030	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1 - Stockbridge Lane	574	574
	2 - Seth Powell Way	693	693
	3 - Waterpark Drive	664	664
	4 - M57 Slips	635	635
08:15-08:30	1 - Stockbridge Lane	686	686
	2 - Seth Powell Way	828	828
	3 - Waterpark Drive	793	793
	4 - M57 Slips	758	758
08:30-08:45	1 - Stockbridge Lane	840	840
	2 - Seth Powell Way	1014	1014
	3 - Waterpark Drive	971	971
	4 - M57 Slips	928	928
08:45-09:00	1 - Stockbridge Lane	840	840
	2 - Seth Powell Way	1014	1014
	3 - Waterpark Drive	971	971
	4 - M57 Slips	928	928
09:00-09:15	1 - Stockbridge Lane	686	686
	2 - Seth Powell Way	828	828
	3 - Waterpark Drive	793	793
	4 - M57 Slips	758	758
09:15-09:30	1 - Stockbridge Lane	574	574
	2 - Seth Powell Way	693	693
	3 - Waterpark Drive	664	664
	4 - M57 Slips	635	635

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 - Stockbridge Lane	0.84	22.95	5.1	C	700	1050
2 - Seth Powell Way	0.86	21.62	5.8	C	845	1268
3 - Waterpark Drive	0.94	45.07	11.4	E	809	1214
4 - M57 Slips	0.56	5.16	1.3	A	774	1160

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	574	144	693	1138	0.505	570	510	0.0	1.0	6.442	A
2 - Seth Powell Way	693	173	599	1296	0.535	689	664	0.0	1.2	6.030	A
3 - Waterpark Drive	664	166	608	1156	0.574	659	680	0.0	1.3	7.243	A
4 - M57 Slips	635	159	571	1791	0.354	632	696	0.0	0.6	3.199	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	686	171	829	1078	0.636	683	611	1.0	1.7	9.256	A
2 - Seth Powell Way	828	207	717	1247	0.664	825	795	1.2	2.0	8.671	A
3 - Waterpark Drive	793	198	728	1104	0.718	788	814	1.3	2.5	11.378	B
4 - M57 Slips	758	189	683	1730	0.438	757	833	0.6	0.8	3.811	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	840	210	1011	998	0.841	828	736	1.7	4.8	20.332	C
2 - Seth Powell Way	1014	254	872	1182	0.858	1000	967	2.0	5.4	18.977	C
3 - Waterpark Drive	971	243	883	1036	0.937	944	989	2.5	9.4	32.495	D
4 - M57 Slips	928	232	820	1656	0.560	926	1006	0.8	1.3	5.073	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	840	210	1016	996	0.843	839	748	4.8	5.1	22.955	C
2 - Seth Powell Way	1014	254	880	1179	0.860	1012	975	5.4	5.8	21.622	C
3 - Waterpark Drive	971	243	894	1032	0.941	963	999	9.4	11.4	45.073	E
4 - M57 Slips	928	232	835	1648	0.563	928	1021	1.3	1.3	5.159	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	686	171	839	1074	0.639	699	634	5.1	1.9	10.141	B
2 - Seth Powell Way	828	207	729	1242	0.667	843	809	5.8	2.1	9.559	A
3 - Waterpark Drive	793	198	744	1097	0.723	827	827	11.4	2.8	15.082	C
4 - M57 Slips	758	189	713	1714	0.442	760	859	1.3	0.8	3.898	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	574	144	698	1136	0.506	578	518	1.9	1.1	6.637	A
2 - Seth Powell Way	693	173	605	1293	0.536	697	670	2.1	1.2	6.221	A
3 - Waterpark Drive	664	166	615	1153	0.576	669	687	2.8	1.4	7.615	A
4 - M57 Slips	635	159	580	1786	0.355	636	705	0.8	0.6	3.228	A

2028 | With Dev | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	19.05	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	19.05	C

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	756	100.000
2 - Seth Powell Way		ONE HOUR	✓	934	100.000
3 - Waterpark Drive		ONE HOUR	✓	772	100.000
4 - M57 Slips		ONE HOUR	✓	868	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	224	475	57
	2 - Seth Powell Way	193	0	182	559
	3 - Waterpark Drive	414	159	0	199
	4 - M57 Slips	82	449	337	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.30	0.63	0.08
	2 - Seth Powell Way	0.21	0.00	0.19	0.60
	3 - Waterpark Drive	0.54	0.21	0.00	0.26
	4 - M57 Slips	0.09	0.52	0.39	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	0	1	4
	2 - Seth Powell Way	2	0	0	1
	3 - Waterpark Drive	2	2	0	1
	4 - M57 Slips	0	1	1	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.000	1.010	1.040
	2 - Seth Powell Way	1.020	1.000	1.000	1.010
	3 - Waterpark Drive	1.020	1.020	1.000	1.010
	4 - M57 Slips	1.000	1.010	1.010	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	1 - Stockbridge Lane	569	569
	2 - Seth Powell Way	703	703
	3 - Waterpark Drive	581	581
	4 - M57 Slips	653	653
16:45-17:00	1 - Stockbridge Lane	680	680
	2 - Seth Powell Way	840	840
	3 - Waterpark Drive	694	694
	4 - M57 Slips	780	780
17:00-17:15	1 - Stockbridge Lane	832	832
	2 - Seth Powell Way	1028	1028
	3 - Waterpark Drive	850	850
	4 - M57 Slips	956	956
17:15-17:30	1 - Stockbridge Lane	832	832
	2 - Seth Powell Way	1028	1028
	3 - Waterpark Drive	850	850
	4 - M57 Slips	956	956
17:30-17:45	1 - Stockbridge Lane	680	680
	2 - Seth Powell Way	840	840
	3 - Waterpark Drive	694	694
	4 - M57 Slips	780	780
17:45-18:00	1 - Stockbridge Lane	569	569
	2 - Seth Powell Way	703	703
	3 - Waterpark Drive	581	581
	4 - M57 Slips	653	653

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 - Stockbridge Lane	0.84	23.07	5.1	C	694	1041
2 - Seth Powell Way	0.90	28.23	7.6	D	857	1286
3 - Waterpark Drive	0.82	19.51	4.4	C	708	1063
4 - M57 Slips	0.58	5.27	1.4	A	796	1195

Main Results for each time segment

16:30 - 16:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	569	142	709	1131	0.503	565	515	0.0	1.0	6.373	A
2 - Seth Powell Way	703	176	650	1274	0.552	698	623	0.0	1.2	6.262	A
3 - Waterpark Drive	581	145	605	1158	0.502	577	744	0.0	1.0	6.267	A
4 - M57 Slips	653	163	573	1790	0.365	651	609	0.0	0.6	3.182	A

16:45 - 17:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	680	170	848	1070	0.635	677	617	1.0	1.7	9.175	A
2 - Seth Powell Way	840	210	779	1221	0.688	836	746	1.2	2.2	9.352	A
3 - Waterpark Drive	694	174	724	1106	0.628	691	891	1.0	1.7	8.784	A
4 - M57 Slips	780	195	686	1729	0.451	779	730	0.6	0.8	3.822	A

17:00 - 17:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	832	208	1036	987	0.843	820	749	1.7	4.7	20.443	C
2 - Seth Powell Way	1028	257	947	1151	0.893	1010	909	2.2	6.8	23.196	C
3 - Waterpark Drive	850	212	875	1040	0.817	840	1082	1.7	4.1	17.540	C
4 - M57 Slips	956	239	832	1649	0.579	953	883	0.8	1.4	5.203	A

17:15 - 17:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	832	208	1040	985	0.845	831	757	4.7	5.1	23.070	C
2 - Seth Powell Way	1028	257	956	1148	0.896	1025	915	6.8	7.6	28.227	D
3 - Waterpark Drive	850	212	888	1034	0.822	849	1093	4.1	4.4	19.513	C
4 - M57 Slips	956	239	842	1644	0.581	956	895	1.4	1.4	5.275	A

17:30 - 17:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	680	170	854	1067	0.637	693	630	5.1	1.8	10.010	B
2 - Seth Powell Way	840	210	791	1216	0.691	861	755	7.6	2.3	10.801	B
3 - Waterpark Drive	694	174	745	1096	0.633	704	907	4.4	1.8	9.578	A
4 - M57 Slips	780	195	701	1721	0.453	782	749	1.4	0.8	3.881	A

17:45 - 18:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	569	142	713	1129	0.504	572	521	1.8	1.0	6.556	A
2 - Seth Powell Way	703	176	657	1272	0.553	707	628	2.3	1.3	6.492	A
3 - Waterpark Drive	581	145	613	1154	0.504	584	752	1.8	1.0	6.457	A
4 - M57 Slips	653	163	580	1786	0.366	655	617	0.8	0.6	3.214	A

2035 | No Dev | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	46.49	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	46.49	E

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2035	No Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	785	100.000
2 - Seth Powell Way		ONE HOUR	✓	985	100.000
3 - Waterpark Drive		ONE HOUR	✓	944	100.000
4 - M57 Slips		ONE HOUR	✓	910	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	237	466	82
	2 - Seth Powell Way	180	0	198	607
	3 - Waterpark Drive	460	169	0	315
	4 - M57 Slips	82	531	297	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.30	0.59	0.10
	2 - Seth Powell Way	0.18	0.00	0.20	0.62
	3 - Waterpark Drive	0.49	0.18	0.00	0.33
	4 - M57 Slips	0.09	0.58	0.33	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	2	3	0
	2 - Seth Powell Way	0	0	3	3
	3 - Waterpark Drive	1	2	0	1
	4 - M57 Slips	1	3	4	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.020	1.030	1.000
	2 - Seth Powell Way	1.000	1.000	1.030	1.030
	3 - Waterpark Drive	1.010	1.020	1.000	1.010
	4 - M57 Slips	1.010	1.030	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1 - Stockbridge Lane	591	591
	2 - Seth Powell Way	742	742
	3 - Waterpark Drive	711	711
	4 - M57 Slips	685	685
08:15-08:30	1 - Stockbridge Lane	706	706
	2 - Seth Powell Way	885	885
	3 - Waterpark Drive	849	849
	4 - M57 Slips	818	818
08:30-08:45	1 - Stockbridge Lane	864	864
	2 - Seth Powell Way	1085	1085
	3 - Waterpark Drive	1039	1039
	4 - M57 Slips	1002	1002
08:45-09:00	1 - Stockbridge Lane	864	864
	2 - Seth Powell Way	1085	1085
	3 - Waterpark Drive	1039	1039
	4 - M57 Slips	1002	1002
09:00-09:15	1 - Stockbridge Lane	706	706
	2 - Seth Powell Way	885	885
	3 - Waterpark Drive	849	849
	4 - M57 Slips	818	818
09:15-09:30	1 - Stockbridge Lane	591	591
	2 - Seth Powell Way	742	742
	3 - Waterpark Drive	711	711
	4 - M57 Slips	685	685

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 - Stockbridge Lane	0.90	33.63	7.6	D	720	1080
2 - Seth Powell Way	0.94	39.44	11.1	E	904	1356
3 - Waterpark Drive	1.03	103.70	31.4	F	866	1299
4 - M57 Slips	0.61	5.86	1.6	A	835	1253

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	591	148	747	1114	0.530	586	539	0.0	1.1	6.922	A
2 - Seth Powell Way	742	185	632	1282	0.579	736	701	0.0	1.4	6.691	A
3 - Waterpark Drive	711	178	649	1138	0.624	704	719	0.0	1.6	8.270	A
4 - M57 Slips	685	171	604	1773	0.386	683	750	0.0	0.6	3.393	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	706	176	894	1050	0.672	702	645	1.1	2.0	10.493	B
2 - Seth Powell Way	885	221	757	1230	0.720	881	839	1.4	2.5	10.421	B
3 - Waterpark Drive	849	212	777	1082	0.784	842	860	1.6	3.4	14.690	B
4 - M57 Slips	818	205	722	1709	0.479	817	897	0.6	0.9	4.155	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	864	216	1084	966	0.895	846	758	2.0	6.7	27.147	D
2 - Seth Powell Way	1085	271	916	1164	0.932	1057	1013	2.5	9.3	29.167	D
3 - Waterpark Drive	1039	260	933	1014	1.025	974	1041	3.4	19.7	55.820	F
4 - M57 Slips	1002	250	842	1644	0.609	999	1065	0.9	1.6	5.738	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	864	216	1089	964	0.897	861	771	6.7	7.6	33.626	D
2 - Seth Powell Way	1085	271	928	1159	0.936	1077	1022	9.3	11.1	39.438	E
3 - Waterpark Drive	1039	260	951	1007	1.032	992	1055	19.7	31.4	103.697	F
4 - M57 Slips	1002	250	858	1635	0.613	1002	1085	1.6	1.6	5.858	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	706	176	918	1039	0.679	727	708	7.6	2.2	12.544	B
2 - Seth Powell Way	885	221	775	1222	0.724	919	869	11.1	2.8	13.359	B
3 - Waterpark Drive	849	212	810	1068	0.795	956	884	31.4	4.5	48.455	E
4 - M57 Slips	818	205	805	1664	0.492	821	961	1.6	1.0	4.413	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	591	148	754	1111	0.532	595	550	2.2	1.2	7.196	A
2 - Seth Powell Way	742	185	640	1279	0.580	747	709	2.8	1.4	7.005	A
3 - Waterpark Drive	711	178	659	1134	0.627	722	728	4.5	1.7	9.052	A
4 - M57 Slips	685	171	617	1766	0.388	686	763	1.0	0.7	3.443	A

2035 | No Dev | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	32.71	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	32.71	D

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2035	No Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	796	100.000
2 - Seth Powell Way		ONE HOUR	✓	988	100.000
3 - Waterpark Drive		ONE HOUR	✓	815	100.000
4 - M57 Slips		ONE HOUR	✓	935	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	232	503	61
	2 - Seth Powell Way	190	0	196	602
	3 - Waterpark Drive	429	171	0	215
	4 - M57 Slips	88	484	363	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.29	0.63	0.08
	2 - Seth Powell Way	0.19	0.00	0.20	0.61
	3 - Waterpark Drive	0.53	0.21	0.00	0.26
	4 - M57 Slips	0.09	0.52	0.39	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	0	1	4
	2 - Seth Powell Way	2	0	0	1
	3 - Waterpark Drive	2	2	0	1
	4 - M57 Slips	0	1	1	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.000	1.010	1.040
	2 - Seth Powell Way	1.020	1.000	1.000	1.010
	3 - Waterpark Drive	1.020	1.020	1.000	1.010
	4 - M57 Slips	1.000	1.010	1.010	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	1 - Stockbridge Lane	599	599
	2 - Seth Powell Way	744	744
	3 - Waterpark Drive	614	614
	4 - M57 Slips	704	704
16:45-17:00	1 - Stockbridge Lane	716	716
	2 - Seth Powell Way	888	888
	3 - Waterpark Drive	733	733
	4 - M57 Slips	841	841
17:00-17:15	1 - Stockbridge Lane	876	876
	2 - Seth Powell Way	1088	1088
	3 - Waterpark Drive	897	897
	4 - M57 Slips	1029	1029
17:15-17:30	1 - Stockbridge Lane	876	876
	2 - Seth Powell Way	1088	1088
	3 - Waterpark Drive	897	897
	4 - M57 Slips	1029	1029
17:30-17:45	1 - Stockbridge Lane	716	716
	2 - Seth Powell Way	888	888
	3 - Waterpark Drive	733	733
	4 - M57 Slips	841	841
17:45-18:00	1 - Stockbridge Lane	599	599
	2 - Seth Powell Way	744	744
	3 - Waterpark Drive	614	614
	4 - M57 Slips	704	704

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 - Stockbridge Lane	0.92	41.06	9.3	E	730	1096
2 - Seth Powell Way	0.97	54.75	15.8	F	907	1360
3 - Waterpark Drive	0.88	28.44	6.7	D	748	1122
4 - M57 Slips	0.63	6.03	1.7	A	858	1287

Main Results for each time segment

16:30 - 16:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	599	150	763	1107	0.541	595	528	0.0	1.2	7.024	A
2 - Seth Powell Way	744	186	694	1256	0.592	738	664	0.0	1.4	6.940	A
3 - Waterpark Drive	614	153	637	1144	0.537	609	794	0.0	1.2	6.793	A
4 - M57 Slips	704	176	590	1781	0.395	701	656	0.0	0.7	3.357	A

16:45 - 17:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	716	179	913	1041	0.687	712	633	1.2	2.1	10.898	B
2 - Seth Powell Way	888	222	830	1200	0.740	883	795	1.4	2.8	11.288	B
3 - Waterpark Drive	733	183	762	1089	0.673	729	951	1.2	2.0	10.082	B
4 - M57 Slips	841	210	707	1718	0.489	839	785	0.7	1.0	4.130	A

17:00 - 17:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	876	219	1115	952	0.920	853	763	2.1	8.0	31.125	D
2 - Seth Powell Way	1088	272	1003	1128	0.964	1050	965	2.8	12.1	36.106	E
3 - Waterpark Drive	897	224	907	1026	0.875	882	1146	2.0	5.9	23.317	C
4 - M57 Slips	1029	257	851	1639	0.628	1027	938	1.0	1.7	5.903	A

17:15 - 17:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	876	219	1120	950	0.922	871	774	8.0	9.3	41.055	E
2 - Seth Powell Way	1088	272	1017	1122	0.969	1073	974	12.1	15.8	54.748	F
3 - Waterpark Drive	897	224	927	1017	0.882	894	1163	5.9	6.7	28.443	D
4 - M57 Slips	1029	257	865	1632	0.631	1029	956	1.7	1.7	6.027	A

17:30 - 17:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	716	179	921	1038	0.690	744	655	9.3	2.3	13.443	B
2 - Seth Powell Way	888	222	854	1190	0.747	939	811	15.8	3.1	17.145	C
3 - Waterpark Drive	733	183	810	1068	0.686	750	984	6.7	2.3	12.095	B
4 - M57 Slips	841	210	733	1703	0.493	843	827	1.7	1.0	4.237	A

17:45 - 18:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	599	150	769	1105	0.542	604	536	2.3	1.2	7.311	A
2 - Seth Powell Way	744	186	702	1253	0.594	750	671	3.1	1.5	7.323	A
3 - Waterpark Drive	614	153	648	1139	0.539	618	804	2.3	1.2	7.089	A
4 - M57 Slips	704	176	599	1776	0.396	705	667	1.0	0.7	3.396	A

2035 | With Dev | AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	53.01	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	53.01	F

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2035	With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	821	100.000
2 - Seth Powell Way		ONE HOUR	✓	992	100.000
3 - Waterpark Drive		ONE HOUR	✓	951	100.000
4 - M57 Slips		ONE HOUR	✓	910	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	256	483	82
	2 - Seth Powell Way	187	0	198	607
	3 - Waterpark Drive	467	169	0	315
	4 - M57 Slips	82	531	297	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.31	0.59	0.10
	2 - Seth Powell Way	0.19	0.00	0.20	0.61
	3 - Waterpark Drive	0.49	0.18	0.00	0.33
	4 - M57 Slips	0.09	0.58	0.33	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	2	3	0
	2 - Seth Powell Way	0	0	3	3
	3 - Waterpark Drive	1	2	0	1
	4 - M57 Slips	1	3	4	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.020	1.030	1.000
	2 - Seth Powell Way	1.000	1.000	1.030	1.030
	3 - Waterpark Drive	1.010	1.020	1.000	1.010
	4 - M57 Slips	1.010	1.030	1.040	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	1 - Stockbridge Lane	618	618
	2 - Seth Powell Way	747	747
	3 - Waterpark Drive	716	716
	4 - M57 Slips	685	685
08:15-08:30	1 - Stockbridge Lane	738	738
	2 - Seth Powell Way	892	892
	3 - Waterpark Drive	855	855
	4 - M57 Slips	818	818
08:30-08:45	1 - Stockbridge Lane	904	904
	2 - Seth Powell Way	1092	1092
	3 - Waterpark Drive	1047	1047
	4 - M57 Slips	1002	1002
08:45-09:00	1 - Stockbridge Lane	904	904
	2 - Seth Powell Way	1092	1092
	3 - Waterpark Drive	1047	1047
	4 - M57 Slips	1002	1002
09:00-09:15	1 - Stockbridge Lane	738	738
	2 - Seth Powell Way	892	892
	3 - Waterpark Drive	855	855
	4 - M57 Slips	818	818
09:15-09:30	1 - Stockbridge Lane	618	618
	2 - Seth Powell Way	747	747
	3 - Waterpark Drive	716	716
	4 - M57 Slips	685	685

