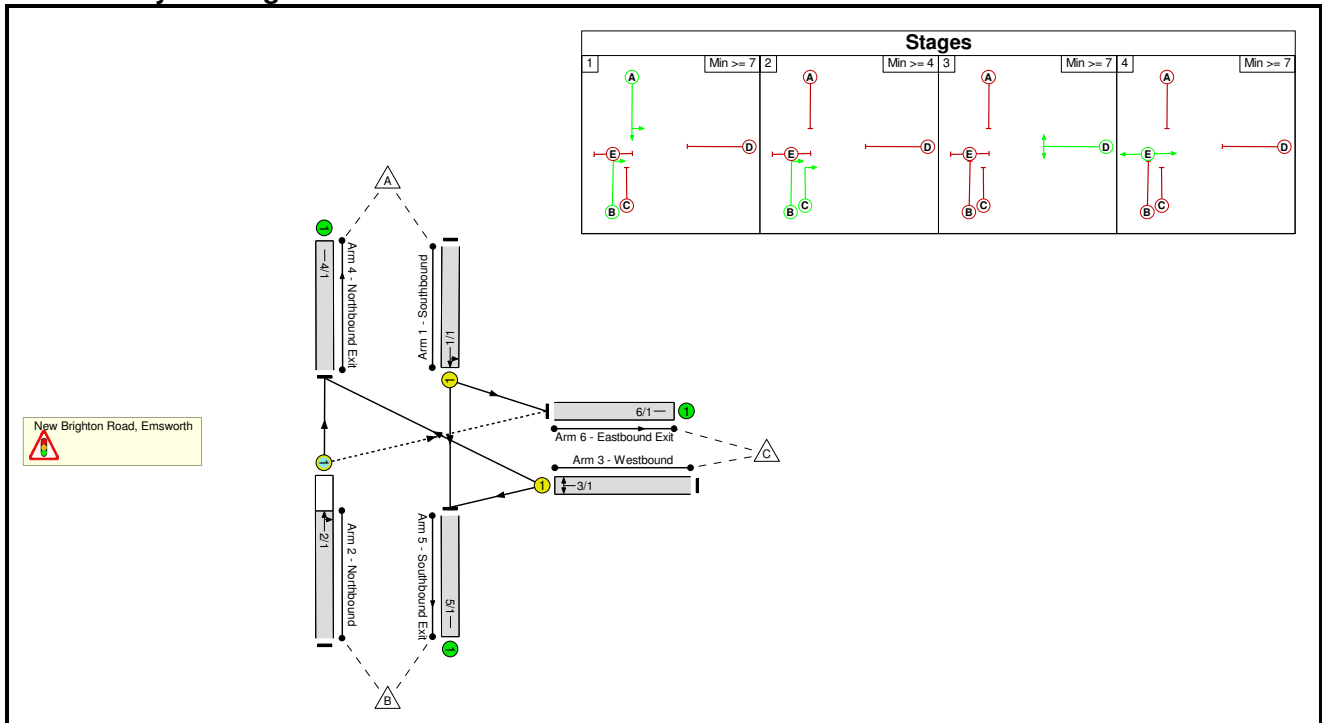


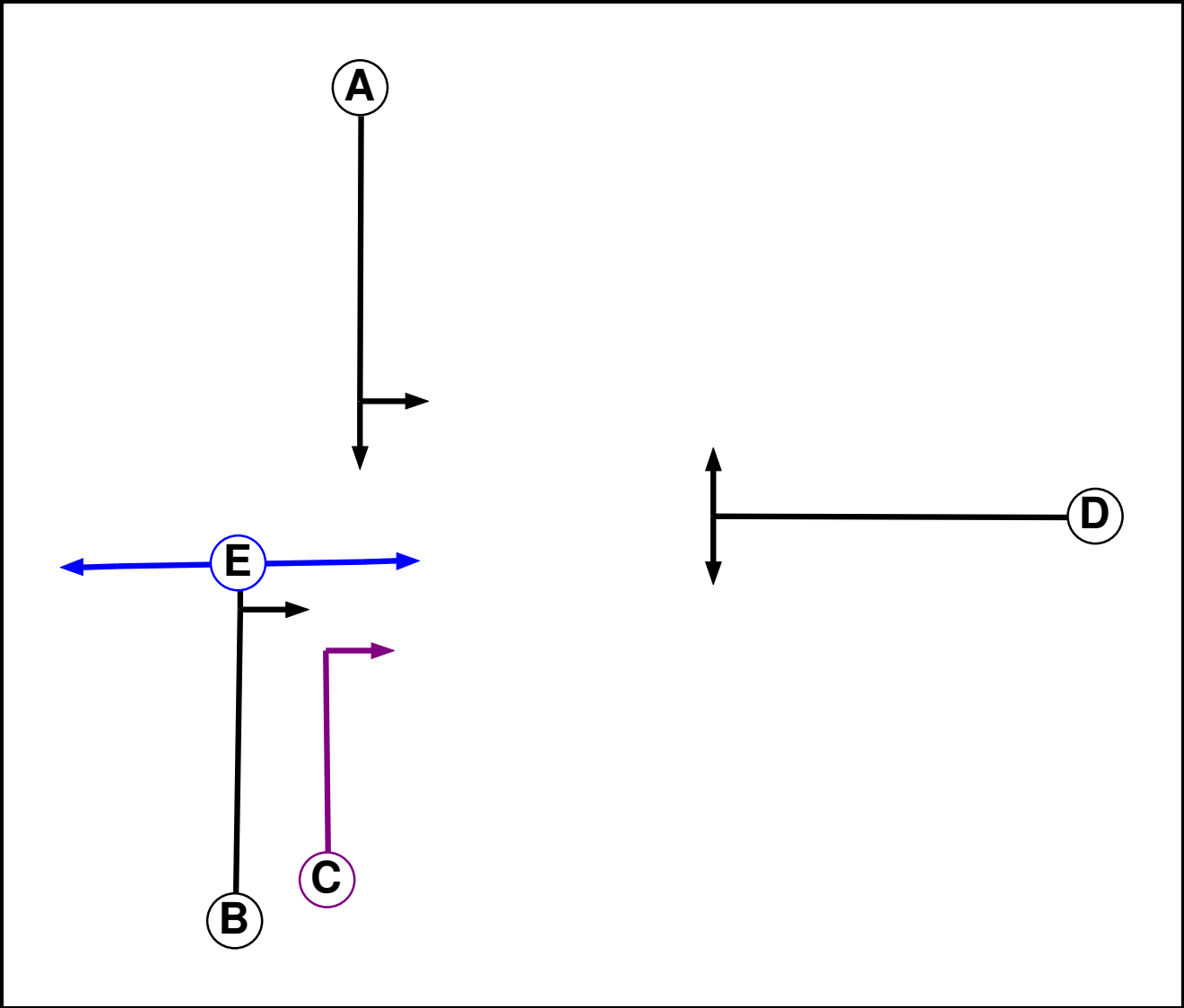
User and Project Details

Project:	Interbridges S278
Title:	Model of Proposed Traffic Signals – 2021 Traffic Growth
Location:	New Brighton Road / Site Access (Interbridges), Emsworth
File name:	New Brighton Road - Interbridges, Emsworth - 2021 Traffic Growth.lsg3x
Author:	Dave Richards
Company:	Telent Technology Services Ltd
Address:	Point 3, Haywood Road, Warwick, CV34 5AH
Notes:	The traffic count data was selected from Thursday 21st January 2016 using 08:00 - 09:00 for the AM Peak and 17:00 - 18:00 for the PM Peak because these periods had the highest traffic counts of the day. The time from 10:00 – 11:00 was selected as a good representation of the quieter Off Peak period. The count data was converted to PCU (Passenger Car Units) as follows: • Cycles multiplied by 0.2 • Motor Cycles multiplied by 0.4 • Car / Van multiplied by 1 • Car / Van Towing multiplied by 1 • 2 Axle Van / Lorry multiplied by 1.5 • 3 Axle Rigid and upwards multiplied by 2.3 As traffic count data for the Development Access Road could not be provided, figures supplied in 2008, based on the number of parking spaces provided in the commuter car park for each development unit and the volume of delivery traffic have been used. For the purposes of the model, the assumption has been made that 50% of vehicles will turn left out of the Development Access Road and 50% will turn right. In addition the assumption has been made that of the total amount of vehicles entering the Development Access Road, 50% will originate from New Brighton Road North and 50% from New Brighton Road South. For this model, the 2016 Traffic Count converted PCU values and the 2008 PCU values have been increased by 10% to represent traffic growth predicted by 2021. In the absence of any pedestrian count data, the model includes two scenarios for each of the time periods, one that assumes the pedestrian stage appears every cycle and one that assumes it appears every other cycle ('Double'). The Practical Reserve Capacity (PRC) results for each scenario are as follows: AM PEAK: 9.4% OFF PEAK: 11.9% PM PEAK: 1.1% AM PEAK DOUBLE: 12.1% OFF PEAK DOUBLE: 4.4% PM PEAK DOUBLE: 4.6%

