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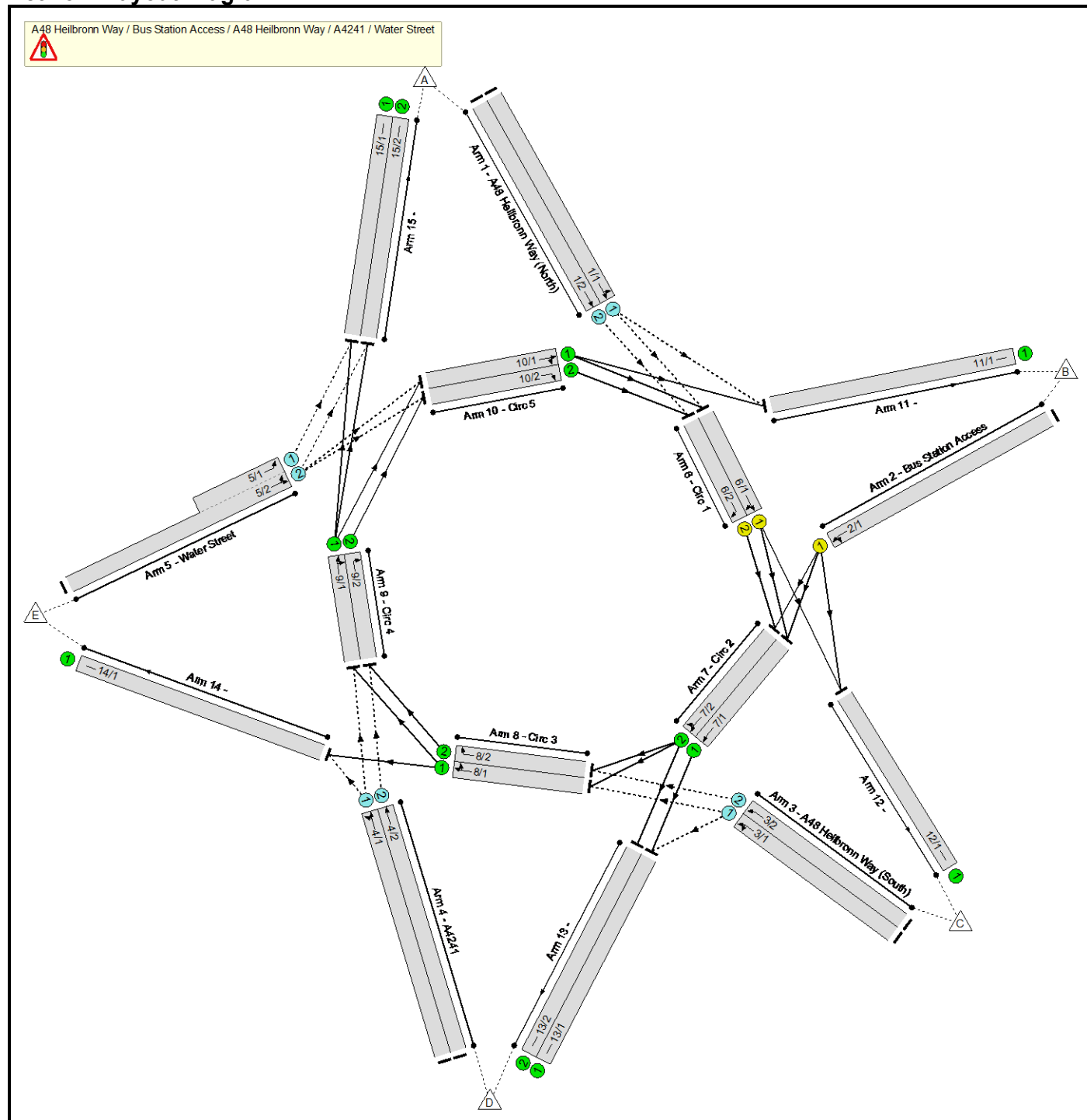
APPENDIX J

Full Input Data And Results

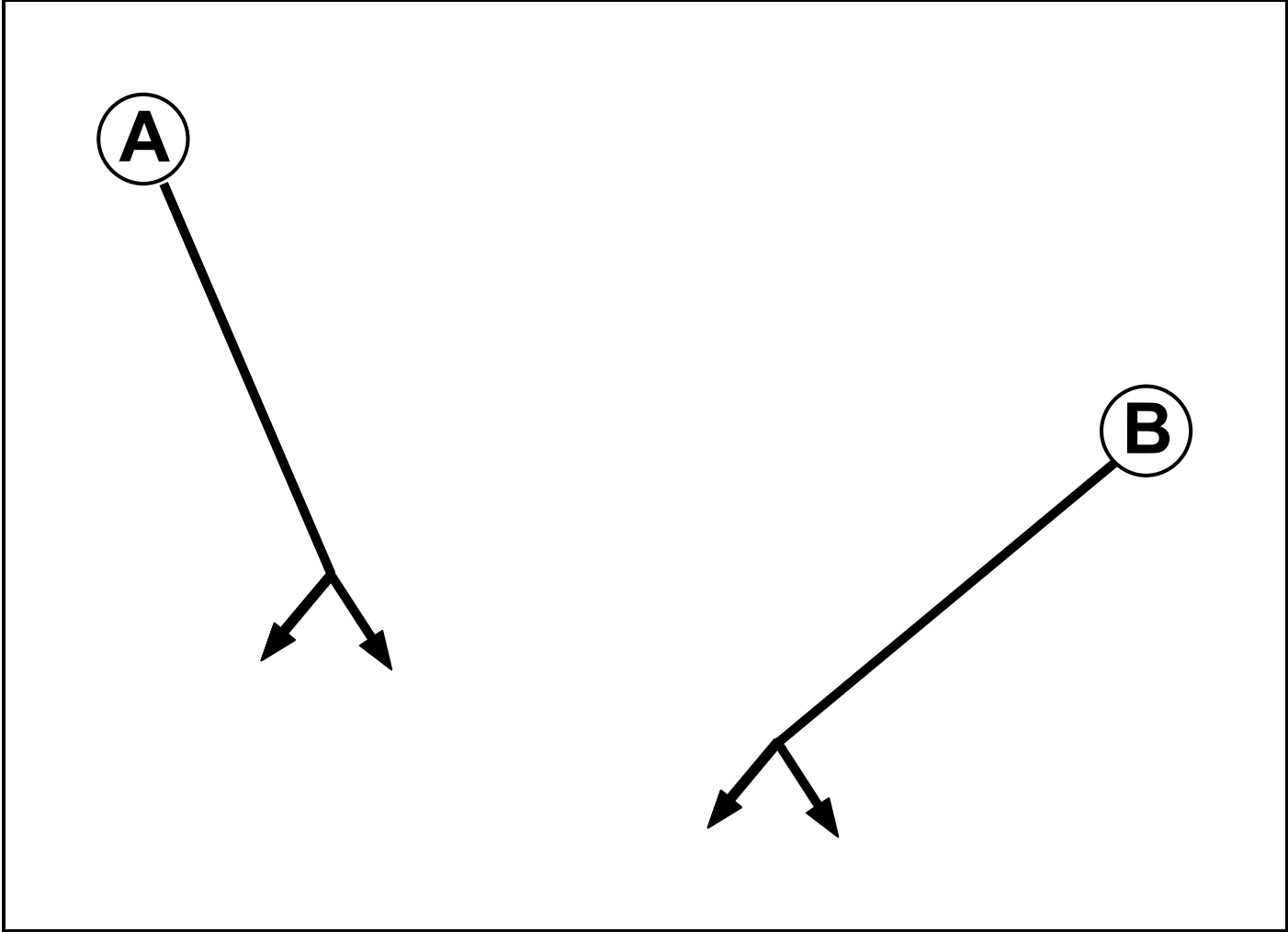
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Junction 2 - A48 Heilbronn Way_Car Park Access_A48 Heilbronn Way_A4241_Water Street.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		5	5

Phase Intergreens Matrix

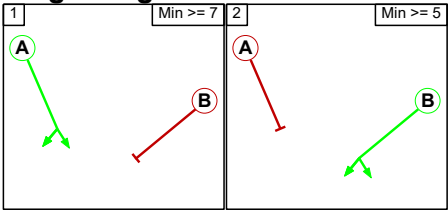
Terminating Phase	Starting Phase		
		A	B
	A		8
	B	7	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	B

Full Input Data And Results

Stage Diagram



Phase Delays

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

Prohibited Stage Change

	To Stage	
From Stage		
	1	2
	1	8
	2	7

Full Input Data And Results

Give-Way Lane Input Data

Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street											
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)
1/1 (A48 Heilbronn Way North))	6/1 (Ahead)	1000	0	10/1	0.33	All	-	-	-	-	-
	11/1 (Left)	1000	0	10/1	0.33	To 11/1 (Ahead)					
1/2 (A48 Heilbronn Way North)) 3/1 (A48 Heilbronn Way South))	6/2 (Ahead)	1000	0	10/1	0.33	All	-	-	-	-	-
				10/2	0.33	All					
				7/1	0.33	All					
	8/1 (Ahead)	1000	0	7/2	0.33	To 8/1 (Right) To 13/2 (Ahead)	-	-	-	-	-
	13/1 (Left)	1000	0	7/1	0.33	All					
3/2 (A48 Heilbronn Way South)) 4/1 (A4241)	8/2 (Ahead)	1000	0	7/1	0.33	All	-	-	-	-	-
				7/2	0.33	All					
	9/1 (Ahead)	1000	0	8/1	0.33	All	-	-	-	-	-
	14/1 (Left)	1000	0	8/1	0.33	To 14/1 (Ahead)					
4/2 (A4241) 5/1 (Water Street)	9/2 (Ahead)	1000	0	8/1	0.33	All	-	-	-	-	-
				8/2	0.33	All					
	15/1 (Left)	1000	0	9/1	0.33	To 15/1 (Ahead)	-	-	-	-	-
5/2 (Water Street)	10/1 (Ahead)	1000	0	9/1	0.33	All	-	-	-	-	-
	10/2 (Ahead)	1000	0	9/1	0.33	All					
				9/2	0.33	All					
	15/2 (Left)	1000	0	9/1	0.33	To 15/1 (Ahead) To 15/2 (Ahead)					

Full Input Data And Results

Lane Input Data

Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A48 Heilbronn Way (North))	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 6 Ahead	Inf
											Arm 11 Left	Inf
1/2 (A48 Heilbronn Way (North))	O		2	3	60.0	Geom	-	4.00	0.00	Y	Arm 6 Ahead	Inf
2/1 (Bus Station Access)	U	B	2	3	60.0	Geom	-	4.30	0.00	Y	Arm 7 Ahead	Inf
											Arm 12 Left	Inf
3/1 (A48 Heilbronn Way (South))	O		2	3	60.0	Geom	-	3.70	0.00	Y	Arm 8 Ahead	Inf
											Arm 13 Left	Inf
3/2 (A48 Heilbronn Way (South))	O		2	3	60.0	Geom	-	3.70	0.00	Y	Arm 8 Ahead	Inf
4/1 (A4241)	O		2	3	60.0	Geom	-	3.60	0.00	Y	Arm 9 Ahead	Inf
											Arm 14 Left	Inf
4/2 (A4241)	O		2	3	60.0	Geom	-	3.60	0.00	Y	Arm 9 Ahead	Inf
5/1 (Water Street)	O		2	3	8.7	Geom	-	3.60	0.00	Y	Arm 15 Left	Inf
5/2 (Water Street)	O		2	3	60.0	Geom	-	3.60	0.00	Y	Arm 10 Ahead	Inf
											Arm 15 Left	Inf
6/1 (Circ 1)	U	A	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 7 Right	Inf
											Arm 12 Ahead	Inf
6/2 (Circ 1)	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 7 Right	Inf
7/1 (Circ 2)	U		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 13 Ahead	Inf
7/2 (Circ 2)	U		2	3	60.0	Geom	-	4.20	0.00	Y	Arm 8 Right	Inf
											Arm 13 Ahead	Inf
8/1 (Circ 3)	U		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 9 Right	Inf
											Arm 14 Ahead	Inf

Full Input Data And Results

8/2 (Circ 3)	U		2	3	60.0	Geom	-	4.90	0.00	Y	Arm 9 Right	Inf
9/1 (Circ 4)	U		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 10 Right	Inf
											Arm 15 Ahead	Inf
9/2 (Circ 4)	U		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 10 Right	Inf
10/1 (Circ 5)	U		2	3	60.0	Geom	-	3.80	0.00	Y	Arm 6 Right	Inf
											Arm 11 Ahead	Inf
10/2 (Circ 5)	U		2	3	60.0	Geom	-	4.40	0.00	Y	Arm 6 Right	Inf
11/1	U		2	3	60.0	Inf	-	-	-	-	-	-
12/1	U		2	3	60.0	Inf	-	-	-	-	-	-
13/1	U		2	3	60.0	Inf	-	-	-	-	-	-
13/2	U		2	3	60.0	Inf	-	-	-	-	-	-
14/1	U		2	3	60.0	Inf	-	-	-	-	-	-
15/1	U		2	3	60.0	Inf	-	-	-	-	-	-
15/2	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2022 Surveyed Flows AM'	07:45	08:45	01:00	
2: '2022 Surveyed Flows PM'	16:30	17:30	01:00	
3: '2026 Do Minimum AM'	07:45	08:45	01:00	
4: '2026 Do Minimum PM'	16:30	17:30	01:00	
5: '2026 Do Something AM'	07:45	08:45	01:00	
6: '2026 Do Something PM'	16:30	17:30	01:00	

Scenario 1: '2022 Surveyed Flows AM' (FG1: '2022 Surveyed Flows AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	24	188	253	540	1005
	B	19	0	24	3	27	73
	C	138	28	0	63	235	464
	D	85	8	25	0	2	120
	E	346	18	141	90	0	595
	Tot.	588	78	378	409	804	2257

Traffic Lane Flows

Lane	Scenario 1: 2022 Surveyed Flows AM
Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	
1/1	465
1/2	540
2/1	73
3/1	464
3/2	0
4/1	120
4/2	0
5/1 (short)	173
5/2 (with short)	595(In) 422(Out)
6/1	665
6/2	572
7/1	314
7/2	618
8/1	987
8/2	0
9/1	303
9/2	0
10/1	278
10/2	32
11/1	78
12/1	378
13/1	377
13/2	32
14/1	804
15/1	295
15/2	293

Lane Saturation Flows

Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street								
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 (A48 Heilbronn Way (North))	4.00	0.00	Y	Arm 6 Ahead	Inf	94.8 %	2015	2015
				Arm 11 Left	Inf	5.2 %		
1/2 (A48 Heilbronn Way (North))	4.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	2015	2015
2/1 (Bus Station Access)	4.30	0.00	Y	Arm 7 Ahead	Inf	67.1 %	2045	2045
				Arm 12 Left	Inf	32.9 %		
3/1 (A48 Heilbronn Way (South))	3.70	0.00	Y	Arm 8 Ahead	Inf	86.4 %	1985	1985
				Arm 13 Left	Inf	13.6 %		
3/2 (A48 Heilbronn Way (South))	3.70	0.00	Y	Arm 8 Ahead	Inf	0.0 %	1985	1985
4/1 (A4241)	3.60	0.00	Y	Arm 9 Ahead	Inf	98.3 %	1975	1975
				Arm 14 Left	Inf	1.7 %		
4/2 (A4241)	3.60	0.00	Y	Arm 9 Ahead	Inf	0.0 %	1975	1975
5/1 (Water Street)	3.60	0.00	Y	Arm 15 Left	Inf	100.0 %	1975	1975
5/2 (Water Street)	3.60	0.00	Y	Arm 10 Ahead	Inf	59.0 %	1975	1975
				Arm 15 Left	Inf	41.0 %		
6/1 (Circ 1)	5.00	0.00	Y	Arm 7 Right	Inf	46.8 %	2115	2115
				Arm 12 Ahead	Inf	53.2 %		
6/2 (Circ 1)	3.50	0.00	Y	Arm 7 Right	Inf	100.0 %	1965	1965
7/1 (Circ 2)	5.00	0.00	Y	Arm 13 Ahead	Inf	100.0 %	2115	2115
7/2 (Circ 2)	4.20	0.00	Y	Arm 8 Right	Inf	94.8 %	2035	2035
				Arm 13 Ahead	Inf	5.2 %		
8/1 (Circ 3)	5.00	0.00	Y	Arm 9 Right	Inf	18.7 %	2115	2115
				Arm 14 Ahead	Inf	81.3 %		
8/2 (Circ 3)	4.90	0.00	Y	Arm 9 Right	Inf	0.0 %	2105	2105
9/1 (Circ 4)	5.00	0.00	Y	Arm 10 Right				

Full Input Data And Results

13/2	Infinite Saturation Flow	Inf	Inf
14/1	Infinite Saturation Flow	Inf	Inf
15/1	Infinite Saturation Flow	Inf	Inf
15/2	Infinite Saturation Flow	Inf	Inf

Scenario 2: '2022 Surveyed Flows PM' (FG2: '2022 Surveyed Flows PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	18	257	58	437	770
	B	28	0	24	2	28	82
	C	287	17	0	24	283	611
	D	408	6	56	0	5	475
	E	465	33	298	63	0	859
	Tot.	1188	74	635	147	753	2797

Traffic Lane Flows

Lane	Scenario 2: 2022 Surveyed Flows PM
Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	
1/1	331
1/2	439
2/1	82
3/1	611
3/2	0
4/1	475
4/2	0
5/1 (short)	232
5/2 (with short)	859(In) 627(Out)
6/1	674
6/2	495
7/1	65
7/2	551
8/1	1080
8/2	0
9/1	802
9/2	0
10/1	417
10/2	56
11/1	74
12/1	635
13/1	89
13/2	58
14/1	753
15/1	594
15/2	594

Full Input Data And Results

13/2	Infinite Saturation Flow	Inf	Inf
14/1	Infinite Saturation Flow	Inf	Inf
15/1	Infinite Saturation Flow	Inf	Inf
15/2	Infinite Saturation Flow	Inf	Inf

Scenario 3: '2026 Do Minimum AM' (FG3: '2026 Do Minimum AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	25	194	264	556	1039
	B	20	0	25	3	28	76
	C	142	29	0	65	243	479
	D	88	8	25	0	2	123
	E	356	19	145	94	0	614
	Tot.	606	81	389	426	829	2331

Traffic Lane Flows

Lane	Scenario 3: 2026 Do Minimum AM
Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	
1/1	483
1/2	556
2/1	76
3/1	479
3/2	0
4/1	123
4/2	0
5/1 (short)	178
5/2 (with short)	614(In) 436(Out)
6/1	687
6/2	591
7/1	326
7/2	639
8/1	1018
8/2	0
9/1	312
9/2	0
10/1	285
10/2	35
11/1	81
12/1	389
13/1	391
13/2	35
14/1	829
15/1	303
15/2	303

Lane Saturation Flows

Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street								
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 (A48 Heilbronn Way (North))	4.00	0.00	Y	Arm 6 Ahead	Inf	94.8 %	2015	2015
				Arm 11 Left	Inf	5.2 %		
1/2 (A48 Heilbronn Way (North))	4.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	2015	2015
2/1 (Bus Station Access)	4.30	0.00	Y	Arm 7 Ahead	Inf	67.1 %	2045	2045
				Arm 12 Left	Inf	32.9 %		
3/1 (A48 Heilbronn Way (South))	3.70	0.00	Y	Arm 8 Ahead	Inf	86.4 %	1985	1985
				Arm 13 Left	Inf	13.6 %		
3/2 (A48 Heilbronn Way (South))	3.70	0.00	Y	Arm 8 Ahead	Inf	0.0 %	1985	1985
4/1 (A4241)	3.60	0.00	Y	Arm 9 Ahead	Inf	98.4 %	1975	1975
				Arm 14 Left	Inf	1.6 %		
4/2 (A4241)	3.60	0.00	Y	Arm 9 Ahead	Inf	0.0 %	1975	1975
5/1 (Water Street)	3.60	0.00	Y	Arm 15 Left	Inf	100.0 %	1975	1975
5/2 (Water Street)	3.60	0.00	Y	Arm 10 Ahead	Inf	59.2 %	1975	1975
				Arm 15 Left	Inf	40.8 %		
6/1 (Circ 1)	5.00	0.00	Y	Arm 7 Right Arm 12 Ahead	Inf Inf	47.0 % 53.0 %	2115	2115
6/2 (Circ 1)	3.50	0.00	Y	Arm 7 Right	Inf	100.0 %	1965	1965
7/1 (Circ 2)	5.00	0.00	Y	Arm 13 Ahead	Inf	100.0 %	2115	2115
7/2 (Circ 2)	4.20	0.00	Y	Arm 8 Right	Inf	94.5 %	2035	2035
				Arm 13 Ahead	Inf	5.5 %		
8/1 (Circ 3)	5.00	0.00	Y	Arm 9 Right	Inf	18.8 %	2115	2115
				Arm 14 Ahead	Inf	81.2 %		
8/2 (Circ 3)	4.90	0.00	Y	Arm 9 Right	Inf	0.0 %	2105	2105
9/1 (Circ 4)	5.00	0.00	Y	Arm 10 Right	Inf	19.9 %	2115	2115
				Arm 15 Ahead	Inf	80.1 %		
9/2 (Circ 4)	5.00	0.00	Y	Arm 10 Right	Inf	0.0 %	2115	2115
10/1 (Circ 5)	3.80	0.00	Y	Arm 6 Right	Inf	80.4 %	1995	1995
				Arm 11 Ahead	Inf	19.6 %		
10/2 (Circ 5)	4.40	0.00	Y	Arm 6 Right	Inf	100.0 %	2055	2055
11/1	Infinite Saturation Flow						Inf	Inf
12/1	Infinite Saturation Flow						Inf	Inf
13/1	Infinite Saturation Flow						Inf	Inf