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 - Stockbridge Lane	0.94	46.56	10.9	E	753	1130
2 - Seth Powell Way	0.95	44.16	12.6	E	910	1365
3 - Waterpark Drive	1.04	112.87	34.9	F	873	1309
4 - M57 Slips	0.61	5.91	1.6	A	835	1253

Main Results for each time segment

08:00 - 08:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	618	155	747	1114	0.555	613	549	0.0	1.3	7.282	A
2 - Seth Powell Way	747	187	645	1277	0.585	741	715	0.0	1.4	6.817	A
3 - Waterpark Drive	716	179	654	1136	0.630	709	731	0.0	1.7	8.407	A
4 - M57 Slips	685	171	614	1768	0.388	683	750	0.0	0.6	3.412	A

08:15 - 08:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	738	185	894	1050	0.703	734	657	1.3	2.3	11.507	B
2 - Seth Powell Way	892	223	772	1224	0.729	887	856	1.4	2.6	10.781	B
3 - Waterpark Drive	855	214	783	1080	0.792	847	875	1.7	3.6	15.188	C
4 - M57 Slips	818	205	734	1703	0.480	817	897	0.6	0.9	4.186	A

08:30 - 08:45

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	904	226	1083	967	0.935	877	770	2.3	9.1	33.901	D
2 - Seth Powell Way	1092	273	930	1158	0.943	1062	1030	2.6	10.2	31.334	D
3 - Waterpark Drive	1047	262	938	1012	1.034	976	1054	3.6	21.3	59.109	F
4 - M57 Slips	1002	250	853	1638	0.612	999	1061	0.9	1.6	5.789	A

08:45 - 09:00

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	904	226	1088	964	0.937	897	782	9.1	10.9	46.557	E
2 - Seth Powell Way	1092	273	944	1153	0.948	1083	1041	10.2	12.6	44.163	E
3 - Waterpark Drive	1047	262	956	1004	1.043	993	1071	21.3	34.9	112.867	F
4 - M57 Slips	1002	250	868	1630	0.615	1002	1081	1.6	1.6	5.908	A

09:00 - 09:15

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	738	185	920	1038	0.711	771	728	10.9	2.6	15.356	C
2 - Seth Powell Way	892	223	799	1213	0.735	930	893	12.6	3.0	14.660	B
3 - Waterpark Drive	855	214	822	1063	0.804	975	907	34.9	4.9	59.395	F
4 - M57 Slips	818	205	827	1652	0.495	820	969	1.6	1.0	4.479	A

09:15 - 09:30

Am	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	618	155	754	1111	0.556	623	561	2.6	1.3	7.633	A
2 - Seth Powell Way	747	187	653	1273	0.587	753	724	3.0	1.5	7.168	A
3 - Waterpark Drive	716	179	665	1132	0.633	728	741	4.9	1.8	9.296	A
4 - M57 Slips	685	171	629	1760	0.389	687	764	1.0	0.7	3.466	A

2035 | With Dev | PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	2 - Seth Powell Way - 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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Seth Powell Way/ Stockbridge Lane/ Waterpark Drive - M57 J3	Standard Roundabout		1, 2, 3, 4	38.70	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	38.70	E

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2035	With Dev	PM	ONE HOUR	16:30	18:00	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stockbridge Lane		ONE HOUR	✓	813	100.000
2 - Seth Powell Way		ONE HOUR	✓	1004	100.000
3 - Waterpark Drive		ONE HOUR	✓	831	100.000
4 - M57 Slips		ONE HOUR	✓	935	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	241	511	61
	2 - Seth Powell Way	206	0	196	602
	3 - Waterpark Drive	445	171	0	215
	4 - M57 Slips	88	484	363	0

Proportions

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0.00	0.30	0.63	0.08
	2 - Seth Powell Way	0.21	0.00	0.20	0.60
	3 - Waterpark Drive	0.54	0.21	0.00	0.26
	4 - M57 Slips	0.09	0.52	0.39	0.00

Vehicle Mix

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

Heavy Vehicle %

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	0	0	1	4
	2 - Seth Powell Way	2	0	0	1
	3 - Waterpark Drive	2	2	0	1
	4 - M57 Slips	0	1	1	0

Average PCU Per Veh

	To				
		1 - Stockbridge Lane	2 - Seth Powell Way	3 - Waterpark Drive	4 - M57 Slips
From	1 - Stockbridge Lane	1.000	1.000	1.010	1.040
	2 - Seth Powell Way	1.020	1.000	1.000	1.010
	3 - Waterpark Drive	1.020	1.020	1.000	1.010
	4 - M57 Slips	1.000	1.010	1.010	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
16:30-16:45	1 - Stockbridge Lane	612	612
	2 - Seth Powell Way	756	756
	3 - Waterpark Drive	626	626
	4 - M57 Slips	704	704
16:45-17:00	1 - Stockbridge Lane	731	731
	2 - Seth Powell Way	903	903
	3 - Waterpark Drive	747	747
	4 - M57 Slips	841	841
17:00-17:15	1 - Stockbridge Lane	895	895
	2 - Seth Powell Way	1105	1105
	3 - Waterpark Drive	915	915
	4 - M57 Slips	1029	1029
17:15-17:30	1 - Stockbridge Lane	895	895
	2 - Seth Powell Way	1105	1105
	3 - Waterpark Drive	915	915
	4 - M57 Slips	1029	1029
17:30-17:45	1 - Stockbridge Lane	731	731
	2 - Seth Powell Way	903	903
	3 - Waterpark Drive	747	747
	4 - M57 Slips	841	841
17:45-18:00	1 - Stockbridge Lane	612	612
	2 - Seth Powell Way	756	756
	3 - Waterpark Drive	626	626
	4 - M57 Slips	704	704

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 - Stockbridge Lane	0.94	48.41	11.3	E	746	1119
2 - Seth Powell Way	0.99	65.44	19.7	F	921	1382
3 - Waterpark Drive	0.90	33.47	8.0	D	763	1144
4 - M57 Slips	0.64	6.21	1.8	A	858	1287

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	612	153	763	1107	0.553	607	552	0.0	1.2	7.196	A
2 - Seth Powell Way	756	189	699	1254	0.603	750	671	0.0	1.5	7.131	A
3 - Waterpark Drive	626	156	649	1138	0.550	621	800	0.0	1.2	7.010	A
4 - M57 Slips	704	176	614	1768	0.398	701	656	0.0	0.7	3.397	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	731	183	913	1041	0.702	727	661	1.2	2.3	11.393	B
2 - Seth Powell Way	903	226	837	1197	0.754	897	803	1.5	2.9	11.892	B
3 - Waterpark Drive	747	187	776	1083	0.690	743	958	1.2	2.2	10.661	B
4 - M57 Slips	841	210	735	1702	0.494	839	785	0.7	1.0	4.203	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	895	224	1114	953	0.940	867	794	2.3	9.3	34.690	D
2 - Seth Powell Way	1105	276	1009	1126	0.982	1060	973	2.9	14.2	40.456	E
3 - Waterpark Drive	915	229	918	1021	0.896	896	1151	2.2	6.8	26.220	D
4 - M57 Slips	1029	257	882	1622	0.635	1026	933	1.0	1.7	6.065	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	895	224	1120	950	0.942	887	807	9.3	11.3	48.406	E
2 - Seth Powell Way	1105	276	1024	1119	0.987	1083	983	14.2	19.7	65.436	F
3 - Waterpark Drive	915	229	938	1012	0.904	910	1169	6.8	8.0	33.467	D
4 - M57 Slips	1029	257	897	1614	0.638	1029	952	1.7	1.8	6.209	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	731	183	922	1037	0.705	766	690	11.3	2.5	14.976	B
2 - Seth Powell Way	903	226	866	1185	0.762	968	822	19.7	3.5	21.132	C
3 - Waterpark Drive	747	187	836	1057	0.707	769	998	8.0	2.6	13.578	B
4 - M57 Slips	841	210	768	1684	0.499	844	836	1.8	1.0	4.336	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stockbridge Lane	612	153	769	1105	0.554	617	561	2.5	1.3	7.523	A
2 - Seth Powell Way	756	189	708	1250	0.605	763	678	3.5	1.6	7.579	A
3 - Waterpark Drive	626	156	661	1133	0.552	631	811	2.6	1.3	7.359	A
4 - M57 Slips	704	176	624	1762	0.399	705	667	1.0	0.7	3.443	A

Appendix V

J8: Knowsley Lane/ Primrose Drive/ George Hale Avenue

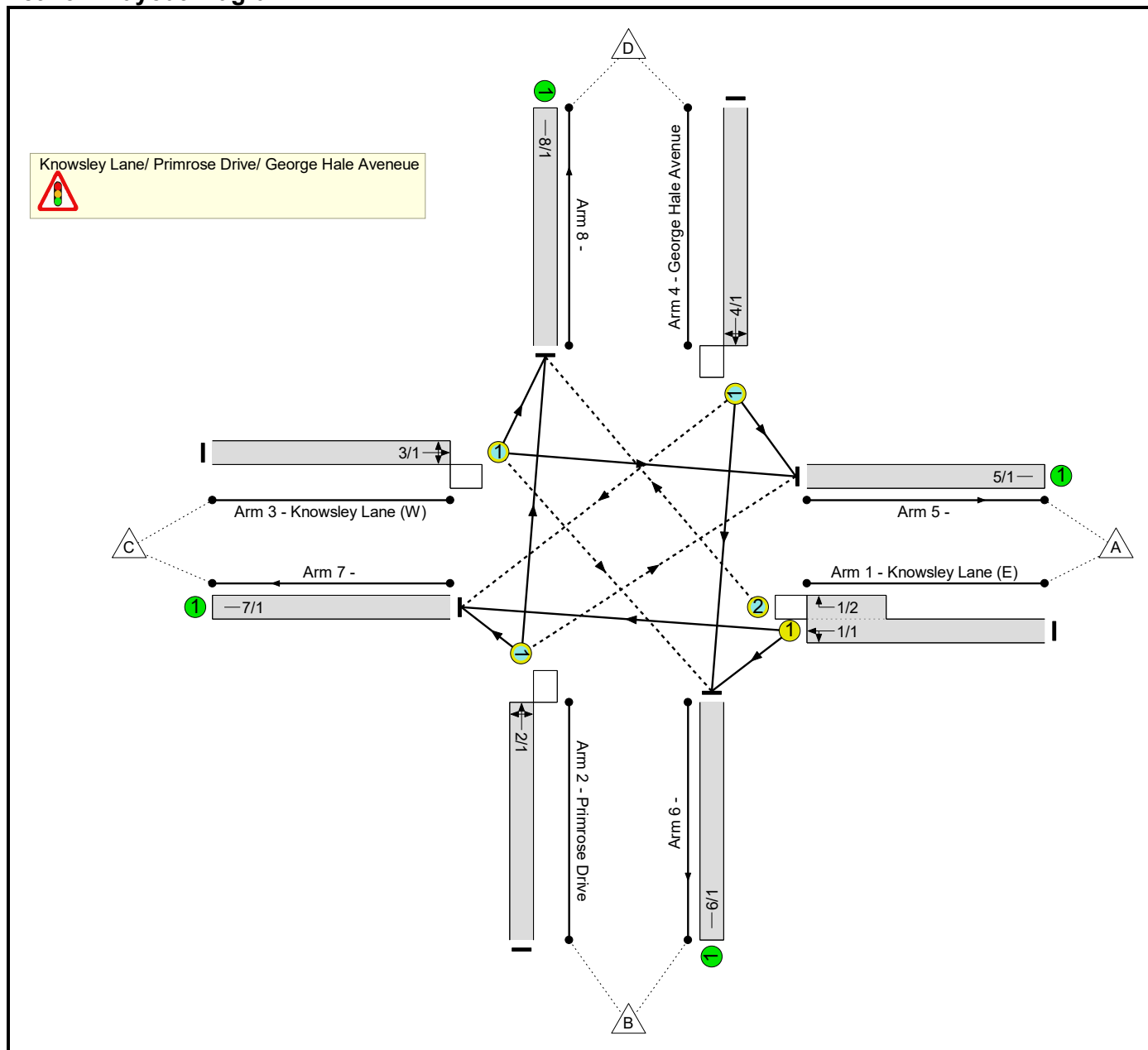
LinSig Modelling Outputs



Detailed Input Data And Results**User and Project Details**

Project:	A25007 Home Farm Road, Knowsley Village
Title:	J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue
Location:	
Client:	Hallam Land
Site Ref(s):	1123 (KMBC Ref)
Design Layout Ref:	8571235497-YU-00-XX-DR-Y-0001 Rev C1
Additional detail:	
File name:	J8_Knowsley Ln-Primrose Dr-George Hale Av.lsg3x
Author:	
Company:	
Address:	
Linsig Version:	3, 3, 0, 6

Network Layout Diagram

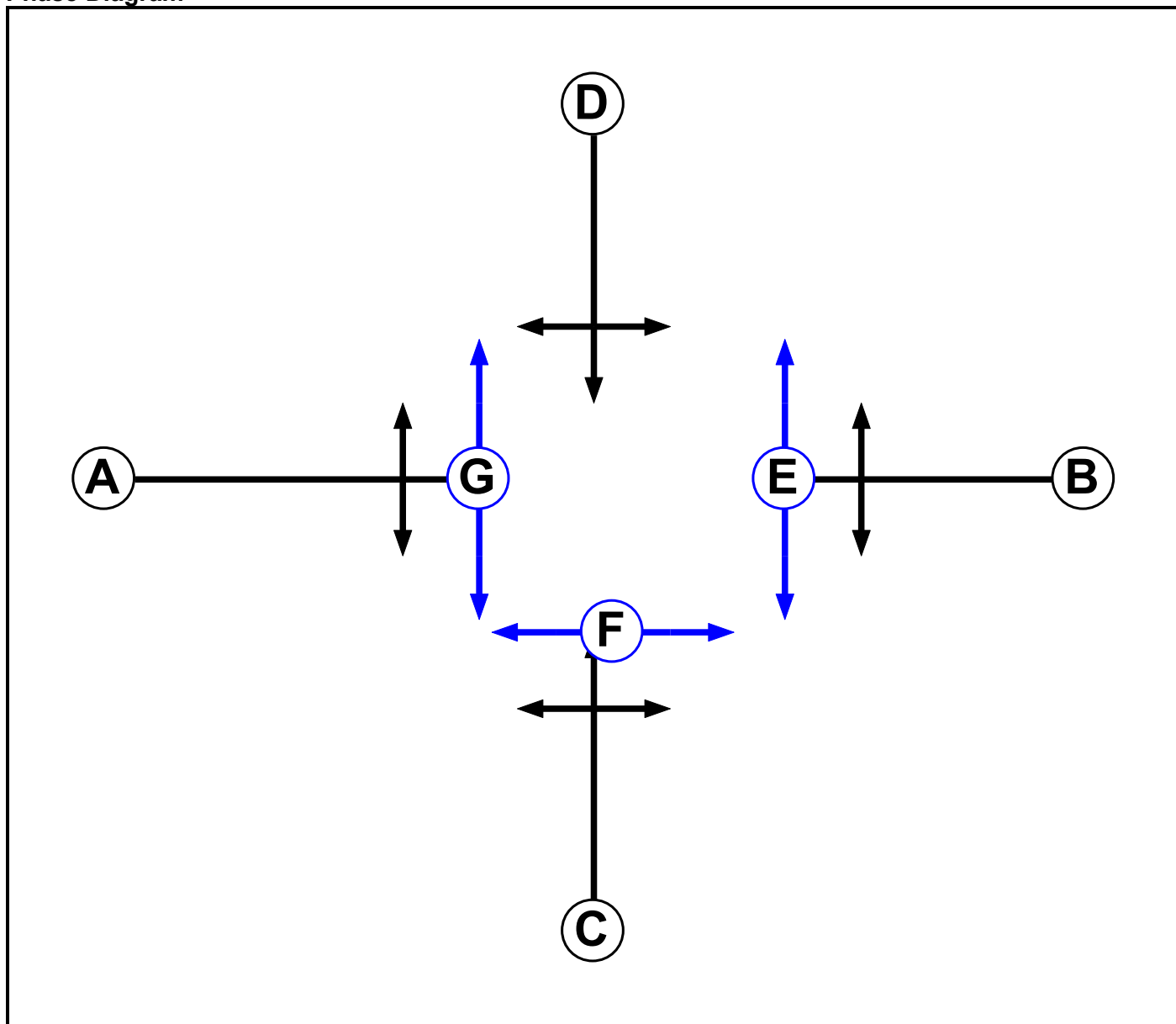


Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	2025 Survey AM	2025 Survey AM	Network Control Plan 1	08:00 - 09:00	90	-23.3	102.63
2	2025 Survey PM	2025 Survey PM	Network Control Plan 1	16:30 - 17:30	90	-22.9	98.15
3	2030 No Dev AM	2030 No Dev AM	Network Control Plan 1	08:00 - 09:00	90	-31.1	151.13
4	2030 No Dev PM	2030 No Dev PM	Network Control Plan 1	16:30 - 17:30	90	-30.5	149.16
5	2030 With Dev AM	2030 With Dev AM	Network Control Plan 1	08:00 - 09:00	90	-40.4	196.16
6	2030 With Dev PM	2030 With Dev PM	Network Control Plan 1	16:30 - 17:30	90	-39.4	194.08
7	2030 With Dev AM (alternate staging)	2030 With Dev AM	Network Control Plan 2	08:00 - 09:00	90	4.0	17.01
8	2030 With Dev Pm (alternate staging)	2030 With Dev PM	Network Control Plan 2	16:30 - 17:30	90	5.1	14.77

Controller Summary

Controller	Type	SCN	Stage Stream	Num Phases	Num Stages	Controls Junctions	Controller Notes
C1	Gen		Stage Stream 1	7	5	Knowsley Lane/ Primrose Drive/ George Hale Aveneue	

Phase Diagram**Phase Input Data**

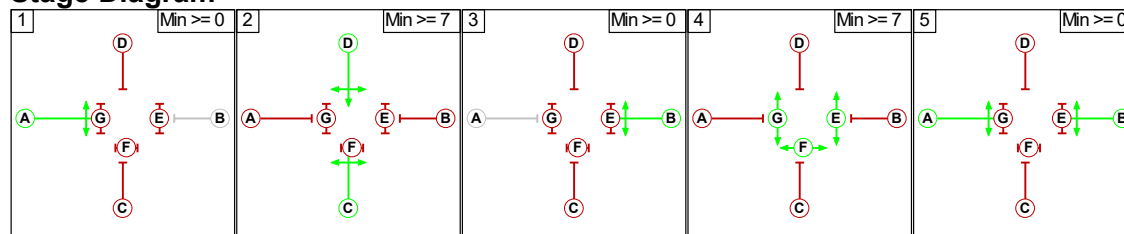
Phase Name	Phase Type	Assoc. Phase	Street Min (s)	Cont Min (s)
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7

Phase Intergreens Matrix

Terminating Phase	Starting Phase							
		A	B	C	D	E	F	G
	A		-	8	8	10	11	8
	B	-		6	6	6	8	8
	C	7	5		-	9	6	8
	D	5	5	-		7	7	7
	E	0	0	0	0		-	-
	F	0	0	0	0	-		-
	G	0	0	0	0	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	C D
3	B
4	E F G
5	A B

Stage Diagram**Phase Delays**

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

Prohibited Stage Change

From Stage	To Stage					
		1	2	3	4	5
	1		8	2	11	2
	2	7		5	9	7
	3	2	6		8	2
	4	2	2	2		2
	5	0	8	0	11	