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Ind. Arrow	B	4	4
D	Traffic		7	7
E	Pedestrian		7	7

Full Input Data And Results

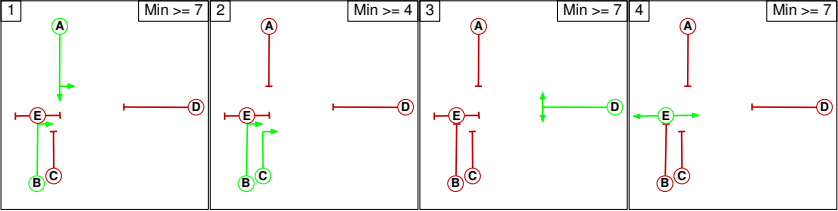
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
	A	B	C	D	E
	A	-	5	6	8
	B	-	-	6	8
	C	6	-	6	8
	D	6	6	6	8
	E	8	8	8	8

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage			
	1	2	3	4
	1	5	6	8
	2	X	6	8
	3	6	X	8
	4	8	X	8

Full Input Data And Results

Give-Way Lane Input Data

Junction: New Brighton Road, Emsworth											
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)
2/1 (Northbound)	6/1 (Right)	1439	0	1/1	1.09	All	3.00	-	0.50	3	2.00

Lane Input Data

Junction: New Brighton Road, Emsworth												
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 (Southbound)	U	A	2	3	60.0	Geom	-	4.10	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Left	14.30
2/1 (Northbound)	O	B C	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 4 Ahead	Inf
											Arm 6 Right	18.85
3/1 (Westbound)	U	D	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 4 Right	17.00
											Arm 5 Left	12.24
4/1 (Northbound Exit)	U		2	3	60.0	Geom	-	3.25	0.00	Y		
5/1 (Southbound Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Eastbound Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM PEAK '	08:00	09:00	01:00	
2: 'OFF PEAK '	10:00	11:00	01:00	
3: 'PM PEAK'	17:00	18:00	01:00	

Scenario 1: 'AM Peak' (FG1: 'AM PEAK ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow:

Origin	Destination				
	A	B	C	Tot.	
	A	0	818	22	840
	B	559	0	22	581
	C	22	22	0	44
	Tot.	581	840	44	1465

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM Peak
Junction: New Brighton Road, Emsworth	
1/1	840
2/1	581
3/1	44
4/1	581
5/1	840
6/1	44

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
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 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.4 %	2019	2019
				Arm 6 Left	14.30	2.6 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	96.2 %	1949	1949
				Arm 6 Right	18.85	3.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'OFF Peak' (FG2: 'OFF PEAK ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin	A	0	494	11	505
	B	382	0	11	393
	C	11	11	0	22
	Tot.	393	505	22	920

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: OFF Peak
Junction: New Brighton Road, Emsworth	
1/1	505
2/1	393
3/1	22
4/1	393
5/1	505
6/1	22

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
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 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.8 %	2020	2020
				Arm 6 Left	14.30	2.2 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	97.2 %	1951	1951
				Arm 6 Right	18.85	2.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'PM PEAK ' (FG3: 'PM PEAK', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin	A	A	B	C	Tot.
	A	0	555	44	599
	B	784	0	44	828
	C	44	44	0	88
	Tot.	828	599	88	1515

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: PM PEAK
Junction: New Brighton Road, Emsworth	
1/1	599
2/1	828
3/1	88
4/1	828
5/1	599
6/1	88

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
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 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	92.7 %	2010	2010
				Arm 6 Left	14.30	7.3 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	94.7 %	1947	1947
				Arm 6 Right	18.85	5.3 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'AM Peak Double' (FG1: 'AM PEAK ', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin	A	0	818	22	840
	B	559	0	22	581
	C	22	22	0	44
	Tot.	581	840	44	1465

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: AM Peak Double
Junction: New Brighton Road, Emsworth	
1/1	840
2/1	581
3/1	44
4/1	581
5/1	840
6/1	44

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
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 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.4 %	2019	2019
				Arm 6 Left	14.30	2.6 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	96.2 %	1949	1949
				Arm 6 Right	18.85	3.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'OFF Peak Double' (FG2: 'OFF PEAK ', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin	A	0	494	11	505
	B	382	0	11	393
	C	11	11	0	22
	Tot.	393	505	22	920

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: OFF Peak Double
Junction: New Brighton Road, Emsworth	
1/1	505
2/1	393
3/1	22
4/1	393
5/1	505
6/1	22

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
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 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	97.8 %	2020	2020
				Arm 6 Left	14.30	2.2 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	97.2 %	1951	1951
				Arm 6 Right	18.85	2.8 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM Peak Double' (FG3: 'PM PEAK', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow:

	Destination				
Origin	A	0	555	44	599
	B	784	0	44	828
	C	44	44	0	88
	Tot.	828	599	88	1515

Full Input Data And Results

Traffic Lane Flows

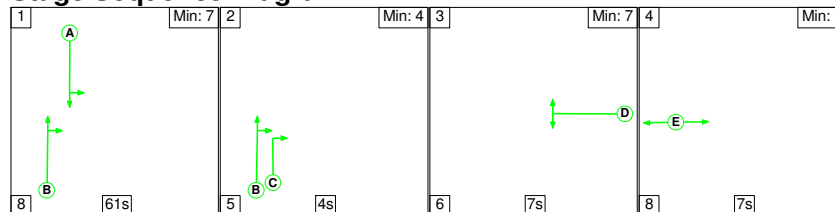
Lane	Scenario 6: PM Peak Double
Junction: New Brighton Road, Emsworth	
1/1	599
2/1	828
3/1	88
4/1	828
5/1	599
6/1	88

Lane Saturation Flows

Junction: New Brighton Road, Emsworth								
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 (Southbound)	4.10	0.00	Y	Arm 5 Ahead	Inf	92.7 %	2010	2010
				Arm 6 Left	14.30	7.3 %		
2/1 (Northbound)	3.40	0.00	Y	Arm 4 Ahead	Inf	94.7 %	1947	1947
				Arm 6 Right	18.85	5.3 %		
3/1 (Westbound)	3.80	0.00	Y	Arm 4 Right	17.00	50.0 %	1805	1805
				Arm 5 Left	12.24	50.0 %		
4/1 (Northbound Exit)	3.25	0.00	Y				1940	1940
5/1 (Southbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Eastbound Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM Peak' (FG1: 'AM PEAK ', Plan 1: 'Network Control Plan 1')