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13/2	Infinite Saturation Flow	Inf	Inf
14/1	Infinite Saturation Flow	Inf	Inf
15/1	Infinite Saturation Flow	Inf	Inf
15/2	Infinite Saturation Flow	Inf	Inf

Scenario 4: '2026 Do Minimum PM' (FG4: '2026 Do Minimum PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination						
		A	B	C	D	E	Tot.
	A	0	19	265	60	450	794
	B	29	0	25	2	29	85
	C	296	17	0	25	291	629
	D	427	6	59	0	5	497
	E	479	34	306	65	0	884
	Tot.	1231	76	655	152	775	2889

Traffic Lane Flows

Lane	Scenario 4: 2026 Do Minimum PM
Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	
1/1	342
1/2	452
2/1	85
3/1	629
3/2	0
4/1	497
4/2	0
5/1 (short)	240
5/2 (with short)	884(In) 644(Out)
6/1	695
6/2	510
7/1	67
7/2	568
8/1	1112
8/2	0
9/1	834
9/2	0
10/1	429
10/2	58
11/1	76
12/1	655
13/1	92
13/2	60
14/1	775
15/1	617
15/2	614

Lane Saturation Flows

Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street								
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 (A48 Heilbronn Way (North))	4.00	0.00	Y	Arm 6 Ahead	Inf	94.4 %	2015	2015
				Arm 11 Left	Inf	5.6 %		
1/2 (A48 Heilbronn Way (North))	4.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	2015	2015
2/1 (Bus Station Access)	4.30	0.00	Y	Arm 7 Ahead	Inf	70.6 %	2045	2045
				Arm 12 Left	Inf	29.4 %		
3/1 (A48 Heilbronn Way (South))	3.70	0.00	Y	Arm 8 Ahead	Inf	96.0 %	1985	1985
				Arm 13 Left	Inf	4.0 %		
3/2 (A48 Heilbronn Way (South))	3.70	0.00	Y	Arm 8 Ahead	Inf	0.0 %	1985	1985
4/1 (A4241)	3.60	0.00	Y	Arm 9 Ahead	Inf	99.0 %	1975	1975
				Arm 14 Left	Inf	1.0 %		
4/2 (A4241)	3.60	0.00	Y	Arm 9 Ahead	Inf	0.0 %	1975	1975
5/1 (Water Street)	3.60	0.00	Y	Arm 15 Left	Inf	100.0 %	1975	1975
5/2 (Water Street)	3.60	0.00	Y	Arm 10 Ahead	Inf	62.9 %	1975	1975
				Arm 15 Left	Inf	37.1 %		
6/1 (Circ 1)	5.00	0.00	Y	Arm 7 Right	Inf	9.4 %	2115	2115
				Arm 12 Ahead	Inf	90.6 %		
6/2 (Circ 1)	3.50	0.00	Y	Arm 7 Right	Inf	100.0 %	1965	1965
7/1 (Circ 2)	5.00	0.00	Y	Arm 13 Ahead	Inf	100.0 %	2115	2115
7/2 (Circ 2)	4.20	0.00	Y	Arm 8 Right	Inf	89.4 %	2035	2035
				Arm 13 Ahead	Inf	10.6 %		
8/1 (Circ 3)	5.00	0.00	Y	Arm 9 Right	Inf	30.8 %	2115	2115
				Arm 14 Ahead	Inf	69.2 %		
8/2 (Circ 3)	4.90	0.00	Y	Arm 9 Right	Inf	0.0 %	2105	2105
9/1 (Circ 4)	5.00	0.00	Y	Arm 10 Right	Inf	9.8 %	2115	2115
				Arm 15 Ahead	Inf	90.2 %		
9/2 (Circ 4)	5.00	0.00	Y	Arm 10 Right	Inf	0.0 %	2115	2115
10/1 (Circ 5)	3.80	0.00	Y	Arm 6 Right	Inf	86.7 %	1995	1995
				Arm 11 Ahead	Inf	13.3 %		
10/2 (Circ 5)	4.40	0.00	Y	Arm 6 Right	Inf	100.0 %	2055	2055
11/1	Infinite Saturation Flow						Inf	Inf
12/1	Infinite Saturation Flow						Inf	Inf
13/1	Infinite Saturation Flow						Inf	Inf

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13/2	Infinite Saturation Flow	Inf	Inf
14/1	Infinite Saturation Flow	Inf	Inf
15/1	Infinite Saturation Flow	Inf	Inf
15/2	Infinite Saturation Flow	Inf	Inf

Scenario 5: '2026 Do Something AM' (FG5: '2026 Do Something AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	25	194	319	556	1094
	B	20	0	25	3	28	76
	C	142	29	0	73	243	487
	D	88	8	25	0	2	123
	E	356	19	145	94	0	614
	Tot.	606	81	389	489	829	2394

Traffic Lane Flows

Lane	Scenario 5: 2026 Do Something AM
Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	
1/1	535
1/2	559
2/1	76
3/1	487
3/2	0
4/1	123
4/2	0
5/1 (short)	178
5/2 (with short)	614(In) 436(Out)
6/1	719
6/2	614
7/1	358
7/2	662
8/1	1018
8/2	0
9/1	312
9/2	0
10/1	265
10/2	55
11/1	81
12/1	389
13/1	431
13/2	58
14/1	829
15/1	303
15/2	303

Full Input Data And Results

13/2	Infinite Saturation Flow	Inf	Inf
14/1	Infinite Saturation Flow	Inf	Inf
15/1	Infinite Saturation Flow	Inf	Inf
15/2	Infinite Saturation Flow	Inf	Inf

Scenario 6: '2026 Do Something PM' (FG6: '2026 Do Something PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	19	265	60	450	794
	B	29	0	25	2	29	85
	C	296	17	0	25	291	629
	D	481	6	66	0	5	558
	E	479	34	306	65	0	884
	Tot.	1285	76	662	152	775	2950

Traffic Lane Flows

Lane	Scenario 6: 2026 Do Something PM
Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	
1/1	342
1/2	452
2/1	85
3/1	629
3/2	0
4/1	558
4/2	0
5/1 (short)	240
5/2 (with short)	884(In) 644(Out)
6/1	702
6/2	510
7/1	67
7/2	568
8/1	1112
8/2	0
9/1	895
9/2	0
10/1	436
10/2	58
11/1	76
12/1	662
13/1	92
13/2	60
14/1	775
15/1	644
15/2	641

Lane Saturation Flows

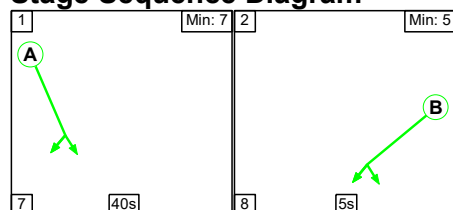
Junction: A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A48 Heilbronn Way (North))	4.00	0.00	Y	Arm 6 Ahead	Inf	94.4 %	2015	2015
				Arm 11 Left	Inf	5.6 %		
1/2 (A48 Heilbronn Way (North))	4.00	0.00	Y	Arm 6 Ahead	Inf	100.0 %	2015	2015
2/1 (Bus Station Access)	4.30	0.00	Y	Arm 7 Ahead	Inf	70.6 %	2045	2045
				Arm 12 Left	Inf	29.4 %		
3/1 (A48 Heilbronn Way (South))	3.70	0.00	Y	Arm 8 Ahead	Inf	96.0 %	1985	1985
				Arm 13 Left	Inf	4.0 %		
3/2 (A48 Heilbronn Way (South))	3.70	0.00	Y	Arm 8 Ahead	Inf	0.0 %	1985	1985
4/1 (A4241)	3.60	0.00	Y	Arm 9 Ahead	Inf	99.1 %	1975	1975
				Arm 14 Left	Inf	0.9 %		
4/2 (A4241)	3.60	0.00	Y	Arm 9 Ahead	Inf	0.0 %	1975	1975
5/1 (Water Street)	3.60	0.00	Y	Arm 15 Left	Inf	100.0 %	1975	1975
5/2 (Water Street)	3.60	0.00	Y	Arm 10 Ahead	Inf	62.9 %	1975	1975
				Arm 15 Left	Inf	37.1 %		
6/1 (Circ 1)	5.00	0.00	Y	Arm 7 Right	Inf	9.3 %	2115	2115
				Arm 12 Ahead	Inf	90.7 %		
6/2 (Circ 1)	3.50	0.00	Y	Arm 7 Right	Inf	100.0 %	1965	1965
7/1 (Circ 2)	5.00	0.00	Y	Arm 13 Ahead	Inf	100.0 %	2115	2115
7/2 (Circ 2)	4.20	0.00	Y	Arm 8 Right	Inf	89.4 %	2035	2035
				Arm 13 Ahead	Inf	10.6 %		
8/1 (Circ 3)	5.00	0.00	Y	Arm 9 Right	Inf	30.8 %	2115	2115
				Arm 14 Ahead	Inf	69.2 %		
8/2 (Circ 3)	4.90	0.00	Y	Arm 9 Right	Inf	0.0 %	2105	2105
9/1 (Circ 4)	5.00	0.00	Y	Arm 10 Right	Inf	9.9 %	2115	2115
				Arm 15 Ahead	Inf	90.1 %		
9/2 (Circ 4)	5.00	0.00	Y	Arm 10 Right	Inf	0.0 %	2115	2115
10/1 (Circ 5)	3.80	0.00	Y	Arm 6 Right	Inf	86.9 %	1995	1995
				Arm 11 Ahead	Inf	13.1 %		
10/2 (Circ 5)	4.40	0.00	Y	Arm 6 Right	Inf	100.0 %	2055	2055
11/1	Infinite Saturation Flow						Inf	Inf
12/1	Infinite Saturation Flow						Inf	Inf
13/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

13/2	Infinite Saturation Flow	Inf	Inf
14/1	Infinite Saturation Flow	Inf	Inf
15/1	Infinite Saturation Flow	Inf	Inf
15/2	Infinite Saturation Flow	Inf	Inf

Scenario 1: '2022 Surveyed Flows AM' (FG1: '2022 Surveyed Flows AM', Plan 1: 'Network Control Plan 1')

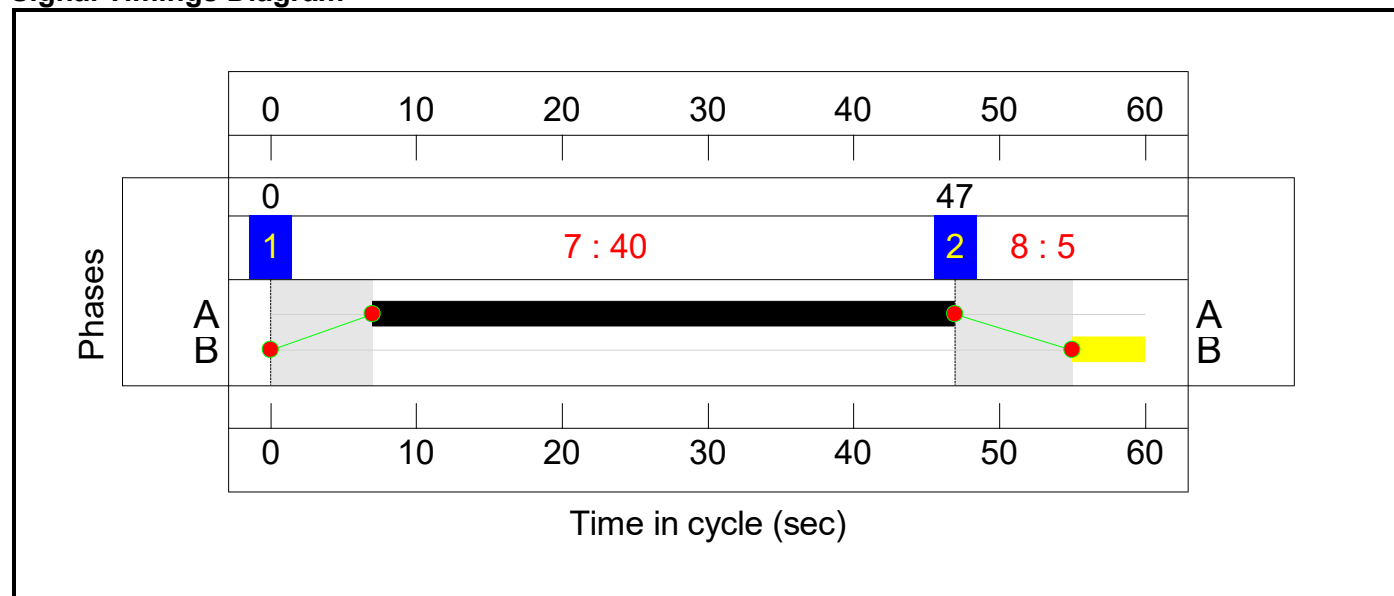
Stage Sequence Diagram



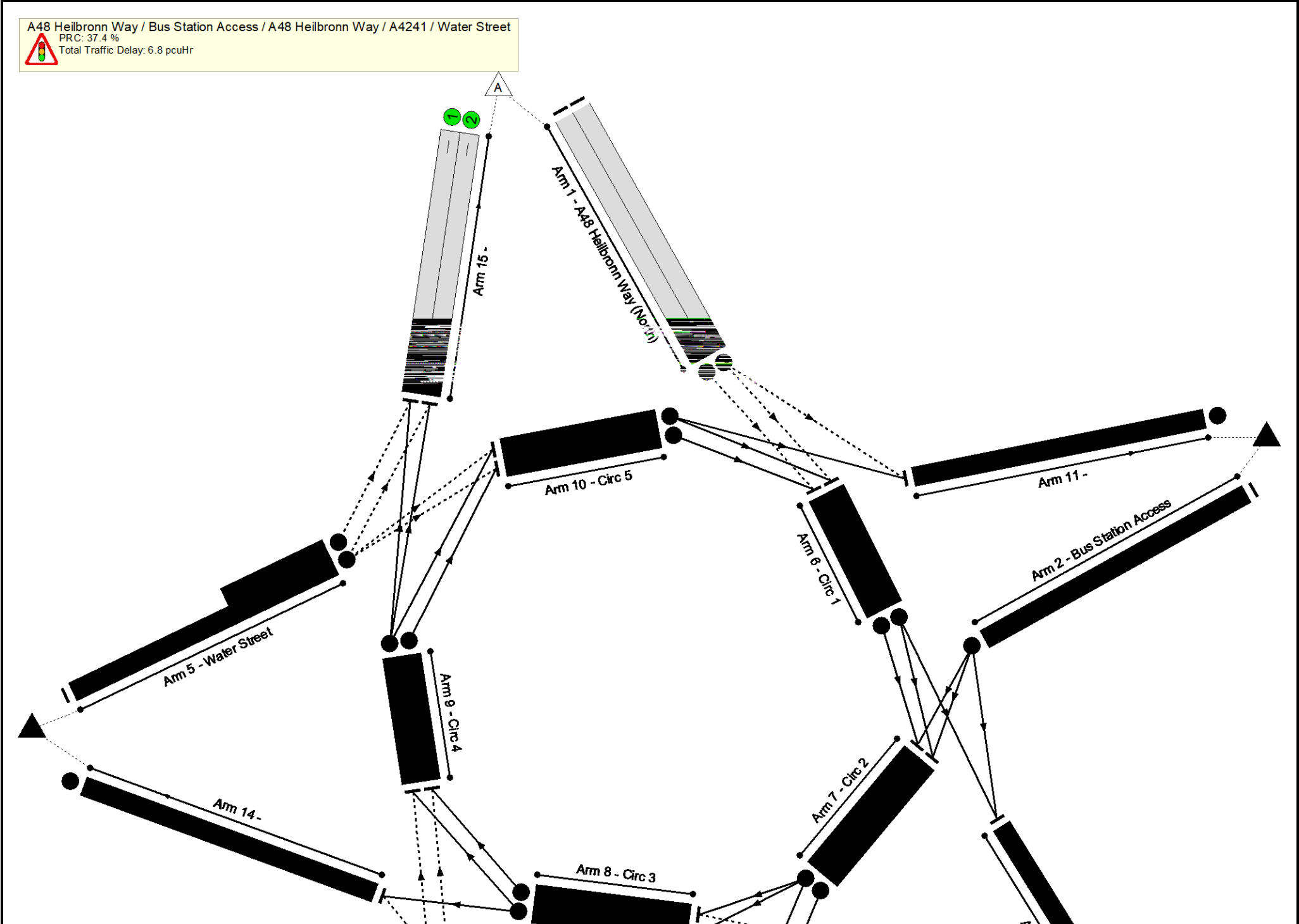
Stage Timings

Stage	1	2
Duration	40	5
Change Point	0	47

Signal Timings Diagram



Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	65.5%
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	N/A	-	-		-	-	-	-	-	-	65.5%
1/1	A48 Heilbronn Way (North) Ahead Left	O	N/A	N/A	-		-	-	-	465	2015	912	51.0%
1/2	A48 Heilbronn Way (North) Ahead	O	N/A	N/A	-		-	-	-	540	2015	897	60.2%
2/1	Bus Station Access Ahead Left	U	N/A	N/A	B		1	5	-	73	2045	205	35.7%
3/1	A48 Heilbronn Way (South) Ahead Left	O	N/A	N/A	-		-	-	-	464	1985	709	65.5%
3/2	A48 Heilbronn Way (South) Ahead	O	N/A	N/A	-		-	-	-	0	1985	1985	0.0%
4/1	A4241 Ahead Left	O	N/A	N/A	-		-	-	-	120	1975	675	17.8%
4/2	A4241 Ahead	O	N/A	N/A	-		-	-	-	0	1975	998	0.0%
5/2+5/1	Water Street Ahead Left	O	N/A	N/A	-		-	-	-	595	1975:1975	1280	46.5%
6/1	Circ 1 Right Ahead	U	N/A	N/A	A		1	40	-	665	2115	1445	46.0%
6/2	Circ 1 Right	U	N/A	N/A	A		1	40	-	572	1965	1343	42.6%
7/1	Circ 2 Ahead	U	N/A	N/A	-		-	-	-	314	2115	2115	14.8%
7/2	Circ 2 Right Ahead	U	N/A	N/A	-		-	-	-	618	2035	2035	30.4%
8/1	Circ 3 Right Ahead	U	N/A	N/A	-		-	-	-	987	2115	2115	46.7%
8/2	Circ 3 Right	U	N/A	N/A	-		-	-	-	0	2105	2105	0.0%

Full Input Data And Results

9/1	Circ 4 Right Ahead	U	N/A	N/A	-		-	-	-	303	2115	2115	14.3%
9/2	Circ 4 Right	U	N/A	N/A	-		-	-	-	0	2115	2115	0.0%
10/1	Circ 5 Right Ahead	U	N/A	N/A	-		-	-	-	278	1995	1995	13.9%
10/2	Circ 5 Right	U	N/A	N/A	-		-	-	-	32	2055	2055	1.6%
11/1		U	N/A	N/A	-		-	-	-	78	Inf	Inf	0.0%
12/1		U	N/A	N/A	-		-	-	-	378	Inf	Inf	0.0%
13/1		U	N/A	N/A	-		-	-	-	377	Inf	Inf	0.0%
13/2		U	N/A	N/A	-		-	-	-	32	Inf	Inf	0.0%
14/1		U	N/A	N/A	-		-	-	-	804	Inf	Inf	0.0%
15/1		U	N/A	N/A	-		-	-	-	295	Inf	Inf	0.0%
15/2		U	N/A	N/A	-		-	-	-	293	Inf	Inf	0.0%

Full 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	-	-	2779	0	0	2.1	4.7	0.0	6.8	-	-	-	-
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	2779	0	0	2.1	4.7	0.0	6.8	-	-	-	-
1/1	465	465	465	0	0	0.0	0.5	-	0.5	4.0	0.0	0.5	0.5
1/2	540	540	540	0	0	0.0	0.8	-	0.8	5.0	0.0	0.8	0.8
2/1	73	73	-	-	-	0.5	0.3	-	0.8	38.8	1.1	0.3	1.4
3/1	464	464	464	0	0	0.1	0.9	-	1.0	8.1	2.3	0.9	3.3
3/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	120	120	120	0	0	0.0	0.1	-	0.1	3.2	0.0	0.1	0.1
4/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	595	595	1190	0	0	0.0	0.4	-	0.4	2.6	0.0	0.4	0.4
6/1	665	665	-	-	-	0.8	0.4	-	1.2	6.7	5.0	0.4	5.4
6/2	572	572	-	-	-	0.7	0.4	-	1.0	6.6	4.1	0.4	4.5
7/1	314	314	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
7/2	618	618	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
8/1	987	987	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
8/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	303	303	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
9/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	278	278	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
10/2	32	32	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
11/1	78	78	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	378	378	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	377	377	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	32	32	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	804	804	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