Lane Input Data

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue												
Lane	Lane Type	Phases	Start Disp. (s)	End Disp. (s)	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient (%)	Nearside Lane	Turns	Turning Radius (m)
1/1 (Knowsley Lane (E))	U	B	2	3	60.0	Geom	-	3.00	0.00	N	Arm 6 Left	12.00
											Arm 7 Ahead	Inf
1/2 (Knowsley Lane (E))	O	B	2	3	5.0	Geom	-	3.25	0.00	Y	Arm 8 Right	Inf
2/1 (Primrose Drive)	O	C	2	3	60.0	Geom	-	3.10	0.00	Y	Arm 5 Right	16.50
											Arm 7 Left	15.70
											Arm 8 Ahead	Inf
3/1 (Knowsley Lane (W))	O	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	20.30
											Arm 8 Left	10.30
4/1 (George Hale Avenue)	O	D	2	3	60.0	Geom	-	2.80	0.00	Y	Arm 5 Left	11.00
											Arm 6 Ahead	Inf
											Arm 7 Right	13.90
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Knowsley Lane (E))	8/1 (Right)	1439	0	3/1	1.09	All	2.00	-	0.50	2	2.00
2/1 (Primrose Drive)	5/1 (Right)	1439	0	4/1	1.09	All	2.00	2.00	0.50	2	2.00
3/1 (Knowsley Lane (W))	6/1 (Right)	1439	0	1/1	1.09	All	2.00	2.00	0.50	2	2.00
4/1 (George Hale Avenue)	7/1 (Right)	1439	0	2/1	1.09	All	2.00	2.00	0.50	2	2.00

Lane Connector Input Data

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue				
Org Lane	Dest Lane	Junction	Modelled Mean Cruise Time (s)	Platoon Dispersion
1/1	6/1	Internal	5	35
1/1	7/1	Internal	5	35
1/2	8/1	Internal	5	35
2/1	5/1	Internal	5	35
2/1	7/1	Internal	5	35
2/1	8/1	Internal	5	35
3/1	5/1	Internal	5	35
3/1	6/1	Internal	5	35
3/1	8/1	Internal	5	35
4/1	5/1	Internal	5	35
4/1	6/1	Internal	5	35
4/1	7/1	Internal	5	35

Scenario 1: '2025 Survey AM' (FG1: '2025 Survey AM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Lane (E))	3.00	0.00	N	Arm 6 Left	12.00	16.3 %	2014	2014
				Arm 7 Ahead	Inf	83.7 %		
1/2 (Knowsley Lane (E))	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (Primrose Drive)	3.10	0.00	Y	Arm 5 Right	16.50	39.8 %	1763	1763
				Arm 7 Left	15.70	58.5 %		
				Arm 8 Ahead	Inf	1.7 %		
3/1 (Knowsley Lane (W))	3.50	0.00	Y	Arm 5 Ahead	Inf	76.8 %	1931	1931
				Arm 6 Right	20.30	22.4 %		
				Arm 8 Left	10.30	0.8 %		
4/1 (George Hale Avenue)	2.80	0.00	Y	Arm 5 Left	11.00	45.5 %	1768	1768
				Arm 6 Ahead	Inf	45.5 %		
				Arm 7 Right	13.90	9.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 1

Scenario 2: '2025 Survey PM' (FG2: '2025 Survey PM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Lane (E))	3.00	0.00	N	Arm 6 Left	12.00	13.8 %	2020	2020
				Arm 7 Ahead	Inf	86.2 %		
1/2 (Knowsley Lane (E))	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (Primrose Drive)	3.10	0.00	Y	Arm 5 Right	16.50	33.0 %	1867	1867
				Arm 7 Left	15.70	0.9 %		
				Arm 8 Ahead	Inf	66.0 %		
3/1 (Knowsley Lane (W))	3.50	0.00	Y	Arm 5 Ahead	Inf	72.9 %	1926	1926
				Arm 6 Right	20.30	26.8 %		
				Arm 8 Left	10.30	0.3 %		
4/1 (George Hale Avenue)	2.80	0.00	Y	Arm 5 Left	11.00	76.9 %	1715	1715
				Arm 6 Ahead	Inf	23.1 %		
				Arm 7 Right	13.90	0.0 %		
5/1			Infinite Saturation Flow				Inf	Inf
6/1			Infinite Saturation Flow				Inf	Inf
7/1			Infinite Saturation Flow				Inf	Inf
8/1			Infinite Saturation Flow				Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 2

Scenario 3: '2030 No Dev AM' (FG3: '2030 No Dev AM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Lane (E))	3.00	0.00	N	Arm 6 Left	12.00	16.4 %	2014	2014
				Arm 7 Ahead	Inf	83.6 %		
1/2 (Knowsley Lane (E))	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (Primrose Drive)	3.10	0.00	Y	Arm 5 Right	16.50	39.8 %	1763	1763
				Arm 7 Left	15.70	58.5 %		
				Arm 8 Ahead	Inf	1.6 %		
3/1 (Knowsley Lane (W))	3.50	0.00	Y	Arm 5 Ahead	Inf	76.8 %	1931	1931
				Arm 6 Right	20.30	22.4 %		
				Arm 8 Left	10.30	0.8 %		
4/1 (George Hale Avenue)	2.80	0.00	Y	Arm 5 Left	11.00	45.5 %	1768	1768
				Arm 6 Ahead	Inf	45.5 %		
				Arm 7 Right	13.90	9.1 %		
5/1			Infinite Saturation Flow				Inf	Inf
6/1			Infinite Saturation Flow				Inf	Inf
7/1			Infinite Saturation Flow				Inf	Inf
8/1			Infinite Saturation Flow				Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 3

Scenario 4: '2030 No Dev PM' (FG4: '2030 No Dev PM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Lane (E))	3.00	0.00	N	Arm 6 Left	12.00	13.8 %	2020	2020
				Arm 7 Ahead	Inf	86.2 %		
1/2 (Knowsley Lane (E))	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (Primrose Drive)	3.10	0.00	Y	Arm 5 Right	16.50	32.9 %	1761	1761
				Arm 7 Left	15.70	66.2 %		
				Arm 8 Ahead	Inf	0.9 %		
3/1 (Knowsley Lane (W))	3.50	0.00	Y	Arm 5 Ahead	Inf	72.9 %	1926	1926
				Arm 6 Right	20.30	26.8 %		
				Arm 8 Left	10.30	0.3 %		
4/1 (George Hale Avenue)	2.80	0.00	Y	Arm 5 Left	11.00	78.6 %	1712	1712
				Arm 6 Ahead	Inf	21.4 %		
				Arm 7 Right	13.90	0.0 %		
5/1			Infinite Saturation Flow				Inf	Inf
6/1			Infinite Saturation Flow				Inf	Inf
7/1			Infinite Saturation Flow				Inf	Inf
8/1			Infinite Saturation Flow				Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 4

Scenario 5: '2030 With Dev AM' (FG5: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Lane (E))	3.00	0.00	N	Arm 6 Left	12.00	15.8 %	2015	2015
				Arm 7 Ahead	Inf	84.2 %		
1/2 (Knowsley Lane (E))	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (Primrose Drive)	3.10	0.00	Y	Arm 5 Right	16.50	39.4 %	1763	1763
				Arm 7 Left	15.70	59.0 %		
				Arm 8 Ahead	Inf	1.6 %		
3/1 (Knowsley Lane (W))	3.50	0.00	Y	Arm 5 Ahead	Inf	77.2 %	1932	1932
				Arm 6 Right	20.30	22.0 %		
				Arm 8 Left	10.30	0.7 %		
4/1 (George Hale Avenue)	2.80	0.00	Y	Arm 5 Left	11.00	45.5 %	1768	1768
				Arm 6 Ahead	Inf	45.5 %		
				Arm 7 Right	13.90	9.1 %		
5/1			Infinite Saturation Flow				Inf	Inf
6/1			Infinite Saturation Flow				Inf	Inf
7/1			Infinite Saturation Flow				Inf	Inf
8/1			Infinite Saturation Flow				Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 5

Scenario 6: '2030 With Dev PM' (FG6: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')**Lane Saturation Flows**

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Lane (E))	3.00	0.00	N	Arm 6 Left	12.00	12.9 %	2022	2022
				Arm 7 Ahead	Inf	87.1 %		
1/2 (Knowsley Lane (E))	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (Primrose Drive)	3.10	0.00	Y	Arm 5 Right	16.50	31.5 %	1761	1761
				Arm 7 Left	15.70	67.7 %		
				Arm 8 Ahead	Inf	0.9 %		
3/1 (Knowsley Lane (W))	3.50	0.00	Y	Arm 5 Ahead	Inf	73.2 %	1926	1926
				Arm 6 Right	20.30	26.6 %		
				Arm 8 Left	10.30	0.3 %		
4/1 (George Hale Avenue)	2.80	0.00	Y	Arm 5 Left	11.00	78.6 %	1712	1712
				Arm 6 Ahead	Inf	21.4 %		
				Arm 7 Right	13.90	0.0 %		
5/1			Infinite Saturation Flow				Inf	Inf
6/1			Infinite Saturation Flow				Inf	Inf
7/1			Infinite Saturation Flow				Inf	Inf
8/1			Infinite Saturation Flow				Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 6

Scenario 7: '2030 With Dev AM (alternate staging)' (FG5: '2030 With Dev AM', Plan 2: 'Network Control Plan 2')
Lane Saturation Flows

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Lane (E))	3.00	0.00	N	Arm 6 Left	12.00	15.8 %	2015	2015
				Arm 7 Ahead	Inf	84.2 %		
1/2 (Knowsley Lane (E))	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (Primrose Drive)	3.10	0.00	Y	Arm 5 Right	16.50	39.4 %	1763	1763
				Arm 7 Left	15.70	59.0 %		
				Arm 8 Ahead	Inf	1.6 %		
3/1 (Knowsley Lane (W))	3.50	0.00	Y	Arm 5 Ahead	Inf	77.2 %	1932	1932
				Arm 6 Right	20.30	22.0 %		
				Arm 8 Left	10.30	0.7 %		
4/1 (George Hale Avenue)	2.80	0.00	Y	Arm 5 Left	11.00	45.5 %	1768	1768
				Arm 6 Ahead	Inf	45.5 %		
				Arm 7 Right	13.90	9.1 %		
5/1			Infinite Saturation Flow				Inf	Inf
6/1			Infinite Saturation Flow				Inf	Inf
7/1			Infinite Saturation Flow				Inf	Inf
8/1			Infinite Saturation Flow				Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 7

Scenario 8: '2030 With Dev Pm (alternate staging)' (FG6: '2030 With Dev PM', Plan 2: 'Network Control Plan 2')
Lane Saturation Flows

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue								
Lane	Lane Width (m)	Gradient (%)	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Knowsley Lane (E))	3.00	0.00	N	Arm 6 Left	12.00	12.9 %	2022	2022
				Arm 7 Ahead	Inf	87.1 %		
1/2 (Knowsley Lane (E))	3.25	0.00	Y	Arm 8 Right	Inf	100.0 %	1940	1940
2/1 (Primrose Drive)	3.10	0.00	Y	Arm 5 Right	16.50	31.5 %	1761	1761
				Arm 7 Left	15.70	67.7 %		
				Arm 8 Ahead	Inf	0.9 %		
3/1 (Knowsley Lane (W))	3.50	0.00	Y	Arm 5 Ahead	Inf	73.2 %	1926	1926
				Arm 6 Right	20.30	26.6 %		
				Arm 8 Left	10.30	0.3 %		
4/1 (George Hale Avenue)	2.80	0.00	Y	Arm 5 Left	11.00	78.6 %	1712	1712
				Arm 6 Ahead	Inf	21.4 %		
				Arm 7 Right	13.90	0.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Bonus Green Times

No Bonus Greens are defined For Scenario 8

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2025 Survey AM'	08:00	09:00	01:00	
2: '2025 Survey PM'	16:30	17:30	01:00	
3: '2030 No Dev AM'	08:00	09:00	01:00	
4: '2030 No Dev PM'	16:30	17:30	01:00	
5: '2030 With Dev AM'	08:00	09:00	01:00	
6: '2030 With Dev PM'	16:30	17:30	01:00	

Traffic Flows, Desired

FG1: '2025 Survey AM'

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	87	446	8	541
	B	138	0	203	6	347
	C	457	133	0	5	595
	D	5	5	1	0	11
	Tot.	600	225	650	19	1494

FG2: '2025 Survey PM'

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	85	529	7	621
	B	70	0	2	140	212
	C	483	178	0	2	663
	D	10	3	0	0	13
	Tot.	563	266	531	149	1509

FG3: '2030 No Dev AM'

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	93	475	9	577
	B	147	0	216	6	369
	C	486	142	0	5	633
	D	5	5	1	0	11
	Tot.	638	240	692	20	1590

FG4: '2030 No Dev PM'

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	90	562	7	659
	B	74	0	149	2	225
	C	513	189	0	2	704
	D	11	3	0	0	14
	Tot.	598	282	711	11	1602

Detailed Input Data And Results

FG5: '2030 With Dev AM'

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	93	494	9	596
	B	147	0	220	6	373
	C	536	153	0	5	694
	D	5	5	1	0	11
	Tot.	688	251	715	20	1674

FG6: '2030 With Dev PM'

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	90	607	7	704
	B	74	0	159	2	235
	C	537	195	0	2	734
	D	11	3	0	0	14
	Tot.	622	288	766	11	1687

Scenario 1: '2025 Survey AM' (FG1: '2025 Survey AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	87	446	8	541
	B	138	0	203	6	347
	C	457	133	0	5	595
	D	5	5	1	0	11
	Tot.	600	225	650	19	1494

Traffic Flows, Difference

Difference :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	0	0	0
	C	0	0	0	0	0
	D	0	0	0	0	0
	Tot.	0	0	0	0	0

Detailed Input Data And Results

Scenario 2: '2025 Survey PM' (FG2: '2025 Survey PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	85	529	7	621
	B	70	0	2	140	212
	C	483	178	0	2	663
	D	10	3	0	0	13
	Tot.	563	266	531	149	1509

Traffic Flows, Difference

Difference :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	0	0	0
	C	0	0	0	0	0
	D	0	0	0	0	0
	Tot.	0	0	0	0	0

Scenario 3: '2030 No Dev AM' (FG3: '2030 No Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	93	475	9	577
	B	147	0	216	6	369
	C	486	142	0	5	633
	D	5	5	1	0	11
	Tot.	638	240	692	20	1590

Traffic Flows, Difference

Difference :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	0	0	0
	C	0	0	0	0	0
	D	0	0	0	0	0
	Tot.	0	0	0	0	0

Detailed Input Data And Results

Scenario 4: '2030 No Dev PM' (FG4: '2030 No Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	90	562	7	659
	B	74	0	149	2	225
	C	513	189	0	2	704
	D	11	3	0	0	14
	Tot.	598	282	711	11	1602

Traffic Flows, Difference

Difference :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	0	0	0
	C	0	0	0	0	0
	D	0	0	0	0	0
	Tot.	0	0	0	0	0

Scenario 5: '2030 With Dev AM' (FG5: '2030 With Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	93	494	9	596
	B	147	0	220	6	373
	C	536	153	0	5	694
	D	5	5	1	0	11
	Tot.	688	251	715	20	1674

Traffic Flows, Difference

Difference :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	0	0	0
	C	0	0	0	0	0
	D	0	0	0	0	0
	Tot.	0	0	0	0	0

Detailed Input Data And Results

Scenario 6: '2030 With Dev PM' (FG6: '2030 With Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	90	607	7	704
	B	74	0	159	2	235
	C	537	195	0	2	734
	D	11	3	0	0	14
	Tot.	622	288	766	11	1687

Traffic Flows, Difference

Difference :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	0	0	0
	C	0	0	0	0	0
	D	0	0	0	0	0
	Tot.	0	0	0	0	0

Scenario 7: '2030 With Dev AM (alternate staging)' (FG5: '2030 With Dev AM', Plan 2: 'Network Control Plan 2')

Traffic Flows, Actual

Actual Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	93	494	9	596
	B	147	0	220	6	373
	C	536	153	0	5	694
	D	5	5	1	0	11
	Tot.	688	251	715	20	1674

Traffic Flows, Difference

Difference :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	0	0	0
	C	0	0	0	0	0
	D	0	0	0	0	0
	Tot.	0	0	0	0	0

Detailed Input Data And Results

Scenario 8: '2030 With Dev Pm (alternate staging)' (FG6: '2030 With Dev PM', Plan 2: 'Network Control Plan 2')

Traffic Flows, Actual

Actual Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	90	607	7	704
	B	74	0	159	2	235
	C	537	195	0	2	734
	D	11	3	0	0	14
	Tot.	622	288	766	11	1687

Traffic Flows, Difference

Difference :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	0	0	0	0
	B	0	0	0	0	0
	C	0	0	0	0	0
	D	0	0	0	0	0
	Tot.	0	0	0	0	0

Traffic Lane Flows

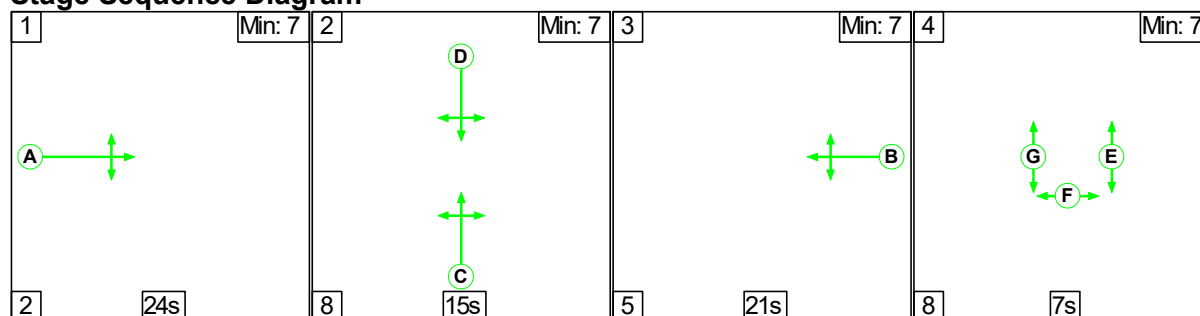
Lane	Scenario 1: 2025 Survey AM	Scenario 2: 2025 Survey PM	Scenario 3: 2030 No Dev AM	Scenario 4: 2030 No Dev PM	Scenario 5: 2030 With Dev AM	Scenario 6: 2030 With Dev PM
Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue						
1/1 (with short)	541(In) 533(Out)	621(In) 614(Out)	577(In) 568(Out)	659(In) 652(Out)	596(In) 587(Out)	704(In) 697(Out)
1/2 (short)	8	7	9	7	9	7
2/1	347	212	369	225	373	235
3/1	595	663	633	704	694	734
4/1	11	13	11	14	11	14
5/1	600	563	638	598	688	622
6/1	225	266	240	282	251	288
7/1	650	531	692	711	715	766
8/1	19	149	20	11	20	11

Detailed Input Data And Results

Lane	Scenario 7: 2030 With Dev AM (alternate staging)	Scenario 8: 2030 With Dev Pm (alternate staging)
Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue		
1/1 (with short)	596(In) 587(Out)	704(In) 697(Out)
1/2 (short)	9	7
2/1	373	235
3/1	694	734
4/1	11	14
5/1	688	622
6/1	251	288
7/1	715	766
8/1	20	11

Scenario 1: '2025 Survey AM' (FG1: '2025 Survey AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