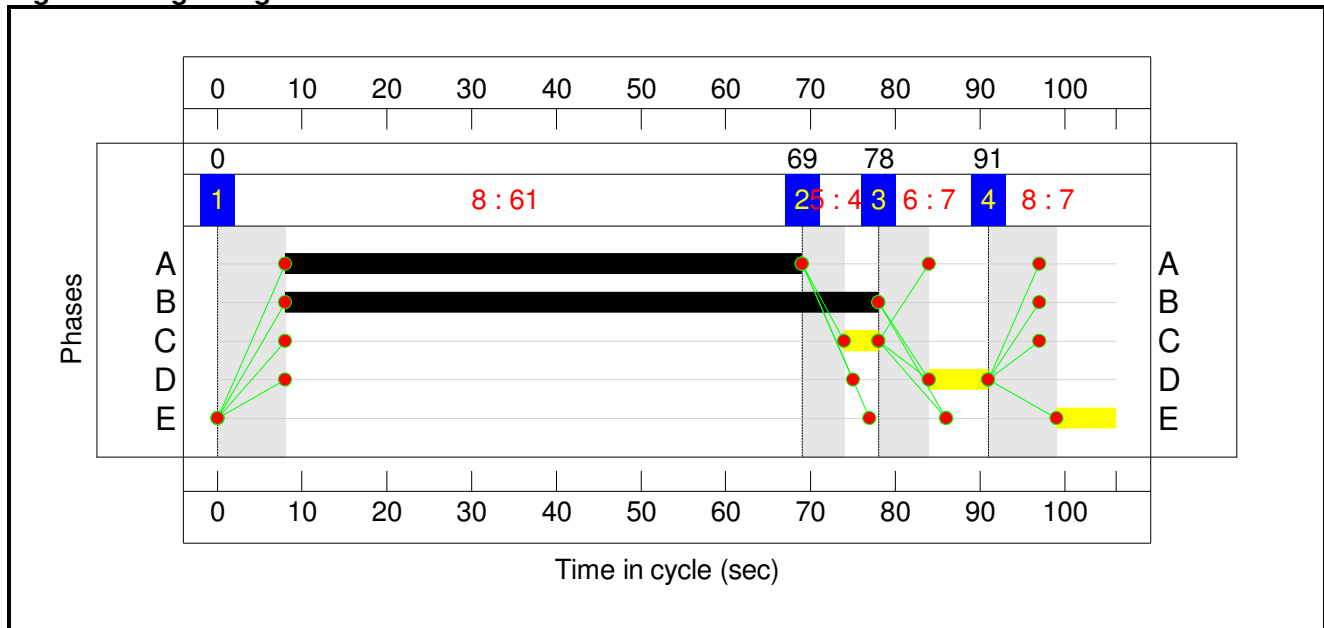
Stage Sequence Diagram



Stage Timings

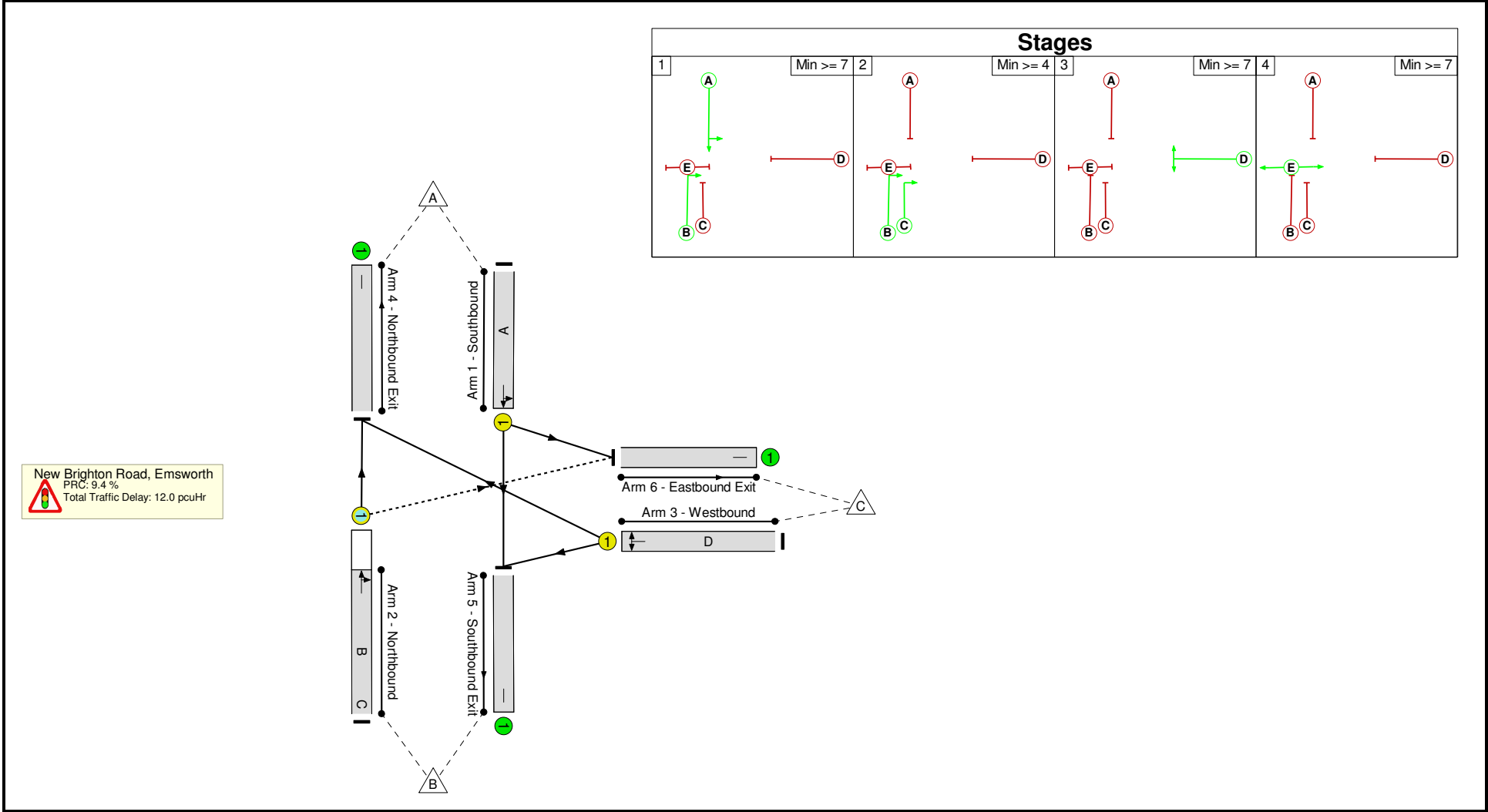
Stage	1	2	3	4
Duration	61	4	7	7
Change Point	0	69	78	91

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

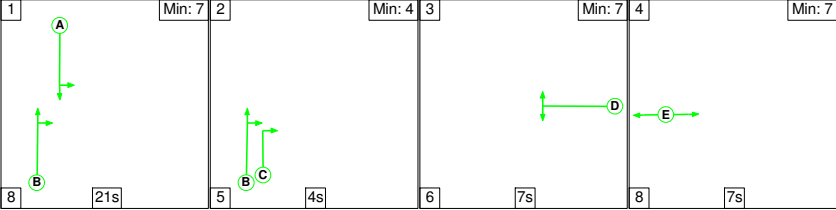
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	82.3%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	82.3%
1/1	Southbound Ahead Left	U	N/A	N/A	A		1	61	-	840	2019	1181	71.1%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	1	70	4	581	1949	706	82.3%
3/1	Westbound Right Left	U	N/A	N/A	D		1	7	-	44	1805	136	32.3%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	581	1940	1940	29.9%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	840	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	44	Inf	Inf	0.0%
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: Proposed Traffic Signal Installation Model	-	-	19	2	1	8.0	3.9	0.0	12.0	-	-	-	-
New Brighton Road, Emsworth	-	-	19	2	1	8.0	3.9	0.0	12.0	-	-	-	-
1/1	840	840	-	-	-	3.6	1.2	-	4.9	20.9	17.5	1.2	18.7
2/1	581	581	19	2	1	3.8	2.2	0.0	6.1	37.6	15.0	2.2	17.3
3/1	44	44	-	-	-	0.6	0.2	-	0.8	65.9	1.2	0.2	1.5
4/1	581	581	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
5/1	840	840	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	44	44	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	9.4	Total Delay for Signalled Lanes (pcuHr):	11.75	Cycle Time (s):	106
	PRC Over All Lanes (%):	9.4	Total Delay Over All Lanes(pcuHr):	11.96		