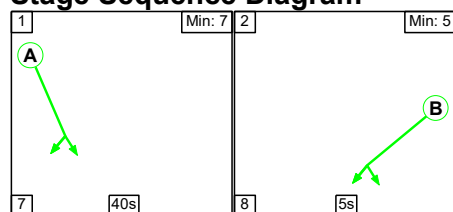
Full Input Data And Results

15/1	295	295	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	293	293	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 95.6 PRC Over All Lanes (%): 37.4 Total Delay for Signalled Lanes (pcuHr): 3.07 Total Delay Over All Lanes(pcuHr): 6.85 Cycle Time (s): 60													

Full Input Data And Results

Scenario 2: '2022 Surveyed Flows PM' (FG2: '2022 Surveyed Flows PM', Plan 1: 'Network Control Plan 1')

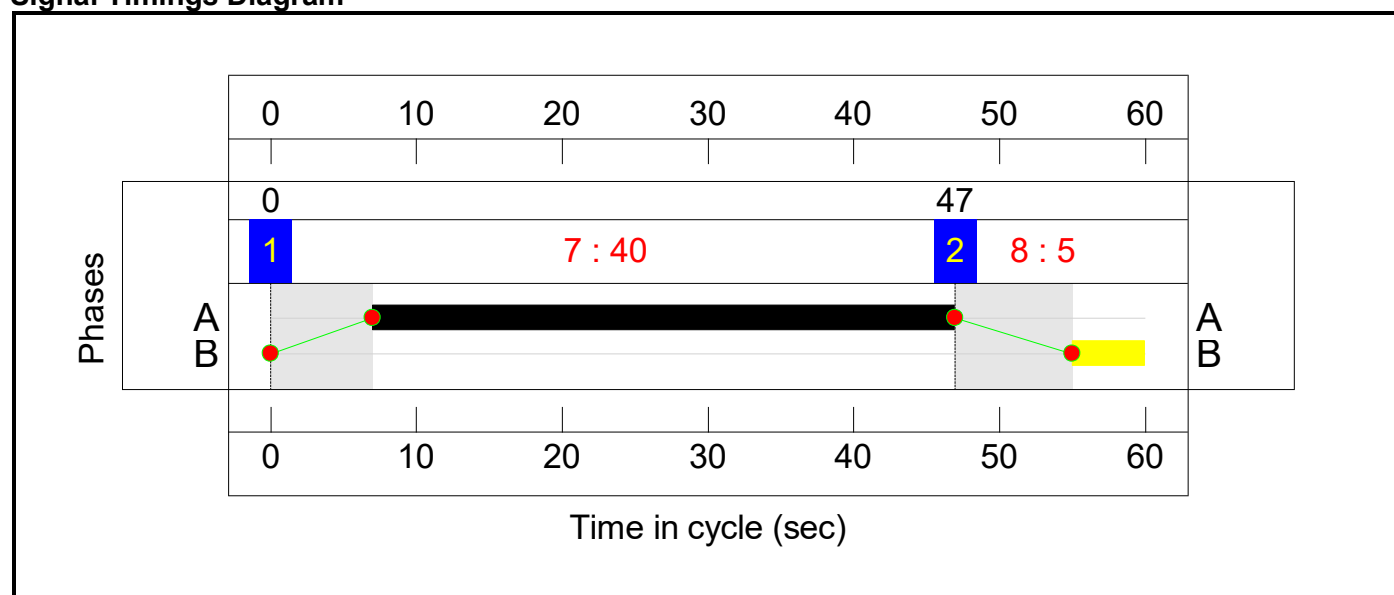
Stage Sequence Diagram



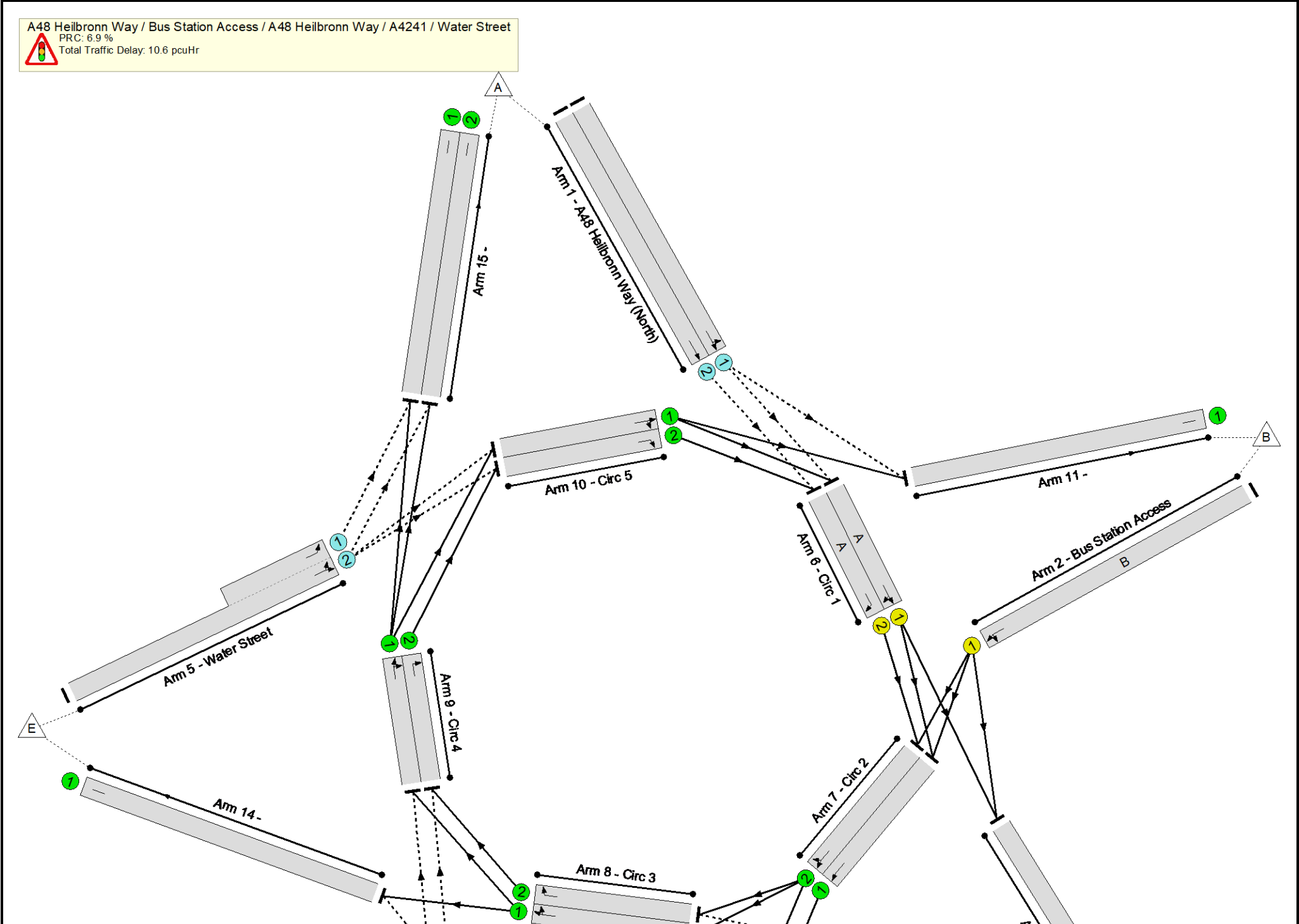
Stage Timings

Stage	1	2
Duration	40	5
Change Point	0	47

Signal Timings Diagram



Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	84.2%
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	N/A	-	-		-	-	-	-	-	-	84.2%
1/1	A48 Heilbronn Way (North) Ahead Left	O	N/A	N/A	-		-	-	-	331	2015	868	38.1%
1/2	A48 Heilbronn Way (North) Ahead	O	N/A	N/A	-		-	-	-	439	2015	844	52.0%
2/1	Bus Station Access Ahead Left	U	N/A	N/A	B		1	5	-	82	2045	205	40.1%
3/1	A48 Heilbronn Way (South) Ahead Left	O	N/A	N/A	-		-	-	-	611	1985	801	76.2%
3/2	A48 Heilbronn Way (South) Ahead	O	N/A	N/A	-		-	-	-	0	1985	1985	0.0%
4/1	A4241 Ahead Left	O	N/A	N/A	-		-	-	-	475	1975	644	73.7%
4/2	A4241 Ahead	O	N/A	N/A	-		-	-	-	0	1975	965	0.0%
5/2+5/1	Water Street Ahead Left	O	N/A	N/A	-		-	-	-	859	1975:1975	1020	84.2%
6/1	Circ 1 Right Ahead	U	N/A	N/A	A		1	40	-	674	2115	1445	46.6%
6/2	Circ 1 Right	U	N/A	N/A	A		1	40	-	495	1965	1343	36.9%
7/1	Circ 2 Ahead	U	N/A	N/A	-		-	-	-	65	2115	2115	3.1%
7/2	Circ 2 Right Ahead	U	N/A	N/A	-		-	-	-	551	2035	2035	27.1%
8/1	Circ 3 Right Ahead	U	N/A	N/A	-		-	-	-	1080	2115	2115	51.1%
8/2	Circ 3 Right	U	N/A	N/A	-		-	-	-	0	2105	2105	0.0%

Full Input Data And Results

9/1	Circ 4 Right Ahead	U	N/A	N/A	-		-	-	-	802	2115	2115	37.9%
9/2	Circ 4 Right	U	N/A	N/A	-		-	-	-	0	2115	2115	0.0%
10/1	Circ 5 Right Ahead	U	N/A	N/A	-		-	-	-	417	1995	1995	20.9%
10/2	Circ 5 Right	U	N/A	N/A	-		-	-	-	56	2055	2055	2.7%
11/1		U	N/A	N/A	-		-	-	-	74	Inf	Inf	0.0%
12/1		U	N/A	N/A	-		-	-	-	635	Inf	Inf	0.0%
13/1		U	N/A	N/A	-		-	-	-	89	Inf	Inf	0.0%
13/2		U	N/A	N/A	-		-	-	-	58	Inf	Inf	0.0%
14/1		U	N/A	N/A	-		-	-	-	753	Inf	Inf	0.0%
15/1		U	N/A	N/A	-		-	-	-	594	Inf	Inf	0.0%
15/2		U	N/A	N/A	-		-	-	-	594	Inf	Inf	0.0%

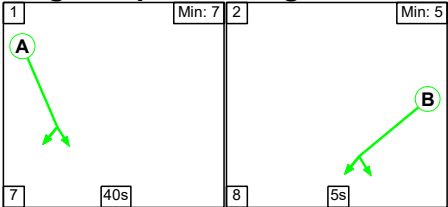
Full Input Data And Results

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	-	-	3574	0	0	2.0	8.6	0.0	10.6	-	-	-	-
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	3574	0	0	2.0	8.6	0.0	10.6	-	-	-	-
1/1	331	331	331	0	0	0.0	0.3	-	0.3	3.3	0.0	0.3	0.3
1/2	439	439	439	0	0	0.0	0.5	-	0.5	4.4	0.0	0.5	0.5
2/1	82	82	-	-	-	0.6	0.3	-	0.9	40.0	1.3	0.3	1.6
3/1	611	611	611	0	0	0.0	1.6	-	1.6	9.6	2.4	1.6	4.0
3/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	475	475	475	0	0	0.0	1.4	-	1.4	10.6	1.3	1.4	2.7
4/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	859	859	1718	0	0	0.0	2.6	-	2.6	10.8	0.0	2.6	2.6
6/1	674	674	-	-	-	0.8	0.4	-	1.3	6.7	5.1	0.4	5.5
6/2	495	495	-	-	-	0.6	0.3	-	0.8	6.1	3.4	0.3	3.7
7/1	65	65	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
7/2	551	551	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
8/1	1080	1080	-	-	-	0.0	0.5	-	0.5	1.7	0.0	0.5	0.5
8/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	802	802	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
9/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	417	417	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/2	56	56	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
11/1	74	74	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	635	635	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	89	89	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	58	58	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	753	753	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

15/1	594	594	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	594	594	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalised Lanes (%): 93.0 Total Delay for Signalised Lanes (pcuHr): 3.02 PRC Over All Lanes (%): 6.9 Total Delay Over All Lanes (pcuHr): 10.64 Cycle Time (s): 60													

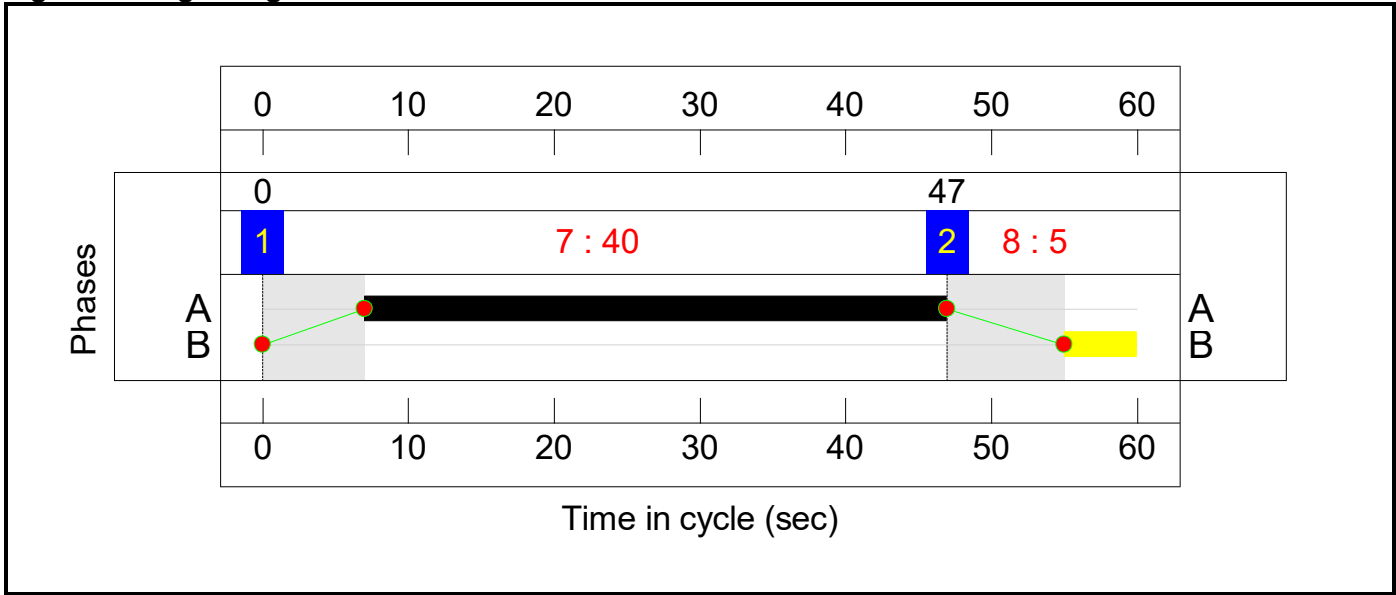
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	40	5
Change Point	0	47

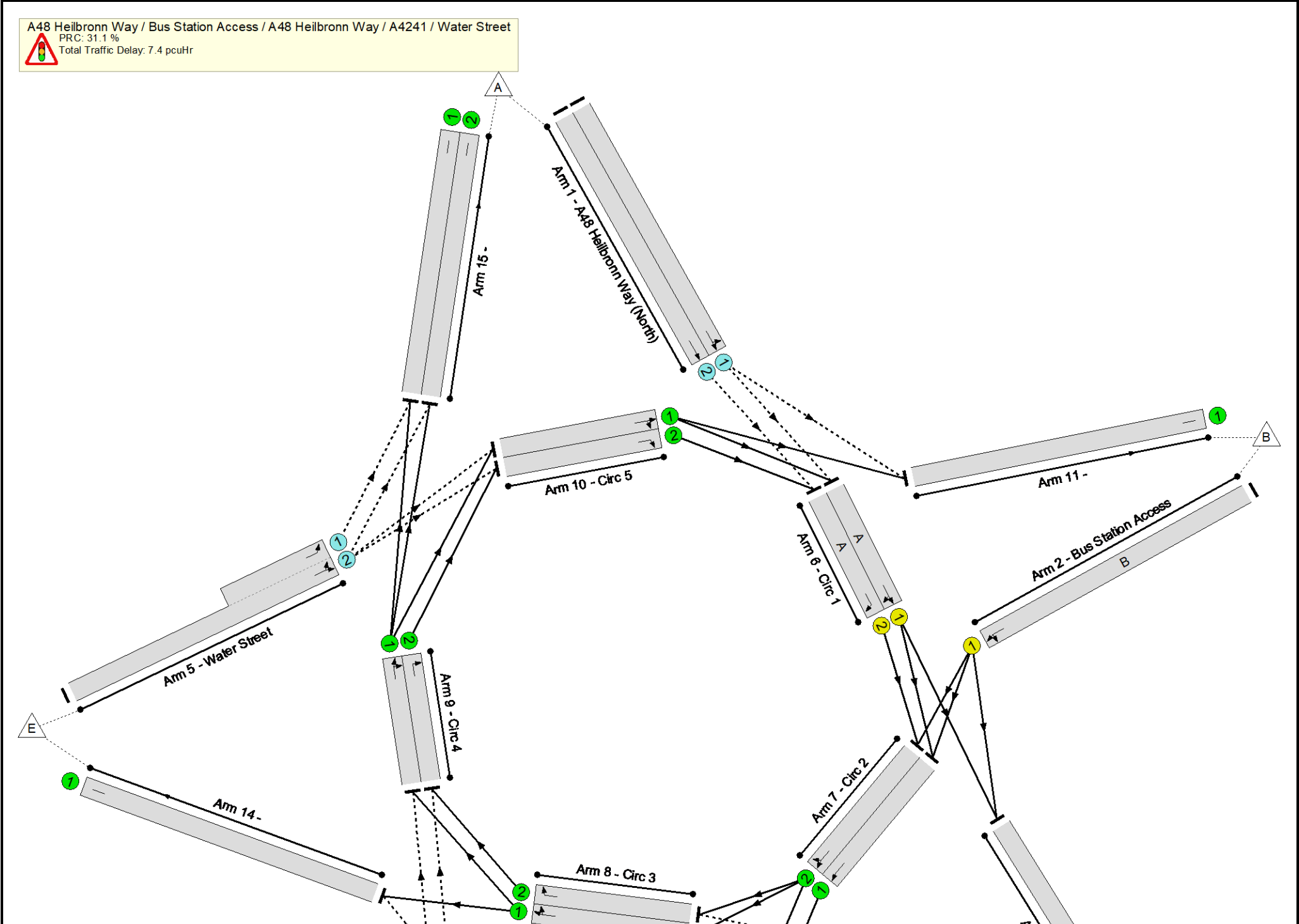
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	68.6%
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	N/A	-	-		-	-	-	-	-	-	68.6%
1/1	A48 Heilbronn Way (North) Ahead Left	O	N/A	N/A	-		-	-	-	483	2015	909	53.1%
1/2	A48 Heilbronn Way (North) Ahead	O	N/A	N/A	-		-	-	-	556	2015	894	62.2%
2/1	Bus Station Access Ahead Left	U	N/A	N/A	B		1	5	-	76	2045	205	37.2%
3/1	A48 Heilbronn Way (South) Ahead Left	O	N/A	N/A	-		-	-	-	479	1985	698	68.6%
3/2	A48 Heilbronn Way (South) Ahead	O	N/A	N/A	-		-	-	-	0	1985	1985	0.0%
4/1	A4241 Ahead Left	O	N/A	N/A	-		-	-	-	123	1975	665	18.5%
4/2	A4241 Ahead	O	N/A	N/A	-		-	-	-	0	1975	987	0.0%
5/2+5/1	Water Street Ahead Left	O	N/A	N/A	-		-	-	-	614	1975:1975	1274	48.2%
6/1	Circ 1 Right Ahead	U	N/A	N/A	A		1	40	-	687	2115	1445	47.5%
6/2	Circ 1 Right	U	N/A	N/A	A		1	40	-	591	1965	1343	44.0%
7/1	Circ 2 Ahead	U	N/A	N/A	-		-	-	-	326	2115	2115	15.4%
7/2	Circ 2 Right Ahead	U	N/A	N/A	-		-	-	-	639	2035	2035	31.4%
8/1	Circ 3 Right Ahead	U	N/A	N/A	-		-	-	-	1018	2115	2115	48.1%
8/2	Circ 3 Right	U	N/A	N/A	-		-	-	-	0	2105	2105	0.0%

Full Input Data And Results

9/1	Circ 4 Right Ahead	U	N/A	N/A	-		-	-	-	312	2115	2115	14.8%
9/2	Circ 4 Right	U	N/A	N/A	-		-	-	-	0	2115	2115	0.0%
10/1	Circ 5 Right Ahead	U	N/A	N/A	-		-	-	-	285	1995	1995	14.3%
10/2	Circ 5 Right	U	N/A	N/A	-		-	-	-	35	2055	2055	1.7%
11/1		U	N/A	N/A	-		-	-	-	81	Inf	Inf	0.0%
12/1		U	N/A	N/A	-		-	-	-	389	Inf	Inf	0.0%
13/1		U	N/A	N/A	-		-	-	-	391	Inf	Inf	0.0%
13/2		U	N/A	N/A	-		-	-	-	35	Inf	Inf	0.0%
14/1		U	N/A	N/A	-		-	-	-	829	Inf	Inf	0.0%
15/1		U	N/A	N/A	-		-	-	-	303	Inf	Inf	0.0%
15/2		U	N/A	N/A	-		-	-	-	303	Inf	Inf	0.0%