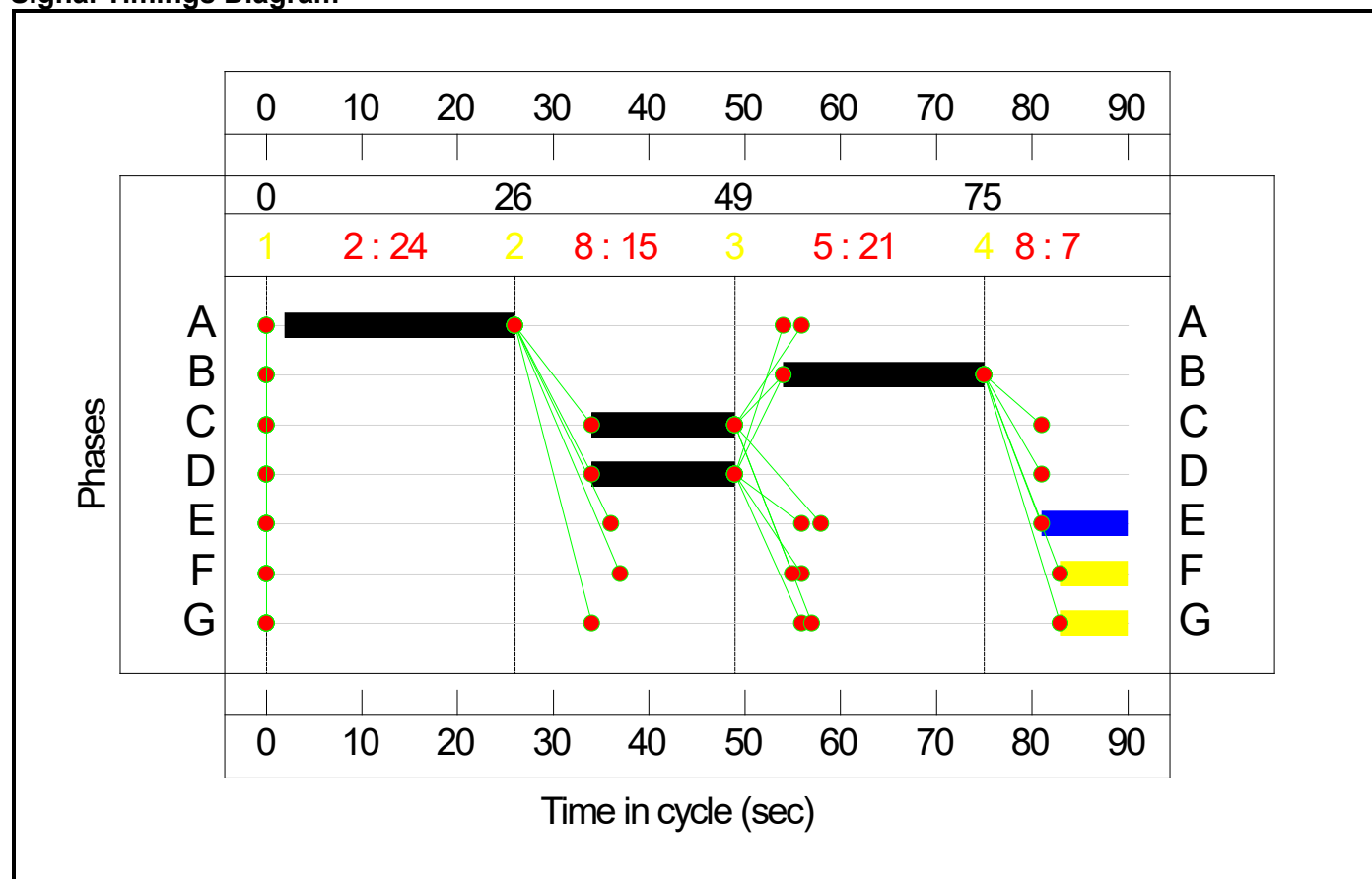
Stage Timings

Stage	1	2	3	4
Duration	24	15	21	7
Change Point	0	26	49	75

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Lane (W) Ahead Right Left	Traffic	24	2	26
B	Knowsley Lane (E) Left Ahead Right	Traffic	21	54	75
C	Primrose Drive Right Left Ahead	Traffic	15	34	49
D	George Hale Avenue Left Ahead Right	Traffic	15	34	49
E	Pedestrians across	Pedestrian	9	81	0
F	Pedestrians across	Pedestrian	7	83	0
G	Pedestrians across	Pedestrian	7	83	0

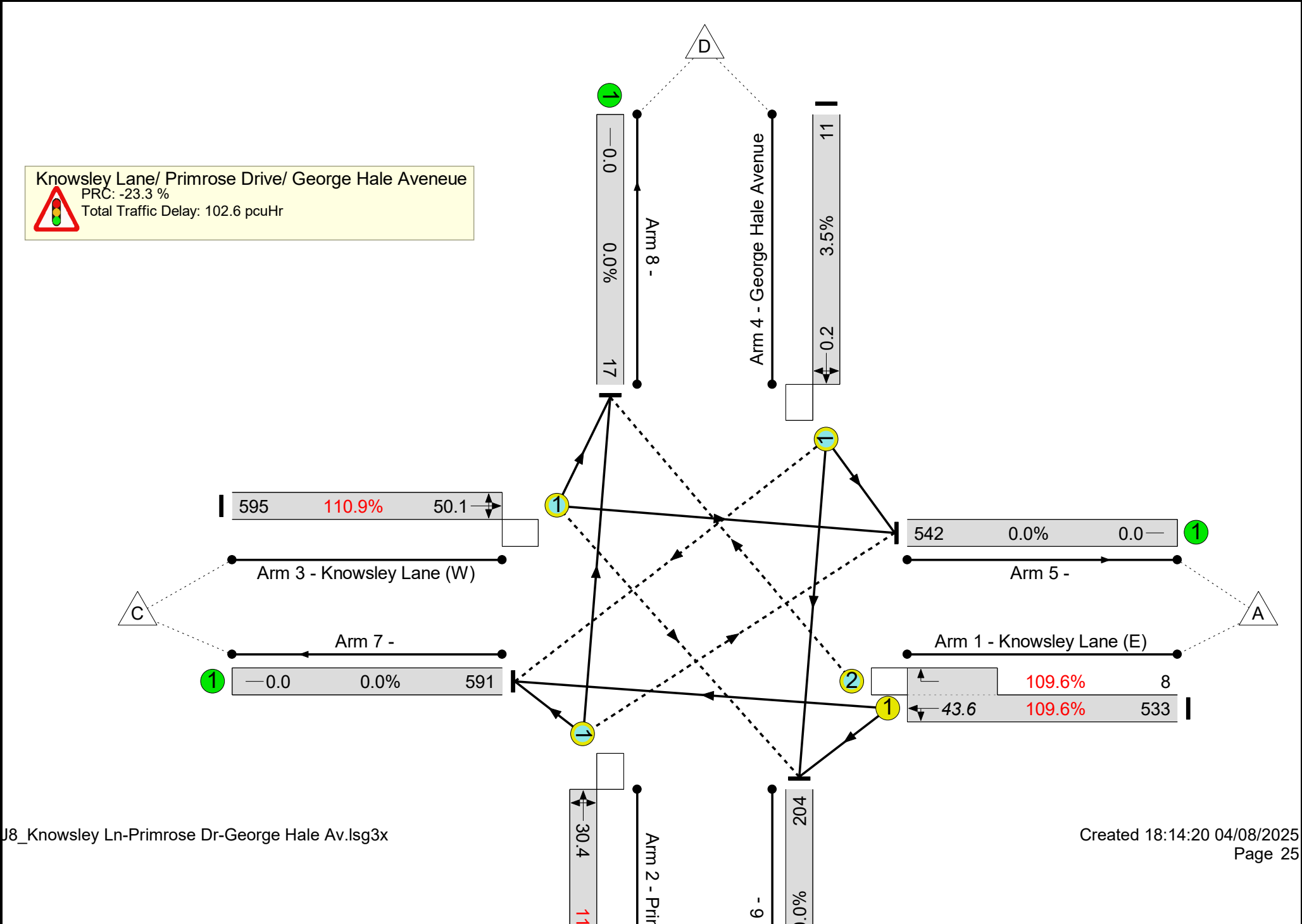
Signal Timings Diagram



Lane Green Times

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Lane (E) Left Ahead	U	B	54	75
1/2	Knowsley Lane (E) Right	O	B	54	75
2/1	Primrose Drive Right Left Ahead	O	C	34	49
3/1	Knowsley Lane (W) Ahead Right Left	O	A	2	26
4/1	George Hale Avenue Left Ahead Right	O	D	34	49

Detailed Input Data And Results
Network Layout Diagram

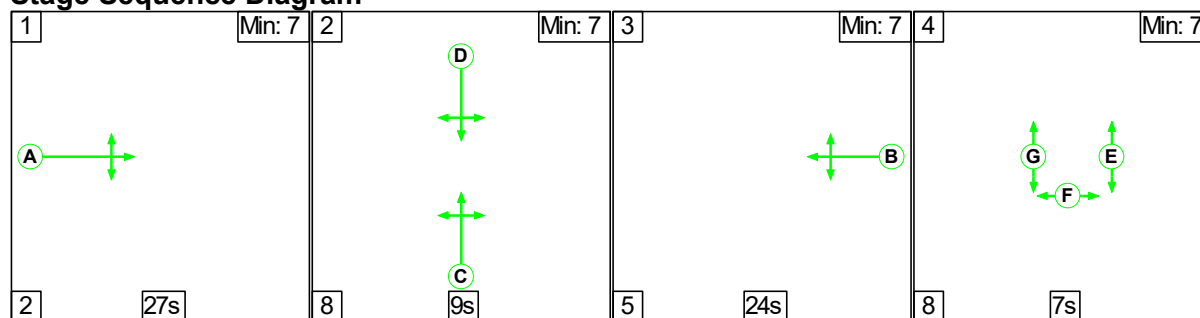


Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	110.9%
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	110.9%
1/1+1/2	Knowsley Lane (E) Left Ahead Right	U+O	N/A	N/A	B		1	21	-	-	541	2014:1940	486+7	109.6 : 109.6%
2/1	Primrose Drive Right Left Ahead	O	N/A	N/A	C		1	15	-	-	347	1763	313	110.7%
3/1	Knowsley Lane (W) Ahead Right Left	O	N/A	N/A	A		1	24	-	-	595	1931	536	110.9%
4/1	George Hale Avenue Left Ahead Right	O	N/A	N/A	D		1	15	-	-	11	1768	314	3.5%
5/1		U	N/A	N/A	-		-	-	-	-	600	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	-	225	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	-	650	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	-	19	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	125	117	10	19.6	83.1	0.0	102.6	-	-	-	-	
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	125	117	10	19.6	83.1	0.0	102.6	-	-	-	-	
1/1+1/2	541	494	0	7	1	6.6	28.4	0.0	35.0	232.8	15.2	28.4	43.6	
2/1	347	313	125	0	0	4.8	20.9	0.0	25.8	267.4	9.5	20.9	30.4	
3/1	595	536	0	110	10	8.0	33.7	0.0	41.8	252.7	16.3	33.7	50.1	
4/1	11	11	1	0	0	0.1	0.0	0.0	0.1	36.9	0.2	0.0	0.2	
5/1	542	542	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	204	204	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	591	591	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 PRC for Signalled Lanes (%): -23.3 PRC Over All Lanes (%): -23.3 Total Delay for Signalled Lanes (pcuHr): 102.63 Total Delay Over All Lanes(pcuHr): 102.63 Cycle Time (s): 90														

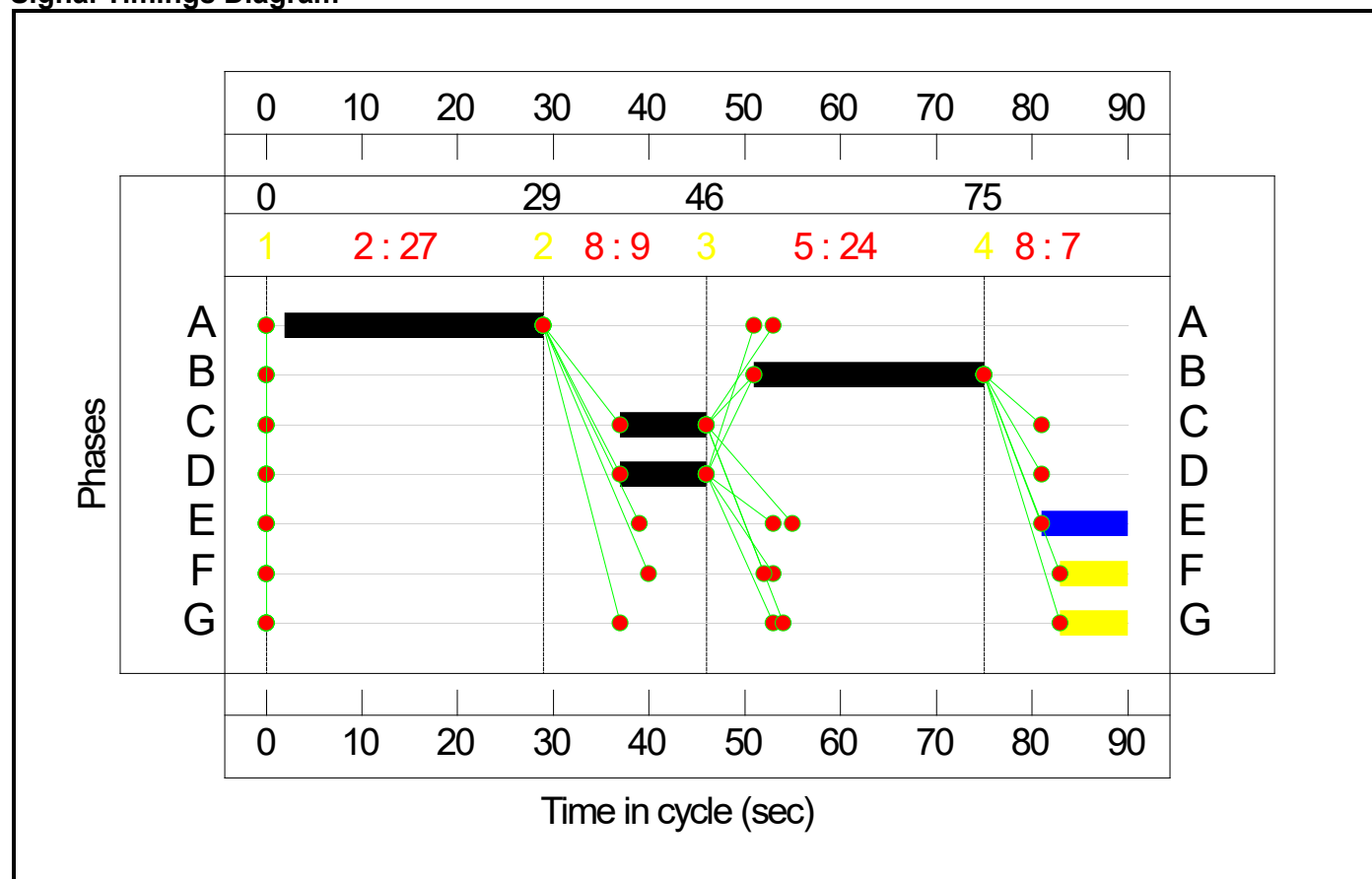
Stage Sequence Diagram**Stage Timings**

Stage	1	2	3	4
Duration	27	9	24	7
Change Point	0	29	46	75

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Lane (W) Ahead Right Left	Traffic	27	2	29
B	Knowsley Lane (E) Left Ahead Right	Traffic	24	51	75
C	Primrose Drive Right Left Ahead	Traffic	9	37	46
D	George Hale Avenue Left Ahead Right	Traffic	9	37	46
E	Pedestrians across	Pedestrian	9	81	0
F	Pedestrians across	Pedestrian	7	83	0
G	Pedestrians across	Pedestrian	7	83	0

Signal Timings Diagram



Lane Green Times

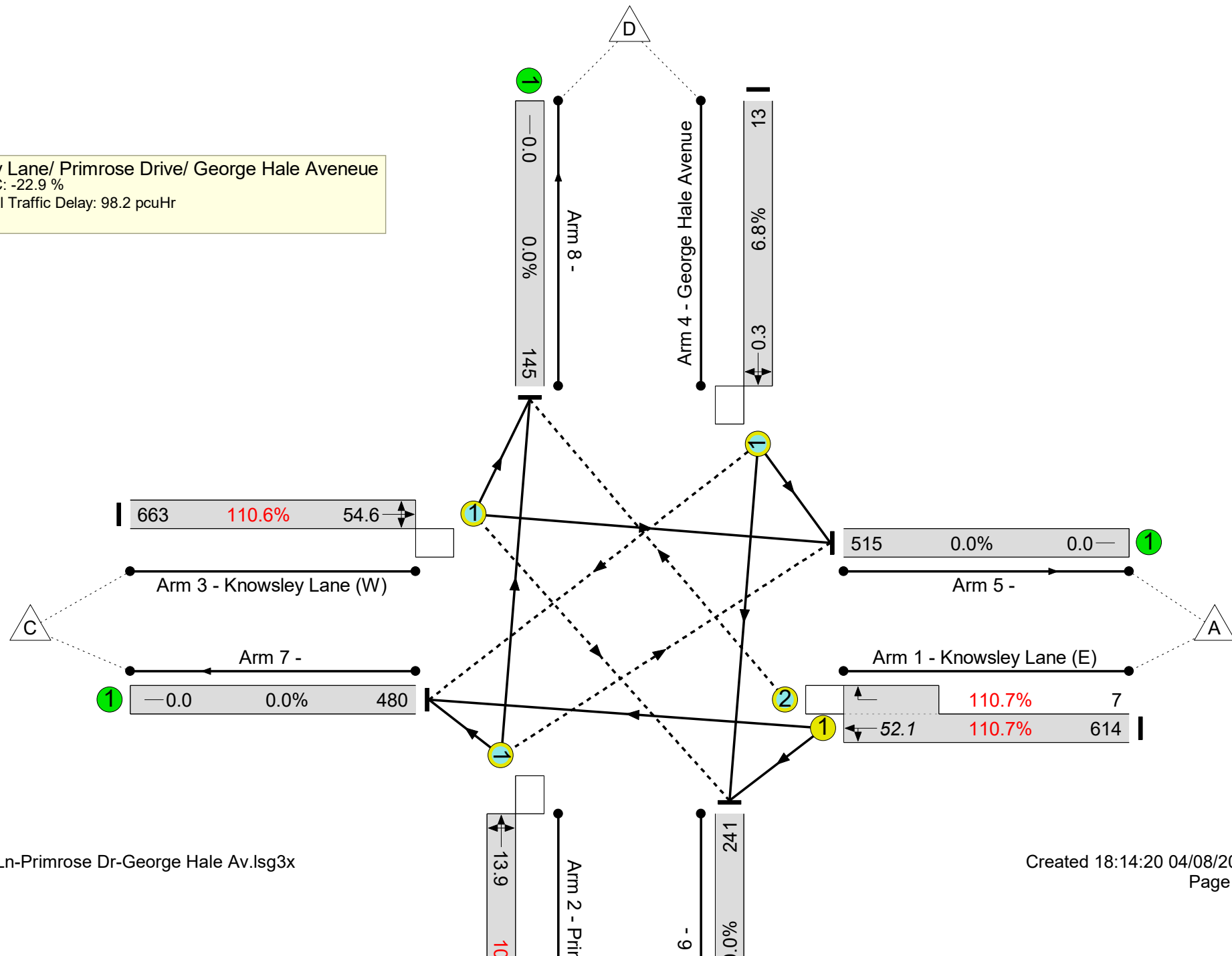
Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Lane (E) Left Ahead	U	B	51	75
1/2	Knowsley Lane (E) Right	O	B	51	75
2/1	Primrose Drive Right Left Ahead	O	C	37	46
3/1	Knowsley Lane (W) Ahead Right Left	O	A	2	29
4/1	George Hale Avenue Left Ahead Right	O	D	37	46