Full Input Data And Results
Scenario 2: 'OFF Peak' (FG2: 'OFF PEAK ', Plan 1: 'Network Control Plan 1')

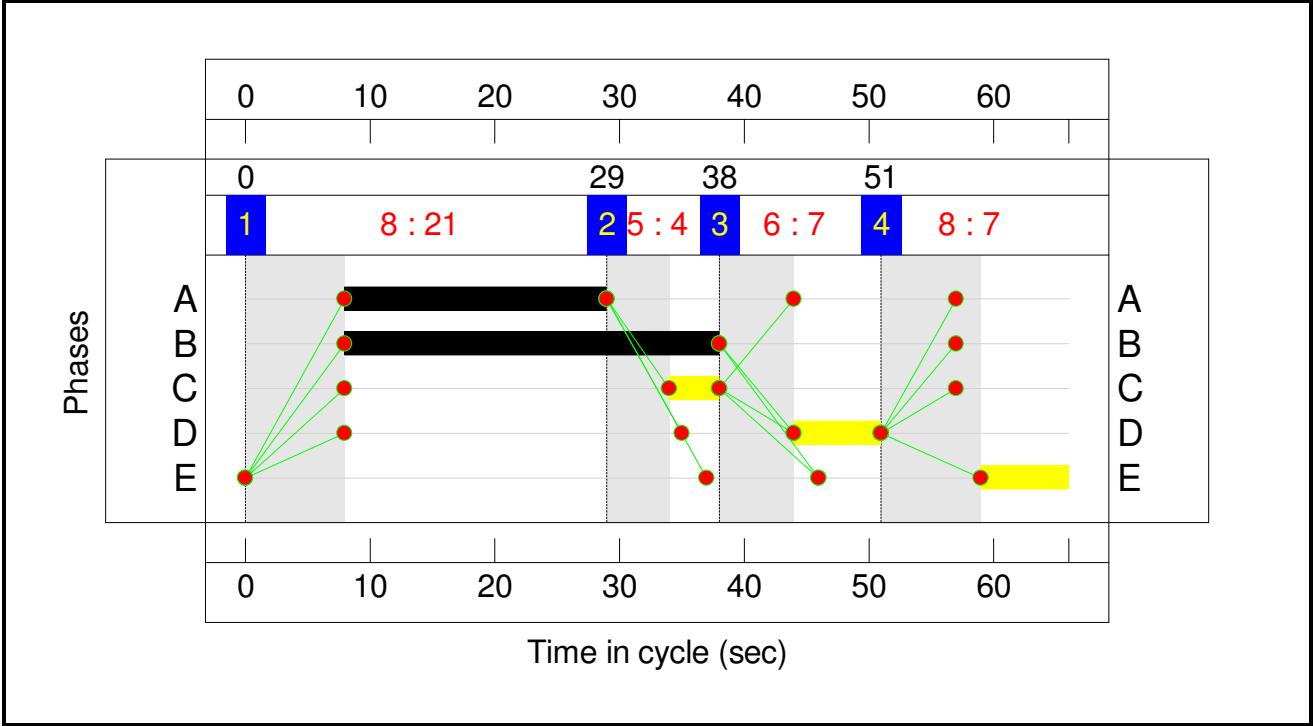
Stage Sequence Diagram



Stage Timings

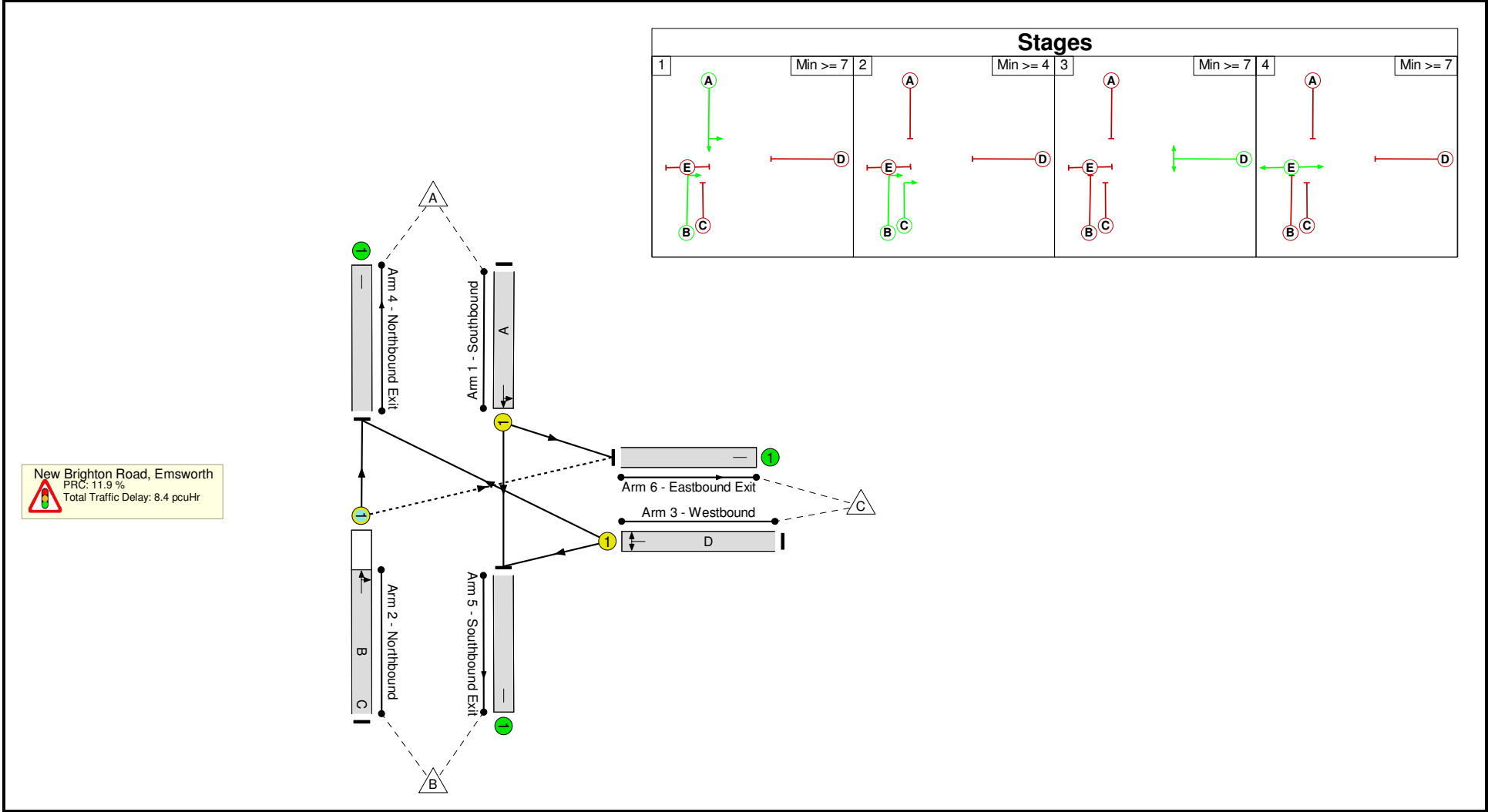
Stage	1	2	3	4
Duration	21	4	7	7
Change Point	0	29	38	51