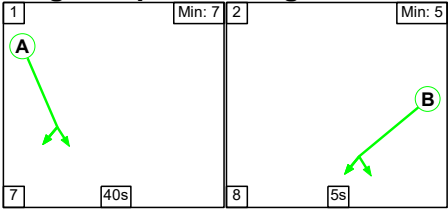
Full Input Data And Results

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	-	-	2869	0	0	2.2	5.1	0.0	7.4	-	-	-	-
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	2869	0	0	2.2	5.1	0.0	7.4	-	-	-	-
1/1	483	483	483	0	0	0.0	0.6	-	0.6	4.2	0.0	0.6	0.6
1/2	556	556	556	0	0	0.0	0.8	-	0.8	5.3	0.0	0.8	0.8
2/1	76	76	-	-	-	0.5	0.3	-	0.8	39.2	1.2	0.3	1.5
3/1	479	479	479	0	0	0.1	1.1	-	1.2	9.2	2.8	1.1	3.9
3/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	123	123	123	0	0	0.0	0.1	-	0.1	3.3	0.0	0.1	0.1
4/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	614	614	1228	0	0	0.0	0.5	-	0.5	2.7	0.0	0.5	0.5
6/1	687	687	-	-	-	0.9	0.5	-	1.3	6.8	5.3	0.5	5.8
6/2	591	591	-	-	-	0.7	0.4	-	1.1	6.7	4.4	0.4	4.8
7/1	326	326	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
7/2	639	639	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
8/1	1018	1018	-	-	-	0.0	0.5	-	0.5	1.6	0.0	0.5	0.5
8/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	312	312	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
9/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	285	285	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/2	35	35	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
11/1	81	81	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	389	389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	391	391	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	35	35	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	829	829	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

15/1	303	303	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	303	303	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 89.3 PRC Over All Lanes (%): 31.1 Total Delay for Signalled Lanes (pcuHr): 3.23 Total Delay Over All Lanes(pcuHr): 7.38 Cycle Time (s): 60													

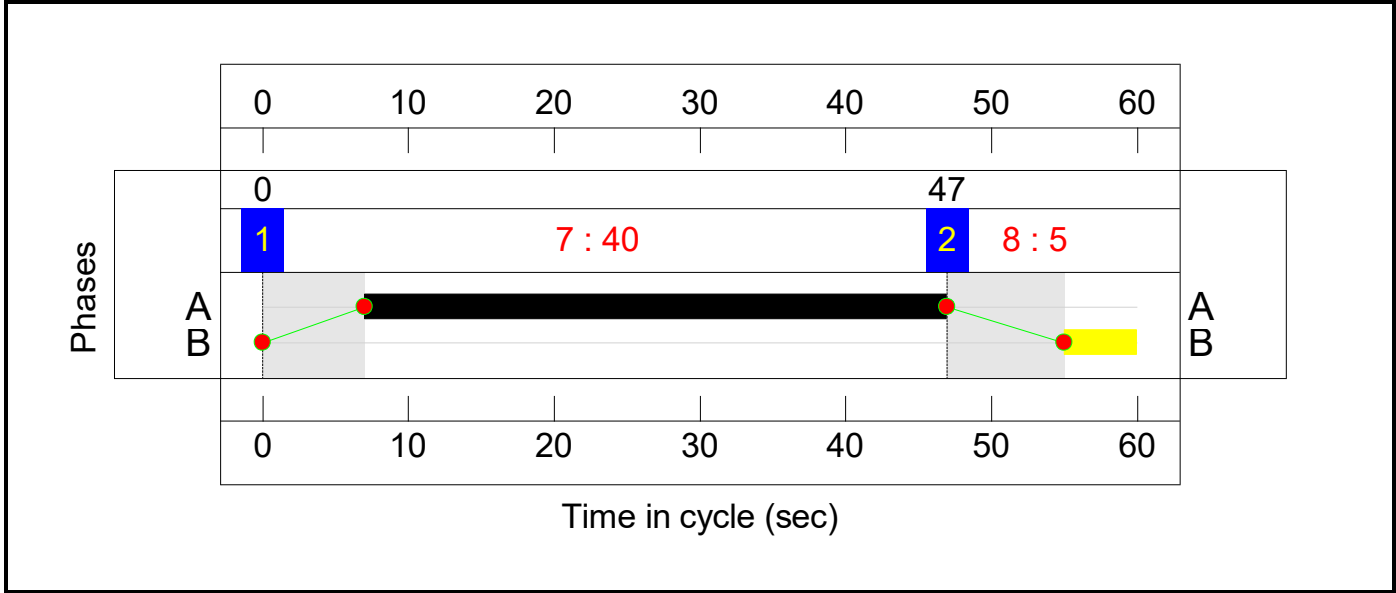
Stage Sequence Diagram



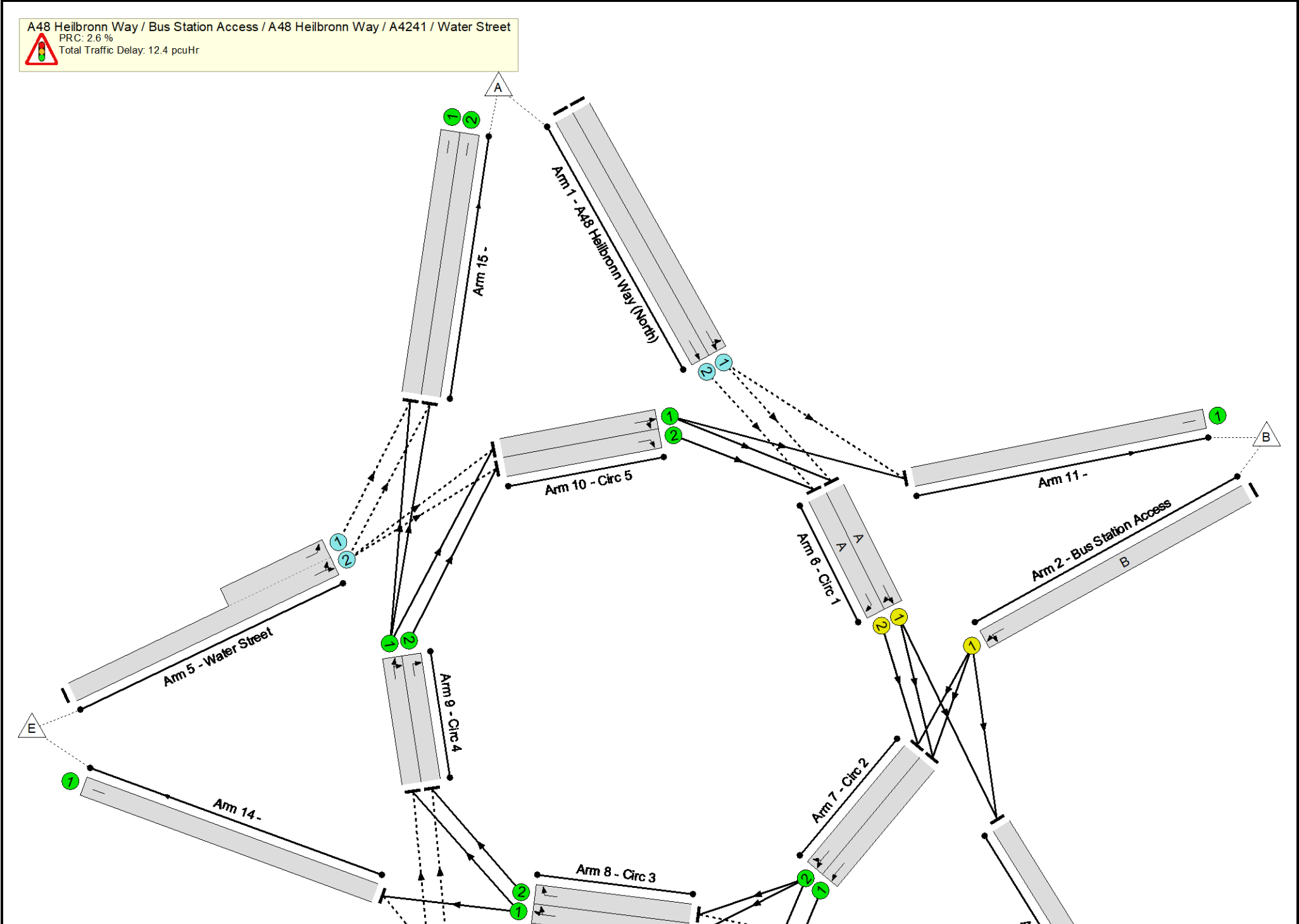
Stage Timings

Stage	1	2
Duration	40	5
Change Point	0	47

Signal Timings Diagram



Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	87.7%
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	N/A	-	-		-	-	-	-	-	-	87.7%
1/1	A48 Heilbronn Way (North) Ahead Left	O	N/A	N/A	-		-	-	-	342	2015	864	39.6%
1/2	A48 Heilbronn Way (North) Ahead	O	N/A	N/A	-		-	-	-	452	2015	839	53.9%
2/1	Bus Station Access Ahead Left	U	N/A	N/A	B		1	5	-	85	2045	205	41.6%
3/1	A48 Heilbronn Way (South) Ahead Left	O	N/A	N/A	-		-	-	-	629	1985	795	79.1%
3/2	A48 Heilbronn Way (South) Ahead	O	N/A	N/A	-		-	-	-	0	1985	1985	0.0%
4/1	A4241 Ahead Left	O	N/A	N/A	-		-	-	-	497	1975	634	78.4%
4/2	A4241 Ahead	O	N/A	N/A	-		-	-	-	0	1975	953	0.0%
5/2+5/1	Water Street Ahead Left	O	N/A	N/A	-		-	-	-	884	1975:1975	1008	87.7%
6/1	Circ 1 Right Ahead	U	N/A	N/A	A		1	40	-	695	2115	1445	48.1%
6/2	Circ 1 Right	U	N/A	N/A	A		1	40	-	510	1965	1343	38.0%
7/1	Circ 2 Ahead	U	N/A	N/A	-		-	-	-	67	2115	2115	3.2%
7/2	Circ 2 Right Ahead	U	N/A	N/A	-		-	-	-	568	2035	2035	27.9%
8/1	Circ 3 Right Ahead	U	N/A	N/A	-		-	-	-	1112	2115	2115	52.6%
8/2	Circ 3 Right	U	N/A	N/A	-		-	-	-	0	2105	2105	0.0%

Full Input Data And Results

9/1	Circ 4 Right Ahead	U	N/A	N/A	-		-	-	-	834	2115	2115	39.4%
9/2	Circ 4 Right	U	N/A	N/A	-		-	-	-	0	2115	2115	0.0%
10/1	Circ 5 Right Ahead	U	N/A	N/A	-		-	-	-	429	1995	1995	21.5%
10/2	Circ 5 Right	U	N/A	N/A	-		-	-	-	58	2055	2055	2.8%
11/1		U	N/A	N/A	-		-	-	-	76	Inf	Inf	0.0%
12/1		U	N/A	N/A	-		-	-	-	655	Inf	Inf	0.0%
13/1		U	N/A	N/A	-		-	-	-	92	Inf	Inf	0.0%
13/2		U	N/A	N/A	-		-	-	-	60	Inf	Inf	0.0%
14/1		U	N/A	N/A	-		-	-	-	775	Inf	Inf	0.0%
15/1		U	N/A	N/A	-		-	-	-	617	Inf	Inf	0.0%
15/2		U	N/A	N/A	-		-	-	-	614	Inf	Inf	0.0%

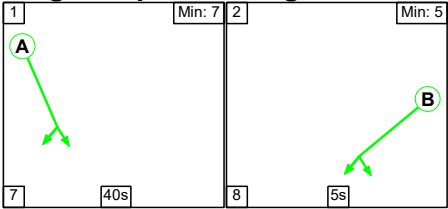
Full Input Data And Results

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	-	-	3688	0	0	2.1	10.3	0.0	12.4	-	-	-	-
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	3688	0	0	2.1	10.3	0.0	12.4	-	-	-	-
1/1	342	342	342	0	0	0.0	0.3	-	0.3	3.4	0.0	0.3	0.3
1/2	452	452	452	0	0	0.0	0.6	-	0.6	4.6	0.0	0.6	0.6
2/1	85	85	-	-	-	0.6	0.4	-	1.0	40.4	1.3	0.4	1.7
3/1	629	629	629	0	0	0.1	1.8	-	1.9	11.0	3.0	1.8	4.8
3/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	497	497	497	0	0	0.0	1.8	-	1.8	13.0	1.8	1.8	3.6
4/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	884	884	1768	0	0	0.0	3.4	-	3.4	13.8	0.4	3.4	3.7
6/1	695	695	-	-	-	0.9	0.5	-	1.3	6.9	5.4	0.5	5.9
6/2	510	510	-	-	-	0.6	0.3	-	0.9	6.2	3.5	0.3	3.8
7/1	67	67	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
7/2	568	568	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
8/1	1112	1112	-	-	-	0.0	0.6	-	0.6	1.8	0.0	0.6	0.6
8/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	834	834	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
9/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	429	429	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/2	58	58	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
11/1	76	76	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	655	655	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	92	92	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	60	60	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	775	775	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

15/1	617	617	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	614	614	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1													
PRC for Signalised Lanes (%):				87.2		Total Delay for Signalised Lanes (pcuHr):				3.16		Cycle Time (s): 60	
PRC Over All Lanes (%):				2.6		Total Delay Over All Lanes(pcuHr):				12.40			

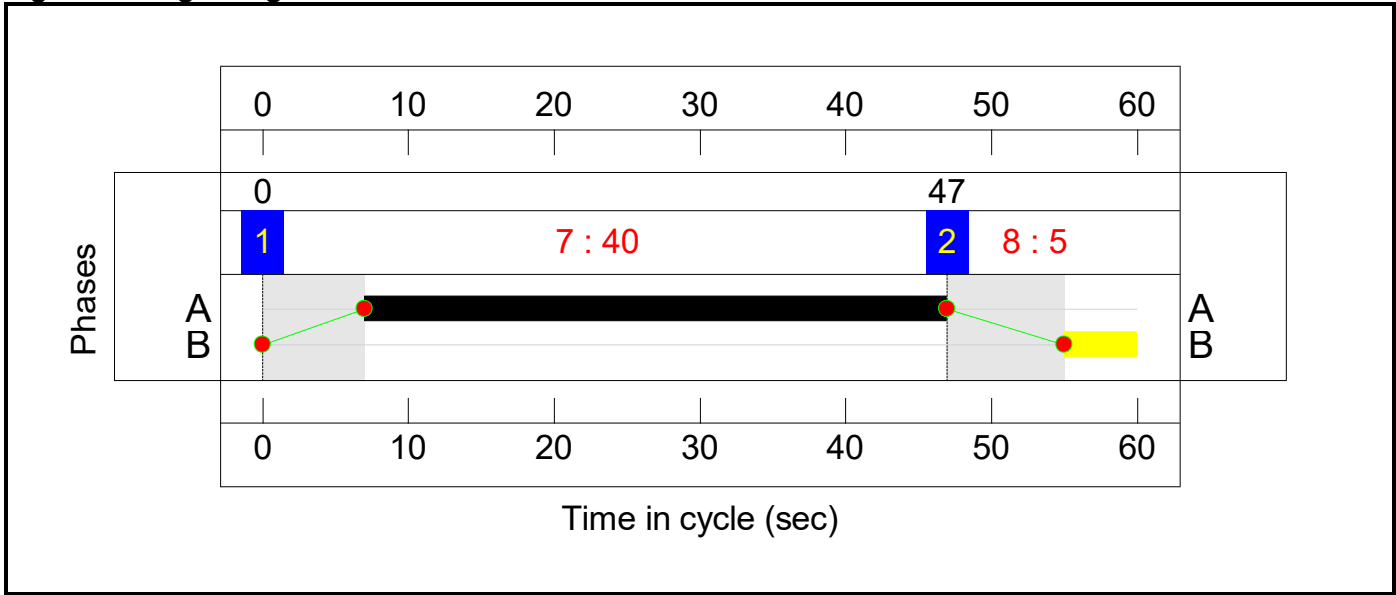
Stage Sequence Diagram



Stage Timings

Stage	1	2
Duration	40	5
Change Point	0	47

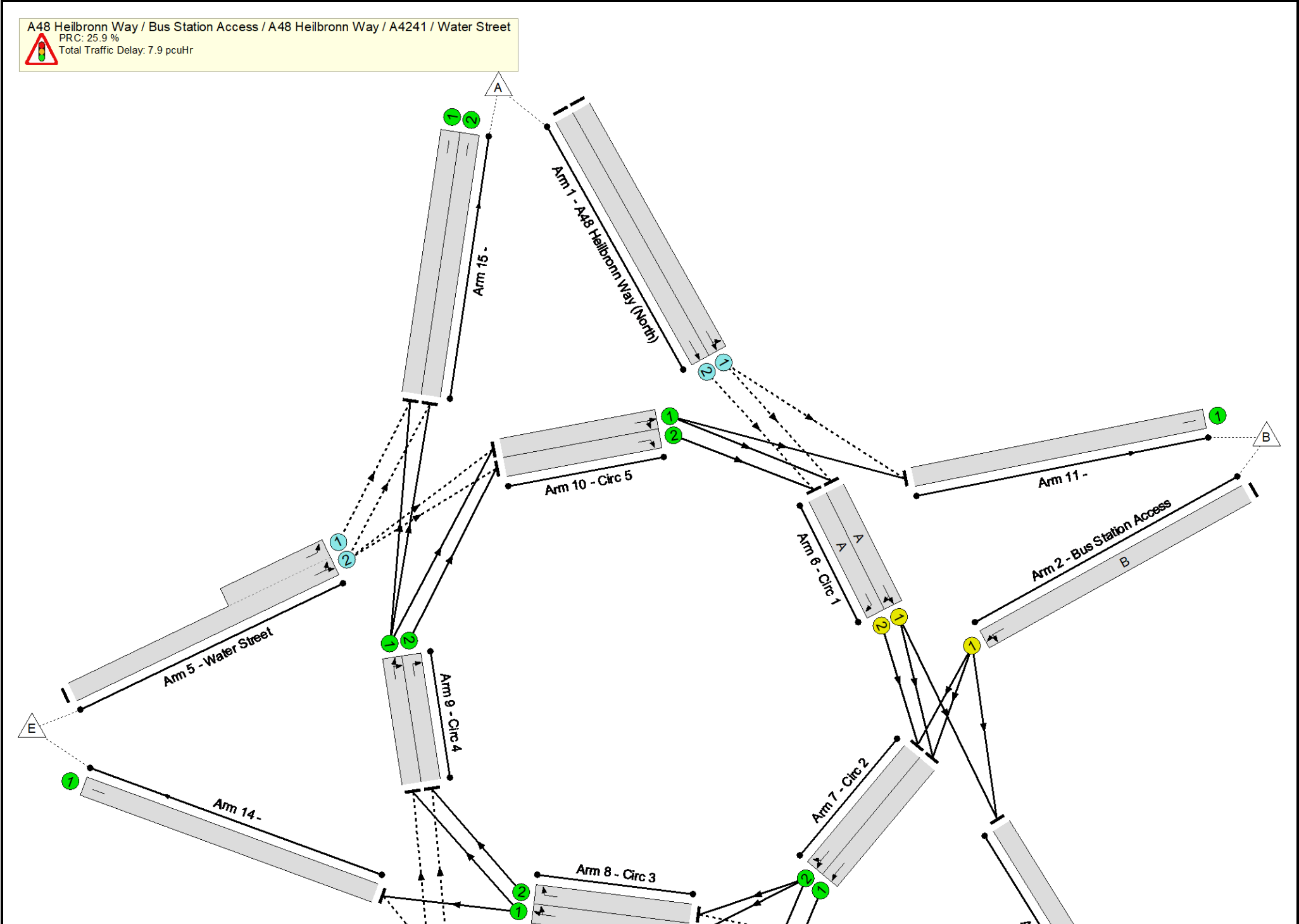
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	71.5%
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	N/A	-	-		-	-	-	-	-	-	71.5%
1/1	A48 Heilbronn Way (North) Ahead Left	O	N/A	N/A	-		-	-	-	535	2015	915	58.5%
1/2	A48 Heilbronn Way (North) Ahead	O	N/A	N/A	-		-	-	-	559	2015	894	62.5%
2/1	Bus Station Access Ahead Left	U	N/A	N/A	B		1	5	-	76	2045	205	37.2%
3/1	A48 Heilbronn Way (South) Ahead Left	O	N/A	N/A	-		-	-	-	487	1985	681	71.5%
3/2	A48 Heilbronn Way (South) Ahead	O	N/A	N/A	-		-	-	-	0	1985	1985	0.0%
4/1	A4241 Ahead Left	O	N/A	N/A	-		-	-	-	123	1975	665	18.5%
4/2	A4241 Ahead	O	N/A	N/A	-		-	-	-	0	1975	987	0.0%
5/2+5/1	Water Street Ahead Left	O	N/A	N/A	-		-	-	-	614	1975:1975	1274	48.2%
6/1	Circ 1 Right Ahead	U	N/A	N/A	A		1	40	-	719	2115	1445	49.7%
6/2	Circ 1 Right	U	N/A	N/A	A		1	40	-	614	1965	1343	45.7%
7/1	Circ 2 Ahead	U	N/A	N/A	-		-	-	-	358	2115	2115	16.9%
7/2	Circ 2 Right Ahead	U	N/A	N/A	-		-	-	-	662	2035	2035	32.5%
8/1	Circ 3 Right Ahead	U	N/A	N/A	-		-	-	-	1018	2115	2115	48.1%
8/2	Circ 3 Right	U	N/A	N/A	-		-	-	-	0	2105	2105	0.0%