Knowsley Lane/ Primrose Drive/ George Hale Avenue

PRC: -22.9 %

Total Traffic Delay: 98.2 pcuHr

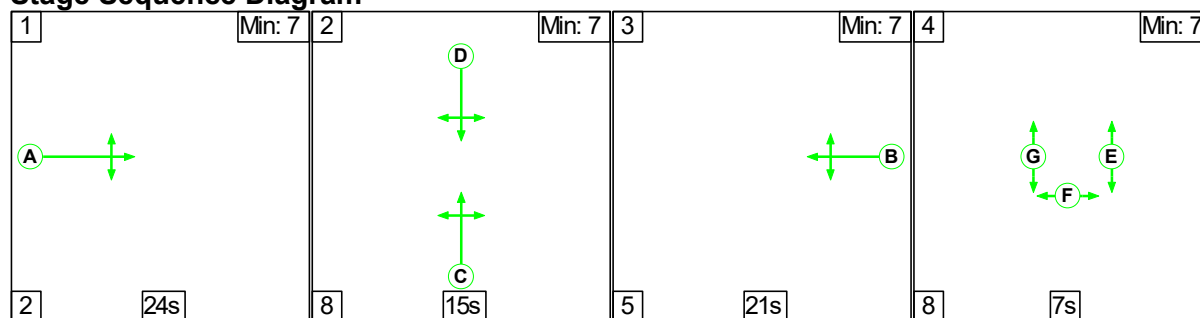


Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	110.7%
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	110.7%
1/1+1/2	Knowsley Lane (E) Left Ahead Right	U+O	N/A	N/A	B		1	24	-	-	621	2020:1940	555+6	110.7 : 110.7%
2/1	Primrose Drive Right Left Ahead	O	N/A	N/A	C		1	9	-	-	212	1867	207	102.2%
3/1	Knowsley Lane (W) Ahead Right Left	O	N/A	N/A	A		1	27	-	-	663	1926	599	110.6%
4/1	George Hale Avenue Left Ahead Right	O	N/A	N/A	D		1	9	-	-	13	1715	191	6.8%
5/1		U	N/A	N/A	-		-	-	-	-	563	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	-	266	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	-	531	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	-	149	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	68	155	12	18.8	79.4	0.0	98.2	-	-	-	-	
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	68	155	12	18.8	79.4	0.0	98.2	-	-	-	-	
1/1+1/2	621	561	0	6	1	7.5	34.4	0.0	41.9	243.0	17.7	34.4	52.1	
2/1	212	207	68	0	0	2.5	8.5	0.0	11.0	187.4	5.4	8.5	13.9	
3/1	663	599	0	149	11	8.6	36.4	0.0	45.0	244.5	18.2	36.4	54.6	
4/1	13	13	0	0	0	0.1	0.0	0.0	0.2	46.1	0.3	0.0	0.3	
5/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	241	241	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	480	480	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	145	145	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 PRC for Signalled Lanes (%): -22.9 PRC Over All Lanes (%): -22.9 Total Delay for Signalled Lanes (pcuHr): 98.15 Total Delay Over All Lanes(pcuHr): 98.15 Cycle Time (s): 90														

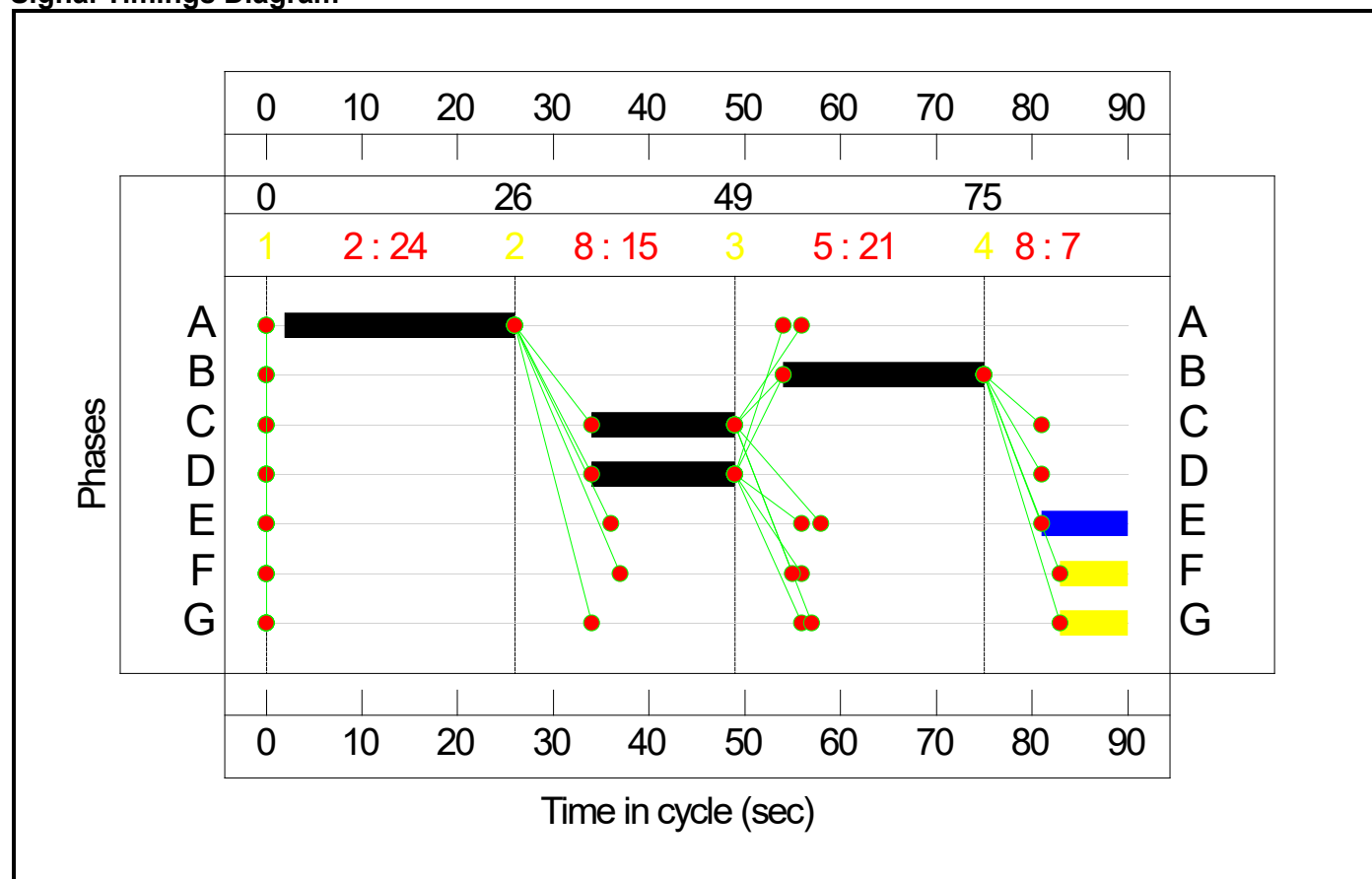
Stage Sequence Diagram**Stage Timings**

Stage	1	2	3	4
Duration	24	15	21	7
Change Point	0	26	49	75

Phase Timings

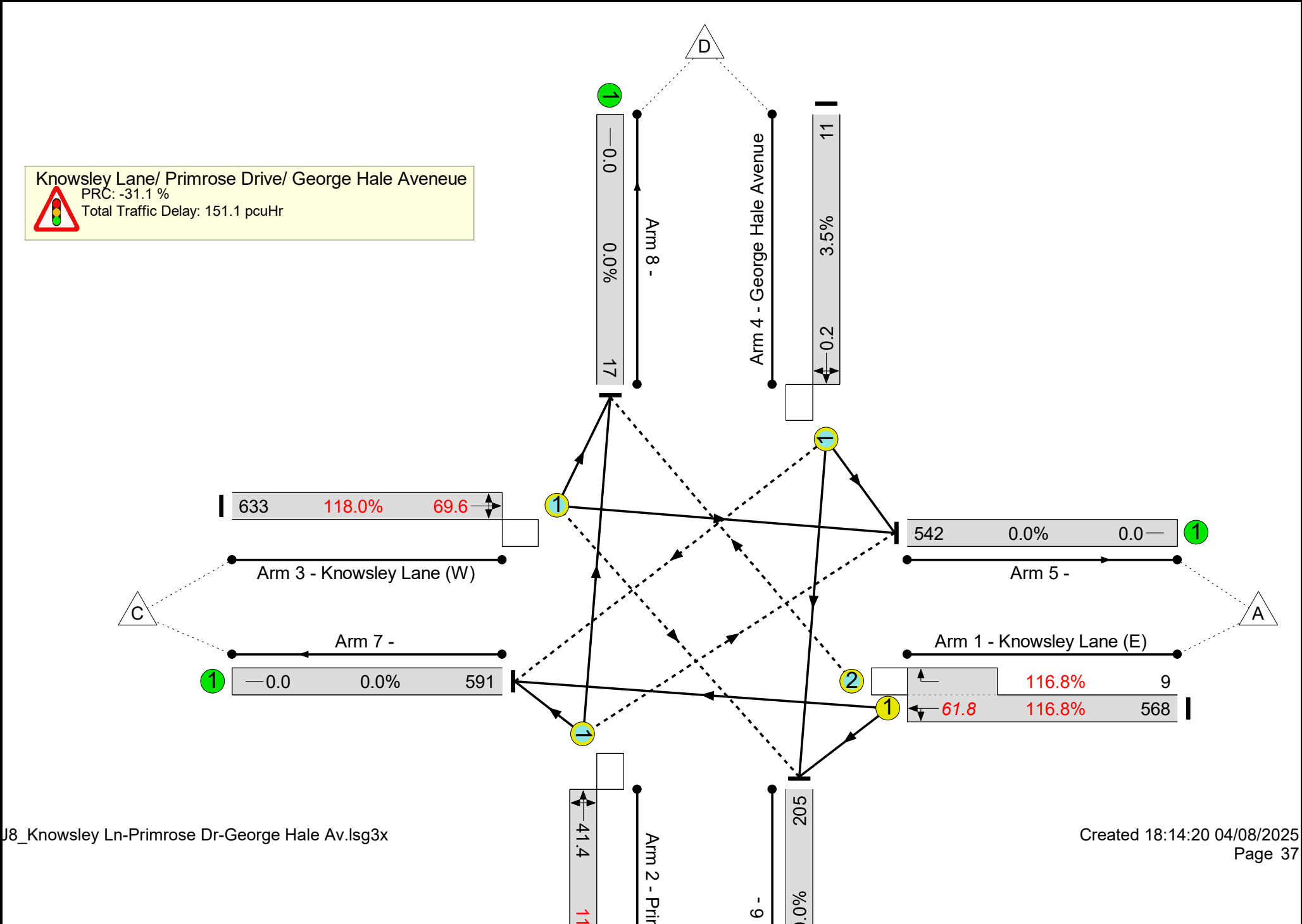
Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Lane (W) Ahead Right Left	Traffic	24	2	26
B	Knowsley Lane (E) Left Ahead Right	Traffic	21	54	75
C	Primrose Drive Right Left Ahead	Traffic	15	34	49
D	George Hale Avenue Left Ahead Right	Traffic	15	34	49
E	Pedestrians across	Pedestrian	9	81	0
F	Pedestrians across	Pedestrian	7	83	0
G	Pedestrians across	Pedestrian	7	83	0

Signal Timings Diagram



Lane Green Times

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Lane (E) Left Ahead	U	B	54	75
1/2	Knowsley Lane (E) Right	O	B	54	75
2/1	Primrose Drive Right Left Ahead	O	C	34	49
3/1	Knowsley Lane (W) Ahead Right Left	O	A	2	26
4/1	George Hale Avenue Left Ahead Right	O	D	34	49

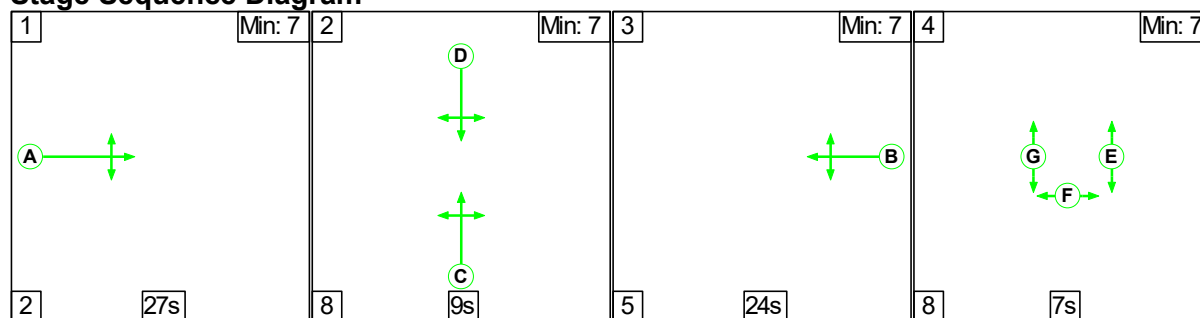


Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	118.0%
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	118.0%
1/1+1/2	Knowsley Lane (E) Left Ahead Right	U+O	N/A	N/A	B		1	21	-	-	577	2014:1940	486+8	116.8 : 116.8%
2/1	Primrose Drive Right Left Ahead	O	N/A	N/A	C		1	15	-	-	369	1763	313	117.7%
3/1	Knowsley Lane (W) Ahead Right Left	O	N/A	N/A	A		1	24	-	-	633	1931	536	118.0%
4/1	George Hale Avenue Left Ahead Right	O	N/A	N/A	D		1	15	-	-	11	1768	314	3.5%
5/1		U	N/A	N/A	-		-	-	-	-	638	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	-	240	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	-	692	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	-	20	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	126	118	10	24.2	127.0	0.0	151.1	-	-	-	-	
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	126	118	10	24.2	127.0	0.0	151.1	-	-	-	-	
1/1+1/2	577	494	0	7	1	8.1	44.8	0.0	52.8	329.6	17.1	44.8	61.8	
2/1	369	313	125	0	0	5.9	30.8	0.0	36.7	357.9	10.6	30.8	41.4	
3/1	633	536	0	111	10	10.1	51.4	0.0	61.5	349.8	18.2	51.4	69.6	
4/1	11	11	1	0	0	0.1	0.0	0.0	0.1	36.9	0.2	0.0	0.2	
5/1	542	542	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	205	205	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	591	591	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 PRC for Signalled Lanes (%): -31.1 PRC Over All Lanes (%): -31.1 Total Delay for Signalled Lanes (pcuHr): 151.13 Total Delay Over All Lanes(pcuHr): 151.13 Cycle Time (s): 90														

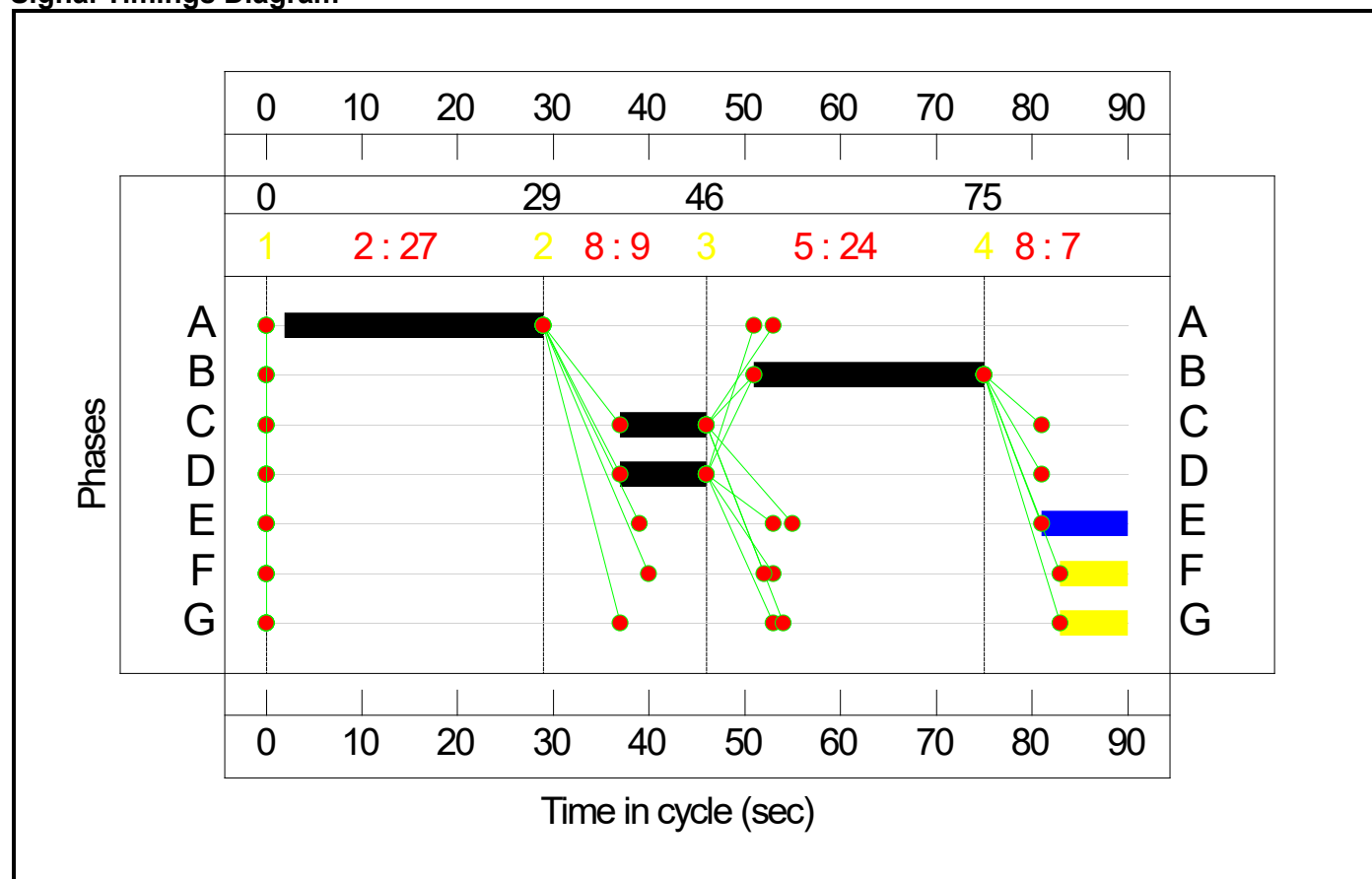
Stage Sequence Diagram**Stage Timings**

Stage	1	2	3	4
Duration	27	9	24	7
Change Point	0	29	46	75

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Lane (W) Ahead Right Left	Traffic	27	2	29
B	Knowsley Lane (E) Left Ahead Right	Traffic	24	51	75
C	Primrose Drive Right Left Ahead	Traffic	9	37	46
D	George Hale Avenue Left Ahead Right	Traffic	9	37	46
E	Pedestrians across	Pedestrian	9	81	0
F	Pedestrians across	Pedestrian	7	83	0
G	Pedestrians across	Pedestrian	7	83	0

Signal Timings Diagram



Lane Green Times

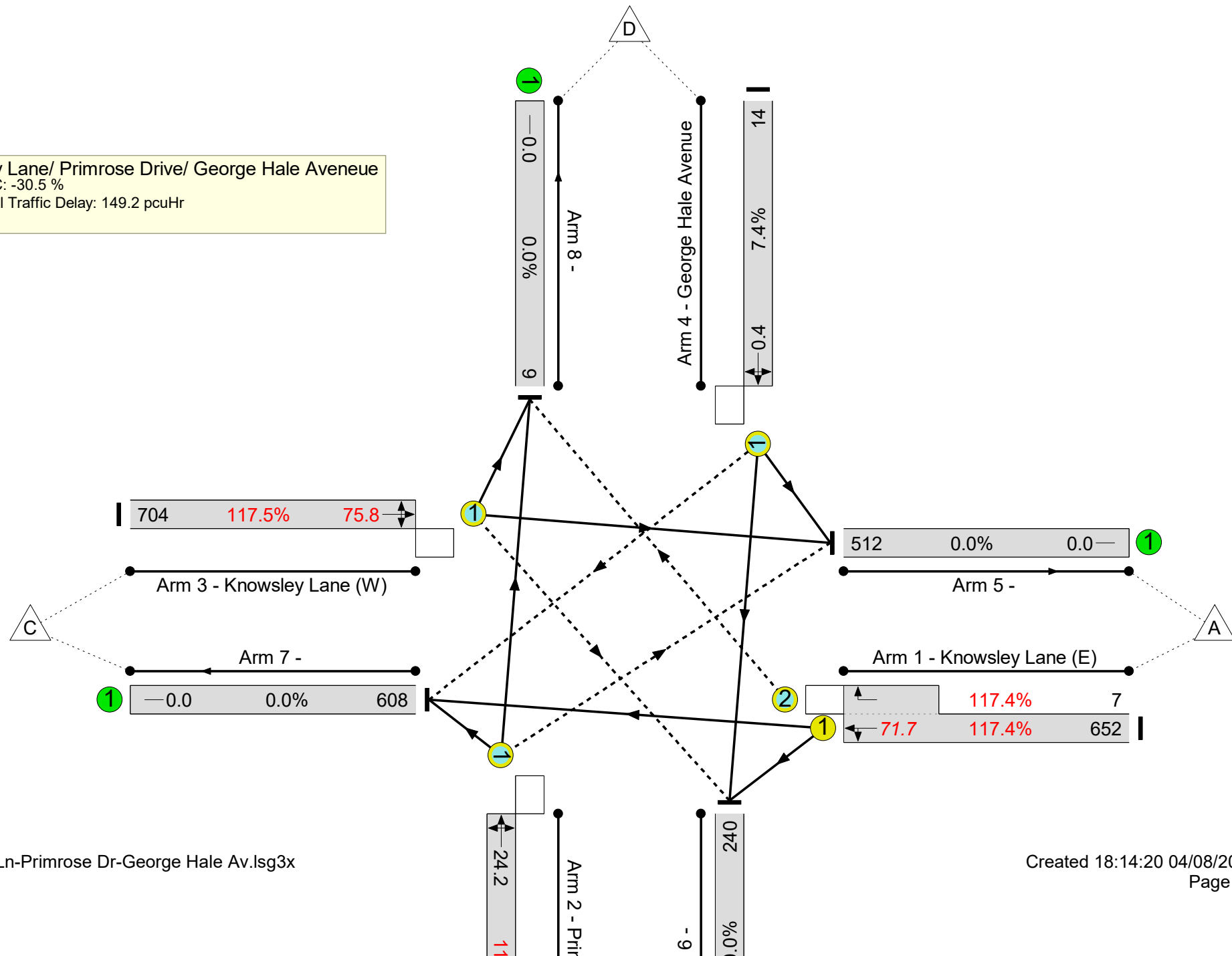
Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Lane (E) Left Ahead	U	B	51	75
1/2	Knowsley Lane (E) Right	O	B	51	75
2/1	Primrose Drive Right Left Ahead	O	C	37	46
3/1	Knowsley Lane (W) Ahead Right Left	O	A	2	29
4/1	George Hale Avenue Left Ahead Right	O	D	37	46