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

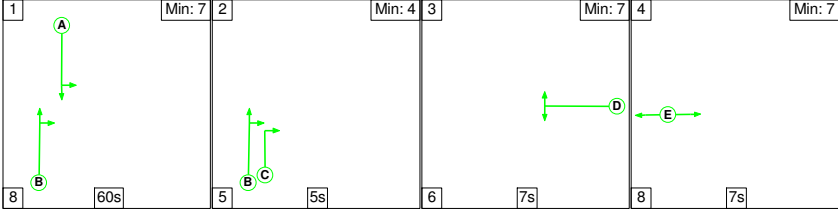
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	80.4%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	80.4%
1/1	Southbound Ahead Left	U	N/A	N/A	A		1	21	-	505	2020	673	75.0%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	1	30	4	393	1951	489	80.4%
3/1	Westbound Right Left	U	N/A	N/A	D		1	7	-	22	1805	219	10.1%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	393	1940	1940	20.3%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	22	Inf	Inf	0.0%
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: Proposed Traffic Signal Installation Model	-	-	5	5	1	4.8	3.6	0.0	8.4	-	-	-	-
New Brighton Road, Emsworth	-	-	5	5	1	4.8	3.6	0.0	8.4	-	-	-	-
1/1	505	505	-	-	-	2.7	1.5	-	4.2	30.1	8.1	1.5	9.6
2/1	393	393	5	5	1	1.9	2.0	0.0	3.9	35.4	6.7	2.0	8.6
3/1	22	22	-	-	-	0.2	0.1	-	0.2	35.1	0.4	0.1	0.4
4/1	393	393	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
5/1	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	22	22	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	11.9	Total Delay for Signalled Lanes (pcuHr):	8.30	Cycle Time (s):	66
	PRC Over All Lanes (%):	11.9	Total Delay Over All Lanes(pcuHr):	8.43		

Full Input Data And Results
Scenario 3: 'PM PEAK ' (FG3: 'PM PEAK', Plan 1: 'Network Control Plan 1')