Full Input Data And Results

9/1	Circ 4 Right Ahead	U	N/A	N/A	-		-	-	-	312	2115	2115	14.8%
9/2	Circ 4 Right	U	N/A	N/A	-		-	-	-	0	2115	2115	0.0%
10/1	Circ 5 Right Ahead	U	N/A	N/A	-		-	-	-	265	1995	1995	13.3%
10/2	Circ 5 Right	U	N/A	N/A	-		-	-	-	55	2055	2055	2.7%
11/1		U	N/A	N/A	-		-	-	-	81	Inf	Inf	0.0%
12/1		U	N/A	N/A	-		-	-	-	389	Inf	Inf	0.0%
13/1		U	N/A	N/A	-		-	-	-	431	Inf	Inf	0.0%
13/2		U	N/A	N/A	-		-	-	-	58	Inf	Inf	0.0%
14/1		U	N/A	N/A	-		-	-	-	829	Inf	Inf	0.0%
15/1		U	N/A	N/A	-		-	-	-	303	Inf	Inf	0.0%
15/2		U	N/A	N/A	-		-	-	-	303	Inf	Inf	0.0%

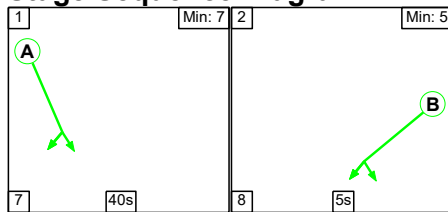
Full Input Data And Results

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	-	-	2932	0	0	2.4	5.5	0.0	7.9	-	-	-	-
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	2932	0	0	2.4	5.5	0.0	7.9	-	-	-	-
1/1	535	535	535	0	0	0.0	0.7	-	0.7	4.7	0.0	0.7	0.7
1/2	559	559	559	0	0	0.0	0.8	-	0.8	5.3	0.0	0.8	0.8
2/1	76	76	-	-	-	0.5	0.3	-	0.8	39.2	1.2	0.3	1.5
3/1	487	487	487	0	0	0.2	1.2	-	1.4	10.6	3.4	1.2	4.6
3/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	123	123	123	0	0	0.0	0.1	-	0.1	3.3	0.0	0.1	0.1
4/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	614	614	1228	0	0	0.0	0.5	-	0.5	2.7	0.0	0.5	0.5
6/1	719	719	-	-	-	0.9	0.5	-	1.4	7.0	5.6	0.5	6.1
6/2	614	614	-	-	-	0.7	0.4	-	1.2	6.8	4.6	0.4	5.0
7/1	358	358	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
7/2	662	662	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
8/1	1018	1018	-	-	-	0.0	0.5	-	0.5	1.6	0.0	0.5	0.5
8/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	312	312	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
9/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	265	265	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
10/2	55	55	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
11/1	81	81	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	389	389	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	431	431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	58	58	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	829	829	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

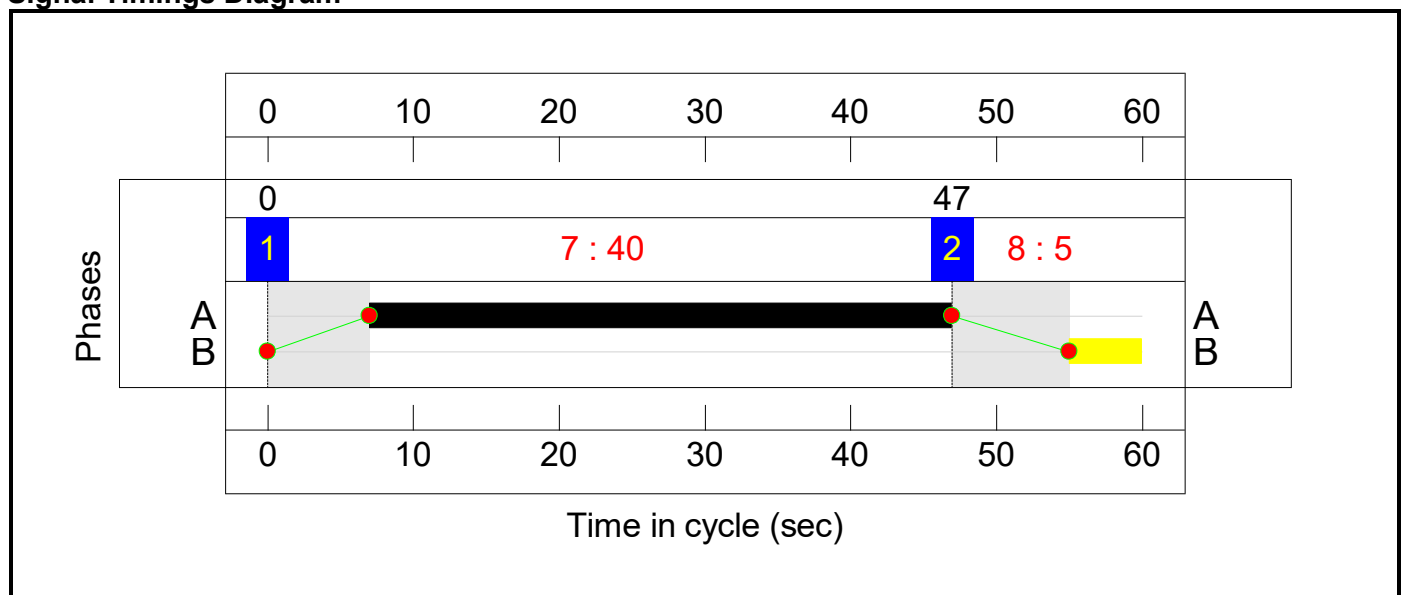
Full Input Data And Results

15/1	303	303	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	303	303	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalled Lanes (%): 80.9 Total Delay for Signalled Lanes (pcuHr): 3.40 Cycle Time (s): 60 PRC Over All Lanes (%): 25.9 Total Delay Over All Lanes(pcuHr): 7.92													

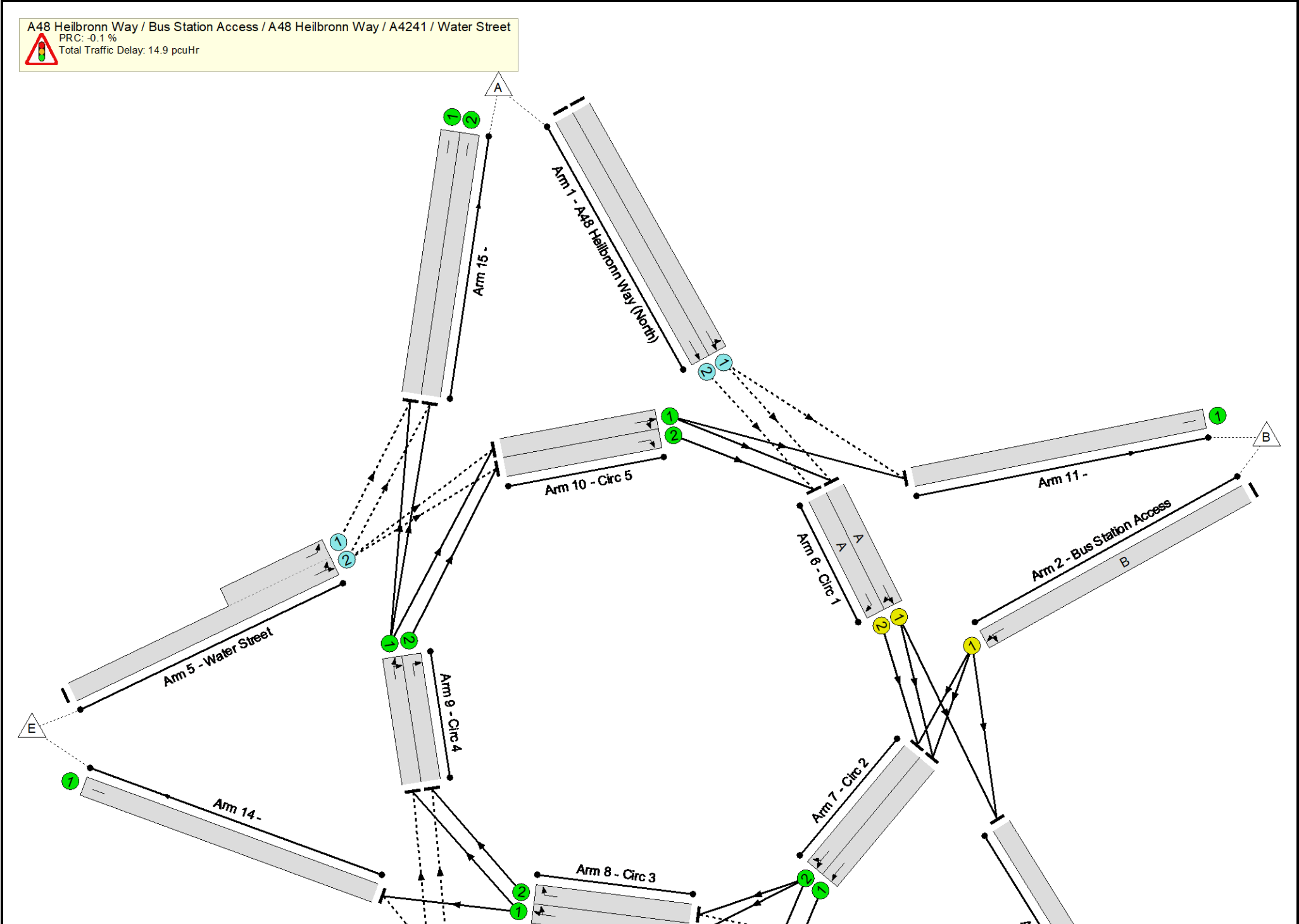
Stage Sequence Diagram



Stage	1	2
Duration	40	5
Change Point	0	47



Full Input Data And Results



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	90.1%
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	N/A	-	-		-	-	-	-	-	-	90.1%
1/1	A48 Heilbronn Way (North) Ahead Left	O	N/A	N/A	-		-	-	-	342	2015	862	39.7%
1/2	A48 Heilbronn Way (North) Ahead	O	N/A	N/A	-		-	-	-	452	2015	837	54.0%
2/1	Bus Station Access Ahead Left	U	N/A	N/A	B		1	5	-	85	2045	205	41.6%
3/1	A48 Heilbronn Way (South) Ahead Left	O	N/A	N/A	-		-	-	-	629	1985	795	79.1%
3/2	A48 Heilbronn Way (South) Ahead	O	N/A	N/A	-		-	-	-	0	1985	1985	0.0%
4/1	A4241 Ahead Left	O	N/A	N/A	-		-	-	-	558	1975	634	88.1%
4/2	A4241 Ahead	O	N/A	N/A	-		-	-	-	0	1975	953	0.0%
5/2+5/1	Water Street Ahead Left	O	N/A	N/A	-		-	-	-	884	1975:1975	981	90.1%
6/1	Circ 1 Right Ahead	U	N/A	N/A	A		1	40	-	702	2115	1445	48.6%
6/2	Circ 1 Right	U	N/A	N/A	A		1	40	-	510	1965	1343	38.0%
7/1	Circ 2 Ahead	U	N/A	N/A	-		-	-	-	67	2115	2115	3.2%
7/2	Circ 2 Right Ahead	U	N/A	N/A	-		-	-	-	568	2035	2035	27.9%
8/1	Circ 3 Right Ahead	U	N/A	N/A	-		-	-	-	1112	2115	2115	52.6%
8/2	Circ 3 Right	U	N/A	N/A	-		-	-	-	0	2105	2105	0.0%

Full Input Data And Results

9/1	Circ 4 Right Ahead	U	N/A	N/A	-		-	-	-	895	2115	2115	42.3%
9/2	Circ 4 Right	U	N/A	N/A	-		-	-	-	0	2115	2115	0.0%
10/1	Circ 5 Right Ahead	U	N/A	N/A	-		-	-	-	436	1995	1995	21.9%
10/2	Circ 5 Right	U	N/A	N/A	-		-	-	-	58	2055	2055	2.8%
11/1		U	N/A	N/A	-		-	-	-	76	Inf	Inf	0.0%
12/1		U	N/A	N/A	-		-	-	-	662	Inf	Inf	0.0%
13/1		U	N/A	N/A	-		-	-	-	92	Inf	Inf	0.0%
13/2		U	N/A	N/A	-		-	-	-	60	Inf	Inf	0.0%
14/1		U	N/A	N/A	-		-	-	-	775	Inf	Inf	0.0%
15/1		U	N/A	N/A	-		-	-	-	644	Inf	Inf	0.0%
15/2		U	N/A	N/A	-		-	-	-	641	Inf	Inf	0.0%

Full 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	-	-	3749	0	0	2.2	12.7	0.0	14.9	-	-	-	-
A48 Heilbronn Way / Bus Station Access / A48 Heilbronn Way / A4241 / Water Street	-	-	3749	0	0	2.2	12.7	0.0	14.9	-	-	-	-
1/1	342	342	342	0	0	0.0	0.3	-	0.3	3.5	0.0	0.3	0.3
1/2	452	452	452	0	0	0.0	0.6	-	0.6	4.7	0.0	0.6	0.6
2/1	85	85	-	-	-	0.6	0.4	-	1.0	40.4	1.3	0.4	1.7
3/1	629	629	629	0	0	0.1	1.8	-	1.9	11.0	3.0	1.8	4.8
3/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	558	558	558	0	0	0.1	3.4	-	3.5	22.4	4.0	3.4	7.4
4/2	0	0	0	0	0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	884	884	1768	0	0	0.0	4.2	-	4.2	17.0	0.7	4.2	4.9
6/1	702	702	-	-	-	0.9	0.5	-	1.4	6.9	5.5	0.5	5.9
6/2	510	510	-	-	-	0.6	0.3	-	0.9	6.2	3.5	0.3	3.8
7/1	67	67	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
7/2	568	568	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
8/1	1112	1112	-	-	-	0.0	0.6	-	0.6	1.8	0.0	0.6	0.6
8/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	895	895	-	-	-	0.0	0.4	-	0.4	1.5	0.0	0.4	0.4
9/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	436	436	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
10/2	58	58	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
11/1	76	76	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	662	662	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	92	92	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	60	60	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	775	775	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

15/1	644	644	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
15/2	641	641	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 PRC for Signalised Lanes (%): 85.3 PRC Over All Lanes (%): -0.1 Total Delay for Signalised Lanes (pcuHr): 3.19 Total Delay Over All Lanes(pcuHr): 14.94 Cycle Time (s): 60													

S|C|P

APPENDIX K

Junctions 9									
ARCADY 9 - Roundabout Module									
Version: 9.5.1.7462 © Copyright TRL Limited, 2019									
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: Junction 3 (Harbourside Road, Industrial Unit Access).j9

Path: M:\Job Library\2022\220352 - Phoenix Wharf, Port Talbot\Traffic Data\Junction Assessments\June 2023\ARCADY

Report generation date: 29/06/2023 15:27:46

»2022 Surveyed Flows , AM

»2022 Surveyed Flows , PM

»2026 Do Minimum, AM

»2026 Do Minimum, PM

»2026 Do Something, AM

»2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Surveyed Flows									
Arm 1	D1	0.0	2.21	0.01	A	D2	0.0	2.08	0.03	A
Arm 2		0.1	1.90	0.08	A		0.3	2.30	0.23	A
Arm 3		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Arm 4		0.3	2.05	0.20	A		0.1	1.74	0.07	A
Arm 5		0.0	2.86	0.03	A		0.0	2.54	0.02	A
	2026 Do Minimum									
Arm 1	D3	0.0	2.22	0.01	A	D4	0.0	2.09	0.03	A
Arm 2		0.1	1.90	0.08	A		0.3	2.33	0.24	A
Arm 3		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Arm 4		0.3	2.07	0.21	A		0.1	1.74	0.07	A
Arm 5		0.0	2.88	0.03	A		0.0	2.55	0.02	A
	2026 Do Something									
Arm 1	D5	0.0	2.27	0.01	A	D6	0.0	2.09	0.03	A
Arm 2		0.1	1.90	0.08	A		0.4	2.44	0.28	A
Arm 3		0.0	0.00	0.00	A		0.0	0.00	0.00	A
Arm 4		0.3	2.16	0.24	A		0.1	1.74	0.07	A
Arm 5		0.0	2.95	0.03	A		0.0	2.55	0.02	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	A4241 / Industrial Unit Access / Harbourside Road / Industrial Unit Access (West)
Location	
Site number	
Date	10/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\abbie.moore
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

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Surveyed Flows , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 / Industrial Unit Access / Harbourside Road / Industrial Unit Access (West)	Standard Roundabout		1, 2, 3, 4, 5	2.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Harbourside Road	
2	A4241 (South)	
3	Access (West)	
4	A4241 (North)	
5	Access (East)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.51	7.22	20.9	89.3	70.0	26.0	
2	7.16	7.16	0.0	21.7	70.0	44.0	
3	3.40	8.30	8.1	19.1	70.0	43.0	
4	7.20	7.30	0.8	49.1	70.0	34.0	
5	3.80	7.30	6.6	21.6	70.0	36.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.545	1873
2	0.553	2072
3	0.457	1463
4	0.594	2237
5	0.473	1518

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	9	100.000
2		✓	148	100.000
3		✓	2	100.000
4		✓	410	100.000
5		✓	35	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
	1	2	3	4	5	
From	1	0	5	0	4	0
	2	27	0	0	102	19
	3	0	1	0	0	1
	4	43	348	2	1	16
	5	0	21	0	14	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
	1	2	3	4	5	
From	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	0	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.01	2.21	0.0	A
2	0.08	1.90	0.1	A
3	0.00	0.00	0.0	A
4	0.20	2.05	0.3	A
5	0.03	2.86	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	7	290	1715	0.004	7	0.0	2.107	A
2	111	16	2064	0.054	111	0.1	1.843	A
3	0	125	1406	0.000	0	0.0	0.000	A
4	309	35	2216	0.139	308	0.2	1.886	A
5	26	316	1368	0.019	26	0.0	2.681	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	8	347	1684	0.005	8	0.0	2.148	A
2	133	19	2062	0.065	133	0.1	1.865	A
3	0	150	1395	0.000	0	0.0	0.000	A
4	369	41	2212	0.167	368	0.2	1.952	A
5	31	378	1339	0.024	31	0.0	2.752	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	10	425	1641	0.006	10	0.0	2.206	A
2	163	23	2060	0.079	163	0.1	1.897	A
3	0	184	1379	0.000	0	0.0	0.000	A
4	451	51	2206	0.205	451	0.3	2.050	A
5	39	463	1299	0.030	39	0.0	2.855	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	10	425	1641	0.006	10	0.0	2.206	A
2	163	23	2060	0.079	163	0.1	1.897	A
3	0	184	1379	0.000	0	0.0	0.000	A
4	451	51	2206	0.205	451	0.3	2.050	A
5	39	464	1299	0.030	39	0.0	2.855	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	8	347	1683	0.005	8	0.0	2.148	A
2	133	19	2062	0.065	133	0.1	1.868	A
3	0	150	1394	0.000	0	0.0	0.000	A
4	369	41	2212	0.167	369	0.2	1.953	A
5	31	379	1339	0.024	31	0.0	2.754	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	7	291	1714	0.004	7	0.0	2.108	A
2	111	16	2064	0.054	111	0.1	1.843	A
3	0	126	1406	0.000	0	0.0	0.000	A
4	309	35	2216	0.139	309	0.2	1.889	A
5	26	317	1368	0.019	26	0.0	2.684	A