Knowsley Lane/ Primrose Drive/ George Hale Avenue

PRC: -30.5 %

Total Traffic Delay: 149.2 pcuHr

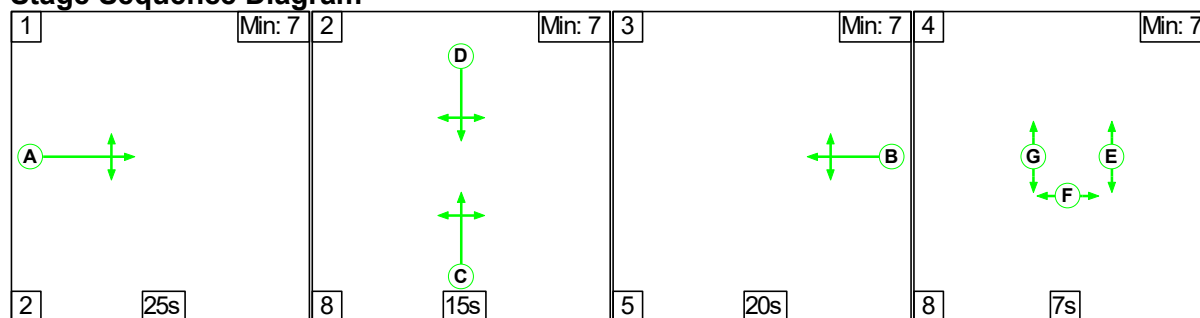


Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	117.5%
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	117.5%
1/1+1/2	Knowsley Lane (E) Left Ahead Right	U+O	N/A	N/A	B		1	24	-	-	659	2020:1940	555+6	117.4 : 117.4%
2/1	Primrose Drive Right Left Ahead	O	N/A	N/A	C		1	9	-	-	225	1761	196	115.0%
3/1	Knowsley Lane (W) Ahead Right Left	O	N/A	N/A	A		1	27	-	-	704	1926	599	117.5%
4/1	George Hale Avenue Left Ahead Right	O	N/A	N/A	D		1	9	-	-	14	1712	190	7.4%
5/1		U	N/A	N/A	-		-	-	-	-	598	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	-	282	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	-	711	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	-	11	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	64	155	12	23.6	125.5	0.0	149.2	-	-	-	-	
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	64	155	12	23.6	125.5	0.0	149.2	-	-	-	-	
1/1+1/2	659	561	0	5	0	9.1	52.1	0.0	61.2	334.2	19.6	52.1	71.7	
2/1	225	196	64	0	0	3.6	17.8	0.0	21.4	343.0	6.4	17.8	24.2	
3/1	704	599	0	149	11	10.8	55.6	0.0	66.4	339.3	20.2	55.6	75.8	
4/1	14	14	0	0	0	0.1	0.0	0.0	0.2	46.2	0.3	0.0	0.4	
5/1	512	512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	240	240	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	608	608	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	9	9	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 PRC for Signalled Lanes (%): -30.5 PRC Over All Lanes (%): -30.5 Total Delay for Signalled Lanes (pcuHr): 149.16 Total Delay Over All Lanes(pcuHr): 149.16 Cycle Time (s): 90														

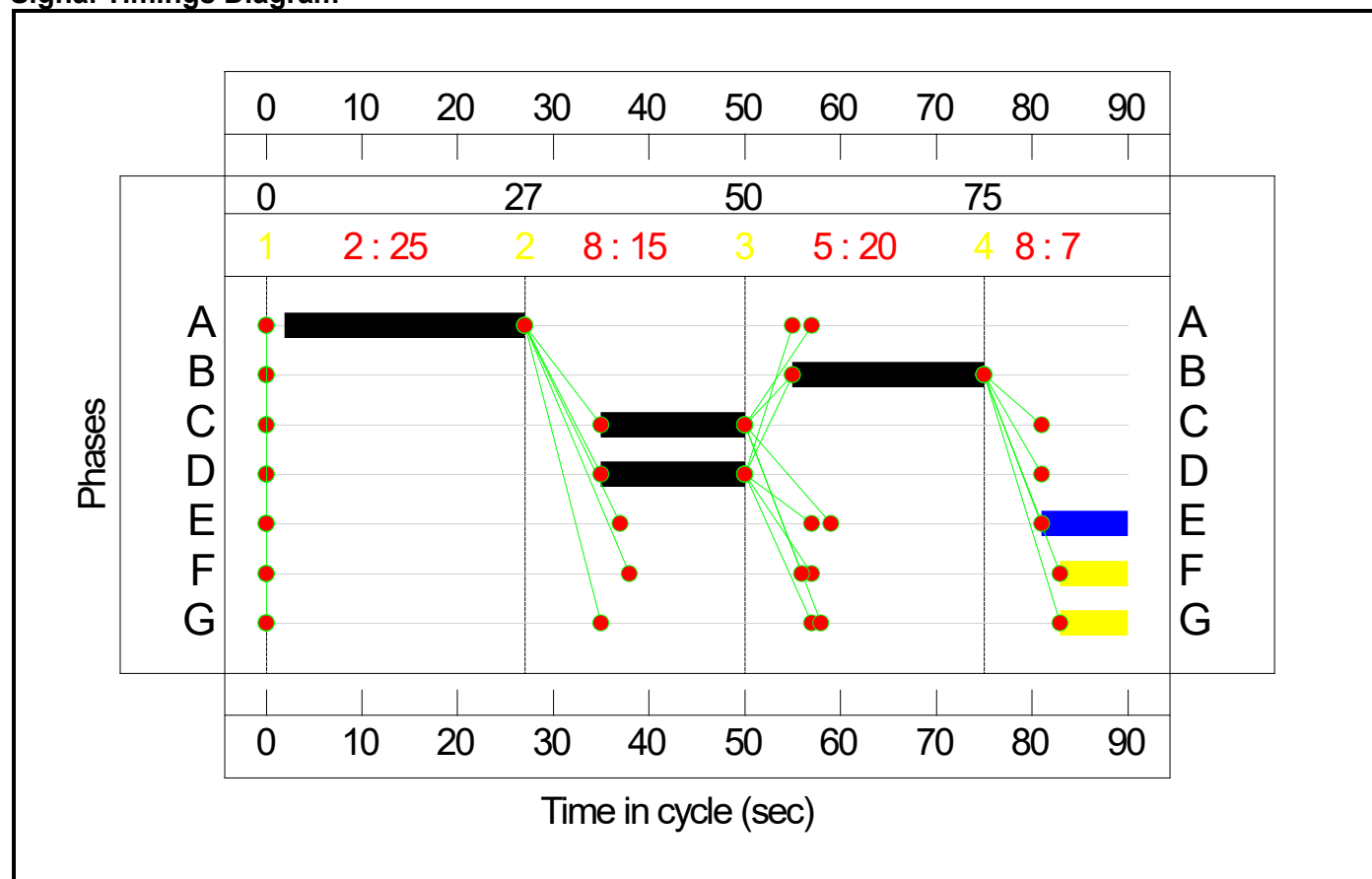
Stage Sequence Diagram**Stage Timings**

Stage	1	2	3	4
Duration	25	15	20	7
Change Point	0	27	50	75

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Lane (W) Ahead Right Left	Traffic	25	2	27
B	Knowsley Lane (E) Left Ahead Right	Traffic	20	55	75
C	Primrose Drive Right Left Ahead	Traffic	15	35	50
D	George Hale Avenue Left Ahead Right	Traffic	15	35	50
E	Pedestrians across	Pedestrian	9	81	0
F	Pedestrians across	Pedestrian	7	83	0
G	Pedestrians across	Pedestrian	7	83	0

Signal Timings Diagram



Lane Green Times

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Lane (E) Left Ahead	U	B	55	75
1/2	Knowsley Lane (E) Right	O	B	55	75
2/1	Primrose Drive Right Left Ahead	O	C	35	50
3/1	Knowsley Lane (W) Ahead Right Left	O	A	2	27
4/1	George Hale Avenue Left Ahead Right	O	D	35	50

Detailed Input Data And Results

Network Layout Diagram

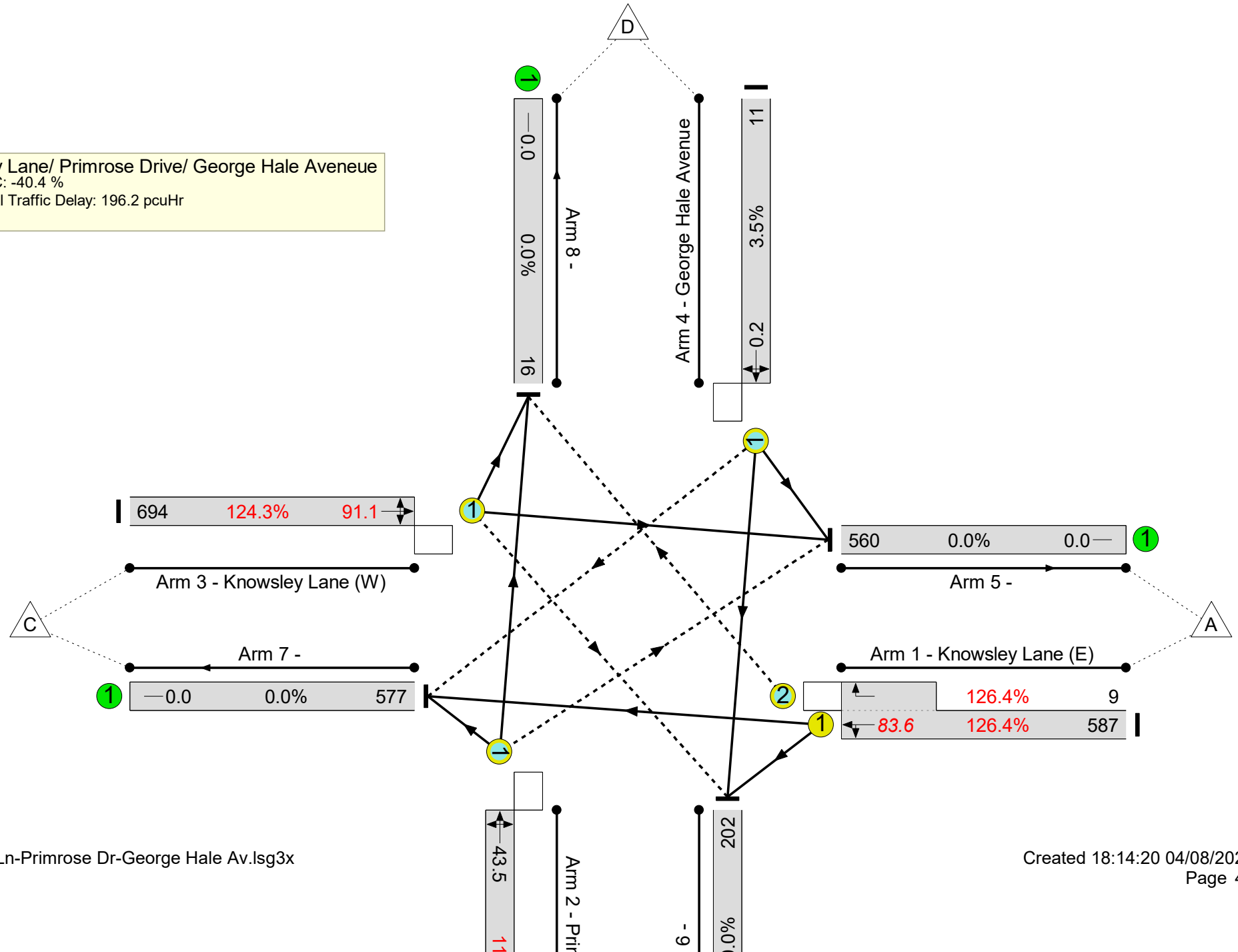
Detailed Input Data And Results

Knowsley Lane/ Primrose Drive/ George Hale Avenue



PRC: -40.4 %

Total Traffic Delay: 196.2 pcuHr

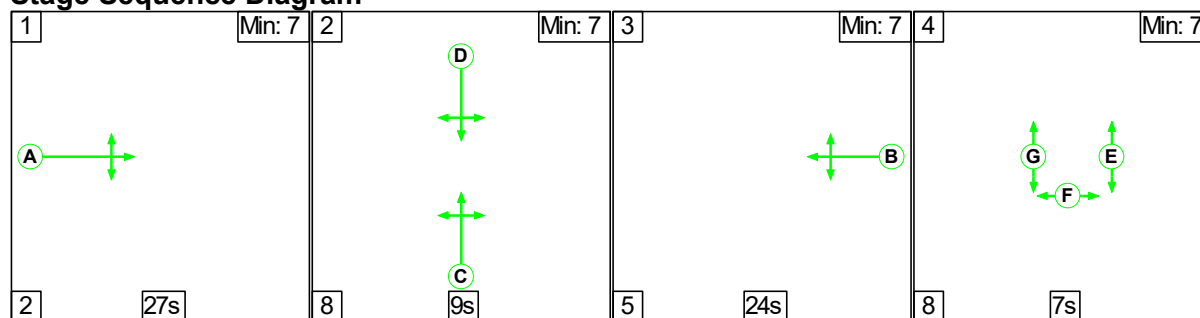


Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	126.4%
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	126.4%
1/1+1/2	Knowsley Lane (E) Left Ahead Right	U+O	N/A	N/A	B		1	20	-	-	596	2015:1940	464+7	126.4 : 126.4%
2/1	Primrose Drive Right Left Ahead	O	N/A	N/A	C		1	15	-	-	373	1763	313	119.0%
3/1	Knowsley Lane (W) Ahead Right Left	O	N/A	N/A	A		1	25	-	-	694	1932	558	124.3%
4/1	George Hale Avenue Left Ahead Right	O	N/A	N/A	D		1	15	-	-	11	1768	314	3.5%
5/1		U	N/A	N/A	-		-	-	-	-	688	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	-	251	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	-	715	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	-	20	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	124	120	10	28.6	167.6	0.0	196.2	-	-	-	-	
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	124	120	10	28.6	167.6	0.0	196.2	-	-	-	-	
1/1+1/2	596	472	0	6	1	10.1	64.5	0.0	74.6	450.6	19.1	64.5	83.6	
2/1	373	313	124	0	0	6.1	32.6	0.0	38.7	373.7	10.8	32.6	43.5	
3/1	694	558	0	114	9	12.3	70.4	0.0	82.7	429.2	20.7	70.4	91.1	
4/1	11	11	1	0	0	0.1	0.0	0.0	0.1	36.9	0.2	0.0	0.2	
5/1	560	560	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	202	202	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	577	577	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	16	16	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 PRC for Signalled Lanes (%): -40.4 PRC Over All Lanes (%): -40.4 Total Delay for Signalled Lanes (pcuHr): 196.16 Total Delay Over All Lanes(pcuHr): 196.16 Cycle Time (s): 90														

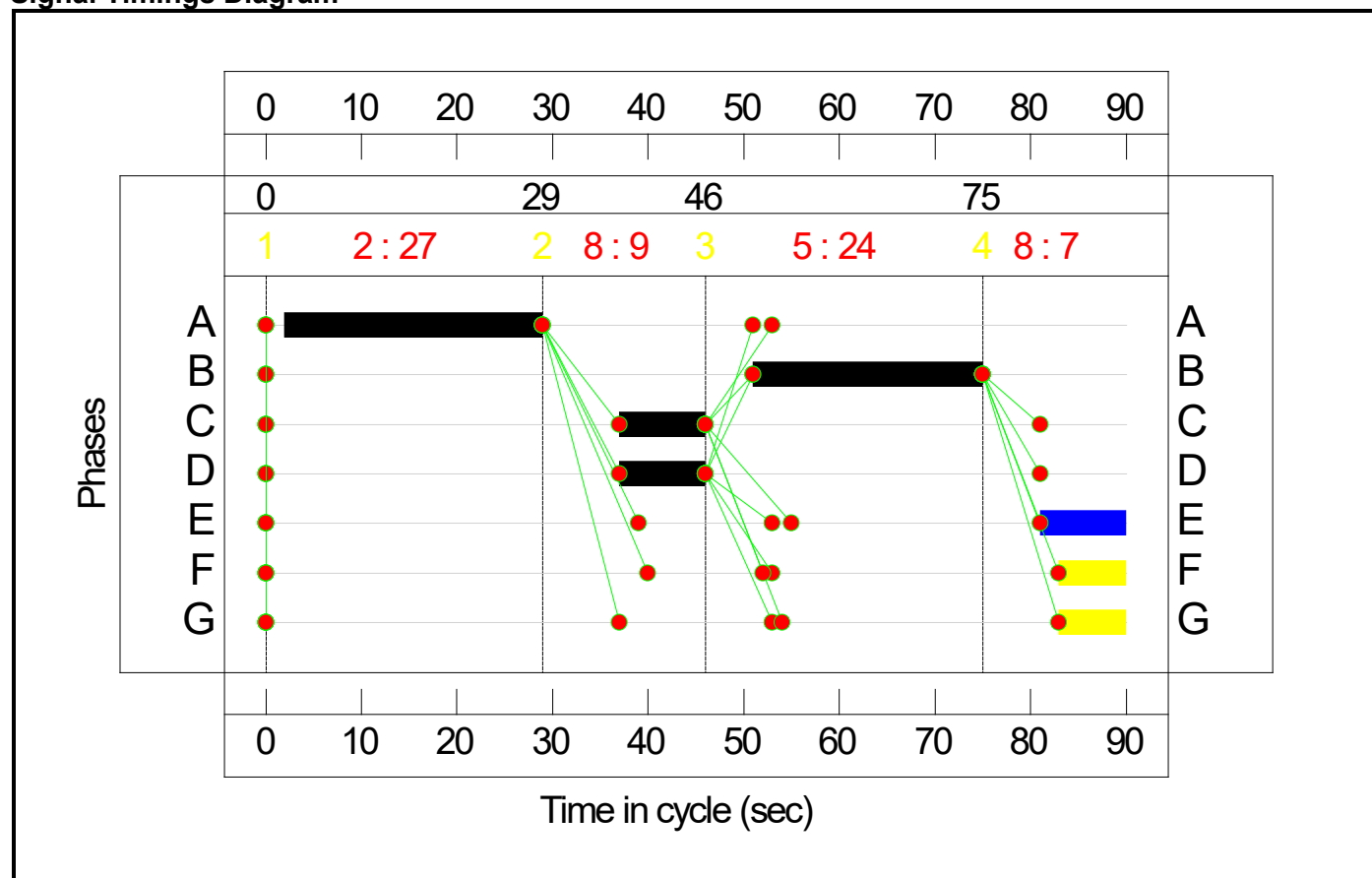
Stage Sequence Diagram**Stage Timings**

Stage	1	2	3	4
Duration	27	9	24	7
Change Point	0	29	46	75

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Lane (W) Ahead Right Left	Traffic	27	2	29
B	Knowsley Lane (E) Left Ahead Right	Traffic	24	51	75
C	Primrose Drive Right Left Ahead	Traffic	9	37	46
D	George Hale Avenue Left Ahead Right	Traffic	9	37	46
E	Pedestrians across	Pedestrian	9	81	0
F	Pedestrians across	Pedestrian	7	83	0
G	Pedestrians across	Pedestrian	7	83	0