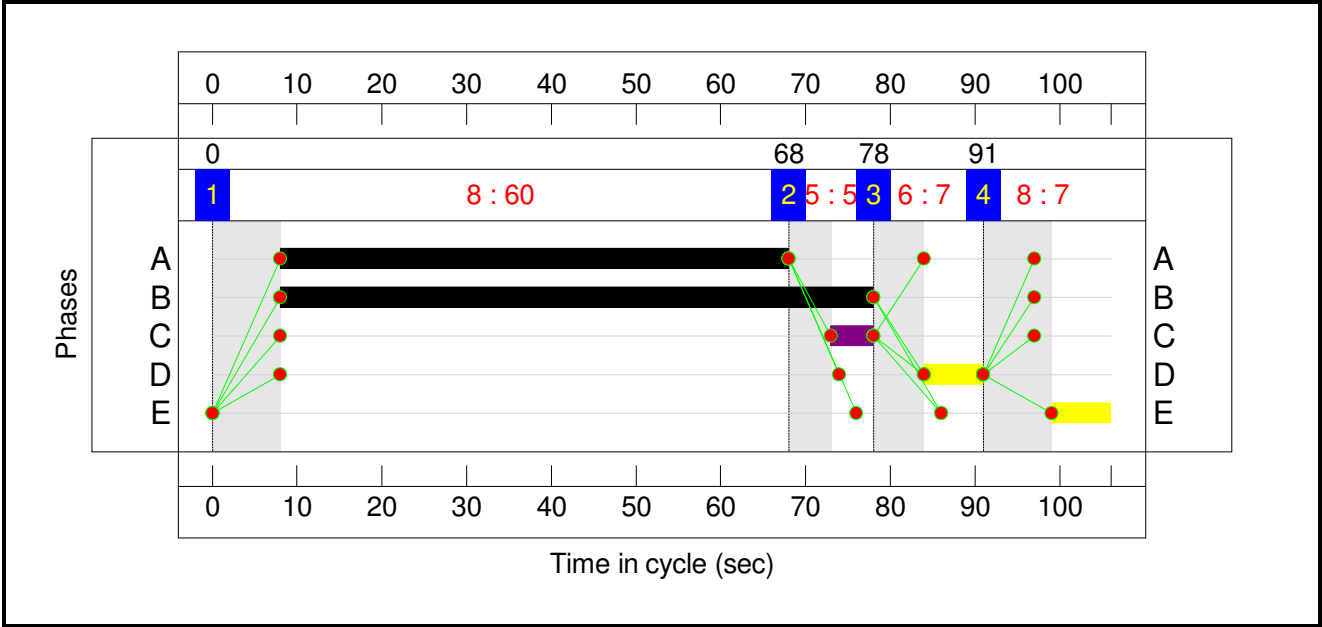
Stage Sequence Diagram



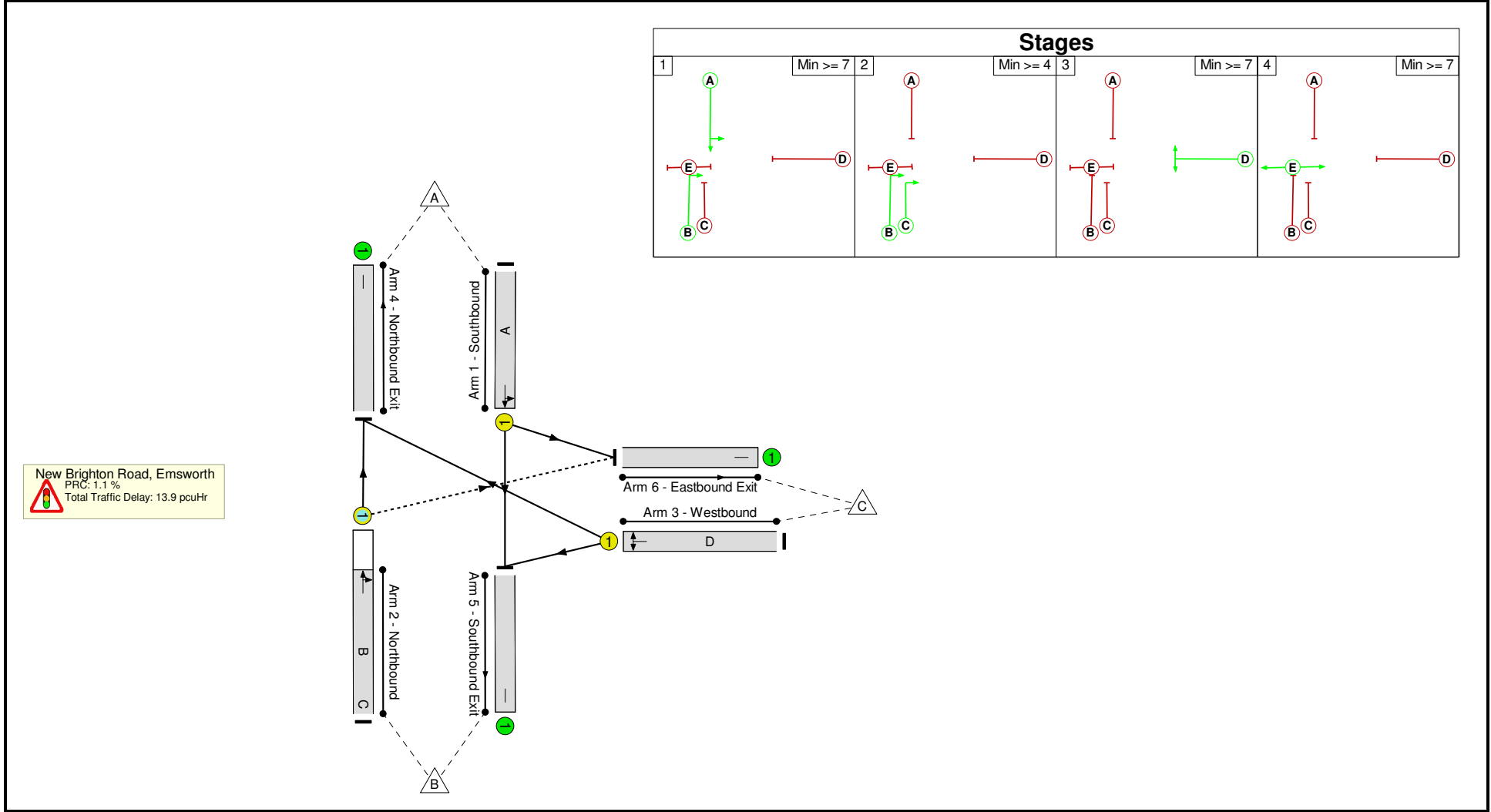
Stage Timings

Stage	1	2	3	4
Duration	60	5	7	7
Change Point	0	68	78	91

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

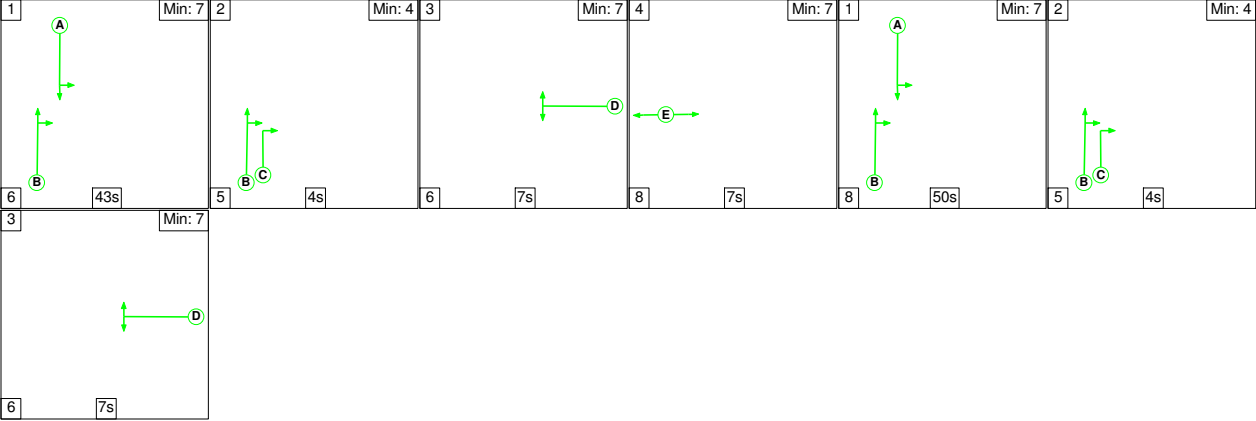
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	89.1%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	89.1%
1/1	Southbound Ahead Left	U	N/A	N/A	A		1	60	-	599	2010	1157	51.8%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	1	70	5	828	1947	930	89.1%
3/1	Westbound Right Left	U	N/A	N/A	D		1	7	-	88	1805	136	64.6%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	828	1940	1940	42.7%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	599	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	88	Inf	Inf	0.0%
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: Proposed Traffic Signal Installation Model	-	-	38	5	1	8.3	5.6	0.0	13.9	-	-	-	-
New Brighton Road, Emsworth	-	-	38	5	1	8.3	5.6	0.0	13.9	-	-	-	-
1/1	599	599	-	-	-	2.3	0.5	-	2.8	16.8	10.6	0.5	11.2
2/1	828	828	38	5	1	4.9	3.8	0.0	8.7	37.8	21.4	3.8	25.2
3/1	88	88	-	-	-	1.2	0.9	-	2.0	83.6	2.5	0.9	3.4
4/1	828	828	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
5/1	599	599	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	88	88	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	1.1	Total Delay for Signalled Lanes (pcuHr):	13.55	Cycle Time (s):	106
	PRC Over All Lanes (%):	1.1	Total Delay Over All Lanes(pcuHr):	13.92		

Full Input Data And Results
Scenario 4: 'AM Peak Double' (FG1: 'AM PEAK ', Plan 2: 'Network Control Plan 2')