2022 Surveyed Flows , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 / Industrial Unit Access / Harbourside Road / Industrial Unit Access (West)	Standard Roundabout		1, 2, 3, 4, 5	2.16	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	43	100.000
2		✓	435	100.000
3		✓	0	100.000
4		✓	147	100.000
5		✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0	17	0	26	0
	2	3	0	0	432	0
	3	0	0	0	0	0
	4	2	139	0	2	4
	5	0	9	0	15	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1	2	3	4	5
	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	0	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.03	2.08	0.0	A
2	0.23	2.30	0.3	A
3	0.00	0.00	0.0	A
4	0.07	1.74	0.1	A
5	0.02	2.54	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	32	124	1805	0.018	32	0.0	2.030	A
2	327	32	2055	0.159	327	0.2	2.082	A
3	0	359	1299	0.000	0	0.0	0.000	A
4	111	2	2235	0.050	110	0.1	1.693	A
5	18	110	1466	0.012	18	0.0	2.485	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	39	148	1792	0.022	39	0.0	2.053	A
2	391	39	2051	0.191	391	0.2	2.168	A
3	0	430	1267	0.000	0	0.0	0.000	A
4	132	3	2235	0.059	132	0.1	1.711	A
5	22	131	1456	0.015	22	0.0	2.509	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	47	182	1774	0.027	47	0.0	2.084	A
2	479	47	2046	0.234	479	0.3	2.296	A
3	0	526	1223	0.000	0	0.0	0.000	A
4	162	3	2235	0.072	162	0.1	1.736	A
5	26	161	1442	0.018	26	0.0	2.542	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	47	182	1774	0.027	47	0.0	2.085	A
2	479	47	2046	0.234	479	0.3	2.296	A
3	0	526	1223	0.000	0	0.0	0.000	A
4	162	3	2235	0.072	162	0.1	1.736	A
5	26	161	1442	0.018	26	0.0	2.542	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	39	148	1792	0.022	39	0.0	2.054	A
2	391	39	2051	0.191	391	0.2	2.169	A
3	0	430	1267	0.000	0	0.0	0.000	A
4	132	3	2235	0.059	132	0.1	1.713	A
5	22	131	1456	0.015	22	0.0	2.511	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	32	124	1805	0.018	32	0.0	2.032	A
2	327	32	2054	0.159	328	0.2	2.086	A
3	0	360	1299	0.000	0	0.0	0.000	A
4	111	2	2235	0.050	111	0.1	1.693	A
5	18	110	1466	0.012	18	0.0	2.487	A

2026 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 / Industrial Unit Access / Harbourside Road / Industrial Unit Access (West)	Standard Roundabout		1, 2, 3, 4, 5	2.08	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	9	100.000
2		✓	153	100.000
3		✓	2	100.000
4		✓	428	100.000
5		✓	35	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0	5	0	4	0
	2	28	0	0	106	19
	3	0	1	0	0	1
	4	44	365	2	1	16
	5	0	21	0	14	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1	2	3	4	5
From	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	0	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.01	2.22	0.0	A
2	0.08	1.90	0.1	A
3	0.00	0.00	0.0	A
4	0.21	2.07	0.3	A
5	0.03	2.88	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	7	303	1708	0.004	7	0.0	2.116	A
2	115	16	2064	0.056	115	0.1	1.846	A
3	0	129	1404	0.000	0	0.0	0.000	A
4	322	35	2216	0.145	322	0.2	1.900	A
5	26	331	1362	0.019	26	0.0	2.695	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	8	362	1675	0.005	8	0.0	2.158	A
2	138	19	2062	0.067	137	0.1	1.869	A
3	0	155	1392	0.000	0	0.0	0.000	A
4	385	42	2211	0.174	385	0.2	1.970	A
5	31	395	1331	0.024	31	0.0	2.769	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	10	443	1631	0.006	10	0.0	2.220	A
2	168	23	2060	0.082	168	0.1	1.902	A
3	0	189	1377	0.000	0	0.0	0.000	A
4	471	52	2206	0.214	471	0.3	2.075	A
5	39	484	1289	0.030	39	0.0	2.878	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	10	444	1631	0.006	10	0.0	2.220	A
2	168	23	2060	0.082	168	0.1	1.902	A
3	0	189	1377	0.000	0	0.0	0.000	A
4	471	52	2206	0.214	471	0.3	2.075	A
5	39	484	1289	0.030	39	0.0	2.878	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	8	363	1675	0.005	8	0.0	2.159	A
2	138	19	2062	0.067	138	0.1	1.872	A
3	0	155	1392	0.000	0	0.0	0.000	A
4	385	42	2211	0.174	385	0.2	1.972	A
5	31	396	1331	0.024	31	0.0	2.769	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	7	304	1707	0.004	7	0.0	2.118	A
2	115	16	2064	0.056	115	0.1	1.846	A
3	0	130	1404	0.000	0	0.0	0.000	A
4	322	35	2216	0.145	322	0.2	1.900	A
5	26	331	1361	0.019	26	0.0	2.696	A

2026 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 / Industrial Unit Access / Harbourside Road / Industrial Unit Access (West)	Standard Roundabout		1, 2, 3, 4, 5	2.19	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	45	100.000
2		✓	455	100.000
3		✓	0	100.000
4		✓	152	100.000
5		✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0	18	0	27	0
	2	3	0	0	452	0
	3	0	0	0	0	0
	4	2	144	0	2	4
	5	0	9	0	15	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1	2	3	4	5
	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	0	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.03	2.09	0.0	A
2	0.24	2.33	0.3	A
3	0.00	0.00	0.0	A
4	0.07	1.74	0.1	A
5	0.02	2.55	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	34	128	1803	0.019	34	0.0	2.034	A
2	343	33	2054	0.167	342	0.2	2.101	A
3	0	375	1292	0.000	0	0.0	0.000	A
4	114	2	2235	0.051	114	0.1	1.696	A
5	18	113	1464	0.012	18	0.0	2.488	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	40	153	1789	0.023	40	0.0	2.058	A
2	409	40	2051	0.199	409	0.2	2.192	A
3	0	448	1258	0.000	0	0.0	0.000	A
4	137	3	2235	0.061	137	0.1	1.714	A
5	22	136	1454	0.015	22	0.0	2.512	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	50	187	1771	0.028	50	0.0	2.091	A
2	501	48	2046	0.245	501	0.3	2.330	A
3	0	549	1212	0.000	0	0.0	0.000	A
4	167	3	2235	0.075	167	0.1	1.740	A
5	26	166	1439	0.018	26	0.0	2.547	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	50	187	1771	0.028	50	0.0	2.091	A
2	501	48	2046	0.245	501	0.3	2.330	A
3	0	549	1212	0.000	0	0.0	0.000	A
4	167	3	2235	0.075	167	0.1	1.740	A
5	26	166	1439	0.018	26	0.0	2.547	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	40	153	1789	0.023	40	0.0	2.059	A
2	409	40	2050	0.199	409	0.2	2.193	A
3	0	449	1258	0.000	0	0.0	0.000	A
4	137	3	2235	0.061	137	0.1	1.714	A
5	22	136	1454	0.015	22	0.0	2.513	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	34	128	1803	0.019	34	0.0	2.034	A
2	343	33	2054	0.167	343	0.2	2.105	A
3	0	376	1291	0.000	0	0.0	0.000	A
4	114	2	2235	0.051	114	0.1	1.699	A
5	18	114	1464	0.012	18	0.0	2.490	A

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 / Industrial Unit Access / Harbourside Road / Industrial Unit Access (West)	Standard Roundabout		1, 2, 3, 4, 5	2.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	9	100.000
2		✓	153	100.000
3		✓	2	100.000
4		✓	490	100.000
5		✓	35	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0	5	0	4	0
	2	28	0	0	106	19
	3	0	1	0	0	1
	4	44	427	2	1	16
	5	0	21	0	14	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1	2	3	4	5
From	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	0	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.01	2.27	0.0	A
2	0.08	1.90	0.1	A
3	0.00	0.00	0.0	A
4	0.24	2.16	0.3	A
5	0.03	2.95	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	7	349	1682	0.004	7	0.0	2.148	A
2	115	16	2064	0.056	115	0.1	1.846	A
3	0	129	1404	0.000	0	0.0	0.000	A
4	369	35	2216	0.167	368	0.2	1.947	A
5	26	377	1340	0.020	26	0.0	2.740	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	8	418	1645	0.005	8	0.0	2.198	A
2	138	19	2062	0.067	137	0.1	1.869	A
3	0	155	1392	0.000	0	0.0	0.000	A
4	440	42	2211	0.199	440	0.2	2.032	A
5	31	451	1305	0.024	31	0.0	2.826	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	10	512	1594	0.006	10	0.0	2.272	A
2	168	23	2060	0.082	168	0.1	1.902	A
3	0	189	1377	0.000	0	0.0	0.000	A
4	540	52	2206	0.245	539	0.3	2.160	A
5	39	552	1257	0.031	39	0.0	2.954	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	10	512	1594	0.006	10	0.0	2.272	A
2	168	23	2060	0.082	168	0.1	1.902	A
3	0	189	1377	0.000	0	0.0	0.000	A
4	540	52	2206	0.245	539	0.3	2.160	A
5	39	553	1257	0.031	39	0.0	2.954	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	8	418	1645	0.005	8	0.0	2.201	A
2	138	19	2062	0.067	138	0.1	1.872	A
3	0	155	1392	0.000	0	0.0	0.000	A
4	440	42	2211	0.199	441	0.2	2.033	A
5	31	452	1305	0.024	31	0.0	2.829	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	7	350	1682	0.004	7	0.0	2.148	A
2	115	16	2064	0.056	115	0.1	1.849	A
3	0	130	1404	0.000	0	0.0	0.000	A
4	369	35	2216	0.167	369	0.2	1.949	A
5	26	378	1339	0.020	26	0.0	2.743	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 / Industrial Unit Access / Harbourside Road / Industrial Unit Access (West)	Standard Roundabout		1, 2, 3, 4, 5	2.28	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	45	100.000
2		✓	517	100.000
3		✓	0	100.000
4		✓	152	100.000
5		✓	24	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
From		1	2	3	4	5
	1	0	18	0	27	0
	2	3	0	0	514	0
	3	0	0	0	0	0
	4	2	144	0	2	4
	5	0	9	0	15	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1	2	3	4	5
	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
	4	0	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.03	2.09	0.0	A
2	0.28	2.44	0.4	A
3	0.00	0.00	0.0	A
4	0.07	1.74	0.1	A
5	0.02	2.55	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	34	128	1803	0.019	34	0.0	2.034	A
2	389	33	2054	0.189	388	0.2	2.160	A
3	0	421	1271	0.000	0	0.0	0.000	A
4	114	2	2235	0.051	114	0.1	1.696	A
5	18	113	1464	0.012	18	0.0	2.488	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	40	153	1789	0.023	40	0.0	2.058	A
2	465	40	2051	0.227	465	0.3	2.269	A
3	0	504	1233	0.000	0	0.0	0.000	A
4	137	3	2235	0.061	137	0.1	1.714	A
5	22	136	1454	0.015	22	0.0	2.512	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	50	187	1771	0.028	50	0.0	2.091	A
2	569	48	2046	0.278	569	0.4	2.437	A
3	0	617	1181	0.000	0	0.0	0.000	A
4	167	3	2235	0.075	167	0.1	1.740	A
5	26	166	1439	0.018	26	0.0	2.547	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	50	187	1771	0.028	50	0.0	2.091	A
2	569	48	2046	0.278	569	0.4	2.437	A
3	0	618	1181	0.000	0	0.0	0.000	A
4	167	3	2235	0.075	167	0.1	1.740	A
5	26	166	1439	0.018	26	0.0	2.547	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	40	153	1789	0.023	40	0.0	2.058	A
2	465	40	2050	0.227	465	0.3	2.272	A
3	0	505	1232	0.000	0	0.0	0.000	A
4	137	3	2235	0.061	137	0.1	1.714	A
5	22	136	1454	0.015	22	0.0	2.515	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	34	128	1803	0.019	34	0.0	2.036	A
2	389	33	2054	0.189	389	0.2	2.164	A
3	0	423	1270	0.000	0	0.0	0.000	A
4	114	2	2235	0.051	114	0.1	1.699	A
5	18	114	1464	0.012	18	0.0	2.490	A

S|C|P

APPENDIX L

Junctions 9									
ARCADY 9 - Roundabout Module									
Version: 9.5.1.7462 © Copyright TRL Limited, 2019									
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: Junction 4.j9

Path: M:\Job Library\2022\220352 - Phoenix Wharf, Port Talbot\Traffic Data\Junction Assessments\June 2023\ARCADY

Report generation date: 29/06/2023 15:33:35

- »2022 Surveyed Flows, AM
- »2022 Surveyed Flows, PM
- »2026 Do Minimum, AM
- »2026 Do Minimum, PM
- »2026 Do Something, AM
- »2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Surveyed Flows									
Arm 1	D1	0.3	1.79	0.21	A	D2	0.6	2.29	0.38	A
Arm 2		0.0	2.34	0.03	A		0.0	2.76	0.03	A
Arm 3		0.2	1.74	0.17	A		0.2	1.90	0.17	A
Arm 4		0.3	2.30	0.21	A		0.1	1.99	0.09	A
	2026 Do Minimum									
Arm 1	D3	0.3	1.81	0.21	A	D4	0.7	2.36	0.40	A
Arm 2		0.0	2.36	0.03	A		0.0	2.82	0.03	A
Arm 3		0.2	1.76	0.18	A		0.2	1.93	0.18	A
Arm 4		0.3	2.35	0.22	A		0.1	2.01	0.10	A
	2026 Do Something									
Arm 1	D5	0.3	1.81	0.21	A	D6	0.8	2.53	0.44	A
Arm 2		0.0	2.36	0.03	A		0.0	2.94	0.03	A
Arm 3		0.2	1.78	0.19	A		0.2	1.98	0.18	A
Arm 4		0.3	2.49	0.26	A		0.1	2.01	0.10	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	A4241 Harbour Way / North Bank Road / A4241 (West) / A4241 (North)
Location	
Site number	
Date	10/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\abbie.moore
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

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Surveyed Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / North Bank Road/ A4241 (West) / A4241 (North)	Standard Roundabout		1, 2, 3, 4	1.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A4242 Harbour Way	
2	North Bank Road	
3	A4241 (West)	
4	A4242 (North)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.00	8.80	12.7	53.8	69.0	30.0	
2	3.80	7.33	21.9	35.0	69.0	33.0	
3	7.70	8.45	15.2	50.0	69.0	31.0	
4	7.10	7.24	2.8	30.2	69.0	30.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.656	2573
2	0.541	1877
3	0.658	2595
4	0.597	2224

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	472	100.000
2		✓	50	100.000
3		✓	384	100.000
4		✓	374	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	11	359	102
	2	12	2	14	22
	3	348	17	0	19
	4	332	23	18	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.21	1.79	0.3	A
2	0.03	2.34	0.0	A
3	0.17	1.74	0.2	A
4	0.21	2.30	0.3	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	355	46	2543	0.140	355	0.2	1.644	A
2	38	361	1682	0.022	38	0.0	2.189	A
3	289	104	2526	0.114	289	0.1	1.608	A
4	282	285	2054	0.137	281	0.2	2.030	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	424	55	2537	0.167	424	0.2	1.703	A
2	45	431	1643	0.027	45	0.0	2.251	A
3	345	125	2513	0.137	345	0.2	1.660	A
4	336	341	2021	0.166	336	0.2	2.136	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	520	67	2529	0.206	519	0.3	1.790	A
2	55	528	1591	0.035	55	0.0	2.343	A
3	423	153	2494	0.170	423	0.2	1.737	A
4	412	417	1975	0.209	412	0.3	2.302	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	520	67	2529	0.206	520	0.3	1.790	A
2	55	528	1591	0.035	55	0.0	2.343	A
3	423	153	2494	0.170	423	0.2	1.737	A
4	412	417	1975	0.209	412	0.3	2.302	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	424	55	2537	0.167	425	0.2	1.703	A
2	45	432	1643	0.027	45	0.0	2.253	A
3	345	125	2512	0.137	345	0.2	1.663	A
4	336	341	2020	0.166	336	0.2	2.139	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	355	46	2543	0.140	356	0.2	1.645	A
2	38	362	1681	0.022	38	0.0	2.190	A
3	289	105	2526	0.114	289	0.1	1.611	A
4	282	285	2054	0.137	282	0.2	2.033	A

2022 Surveyed Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / North Bank Road/ A4241 (West) / A4241 (North)	Standard Roundabout		1, 2, 3, 4	2.18	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	892	100.000
2		✓	37	100.000
3		✓	350	100.000
4		✓	167	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	13	463	416
	2	14	0	10	13
	3	335	6	0	9
	4	144	6	17	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.38	2.29	0.6	A
2	0.03	2.76	0.0	A
3	0.17	1.90	0.2	A
4	0.09	1.99	0.1	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	672	22	2559	0.262	670	0.4	1.906	A
2	28	673	1513	0.018	28	0.0	2.424	A
3	263	333	2376	0.111	263	0.1	1.703	A
4	126	267	2065	0.061	125	0.1	1.855	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	802	26	2556	0.314	801	0.5	2.052	A
2	33	805	1441	0.023	33	0.0	2.556	A
3	315	398	2333	0.135	315	0.2	1.782	A
4	150	319	2033	0.074	150	0.1	1.910	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	982	32	2552	0.385	981	0.6	2.291	A
2	41	986	1344	0.030	41	0.0	2.762	A
3	385	487	2274	0.169	385	0.2	1.905	A
4	184	391	1991	0.092	184	0.1	1.992	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	982	32	2552	0.385	982	0.6	2.292	A
2	41	987	1343	0.030	41	0.0	2.763	A
3	385	488	2274	0.169	385	0.2	1.905	A
4	184	391	1991	0.092	184	0.1	1.992	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	802	26	2556	0.314	803	0.5	2.053	A
2	33	806	1441	0.023	33	0.0	2.559	A
3	315	399	2332	0.135	315	0.2	1.783	A
4	150	319	2033	0.074	150	0.1	1.910	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	672	22	2559	0.262	672	0.4	1.910	A
2	28	675	1512	0.018	28	0.0	2.425	A
3	263	334	2375	0.111	264	0.1	1.704	A
4	126	267	2064	0.061	126	0.1	1.856	A

2026 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / North Bank Road/ A4241 (West) / A4241 (North)	Standard Roundabout		1, 2, 3, 4	1.97	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	490	100.000
2		✓	50	100.000
3		✓	402	100.000
4		✓	391	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	11	373	106
	2	12	2	14	22
	3	365	17	0	20
	4	348	24	18	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.21	1.81	0.3	A
2	0.03	2.36	0.0	A
3	0.18	1.76	0.2	A
4	0.22	2.35	0.3	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	369	47	2542	0.145	368	0.2	1.655	A
2	38	374	1674	0.022	38	0.0	2.199	A
3	303	107	2524	0.120	302	0.1	1.619	A
4	294	298	2046	0.144	294	0.2	2.054	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	440	56	2536	0.174	440	0.2	1.716	A
2	45	448	1635	0.028	45	0.0	2.264	A
3	361	129	2510	0.144	361	0.2	1.674	A
4	352	356	2011	0.175	351	0.2	2.168	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	540	68	2528	0.213	539	0.3	1.809	A
2	55	548	1580	0.035	55	0.0	2.359	A
3	443	157	2491	0.178	442	0.2	1.756	A
4	430	436	1964	0.219	430	0.3	2.347	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	540	68	2528	0.213	539	0.3	1.809	A
2	55	548	1580	0.035	55	0.0	2.360	A
3	443	157	2491	0.178	443	0.2	1.756	A
4	430	436	1964	0.219	430	0.3	2.347	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	440	56	2536	0.174	441	0.2	1.719	A
2	45	448	1634	0.028	45	0.0	2.264	A
3	361	129	2510	0.144	362	0.2	1.674	A
4	352	356	2011	0.175	352	0.2	2.171	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	369	47	2542	0.145	369	0.2	1.658	A
2	38	375	1674	0.022	38	0.0	2.201	A
3	303	108	2524	0.120	303	0.1	1.622	A
4	294	298	2046	0.144	295	0.2	2.057	A

2026 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / North Bank Road/ A4241 (West) / A4241 (North)	Standard Roundabout		1, 2, 3, 4	2.23	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	934	100.000
2		✓	37	100.000
3		✓	362	100.000
4		✓	172	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	13	485	436
	2	14	0	10	13
	3	347	6	0	9
	4	149	6	17	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.40	2.36	0.7	A
2	0.03	2.82	0.0	A
3	0.18	1.93	0.2	A
4	0.10	2.01	0.1	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	703	22	2559	0.275	702	0.4	1.936	A
2	28	705	1496	0.019	28	0.0	2.452	A
3	273	348	2366	0.115	272	0.1	1.718	A
4	129	276	2059	0.063	129	0.1	1.864	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	840	26	2556	0.329	839	0.5	2.097	A
2	33	843	1421	0.023	33	0.0	2.593	A
3	325	416	2321	0.140	325	0.2	1.803	A
4	155	330	2027	0.076	155	0.1	1.922	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1028	32	2552	0.403	1028	0.7	2.360	A
2	41	1032	1319	0.031	41	0.0	2.816	A
3	399	509	2259	0.176	398	0.2	1.934	A
4	189	404	1983	0.096	189	0.1	2.007	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1028	32	2552	0.403	1028	0.7	2.362	A
2	41	1033	1318	0.031	41	0.0	2.817	A
3	399	510	2259	0.176	399	0.2	1.934	A
4	189	404	1983	0.096	189	0.1	2.007	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	840	26	2556	0.329	840	0.5	2.099	A
2	33	844	1420	0.023	33	0.0	2.594	A
3	325	417	2321	0.140	326	0.2	1.806	A
4	155	330	2027	0.076	155	0.1	1.922	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	703	22	2559	0.275	704	0.4	1.940	A
2	28	707	1495	0.019	28	0.0	2.455	A
3	273	349	2365	0.115	273	0.1	1.719	A
4	129	276	2059	0.063	130	0.1	1.867	A