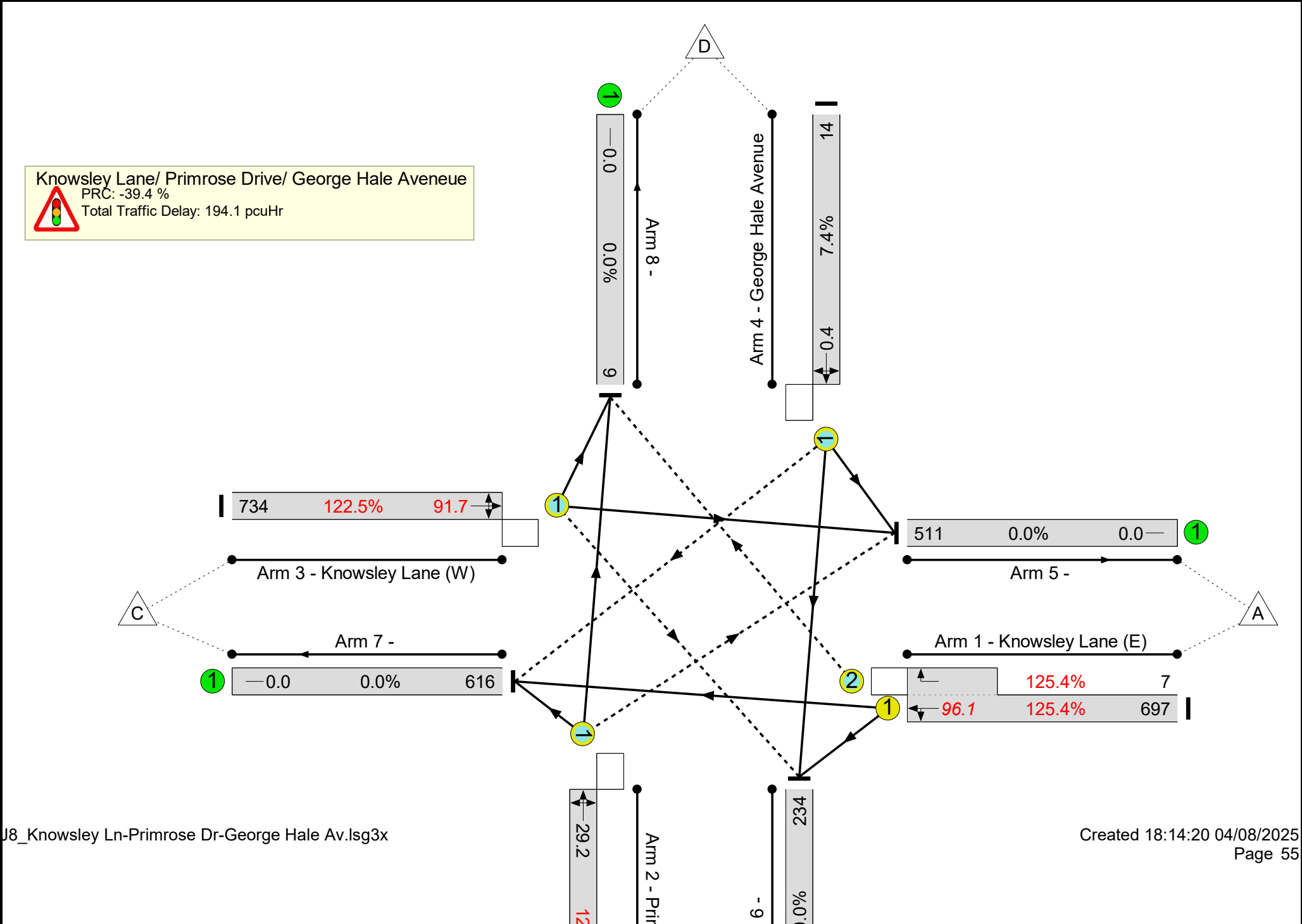
Signal Timings Diagram



Lane Green Times

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Lane (E) Left Ahead	U	B	51	75
1/2	Knowsley Lane (E) Right	O	B	51	75
2/1	Primrose Drive Right Left Ahead	O	C	37	46
3/1	Knowsley Lane (W) Ahead Right Left	O	A	2	29
4/1	George Hale Avenue Left Ahead Right	O	D	37	46

Detailed Input Data And Results
Network Layout Diagram

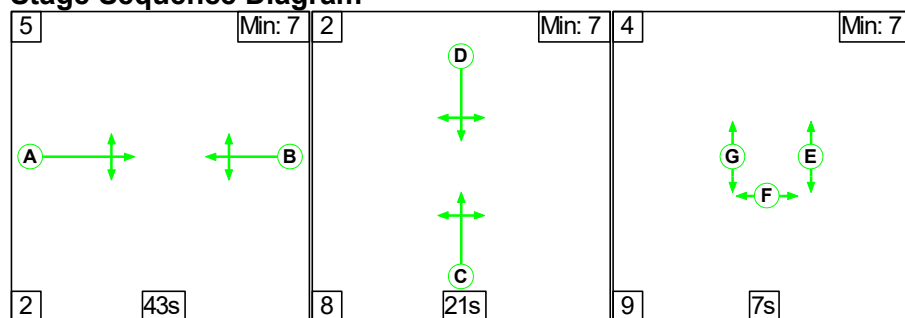


Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	125.4%
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	125.4%
1/1+1/2	Knowsley Lane (E) Left Ahead Right	U+O	N/A	N/A	B		1	24	-	-	704	2022:1940	556+6	125.4 : 125.4%
2/1	Primrose Drive Right Left Ahead	O	N/A	N/A	C		1	9	-	-	235	1761	196	120.1%
3/1	Knowsley Lane (W) Ahead Right Left	O	N/A	N/A	A		1	27	-	-	734	1926	599	122.5%
4/1	George Hale Avenue Left Ahead Right	O	N/A	N/A	D		1	9	-	-	14	1712	190	7.4%
5/1		U	N/A	N/A	-		-	-	-	-	622	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	-	288	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	-	766	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	-	11	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	62	153	12	28.0	166.1	0.0	194.1	-	-	-	-	
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	62	153	12	28.0	166.1	0.0	194.1	-	-	-	-	
1/1+1/2	704	561	0	5	0	11.3	73.7	0.0	85.1	435.0	22.3	73.7	96.1	
2/1	235	196	62	0	0	4.1	22.3	0.0	26.4	404.5	6.9	22.3	29.2	
3/1	734	599	0	148	11	12.4	70.0	0.0	82.4	404.3	21.7	70.0	91.7	
4/1	14	14	0	0	0	0.1	0.0	0.0	0.2	46.2	0.3	0.0	0.4	
5/1	511	511	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	234	234	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	616	616	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	9	9	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 PRC for Signalled Lanes (%): -39.4 PRC Over All Lanes (%): -39.4 Total Delay for Signalled Lanes (pcuHr): 194.08 Total Delay Over All Lanes(pcuHr): 194.08 Cycle Time (s): 90														

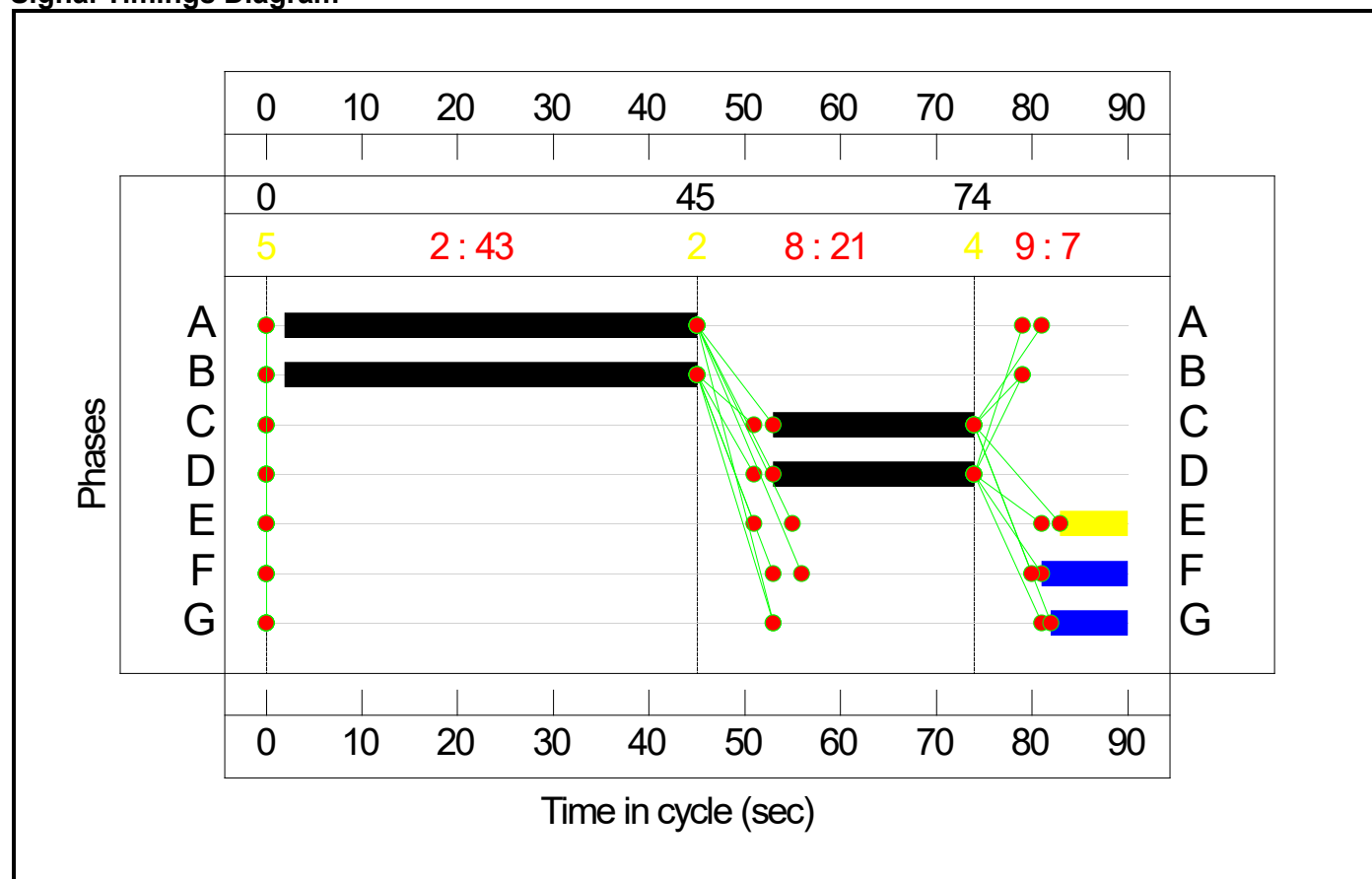
Stage Sequence Diagram**Stage Timings**

Stage	5	2	4
Duration	43	21	7
Change Point	0	45	74

Phase Timings

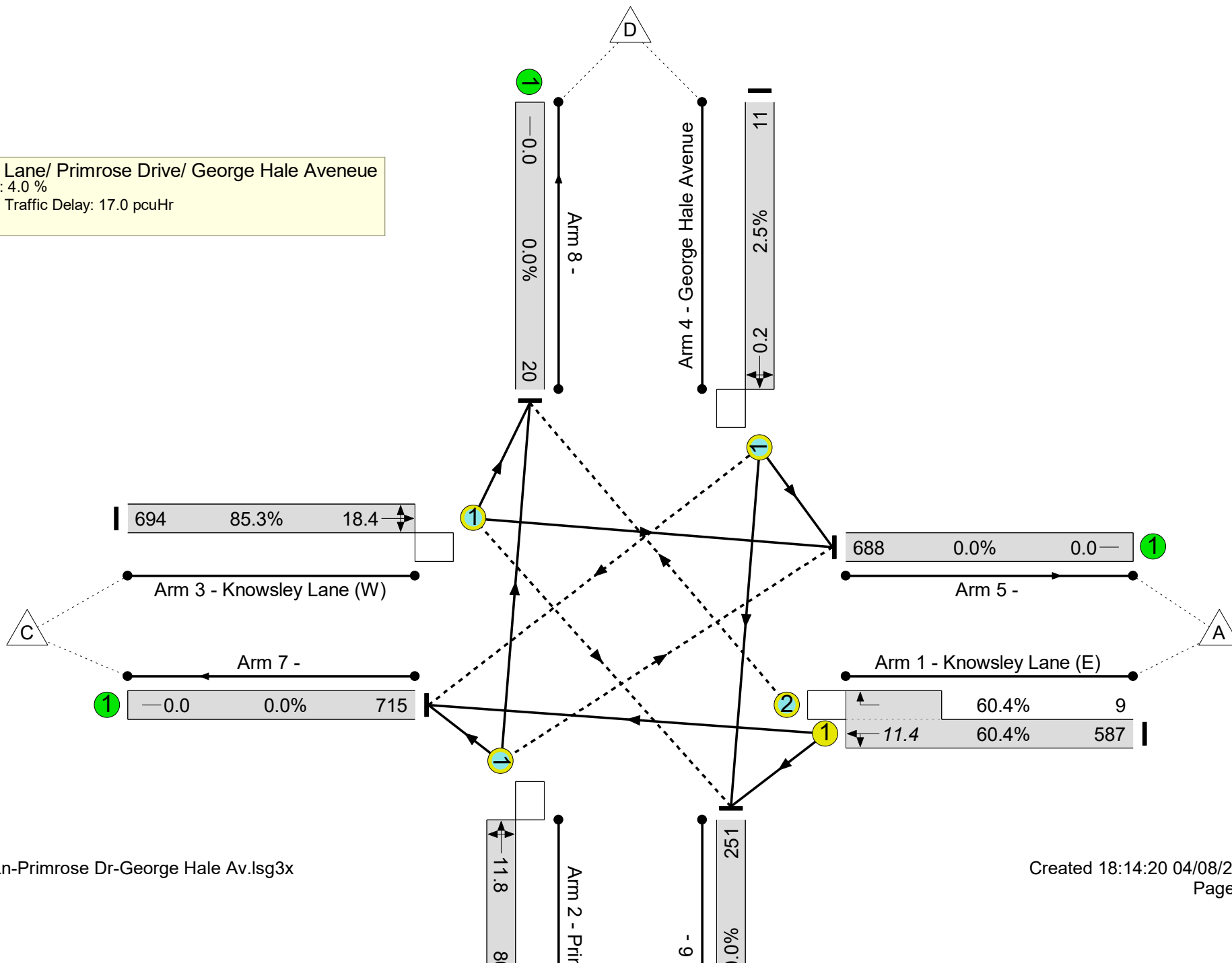
Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Lane (W) Ahead Right Left	Traffic	43	2	45
B	Knowsley Lane (E) Left Ahead Right	Traffic	43	2	45
C	Primrose Drive Right Left Ahead	Traffic	21	53	74
D	George Hale Avenue Left Ahead Right	Traffic	21	53	74
E	Pedestrians across	Pedestrian	7	83	0
F	Pedestrians across	Pedestrian	9	81	0
G	Pedestrians across	Pedestrian	8	82	0

Signal Timings Diagram



Lane Green Times

Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Lane (E) Left Ahead	U	B	2	45
1/2	Knowsley Lane (E) Right	O	B	2	45
2/1	Primrose Drive Right Left Ahead	O	C	53	74
3/1	Knowsley Lane (W) Ahead Right Left	O	A	2	45
4/1	George Hale Avenue Left Ahead Right	O	D	53	74

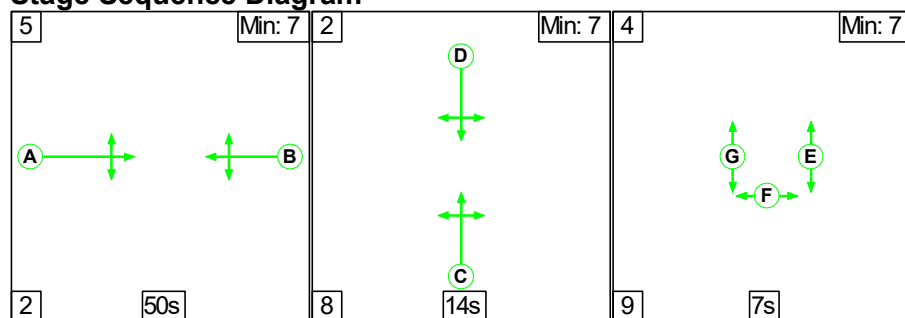


Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	86.6%
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	86.6%
1/1+1/2	Knowsley Lane (E) Left Ahead Right	U+O	N/A	N/A	B		1	43	-	-	596	2015:1940	971+15	60.4 : 60.4%
2/1	Primrose Drive Right Left Ahead	O	N/A	N/A	C		1	21	-	-	373	1763	431	86.6%
3/1	Knowsley Lane (W) Ahead Right Left	O	N/A	N/A	A		1	43	-	-	694	1932	814	85.3%
4/1	George Hale Avenue Left Ahead Right	O	N/A	N/A	D		1	21	-	-	11	1768	432	2.5%
5/1		U	N/A	N/A	-		-	-	-	-	688	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	-	251	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	-	715	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	-	20	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	310	0	0	10.1	6.5	0.4	17.0	-	-	-	-	
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	310	0	0	10.1	6.5	0.4	17.0	-	-	-	-	
1/1+1/2	596	596	9	0	0	2.8	0.8	0.0	3.5	21.3	10.7	0.8	11.4	
2/1	373	373	147	0	0	3.4	2.9	0.0	6.3	60.8	8.9	2.9	11.8	
3/1	694	694	153	0	0	3.9	2.8	0.4	7.1	36.8	15.6	2.8	18.4	
4/1	11	11	1	0	0	0.1	0.0	0.0	0.1	30.5	0.2	0.0	0.2	
5/1	688	688	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	251	251	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	715	715	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	20	20	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 PRC for Signalled Lanes (%): 4.0 PRC Over All Lanes (%): 4.0 Total Delay for Signalled Lanes (pcuHr): 17.01 Total Delay Over All Lanes(pcuHr): 17.01 Cycle Time (s): 90														