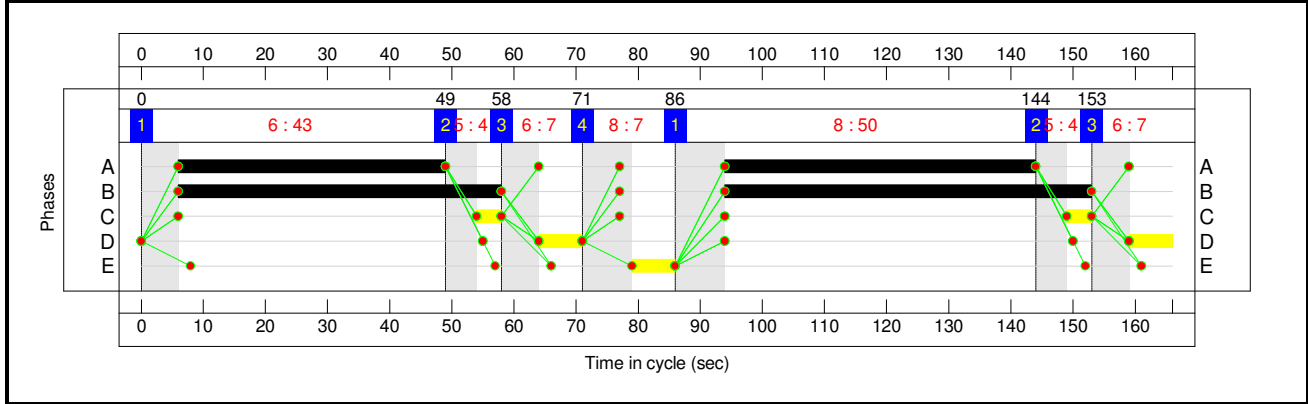
Stage Sequence Diagram



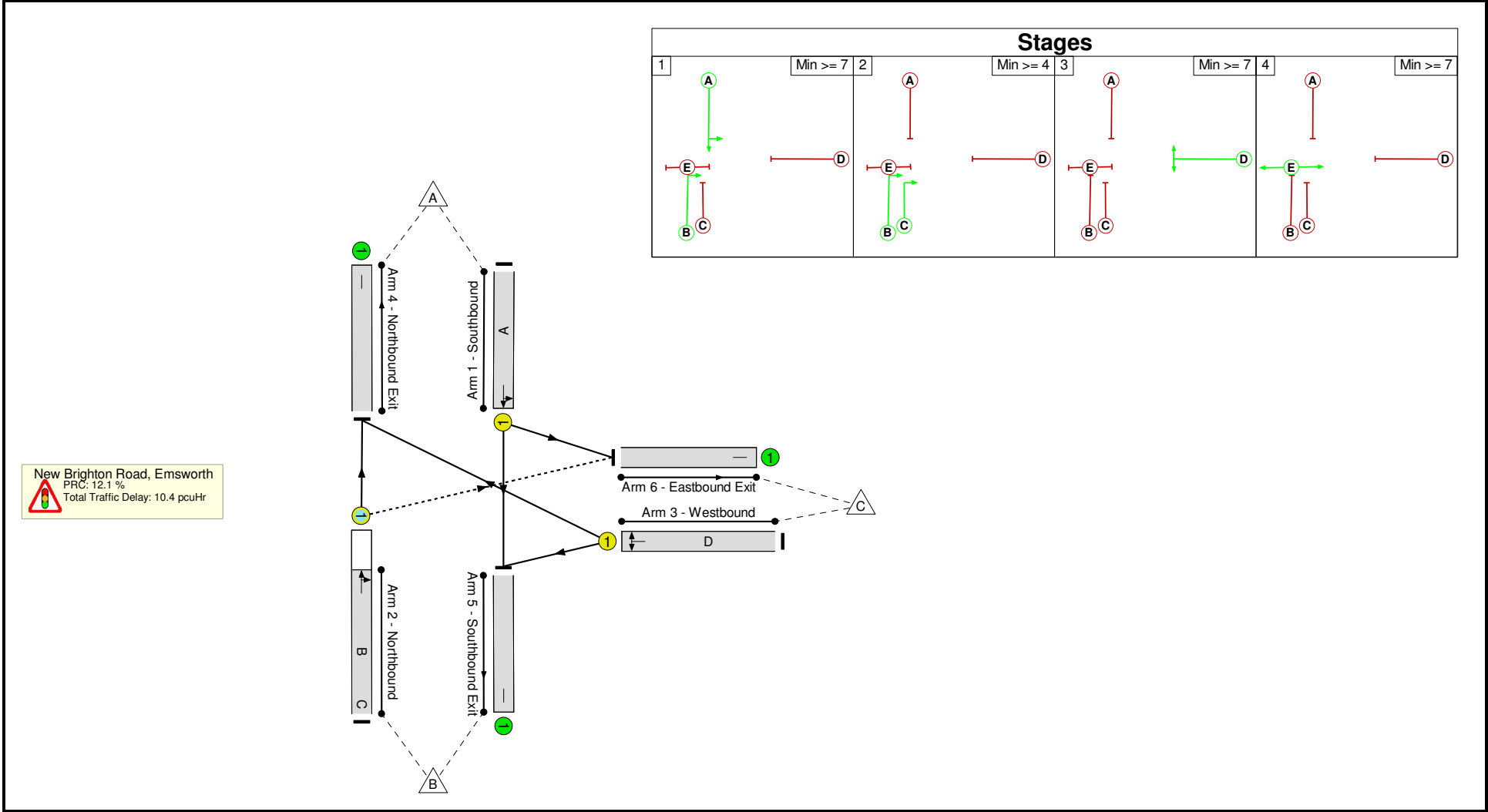
Stage Timings

Stage	1	2	3	4	1	2	3
Duration	43	4	7	7	50	4	7
Change Point	0	49	58	71	86	144	153

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

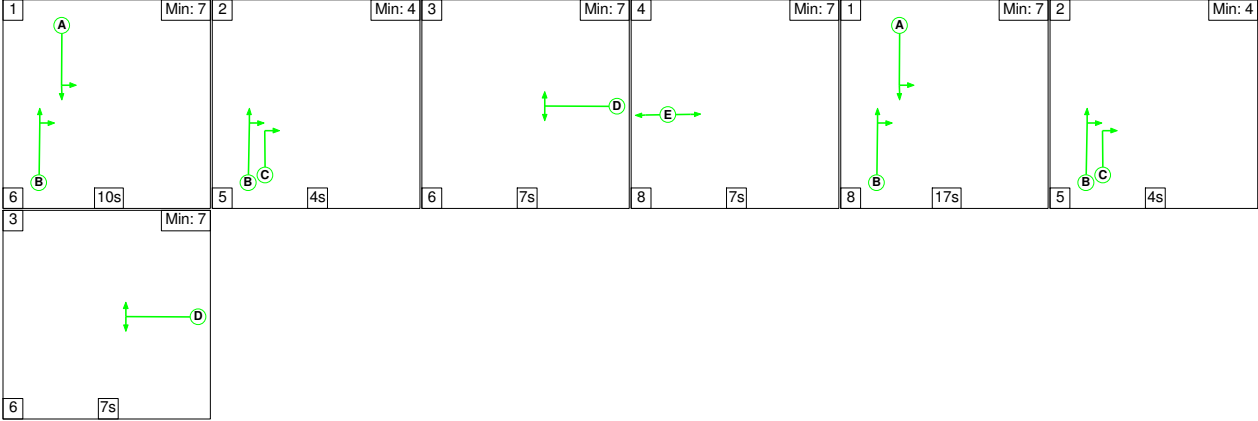
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	80.3%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	80.3%
1/1	Southbound Ahead Left	U	N/A	N/A	A		2	93	-	840	2019	1155	72.7%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	2	111	8	581	1949	724	80.3%
3/1	Westbound Right Left	U	N/A	N/A	D		2	14	-	44	1805	174	25.3%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	581	1940	1940	29.9%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	840	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	44	Inf	Inf	0.0%
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: Proposed Traffic Signal Installation Model	-	-	16	4	2	6.6	3.7	0.0	10.4	-	-	-	-
New Brighton Road, Emsworth	-	-	16	4	2	6.6	3.7	0.0	10.4	-	-	-	-
1/1	840	840	-	-	-	3.2	1.3	-	4.5	19.4	17.5	1.3	18.8
2/1	581	581	16	4	2	3.0	2.0	0.0	5.0	31.1	15.0	2.0	17.0
3/1	44	44	-	-	-	0.4	0.2	-	0.6	49.5	1.1	0.2	1.3
4/1	581	581	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
5/1	840	840	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	44	44	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	12.1	Total Delay for Signalled Lanes (pcuHr):	10.16	Cycle Time (s):	166
	PRC Over All Lanes (%):	12.1	Total Delay Over All Lanes(pcuHr):	10.37		

Full Input Data And Results
Scenario 5: 'OFF Peak Double' (FG2: 'OFF PEAK ', Plan 2: 'Network Control Plan 2')