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / North Bank Road/ A4241 (West) / A4241 (North)	Standard Roundabout		1, 2, 3, 4	2.04	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	490	100.000
2		✓	50	100.000
3		✓	432	100.000
4		✓	454	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	11	373	106
	2	12	2	14	22
	3	395	17	0	20
	4	411	24	18	1

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.21	1.81	0.3	A
2	0.03	2.36	0.0	A
3	0.19	1.78	0.2	A
4	0.26	2.49	0.3	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	369	47	2542	0.145	368	0.2	1.655	A
2	38	374	1674	0.022	38	0.0	2.199	A
3	325	107	2524	0.129	325	0.1	1.636	A
4	342	320	2033	0.168	341	0.2	2.126	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	440	56	2536	0.174	440	0.2	1.716	A
2	45	448	1635	0.028	45	0.0	2.264	A
3	388	129	2510	0.155	388	0.2	1.695	A
4	408	383	1995	0.205	408	0.3	2.267	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	540	68	2528	0.213	539	0.3	1.809	A
2	55	548	1580	0.035	55	0.0	2.359	A
3	476	157	2491	0.191	475	0.2	1.785	A
4	500	469	1944	0.257	500	0.3	2.492	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	540	68	2528	0.213	539	0.3	1.809	A
2	55	548	1580	0.035	55	0.0	2.360	A
3	476	157	2491	0.191	476	0.2	1.785	A
4	500	469	1944	0.257	500	0.3	2.492	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	440	56	2536	0.174	441	0.2	1.717	A
2	45	448	1634	0.028	45	0.0	2.266	A
3	388	129	2510	0.155	389	0.2	1.698	A
4	408	383	1995	0.205	408	0.3	2.270	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	369	47	2542	0.145	369	0.2	1.655	A
2	38	375	1674	0.022	38	0.0	2.201	A
3	325	108	2524	0.129	325	0.1	1.639	A
4	342	321	2032	0.168	342	0.2	2.129	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / North Bank Road/ A4241 (West) / A4241 (North)	Standard Roundabout		1, 2, 3, 4	2.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	1025	100.000
2		✓	37	100.000
3		✓	362	100.000
4		✓	172	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	13	514	498
	2	14	0	10	13
	3	347	6	0	9
	4	149	6	17	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.44	2.53	0.8	A
2	0.03	2.94	0.0	A
3	0.18	1.98	0.2	A
4	0.10	2.01	0.1	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	772	22	2559	0.302	770	0.4	2.011	A
2	28	773	1459	0.019	28	0.0	2.515	A
3	273	394	2335	0.117	272	0.1	1.744	A
4	129	276	2059	0.063	129	0.1	1.864	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	921	26	2556	0.361	921	0.6	2.202	A
2	33	925	1377	0.024	33	0.0	2.678	A
3	325	472	2284	0.142	325	0.2	1.836	A
4	155	330	2027	0.076	155	0.1	1.922	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1129	32	2552	0.442	1128	0.8	2.526	A
2	41	1132	1265	0.032	41	0.0	2.940	A
3	399	578	2215	0.180	398	0.2	1.982	A
4	189	404	1983	0.096	189	0.1	2.007	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1129	32	2552	0.442	1129	0.8	2.528	A
2	41	1133	1264	0.032	41	0.0	2.941	A
3	399	578	2214	0.180	399	0.2	1.982	A
4	189	404	1983	0.096	189	0.1	2.007	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	921	26	2556	0.361	922	0.6	2.204	A
2	33	926	1376	0.024	33	0.0	2.680	A
3	325	472	2284	0.142	326	0.2	1.837	A
4	155	330	2027	0.076	155	0.1	1.922	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	772	22	2559	0.302	772	0.4	2.015	A
2	28	775	1458	0.019	28	0.0	2.517	A
3	273	396	2334	0.117	273	0.1	1.745	A
4	129	276	2059	0.063	130	0.1	1.867	A

S|C|P

APPENDIX M

Junctions 9									
ARCADY 9 - Roundabout Module									
Version: 9.5.1.7462 © Copyright TRL Limited, 2019									
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk									
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Filename: Junction 5.j9

Path: M:\Job Library\2022\220352 - Phoenix Wharf, Port Talbot\Traffic Data\Junction Assessments\June 2023\ARCADY

Report generation date: 29/06/2023 15:40:47

- »2022 Surveyed Flows, AM
- »2022 Surveyed Flows, PM
- »2026 Do Minimum, AM
- »2026 Do Minimum, PM
- »2026 Do Something, AM
- »2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Surveyed Flows									
Arm 1	D1	0.2	1.53	0.18	A	D2	0.5	1.83	0.32	A
Arm 2		0.1	3.06	0.05	A		0.1	3.73	0.06	A
Arm 3		0.4	1.77	0.27	A		0.2	1.58	0.19	A
Arm 4		0.0	3.01	0.03	A		0.0	2.78	0.03	A
	2026 Do Minimum									
Arm 1	D3	0.2	1.55	0.18	A	D4	0.5	1.88	0.34	A
Arm 2		0.1	3.09	0.05	A		0.1	3.83	0.07	A
Arm 3		0.4	1.80	0.29	A		0.2	1.60	0.20	A
Arm 4		0.0	3.06	0.03	A		0.0	2.81	0.03	A
	2026 Do Something									
Arm 1	D5	0.2	1.55	0.18	A	D6	0.6	1.98	0.37	A
Arm 2		0.1	3.09	0.05	A		0.1	4.03	0.07	A
Arm 3		0.5	1.90	0.32	A		0.2	1.60	0.20	A
Arm 4		0.0	3.20	0.03	A		0.0	2.81	0.03	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	A4241 Harbour Way / Oakwood Road / A4241 Harbour Way / Llewellyn's Road
Location	
Site number	
Date	01/12/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\abbie.moore
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

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Surveyed Flows, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Oakwood Road / A4241 Harbour Way / Llewellyn's Road	Standard Roundabout		1, 2, 3, 4	1.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A4241 Harbour Way (East)	
2	Llewellyn's Road	
3	A4241 Harbour Way (West)	
4	Oakwood Road	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.20	9.90	24.1	72.0	69.5	26.0	
2	3.80	6.45	6.3	19.5	69.5	33.0	
3	7.30	9.69	14.5	72.0	69.5	24.0	
4	3.25	5.60	30.0	34.0	69.5	25.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.712	2921
2	0.470	1477
3	0.701	2837
4	0.503	1612

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	460	100.000
2		✓	54	100.000
3		✓	697	100.000
4		✓	36	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	6	16	423	15
	2	21	0	33	0
	3	589	65	0	43
	4	17	0	19	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.18	1.53	0.2	A
2	0.05	3.06	0.1	A
3	0.27	1.77	0.4	A
4	0.03	3.01	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	346	63	2876	0.120	346	0.1	1.422	A
2	41	348	1313	0.031	41	0.0	2.827	A
3	525	32	2815	0.186	524	0.2	1.571	A
4	27	512	1355	0.020	27	0.0	2.710	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	414	75	2867	0.144	413	0.2	1.466	A
2	49	416	1281	0.038	49	0.0	2.919	A
3	627	38	2810	0.223	626	0.3	1.647	A
4	32	612	1305	0.025	32	0.0	2.829	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	506	92	2855	0.177	506	0.2	1.532	A
2	59	510	1237	0.048	59	0.1	3.055	A
3	767	46	2804	0.274	767	0.4	1.766	A
4	40	749	1235	0.032	40	0.0	3.009	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	506	92	2855	0.177	506	0.2	1.532	A
2	59	510	1237	0.048	59	0.1	3.055	A
3	767	46	2804	0.274	767	0.4	1.766	A
4	40	750	1235	0.032	40	0.0	3.010	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	414	76	2867	0.144	414	0.2	1.466	A
2	49	416	1281	0.038	49	0.0	2.920	A
3	627	38	2810	0.223	627	0.3	1.650	A
4	32	613	1304	0.025	32	0.0	2.832	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	346	63	2876	0.120	346	0.1	1.425	A
2	41	349	1313	0.031	41	0.0	2.831	A
3	525	32	2815	0.186	525	0.2	1.571	A
4	27	513	1354	0.020	27	0.0	2.713	A

2022 Surveyed Flows, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Oakwood Road / A4241 Harbour Way / Llewellyn's Road	Standard Roundabout		1, 2, 3, 4	1.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	845	100.000
2		✓	58	100.000
3		✓	489	100.000
4		✓	38	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	17	5	815	8
	2	8	0	47	3
	3	471	6	0	12
	4	9	1	28	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.32	1.83	0.5	A
2	0.06	3.73	0.1	A
3	0.19	1.58	0.2	A
4	0.03	2.78	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	636	26	2902	0.219	635	0.3	1.588	A
2	44	652	1170	0.037	44	0.0	3.194	A
3	368	27	2818	0.131	368	0.2	1.468	A
4	29	377	1423	0.020	29	0.0	2.582	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	760	31	2898	0.262	759	0.4	1.682	A
2	52	780	1110	0.047	52	0.0	3.400	A
3	440	32	2814	0.156	439	0.2	1.515	A
4	34	451	1385	0.025	34	0.0	2.663	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	930	39	2893	0.322	930	0.5	1.833	A
2	64	955	1028	0.062	64	0.1	3.732	A
3	538	40	2809	0.192	538	0.2	1.584	A
4	42	552	1334	0.031	42	0.0	2.784	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	930	39	2893	0.322	930	0.5	1.833	A
2	64	956	1028	0.062	64	0.1	3.733	A
3	538	40	2809	0.192	538	0.2	1.584	A
4	42	553	1334	0.031	42	0.0	2.784	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	760	31	2898	0.262	760	0.4	1.685	A
2	52	781	1110	0.047	52	0.0	3.405	A
3	440	32	2814	0.156	440	0.2	1.518	A
4	34	452	1385	0.025	34	0.0	2.666	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	636	26	2902	0.219	636	0.3	1.590	A
2	44	654	1170	0.037	44	0.0	3.198	A
3	368	27	2818	0.131	368	0.2	1.469	A
4	29	378	1422	0.020	29	0.0	2.582	A

2026 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Oakwood Road / A4241 Harbour Way / Llewellyn's Road	Standard Roundabout		1, 2, 3, 4	1.80	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	477	100.000
2		✓	56	100.000
3		✓	731	100.000
4		✓	37	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	6	16	439	16
	2	22	0	34	0
	3	620	67	0	44
	4	17	0	20	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.18	1.55	0.2	A
2	0.05	3.09	0.1	A
3	0.29	1.80	0.4	A
4	0.03	3.06	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	359	65	2874	0.125	359	0.1	1.430	A
2	42	362	1307	0.032	42	0.0	2.845	A
3	550	33	2814	0.196	549	0.2	1.589	A
4	28	537	1342	0.021	28	0.0	2.738	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	429	78	2865	0.150	429	0.2	1.477	A
2	50	432	1274	0.040	50	0.0	2.941	A
3	657	40	2809	0.234	657	0.3	1.672	A
4	33	643	1289	0.026	33	0.0	2.865	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	525	96	2853	0.184	525	0.2	1.546	A
2	62	529	1228	0.050	62	0.1	3.085	A
3	805	48	2803	0.287	804	0.4	1.800	A
4	41	787	1217	0.033	41	0.0	3.060	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	525	96	2853	0.184	525	0.2	1.546	A
2	62	530	1228	0.050	62	0.1	3.085	A
3	805	48	2803	0.287	805	0.4	1.800	A
4	41	787	1216	0.033	41	0.0	3.061	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	429	78	2865	0.150	429	0.2	1.479	A
2	50	433	1274	0.040	50	0.0	2.942	A
3	657	40	2809	0.234	658	0.3	1.675	A
4	33	643	1289	0.026	33	0.0	2.866	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	359	66	2874	0.125	359	0.1	1.430	A
2	42	362	1307	0.032	42	0.0	2.846	A
3	550	33	2814	0.196	551	0.2	1.592	A
4	28	539	1342	0.021	28	0.0	2.742	A

2026 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Oakwood Road / A4241 Harbour Way / Llewellyn's Road	Standard Roundabout		1, 2, 3, 4	1.88	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	885	100.000
2		✓	60	100.000
3		✓	505	100.000
4		✓	39	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	17	5	855	8
	2	8	0	49	3
	3	487	6	0	12
	4	9	1	29	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.34	1.88	0.5	A
2	0.07	3.83	0.1	A
3	0.20	1.60	0.2	A
4	0.03	2.81	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	666	27	2902	0.230	665	0.3	1.609	A
2	45	683	1156	0.039	45	0.0	3.240	A
3	380	27	2818	0.135	380	0.2	1.476	A
4	29	389	1417	0.021	29	0.0	2.594	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	796	32	2898	0.275	795	0.4	1.711	A
2	54	817	1093	0.049	54	0.1	3.463	A
3	454	32	2814	0.161	454	0.2	1.524	A
4	35	466	1378	0.025	35	0.0	2.679	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	974	40	2893	0.337	974	0.5	1.875	A
2	66	1000	1007	0.066	66	0.1	3.825	A
3	556	40	2809	0.198	556	0.2	1.597	A
4	43	570	1326	0.032	43	0.0	2.806	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	974	40	2893	0.337	974	0.5	1.875	A
2	66	1001	1007	0.066	66	0.1	3.826	A
3	556	40	2809	0.198	556	0.2	1.597	A
4	43	570	1326	0.032	43	0.0	2.806	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	796	32	2898	0.275	796	0.4	1.715	A
2	54	818	1093	0.049	54	0.1	3.467	A
3	454	32	2814	0.161	454	0.2	1.524	A
4	35	466	1378	0.025	35	0.0	2.682	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	666	27	2901	0.230	667	0.3	1.612	A
2	45	685	1155	0.039	45	0.0	3.245	A
3	380	27	2818	0.135	380	0.2	1.476	A
4	29	390	1416	0.021	29	0.0	2.597	A

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Oakwood Road / A4241 Harbour Way / Llewellyn's Road	Standard Roundabout		1, 2, 3, 4	1.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	477	100.000
2		✓	56	100.000
3		✓	823	100.000
4		✓	37	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	6	16	439	16
	2	22	0	34	0
	3	712	67	0	44
	4	17	0	20	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.18	1.55	0.2	A
2	0.05	3.09	0.1	A
3	0.32	1.90	0.5	A
4	0.03	3.20	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	359	65	2874	0.125	359	0.1	1.430	A
2	42	362	1307	0.032	42	0.0	2.845	A
3	620	33	2814	0.220	618	0.3	1.640	A
4	28	606	1307	0.021	28	0.0	2.812	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	429	78	2865	0.150	429	0.2	1.477	A
2	50	432	1274	0.040	50	0.0	2.941	A
3	740	40	2809	0.263	740	0.4	1.738	A
4	33	725	1248	0.027	33	0.0	2.963	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	525	96	2853	0.184	525	0.2	1.546	A
2	62	529	1228	0.050	62	0.1	3.085	A
3	906	48	2803	0.323	906	0.5	1.897	A
4	41	888	1166	0.035	41	0.0	3.199	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	525	96	2853	0.184	525	0.2	1.546	A
2	62	530	1228	0.050	62	0.1	3.085	A
3	906	48	2803	0.323	906	0.5	1.897	A
4	41	889	1165	0.035	41	0.0	3.199	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	429	78	2865	0.150	429	0.2	1.479	A
2	50	433	1274	0.040	50	0.0	2.944	A
3	740	40	2809	0.263	740	0.4	1.739	A
4	33	726	1247	0.027	33	0.0	2.967	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	359	66	2874	0.125	359	0.1	1.433	A
2	42	362	1307	0.032	42	0.0	2.846	A
3	620	33	2814	0.220	620	0.3	1.643	A
4	28	608	1307	0.021	28	0.0	2.814	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Oakwood Road / A4241 Harbour Way / Llewellyn's Road	Standard Roundabout		1, 2, 3, 4	1.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	977	100.000
2		✓	60	100.000
3		✓	505	100.000
4		✓	39	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	17	5	947	8
	2	8	0	49	3
	3	487	6	0	12
	4	9	1	29	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.37	1.98	0.6	A
2	0.07	4.03	0.1	A
3	0.20	1.60	0.2	A
4	0.03	2.81	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	736	27	2902	0.254	734	0.3	1.661	A
2	45	752	1124	0.040	45	0.0	3.337	A
3	380	27	2818	0.135	380	0.2	1.476	A
4	29	389	1417	0.021	29	0.0	2.594	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	878	32	2898	0.303	878	0.4	1.781	A
2	54	899	1054	0.051	54	0.1	3.597	A
3	454	32	2814	0.161	454	0.2	1.524	A
4	35	466	1378	0.025	35	0.0	2.679	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1076	40	2893	0.372	1075	0.6	1.981	A
2	66	1101	959	0.069	66	0.1	4.029	A
3	556	40	2809	0.198	556	0.2	1.597	A
4	43	570	1326	0.032	43	0.0	2.805	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	1076	40	2893	0.372	1076	0.6	1.981	A
2	66	1102	959	0.069	66	0.1	4.030	A
3	556	40	2809	0.198	556	0.2	1.597	A
4	43	570	1326	0.032	43	0.0	2.806	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	878	32	2898	0.303	879	0.4	1.782	A
2	54	901	1054	0.051	54	0.1	3.602	A
3	454	32	2814	0.161	454	0.2	1.527	A
4	35	466	1378	0.025	35	0.0	2.682	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	736	27	2901	0.254	736	0.3	1.664	A
2	45	754	1123	0.040	45	0.0	3.340	A
3	380	27	2818	0.135	380	0.2	1.476	A
4	29	390	1416	0.021	29	0.0	2.595	A

S|C|P

APPENDIX N

Junctions 9									
ARCADY 9 - Roundabout Module									
Version: 9.5.1.7462 © Copyright TRL Limited, 2019									
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Filename: Junction 6.j9

Path: M:\Job Library\2022\220352 - Phoenix Wharf, Port Talbot\Traffic Data\Junction Assessments\June 2023\ARCADY

Report generation date: 29/06/2023 15:47:42

»2022 Surveyed Flows , AM

»2022 Surveyed Flows , PM

»2026 Do Minimum, AM

»2026 Do Minimum, PM

»2026 Do Something, AM

»2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Surveyed Flows									
Arm 1	D1	0.3	1.73	0.21	A	D2	0.4	1.87	0.28	A
Arm 2		0.1	2.95	0.07	A		0.3	4.21	0.26	A
Arm 3		0.4	1.94	0.27	A		0.3	1.81	0.21	A
Arm 4		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2026 Do Minimum									
Arm 1	D3	0.3	1.75	0.22	A	D4	0.4	1.91	0.30	A
Arm 2		0.1	2.98	0.07	A		0.4	4.37	0.27	A
Arm 3		0.4	1.98	0.29	A		0.3	1.83	0.22	A
Arm 4		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2026 Do Something									
Arm 1	D5	0.4	1.94	0.28	A	D6	0.4	1.94	0.31	A
Arm 2		0.1	3.13	0.11	A		0.8	5.72	0.44	A
Arm 3		0.5	2.15	0.33	A		0.3	1.90	0.22	A
Arm 4		0.0	0.00	0.00	A		0.0	0.00	0.00	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	A4241 Harbour Way / Access / A4241 Harbour Way / Industrial Unit Access
Location	
Site number	
Date	17/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\craig.thomson
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

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Surveyed Flows , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access / A4241 Harbour Way / Industrial Unit Access	Standard Roundabout		1, 2, 3, 4	1.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A4241 Harbour Way (South)	
2	North Road Site Access	
3	A4241 Harbour Way (North)	
4	Access (East)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.40	9.80	16.6	61.7	52.0	38.0	
2	3.70	6.20	10.8	43.5	52.0	34.0	
3	7.30	8.93	11.5	55.5	52.0	35.0	
4	3.00	7.64	3.5	17.0	52.0	34.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.797	2754
2	0.580	1576
3	0.769	2587
4	0.491	1151

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	515	100.000
2		✓	79	100.000
3		✓	636	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	93	421	1
	2	40	0	39	0
	3	509	121	0	6
	4	0	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.21	1.73	0.3	A
2	0.07	2.95	0.1	A
3	0.27	1.94	0.4	A
4	0.00	0.00	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	388	91	2681	0.145	387	0.2	1.568	A
2	59	317	1392	0.043	59	0.0	2.701	A
3	479	31	2564	0.187	478	0.2	1.725	A
4	0	503	904	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	463	109	2667	0.174	463	0.2	1.632	A
2	71	379	1356	0.052	71	0.1	2.801	A
3	572	37	2559	0.223	572	0.3	1.810	A
4	0	602	855	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	567	133	2648	0.214	567	0.3	1.729	A
2	87	464	1307	0.067	87	0.1	2.951	A
3	700	45	2553	0.274	700	0.4	1.943	A
4	0	737	789	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	567	133	2648	0.214	567	0.3	1.729	A
2	87	465	1306	0.067	87	0.1	2.951	A
3	700	45	2553	0.274	700	0.4	1.943	A
4	0	738	789	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	463	109	2667	0.174	463	0.2	1.632	A
2	71	380	1356	0.052	71	0.1	2.801	A
3	572	37	2559	0.223	572	0.3	1.814	A
4	0	603	855	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	388	91	2681	0.145	388	0.2	1.569	A
2	59	318	1391	0.043	60	0.0	2.704	A
3	479	31	2563	0.187	479	0.2	1.726	A
4	0	505	903	0.000	0	0.0	0.000	A