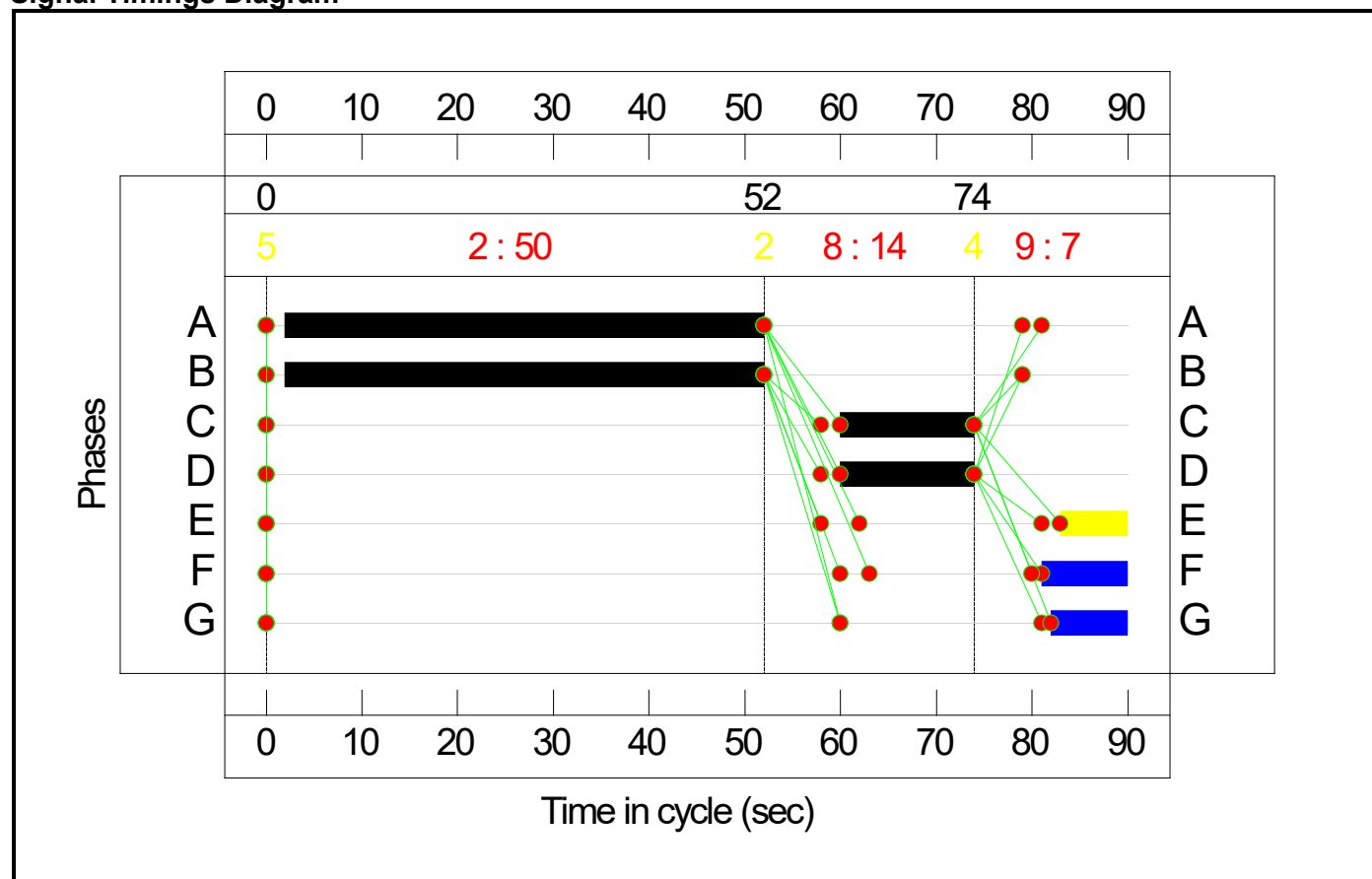
Stage Sequence Diagram**Stage Timings**

Stage	5	2	4
Duration	50	14	7
Change Point	0	52	74

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	Knowsley Lane (W) Ahead Right Left	Traffic	50	2	52
B	Knowsley Lane (E) Left Ahead Right	Traffic	50	2	52
C	Primrose Drive Right Left Ahead	Traffic	14	60	74
D	George Hale Avenue Left Ahead Right	Traffic	14	60	74
E	Pedestrians across	Pedestrian	7	83	0
F	Pedestrians across	Pedestrian	9	81	0
G	Pedestrians across	Pedestrian	8	82	0

Signal Timings Diagram



Lane Green Times

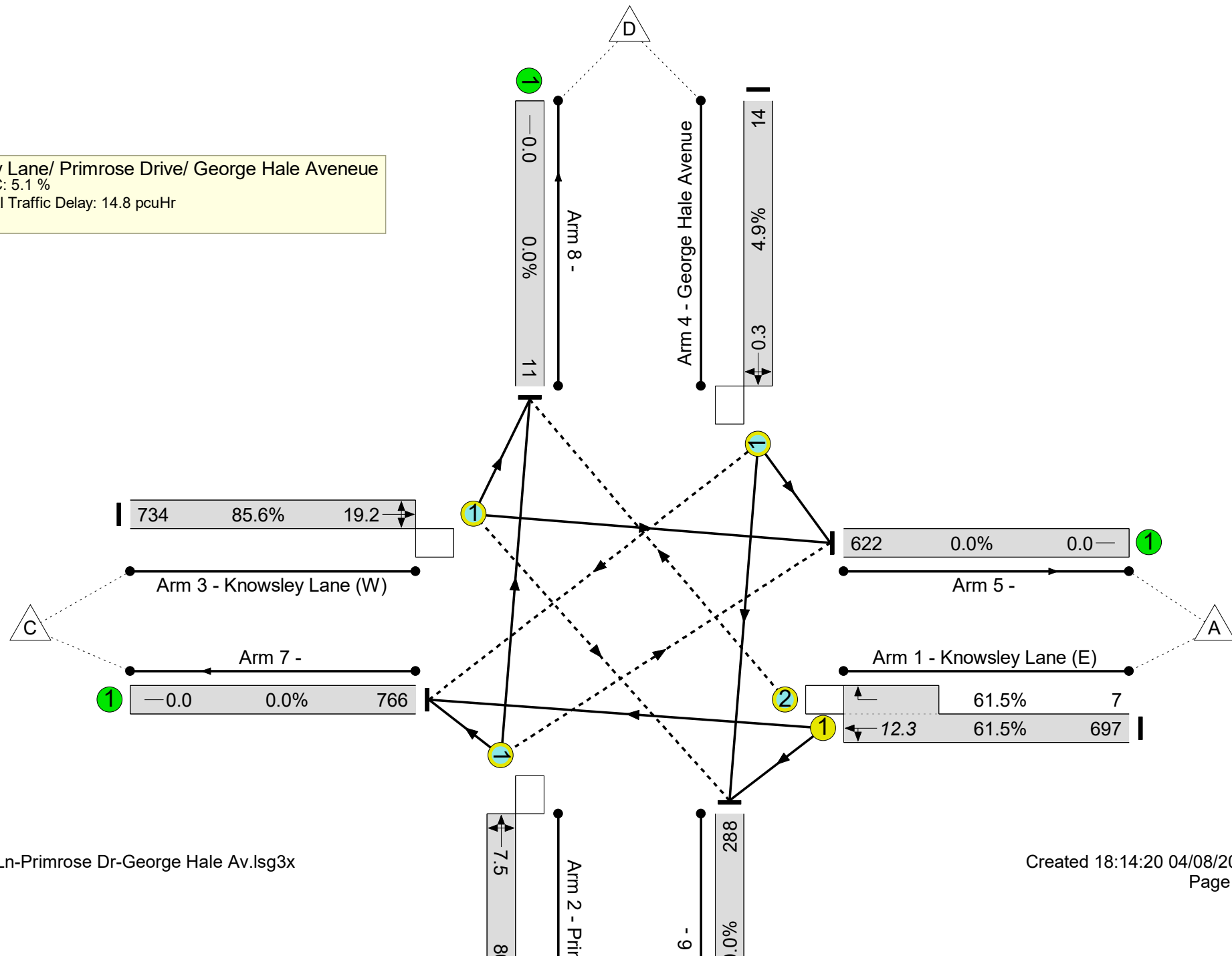
Junction: Knowsley Lane/ Primrose Drive/ George Hale Avenue					
Lane	Description	Type	Phases	Start Green	End Green
1/1	Knowsley Lane (E) Left Ahead	U	B	2	52
1/2	Knowsley Lane (E) Right	O	B	2	52
2/1	Primrose Drive Right Left Ahead	O	C	60	74
3/1	Knowsley Lane (W) Ahead Right Left	O	A	2	52
4/1	George Hale Avenue Left Ahead Right	O	D	60	74



Knowsley Lane/ Primrose Drive/ George Hale Avenue

PRC: 5.1 %

Total Traffic Delay: 14.8 pcuHr



Detailed Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	85.6%
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	N/A	-	-		-	-	-	-	-	-	-	85.6%
1/1+1/2	Knowsley Lane (E) Left Ahead Right	U+O	N/A	N/A	B		1	50	-	-	704	2022:1940	1134+11	61.5 : 61.5%
2/1	Primrose Drive Right Left Ahead	O	N/A	N/A	C		1	14	-	-	235	1761	294	80.1%
3/1	Knowsley Lane (W) Ahead Right Left	O	N/A	N/A	A		1	50	-	-	734	1926	858	85.6%
4/1	George Hale Avenue Left Ahead Right	O	N/A	N/A	D		1	14	-	-	14	1712	285	4.9%
5/1		U	N/A	N/A	-		-	-	-	-	622	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	-	288	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	-	766	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	-	11	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	
Network: J8 Knowsley Lane/ Primrise Drive/ George Hale Avenue	-	-	276	0	0	8.7	5.5	0.6	14.8	-	-	-	-	
Knowsley Lane/ Primrose Drive/ George Hale Avenue	-	-	276	0	0	8.7	5.5	0.6	14.8	-	-	-	-	
1/1+1/2	704	704	7	0	0	2.5	0.8	0.0	3.3	17.1	11.5	0.8	12.3	
2/1	235	235	74	0	0	2.4	1.9	0.0	4.2	65.0	5.6	1.9	7.5	
3/1	734	734	195	0	0	3.7	2.8	0.5	7.0	34.5	16.3	2.8	19.2	
4/1	14	14	0	0	0	0.1	0.0	0.0	0.1	38.3	0.3	0.0	0.3	
5/1	622	622	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
6/1	288	288	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
7/1	766	766	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
8/1	11	11	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	
C1 PRC for Signalled Lanes (%): 5.1 PRC Over All Lanes (%): 5.1 Total Delay for Signalled Lanes (pcuHr): 14.77 Total Delay Over All Lanes (pcuHr): 14.77 Cycle Time (s): 90														

Appendix W

Knowsley Lane/ Proposed Site Access

JUNCTIONS Modelling Outputs



Junctions 11									
PICADY 11 - Priority Intersection Module									
Version: 11.0.0.2177									
© Copyright TRL Software Limited, 2024									
For sales and distribution information, program advice and maintenance, contact TRL Software:									
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com									
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: Knowsley Lane-Proposed Site Accesses.j11

Path: C:\Users\OliverMcLaughlin\Astute Transport\Astute Transport - Shared Drive\Jobs\2025 Projects\A25007 Home Farm Road, Knowsley Village\Analysis\JUNCTIONS

Report generation date: 05/08/2025 18:49:53

»2030 | With Dev | AM

»2030 | With Dev | PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2030 - With Dev										
Stream B-AC	D1	1.1	30.71	0.54	D	D2	0.3	20.18	0.26	C
Stream C-AB		0.0	8.19	0.05	A		0.1	9.91	0.12	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

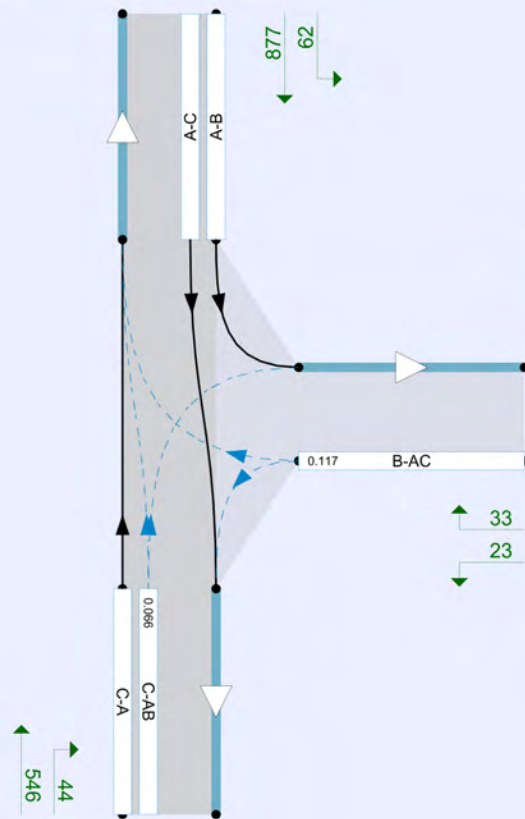
File Description

Title	
Location	
Site number	
Date	26/06/2025
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\OliverMcLaughlin
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

A - Knowsley Lane (N)



B - Proposed Site Access

C - Knowsley Lane (S)

Flows show original traffic demand (PCU/hr)
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

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	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓
D2	2030	With Dev	PM	ONE HOUR	00:00	01:30	15	✓

Analysis Set Details

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

2030 | With Dev | AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Proposed Site Access	T-Junction	Two-way	Two-way	Two-way		2.36	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.36	A

Arms

Arms

Arm	Name	Description	Arm type
A	Knowsley Lane (N)		Major
B	Proposed Site Access		Minor
C	Knowsley Lane (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Width for right-turn storage (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Knowsley Lane (S)	6.00		✓	3.00	100.0	✓	5.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Proposed Site Access	One lane	3.65	43	43

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	546	0.099	0.251	0.158	0.359
B-C	693	0.106	0.269	-	-
C-B	687	0.266	0.266	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2030	With Dev	AM	ONE HOUR	08:00	09:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	772	100.000
B - Proposed Site Access		ONE HOUR	✓	124	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	786	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Proposed Site Access	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	29	743
	B - Proposed Site Access	76	0	48
	C - Knowsley Lane (S)	767	19	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Proposed Site Access	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0.00	0.04	0.96
	B - Proposed Site Access	0.61	0.00	0.39
	C - Knowsley Lane (S)	0.98	0.02	0.00

Vehicle Mix

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

Heavy Vehicle %

From	To			
		A - Knowsley Lane (N)	B - Proposed Site Access	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	0	6
	B - Proposed Site Access	0	0	0
	C - Knowsley Lane (S)	5	0	0

Average PCU Per Veh

From	To			
		A - Knowsley Lane (N)	B - Proposed Site Access	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	1.000	1.000	1.060
	B - Proposed Site Access	1.000	1.000	1.000
	C - Knowsley Lane (S)	1.050	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
08:00-08:15	A - Knowsley Lane (N)	581	581
	B - Proposed Site Access	93	93
	C - Knowsley Lane (S)	592	592
08:15-08:30	A - Knowsley Lane (N)	694	694
	B - Proposed Site Access	111	111
	C - Knowsley Lane (S)	707	707
08:30-08:45	A - Knowsley Lane (N)	850	850
	B - Proposed Site Access	137	137
	C - Knowsley Lane (S)	865	865
08:45-09:00	A - Knowsley Lane (N)	850	850
	B - Proposed Site Access	137	137
	C - Knowsley Lane (S)	865	865
09:00-09:15	A - Knowsley Lane (N)	694	694
	B - Proposed Site Access	111	111
	C - Knowsley Lane (S)	707	707
09:15-09:30	A - Knowsley Lane (N)	581	581
	B - Proposed Site Access	93	93
	C - Knowsley Lane (S)	592	592

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-AC	0.54	30.71	1.1	D	114	171
C-AB	0.05	8.19	0.0	A	17	26
C-A					704	1056
A-B					27	40
A-C					682	1023

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	93	23	0.00	369	0.253	92	0.0	0.3	12.958	B
C-AB	14	4	0.00	532	0.027	14	0.0	0.0	6.947	A
C-A	577	144	0.00			577				
A-B	22	5	0.00			22				
A-C	559	140	0.00			559				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	0.00	321	0.347	111	0.3	0.5	17.029	C
C-AB	17	4	0.00	502	0.034	17	0.0	0.0	7.420	A
C-A	690	172	0.00			690				
A-B	26	7	0.00			26				
A-C	668	167	0.00			668				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	137	34	0.00	253	0.539	134	0.5	1.1	29.676	D
C-AB	21	5	0.00	461	0.045	21	0.0	0.0	8.184	A
C-A	844	211	0.00			844				
A-B	32	8	0.00			32				
A-C	818	205	0.00			818				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	137	34	0.00	253	0.539	136	1.1	1.1	30.706	D
C-AB	21	5	0.00	461	0.045	21	0.0	0.0	8.186	A
C-A	844	211	0.00			844				
A-B	32	8	0.00			32				
A-C	818	205	0.00			818				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	0.00	321	0.347	114	1.1	0.5	17.528	C
C-AB	17	4	0.00	502	0.034	17	0.0	0.0	7.424	A
C-A	690	172	0.00			690				
A-B	26	7	0.00			26				
A-C	668	167	0.00			668				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	93	23	0.00	368	0.253	94	0.5	0.3	13.162	B
C-AB	14	4	0.00	532	0.027	14	0.0	0.0	6.951	A
C-A	577	144	0.00			577				
A-B	22	5	0.00			22				
A-C	559	140	0.00			559				

2030 | With Dev | PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Knowsley Lane/ Proposed Site Access	T-Junction	Two-way	Two-way	Two-way		0.99	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.99	A

Traffic Demand

Demand Set Details

ID	Year	Scenario	Time period	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2030	With Dev	PM	ONE HOUR	00:00	01:30	15	✓

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Knowsley Lane (N)		ONE HOUR	✓	939	100.000
B - Proposed Site Access		ONE HOUR	✓	56	100.000
C - Knowsley Lane (S)		ONE HOUR	✓	590	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		A - Knowsley Lane (N)	B - Proposed Site Access	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	62	877
	B - Proposed Site Access	33	0	23
	C - Knowsley Lane (S)	546	44	0

Proportions

From	To			
		A - Knowsley Lane (N)	B - Proposed Site Access	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0.00	0.07	0.93
	B - Proposed Site Access	0.59	0.00	0.41
	C - Knowsley Lane (S)	0.93	0.07	0.00

Vehicle Mix

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

Heavy Vehicle %

	To			
From		A - Knowsley Lane (N)	B - Proposed Site Access	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	0	0	3
	B - Proposed Site Access	0	0	0
	C - Knowsley Lane (S)	2	0	0

Average PCU Per Veh

	To			
From		A - Knowsley Lane (N)	B - Proposed Site Access	C - Knowsley Lane (S)
	A - Knowsley Lane (N)	1.000	1.000	1.030
	B - Proposed Site Access	1.000	1.000	1.000
	C - Knowsley Lane (S)	1.020	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (PCU/hr)	Demand in PCU (PCU/hr)
00:00-00:15	A - Knowsley Lane (N)	707	707
	B - Proposed Site Access	42	42
	C - Knowsley Lane (S)	444	444
00:15-00:30	A - Knowsley Lane (N)	844	844
	B - Proposed Site Access	50	50
	C - Knowsley Lane (S)	530	530
00:30-00:45	A - Knowsley Lane (N)	1034	1034
	B - Proposed Site Access	62	62
	C - Knowsley Lane (S)	650	650
00:45-01:00	A - Knowsley Lane (N)	1034	1034
	B - Proposed Site Access	62	62
	C - Knowsley Lane (S)	650	650
01:00-01:15	A - Knowsley Lane (N)	844	844
	B - Proposed Site Access	50	50
	C - Knowsley Lane (S)	530	530
01:15-01:30	A - Knowsley Lane (N)	707	707
	B - Proposed Site Access	42	42
	C - Knowsley Lane (S)	444	444

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-AC	0.26	20.18	0.3	C	51	77
C-AB	0.12	9.91	0.1	A	40	61
C-A					501	752
A-B					57	85
A-C					805	1207

Main Results for each time segment

00:00 - 00:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	11	0.00	360	0.117	42	0.0	0.1	11.289	B
C-AB	33	8	0.00	499	0.066	33	0.0	0.1	7.722	A
C-A	411	103	0.00			411				
A-B	47	12	0.00			47				
A-C	660	165	0.00			660				

00:15 - 00:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	13	0.00	311	0.162	50	0.1	0.2	13.793	B
C-AB	40	10	0.00	462	0.086	39	0.1	0.1	8.513	A
C-A	491	123	0.00			491				
A-B	56	14	0.00			56				
A-C	788	197	0.00			788				

00:30 - 00:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	15	0.00	240	0.257	61	0.2	0.3	20.051	C
C-AB	48	12	0.00	412	0.118	48	0.1	0.1	9.900	A
C-A	601	150	0.00			601				
A-B	68	17	0.00			68				
A-C	966	241	0.00			966				

00:45 - 01:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	15	0.00	240	0.257	62	0.3	0.3	20.181	C
C-AB	48	12	0.00	412	0.118	48	0.1	0.1	9.908	A
C-A	601	150	0.00			601				
A-B	68	17	0.00			68				
A-C	966	241	0.00			966				

01:00 - 01:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	50	13	0.00	311	0.162	51	0.3	0.2	13.885	B
C-AB	40	10	0.00	462	0.086	40	0.1	0.1	8.522	A
C-A	491	123	0.00			491				
A-B	56	14	0.00			56				
A-C	788	197	0.00			788				

01:15 - 01:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	11	0.00	360	0.117	42	0.2	0.1	11.348	B
C-AB	33	8	0.00	499	0.066	33	0.1	0.1	7.735	A
C-A	411	103	0.00			411				
A-B	47	12	0.00			47				
A-C	660	165	0.00			660				