2022 Surveyed Flows , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access / A4241 Harbour Way / Industrial Unit Access	Standard Roundabout		1, 2, 3, 4	2.29	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	690	100.000
2		✓	270	100.000
3		✓	481	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	28	661	1
	2	88	0	182	0
	3	404	77	0	0
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.28	1.87	0.4	A
2	0.26	4.21	0.3	A
3	0.21	1.81	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	519	58	2708	0.192	519	0.2	1.644	A
2	203	497	1287	0.158	203	0.2	3.317	A
3	362	67	2536	0.143	361	0.2	1.655	A
4	0	427	941	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	620	69	2699	0.230	620	0.3	1.731	A
2	243	595	1231	0.197	242	0.2	3.642	A
3	432	80	2526	0.171	432	0.2	1.718	A
4	0	511	900	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	760	85	2686	0.283	759	0.4	1.867	A
2	297	729	1153	0.258	297	0.3	4.201	A
3	530	98	2512	0.211	529	0.3	1.815	A
4	0	626	844	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	760	85	2686	0.283	760	0.4	1.867	A
2	297	729	1153	0.258	297	0.3	4.205	A
3	530	98	2512	0.211	530	0.3	1.815	A
4	0	626	843	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	620	69	2699	0.230	621	0.3	1.731	A
2	243	595	1231	0.197	243	0.2	3.649	A
3	432	80	2526	0.171	433	0.2	1.722	A
4	0	512	900	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	519	58	2708	0.192	520	0.2	1.647	A
2	203	499	1287	0.158	204	0.2	3.326	A
3	362	67	2536	0.143	362	0.2	1.658	A
4	0	429	940	0.000	0	0.0	0.000	A

2026 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access / A4241 Harbour Way / Industrial Unit Access	Standard Roundabout		1, 2, 3, 4	1.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	534	100.000
2		✓	81	100.000
3		✓	667	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	96	437	1
	2	41	0	40	0
	3	537	124	0	6
	4	0	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.22	1.75	0.3	A
2	0.07	2.98	0.1	A
3	0.29	1.98	0.4	A
4	0.00	0.00	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	402	93	2680	0.150	401	0.2	1.579	A
2	61	329	1385	0.044	61	0.0	2.718	A
3	502	32	2563	0.196	501	0.2	1.746	A
4	0	527	892	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	480	111	2665	0.180	480	0.2	1.646	A
2	73	394	1348	0.054	73	0.1	2.823	A
3	600	38	2558	0.234	599	0.3	1.837	A
4	0	631	841	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	588	136	2645	0.222	588	0.3	1.749	A
2	89	482	1296	0.069	89	0.1	2.981	A
3	734	46	2552	0.288	734	0.4	1.980	A
4	0	772	772	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	588	137	2645	0.222	588	0.3	1.749	A
2	89	482	1296	0.069	89	0.1	2.981	A
3	734	46	2552	0.288	734	0.4	1.980	A
4	0	773	771	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	480	112	2665	0.180	480	0.2	1.647	A
2	73	394	1347	0.054	73	0.1	2.826	A
3	600	38	2558	0.234	600	0.3	1.840	A
4	0	631	841	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	402	93	2679	0.150	402	0.2	1.582	A
2	61	330	1385	0.044	61	0.0	2.721	A
3	502	32	2563	0.196	502	0.2	1.746	A
4	0	529	891	0.000	0	0.0	0.000	A

2026 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access / A4241 Harbour Way / Industrial Unit Access	Standard Roundabout		1, 2, 3, 4	2.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	727	100.000
2		✓	278	100.000
3		✓	498	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	29	697	1
	2	90	0	188	0
	3	419	79	0	0
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.30	1.91	0.4	A
2	0.27	4.37	0.4	A
3	0.22	1.83	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	547	59	2707	0.202	546	0.3	1.666	A
2	209	525	1272	0.165	209	0.2	3.385	A
3	375	68	2535	0.148	374	0.2	1.666	A
4	0	442	934	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	654	71	2697	0.242	653	0.3	1.760	A
2	250	627	1212	0.206	250	0.3	3.740	A
3	448	82	2524	0.177	448	0.2	1.732	A
4	0	528	891	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	800	87	2685	0.298	800	0.4	1.909	A
2	306	768	1130	0.271	306	0.4	4.363	A
3	548	100	2510	0.218	548	0.3	1.833	A
4	0	647	833	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	800	87	2685	0.298	800	0.4	1.909	A
2	306	769	1130	0.271	306	0.4	4.367	A
3	548	100	2510	0.218	548	0.3	1.834	A
4	0	647	833	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	654	71	2697	0.242	654	0.3	1.761	A
2	250	628	1212	0.206	250	0.3	3.745	A
3	448	82	2524	0.177	448	0.2	1.733	A
4	0	529	891	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	547	60	2706	0.202	548	0.3	1.666	A
2	209	526	1271	0.165	210	0.2	3.394	A
3	375	69	2534	0.148	375	0.2	1.666	A
4	0	443	933	0.000	0	0.0	0.000	A

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access / A4241 Harbour Way / Industrial Unit Access	Standard Roundabout		1, 2, 3, 4	2.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	647	100.000
2		✓	133	100.000
3		✓	759	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	209	437	1
	2	93	0	40	0
	3	537	216	0	6
	4	0	2	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.28	1.94	0.4	A
2	0.11	3.13	0.1	A
3	0.33	2.15	0.5	A
4	0.00	0.00	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	487	162	2624	0.186	486	0.2	1.683	A
2	100	329	1385	0.072	100	0.1	2.801	A
3	571	71	2533	0.226	570	0.3	1.834	A
4	0	636	839	0.000	0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	582	194	2599	0.224	581	0.3	1.783	A
2	120	394	1348	0.089	119	0.1	2.930	A
3	682	84	2522	0.271	682	0.4	1.956	A
4	0	760	778	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	712	238	2564	0.278	712	0.4	1.943	A
2	146	482	1296	0.113	146	0.1	3.130	A
3	836	103	2508	0.333	835	0.5	2.152	A
4	0	931	694	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	712	238	2564	0.278	712	0.4	1.943	A
2	146	482	1296	0.113	146	0.1	3.130	A
3	836	103	2508	0.333	836	0.5	2.152	A
4	0	931	694	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	582	194	2599	0.224	582	0.3	1.784	A
2	120	394	1347	0.089	120	0.1	2.934	A
3	682	85	2522	0.271	683	0.4	1.957	A
4	0	761	777	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	487	163	2624	0.186	487	0.2	1.686	A
2	100	330	1384	0.072	100	0.1	2.804	A
3	571	71	2533	0.226	572	0.3	1.838	A
4	0	637	838	0.000	0	0.0	0.000	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access / A4241 Harbour Way / Industrial Unit Access	Standard Roundabout		1, 2, 3, 4	2.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	751	100.000
2		✓	455	100.000
3		✓	498	100.000
4		✓	1	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	53	697	1
	2	176	0	279	0
	3	419	79	0	0
	4	0	1	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.31	1.94	0.4	A
2	0.44	5.72	0.8	A
3	0.22	1.90	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	565	59	2707	0.209	564	0.3	1.680	A
2	343	525	1272	0.269	341	0.4	3.856	A
3	375	133	2485	0.151	374	0.2	1.705	A
4	0	506	902	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	675	71	2697	0.250	675	0.3	1.779	A
2	409	627	1212	0.337	408	0.5	4.477	A
3	448	159	2465	0.182	448	0.2	1.783	A
4	0	606	854	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	827	87	2685	0.308	826	0.4	1.937	A
2	501	768	1130	0.443	500	0.8	5.698	A
3	548	194	2438	0.225	548	0.3	1.904	A
4	0	741	787	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	827	87	2685	0.308	827	0.4	1.937	A
2	501	769	1130	0.443	501	0.8	5.720	A
3	548	195	2437	0.225	548	0.3	1.904	A
4	0	742	787	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	675	71	2697	0.250	676	0.3	1.780	A
2	409	628	1212	0.338	410	0.5	4.498	A
3	448	160	2465	0.182	448	0.2	1.784	A
4	0	607	853	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	565	60	2706	0.209	566	0.3	1.683	A
2	343	526	1271	0.270	343	0.4	3.883	A
3	375	133	2485	0.151	375	0.2	1.705	A
4	0	508	902	0.000	0	0.0	0.000	A

S|C|P

APPENDIX O

Junctions 9									
ARCADY 9 - Roundabout Module									
Version: 9.5.1.7462 © Copyright TRL Limited, 2019									
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk									
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Filename: Junction 7.j9

Path: M:\Job Library\2022\220352 - Phoenix Wharf, Port Talbot\Traffic Data\Junction Assessments\June 2023\ARCADY

Report generation date: 29/06/2023 15:53:09

»2022 Surveyed Flows , AM

»2022 Surveyed Flows , PM

»2026 Do Minimum, AM

»2026 Do Minimum, PM

»2026 Do Something, AM

»2026 Do Something, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2022 Surveyed Flows									
Arm 1	D1	0.3	1.69	0.24	A	D2	0.2	1.49	0.18	A
Arm 2		0.0	1.35	0.03	A		0.2	1.50	0.14	A
Arm 3		0.3	1.63	0.22	A		0.2	1.62	0.19	A
Arm 4		0.0	2.48	0.02	A		0.0	0.00	0.00	A
	2026 Do Minimum									
Arm 1	D3	0.3	1.71	0.24	A	D4	0.2	1.51	0.19	A
Arm 2		0.0	1.35	0.04	A		0.2	1.53	0.15	A
Arm 3		0.3	1.65	0.23	A		0.3	1.63	0.20	A
Arm 4		0.0	2.51	0.02	A		0.0	0.00	0.00	A
	2026 Do Something									
Arm 1	D5	0.4	1.82	0.29	A	D6	0.3	1.53	0.20	A
Arm 2		0.0	1.40	0.04	A		0.2	1.54	0.15	A
Arm 3		0.3	1.70	0.25	A		0.3	1.70	0.24	A
Arm 4		0.0	2.56	0.02	A		0.0	0.00	0.00	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	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)
Location	
Site number	
Date	17/01/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	SCP\craig.thomson
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

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Surveyed Flows , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A4241 Harbour Way (South)	
2	Main Gate Access	
3	A4241 Harbour Way (North)	
4	Access (East)	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	7.59	10.90	18.5	84.6	70.0	35.0	
2	8.80	10.50	16.0	66.2	70.0	31.0	
3	7.14	9.95	18.5	76.9	70.0	29.0	
4	3.65	7.24	17.7	37.8	70.0	27.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.714	2996
2	0.740	3144
3	0.695	2845
4	0.533	1825

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Surveyed Flows	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	596	100.000
2		✓	86	100.000
3		✓	552	100.000
4		✓	27	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	143	453	0
	2	30	0	56	0
	3	317	235	0	0
	4	1	18	6	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.24	1.69	0.3	A
2	0.03	1.35	0.0	A
3	0.22	1.63	0.3	A
4	0.02	2.48	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	449	196	2856	0.157	448	0.2	1.494	A
2	65	346	2888	0.022	65	0.0	1.274	A
3	416	24	2828	0.147	415	0.2	1.491	A
4	20	437	1591	0.013	20	0.0	2.291	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	536	235	2829	0.189	536	0.2	1.569	A
2	77	414	2838	0.027	77	0.0	1.303	A
3	496	29	2825	0.176	496	0.2	1.545	A
4	24	523	1546	0.016	24	0.0	2.365	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	656	287	2791	0.235	656	0.3	1.685	A
2	95	507	2769	0.034	95	0.0	1.345	A
3	608	35	2820	0.215	608	0.3	1.626	A
4	30	641	1483	0.020	30	0.0	2.476	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	656	287	2791	0.235	656	0.3	1.685	A
2	95	508	2769	0.034	95	0.0	1.345	A
3	608	35	2820	0.215	608	0.3	1.626	A
4	30	641	1483	0.020	30	0.0	2.476	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	536	235	2829	0.189	536	0.2	1.572	A
2	77	415	2837	0.027	77	0.0	1.305	A
3	496	29	2825	0.176	496	0.2	1.548	A
4	24	523	1546	0.016	24	0.0	2.366	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	449	197	2856	0.157	449	0.2	1.497	A
2	65	347	2887	0.022	65	0.0	1.276	A
3	416	24	2828	0.147	416	0.2	1.494	A
4	20	438	1591	0.013	20	0.0	2.293	A

2022 Surveyed Flows , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.54	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2022 Surveyed Flows	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	484	100.000
2		✓	354	100.000
3		✓	488	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	39	445	0
	2	105	0	249	0
	3	426	60	0	2
	4	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.18	1.49	0.2	A
2	0.14	1.50	0.2	A
3	0.19	1.62	0.2	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	364	45	2964	0.123	364	0.1	1.384	A
2	267	335	2897	0.092	266	0.1	1.368	A
3	367	79	2790	0.132	367	0.2	1.485	A
4	0	444	1588	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	435	54	2958	0.147	435	0.2	1.426	A
2	318	400	2848	0.112	318	0.1	1.422	A
3	439	94	2779	0.158	439	0.2	1.537	A
4	0	531	1541	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	533	66	2949	0.181	533	0.2	1.489	A
2	390	490	2782	0.140	390	0.2	1.504	A
3	537	116	2765	0.194	537	0.2	1.615	A
4	0	650	1478	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	533	66	2949	0.181	533	0.2	1.489	A
2	390	490	2782	0.140	390	0.2	1.504	A
3	537	116	2765	0.194	537	0.2	1.615	A
4	0	651	1478	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	435	54	2958	0.147	435	0.2	1.428	A
2	318	400	2848	0.112	318	0.1	1.422	A
3	439	94	2779	0.158	439	0.2	1.540	A
4	0	532	1541	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	364	45	2964	0.123	365	0.1	1.384	A
2	267	335	2896	0.092	267	0.1	1.368	A
3	367	79	2790	0.132	368	0.2	1.487	A
4	0	445	1587	0.000	0	0.0	0.000	A

2026 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.68	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2026 Do Minimum	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	617	100.000
2		✓	89	100.000
3		✓	582	100.000
4		✓	28	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1	2	3	4
From	1	0	147	470	0
	2	31	0	58	0
	3	340	242	0	0
	4	1	19	6	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1	2	3	4	
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.24	1.71	0.3	A
2	0.04	1.35	0.0	A
3	0.23	1.65	0.3	A
4	0.02	2.51	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	465	202	2852	0.163	464	0.2	1.507	A
2	67	359	2878	0.023	67	0.0	1.279	A
3	438	25	2828	0.155	437	0.2	1.505	A
4	21	461	1579	0.013	21	0.0	2.310	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	555	242	2824	0.196	554	0.2	1.585	A
2	80	430	2826	0.028	80	0.0	1.310	A
3	523	30	2824	0.185	523	0.2	1.563	A
4	25	551	1531	0.016	25	0.0	2.390	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	679	296	2785	0.244	679	0.3	1.708	A
2	98	526	2755	0.036	98	0.0	1.354	A
3	641	36	2820	0.227	641	0.3	1.651	A
4	31	675	1465	0.021	31	0.0	2.509	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	679	296	2785	0.244	679	0.3	1.709	A
2	98	526	2755	0.036	98	0.0	1.354	A
3	641	36	2820	0.227	641	0.3	1.651	A
4	31	675	1465	0.021	31	0.0	2.510	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	555	242	2823	0.196	555	0.2	1.588	A
2	80	430	2826	0.028	80	0.0	1.310	A
3	523	30	2824	0.185	523	0.2	1.564	A
4	25	551	1531	0.016	25	0.0	2.390	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	465	203	2852	0.163	465	0.2	1.507	A
2	67	360	2878	0.023	67	0.0	1.282	A
3	438	25	2828	0.155	438	0.2	1.506	A
4	21	462	1578	0.013	21	0.0	2.312	A

2026 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.56	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2026 Do Minimum	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	514	100.000
2		✓	364	100.000
3		✓	505	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	
From	1	0	40	474	0	
	2	108	0	256	0	
	3	441	62	0	2	
	4	2	0	0	0	

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.19	1.51	0.2	A
2	0.15	1.53	0.2	A
3	0.20	1.63	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	387	47	2963	0.131	386	0.1	1.396	A
2	274	356	2881	0.095	274	0.1	1.380	A
3	380	81	2788	0.136	380	0.2	1.494	A
4	0	459	1580	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	462	56	2956	0.156	462	0.2	1.442	A
2	327	426	2829	0.116	327	0.1	1.438	A
3	454	97	2777	0.163	454	0.2	1.548	A
4	0	549	1532	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	566	68	2948	0.192	566	0.2	1.510	A
2	401	522	2758	0.145	401	0.2	1.526	A
3	556	119	2762	0.201	556	0.3	1.630	A
4	0	672	1466	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	566	68	2948	0.192	566	0.2	1.510	A
2	401	522	2758	0.145	401	0.2	1.526	A
3	556	119	2762	0.201	556	0.3	1.630	A
4	0	673	1466	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	462	56	2956	0.156	462	0.2	1.445	A
2	327	426	2829	0.116	327	0.1	1.438	A
3	454	97	2777	0.163	454	0.2	1.551	A
4	0	550	1532	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	387	47	2963	0.131	387	0.2	1.397	A
2	274	357	2880	0.095	274	0.1	1.380	A
3	380	81	2788	0.136	380	0.2	1.494	A
4	0	460	1579	0.000	0	0.0	0.000	A

2026 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.75	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2026 Do Something	AM	ONE HOUR	07:30	09:00	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	731	100.000
2		✓	89	100.000
3		✓	634	100.000
4		✓	28	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	147	584	0
	2	31	0	58	0
	3	392	242	0	0
	4	1	19	6	2

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.29	1.82	0.4	A
2	0.04	1.40	0.0	A
3	0.25	1.70	0.3	A
4	0.02	2.56	0.0	A

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	550	202	2852	0.193	549	0.2	1.563	A
2	67	445	2815	0.024	67	0.0	1.309	A
3	477	25	2828	0.169	476	0.2	1.531	A
4	21	500	1558	0.014	21	0.0	2.341	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	657	242	2824	0.233	657	0.3	1.660	A
2	80	532	2751	0.029	80	0.0	1.347	A
3	570	30	2824	0.202	570	0.3	1.596	A
4	25	598	1506	0.017	25	0.0	2.430	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	805	296	2785	0.289	804	0.4	1.817	A
2	98	651	2662	0.037	98	0.0	1.403	A
3	698	36	2820	0.248	698	0.3	1.696	A
4	31	732	1434	0.021	31	0.0	2.564	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	805	296	2785	0.289	805	0.4	1.817	A
2	98	652	2662	0.037	98	0.0	1.403	A
3	698	36	2820	0.248	698	0.3	1.696	A
4	31	732	1434	0.021	31	0.0	2.564	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	657	242	2823	0.233	658	0.3	1.661	A
2	80	533	2750	0.029	80	0.0	1.347	A
3	570	30	2824	0.202	570	0.3	1.599	A
4	25	598	1506	0.017	25	0.0	2.431	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	550	203	2852	0.193	551	0.2	1.564	A
2	67	446	2814	0.024	67	0.0	1.311	A
3	477	25	2828	0.169	478	0.2	1.531	A
4	21	501	1558	0.014	21	0.0	2.344	A

2026 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	A4241 Harbour Way / Access (East) / A4241 Harbour Way / Access (West)	Standard Roundabout		1, 2, 3, 4	1.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2026 Do Something	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		✓	538	100.000
2		✓	364	100.000
3		✓	591	100.000
4		✓	2	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1	2	3	4	
From	1	0	40	498	0
	2	108	0	256	0
	3	527	62	0	2
	4	2	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1	2	3	4
	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
From	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	0.20	1.53	0.3	A
2	0.15	1.54	0.2	A
3	0.24	1.70	0.3	A
4	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	405	47	2963	0.137	404	0.2	1.406	A
2	274	374	2867	0.096	274	0.1	1.387	A
3	445	81	2788	0.160	444	0.2	1.535	A
4	0	524	1545	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	484	56	2956	0.164	484	0.2	1.455	A
2	327	448	2813	0.116	327	0.1	1.447	A
3	531	97	2777	0.191	531	0.2	1.602	A
4	0	626	1491	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	592	68	2948	0.201	592	0.3	1.527	A
2	401	548	2739	0.146	401	0.2	1.539	A
3	651	119	2762	0.236	650	0.3	1.704	A
4	0	767	1416	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	592	68	2948	0.201	592	0.3	1.527	A
2	401	548	2739	0.146	401	0.2	1.539	A
3	651	119	2762	0.236	651	0.3	1.704	A
4	0	767	1415	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	484	56	2956	0.164	484	0.2	1.455	A
2	327	448	2813	0.116	327	0.1	1.450	A
3	531	97	2777	0.191	532	0.2	1.604	A
4	0	627	1490	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	405	47	2963	0.137	405	0.2	1.406	A
2	274	375	2867	0.096	274	0.1	1.388	A
3	445	81	2788	0.160	445	0.2	1.535	A
4	0	525	1545	0.000	0	0.0	0.000	A