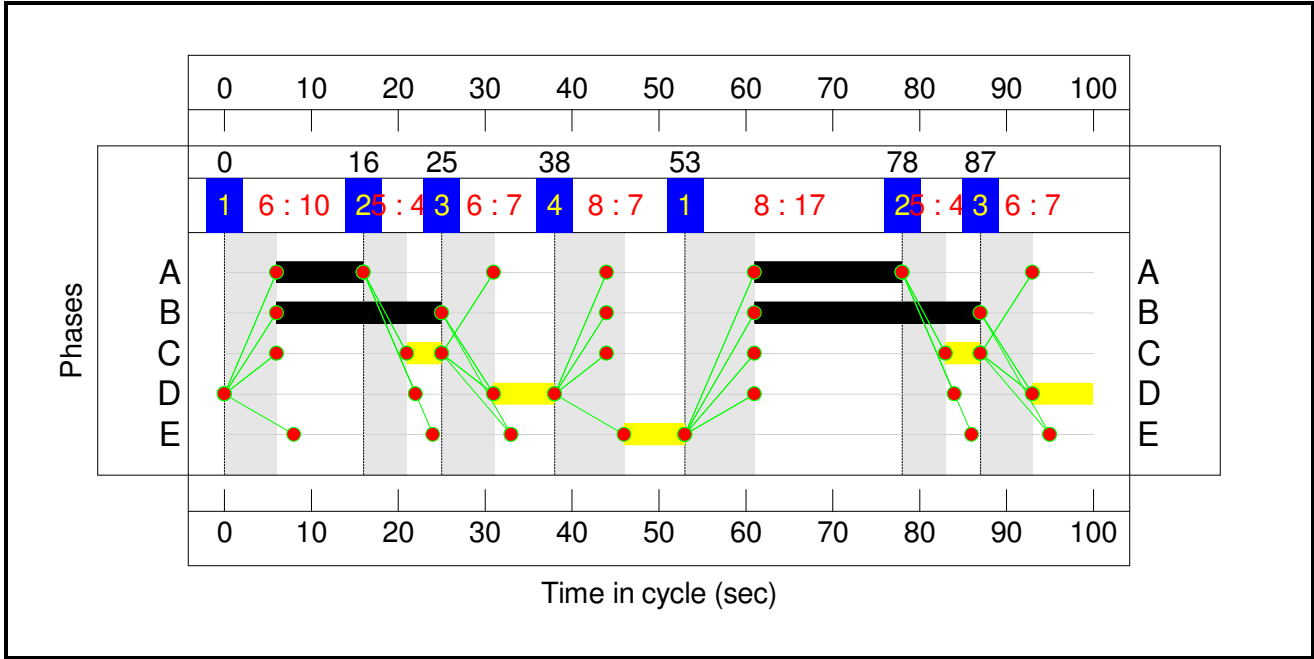
Stage Sequence Diagram



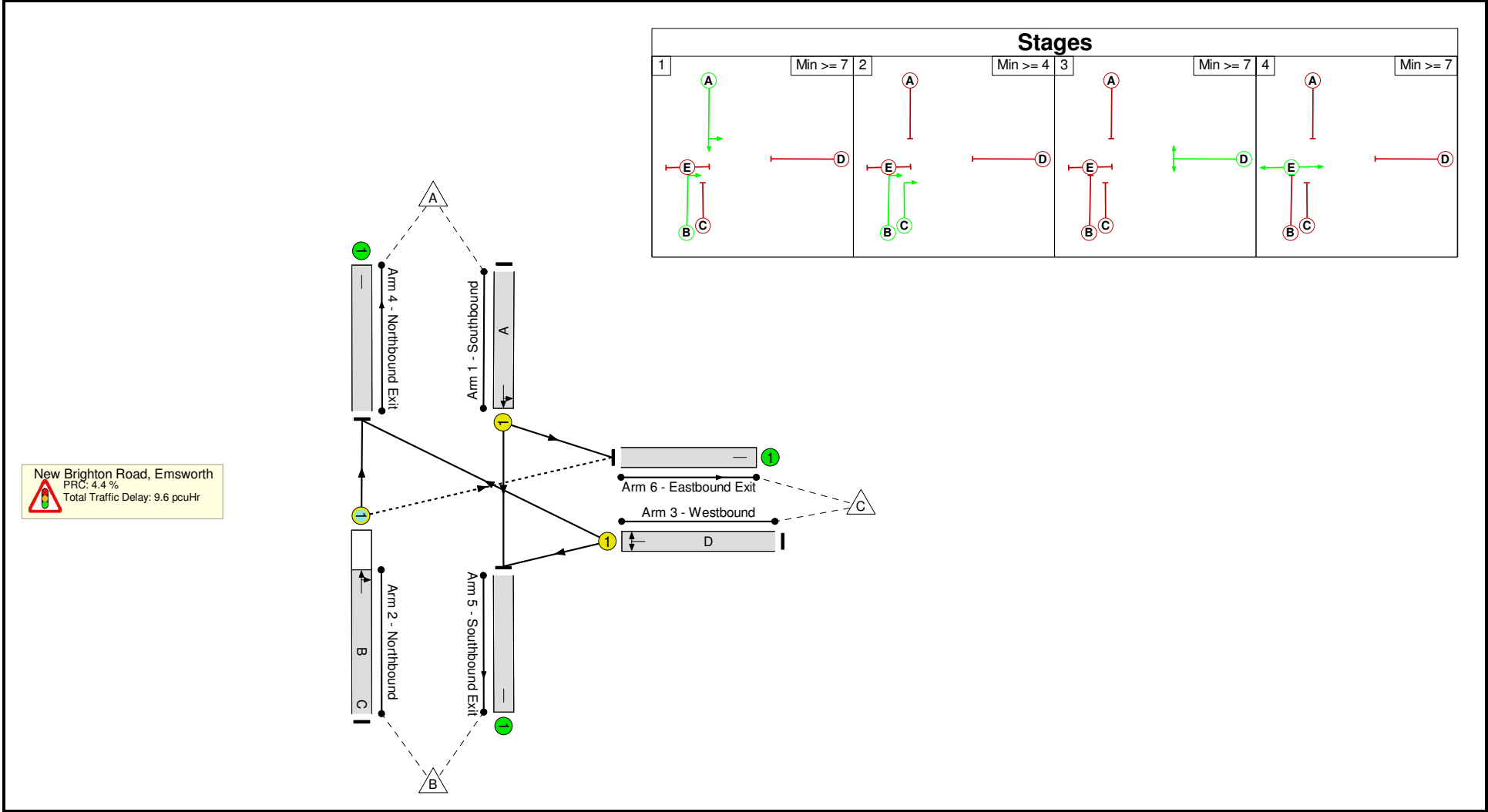
Stage Timings

Stage	1	2	3	4	1	2	3
Duration	10	4	7	7	17	4	7
Change Point	0	16	25	38	53	78	87

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

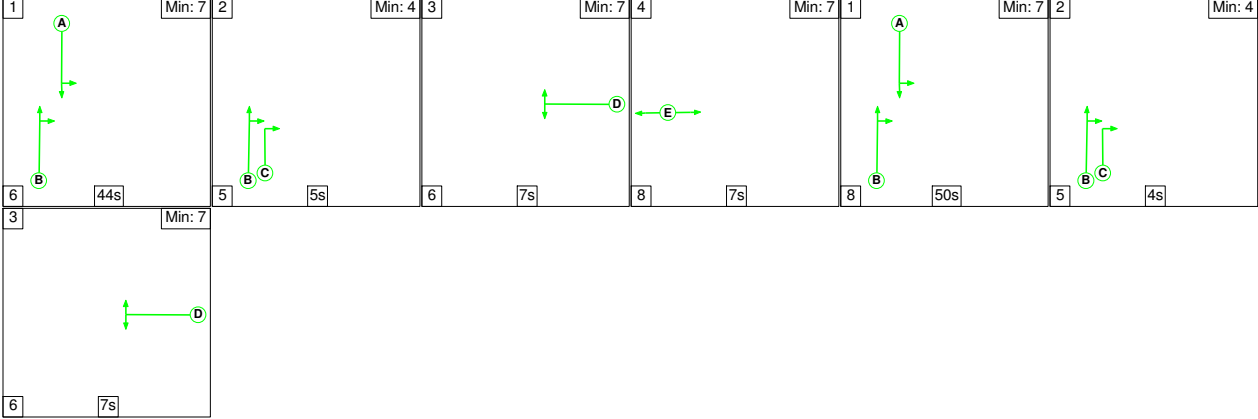
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	86.2%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	86.2%
1/1	Southbound Ahead Left	U	N/A	N/A	A		2	27	-	505	2020	586	86.2%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	2	45	8	393	1951	470	83.7%
3/1	Westbound Right Left	U	N/A	N/A	D		2	14	-	22	1805	289	7.6%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	393	1940	1940	20.3%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	505	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	22	Inf	Inf	0.0%
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: Proposed Traffic Signal Installation Model	-	-	3	6	2	4.1	5.5	0.0	9.6	-	-	-	-
New Brighton Road, Emsworth	-	-	3	6	2	4.1	5.5	0.0	9.6	-	-	-	-
1/1	505	505	-	-	-	2.5	2.9	-	5.4	38.5	8.1	2.9	11.1
2/1	393	393	3	6	2	1.5	2.4	0.0	3.9	35.8	6.7	2.4	9.1
3/1	22	22	-	-	-	0.1	0.0	-	0.2	26.2	0.3	0.0	0.4
4/1	393	393	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
5/1	505	505	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	22	22	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	4.4	Total Delay for Signalled Lanes (pcuHr):	9.47	Cycle Time (s):	100
	PRC Over All Lanes (%):	4.4	Total Delay Over All Lanes(pcuHr):	9.60		

Full Input Data And Results
Scenario 6: 'PM Peak Double' (FG3: 'PM PEAK', Plan 2: 'Network Control Plan 2')

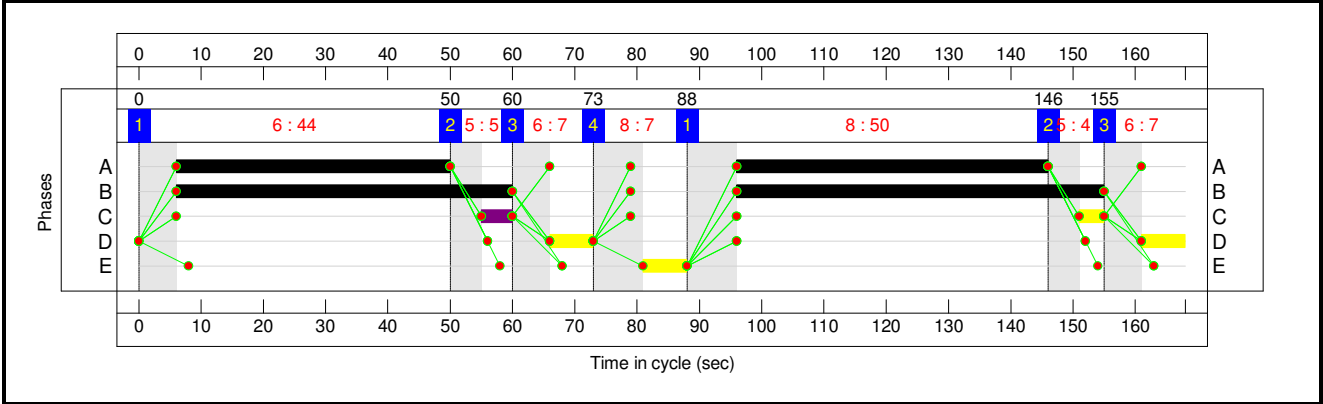
Stage Sequence Diagram



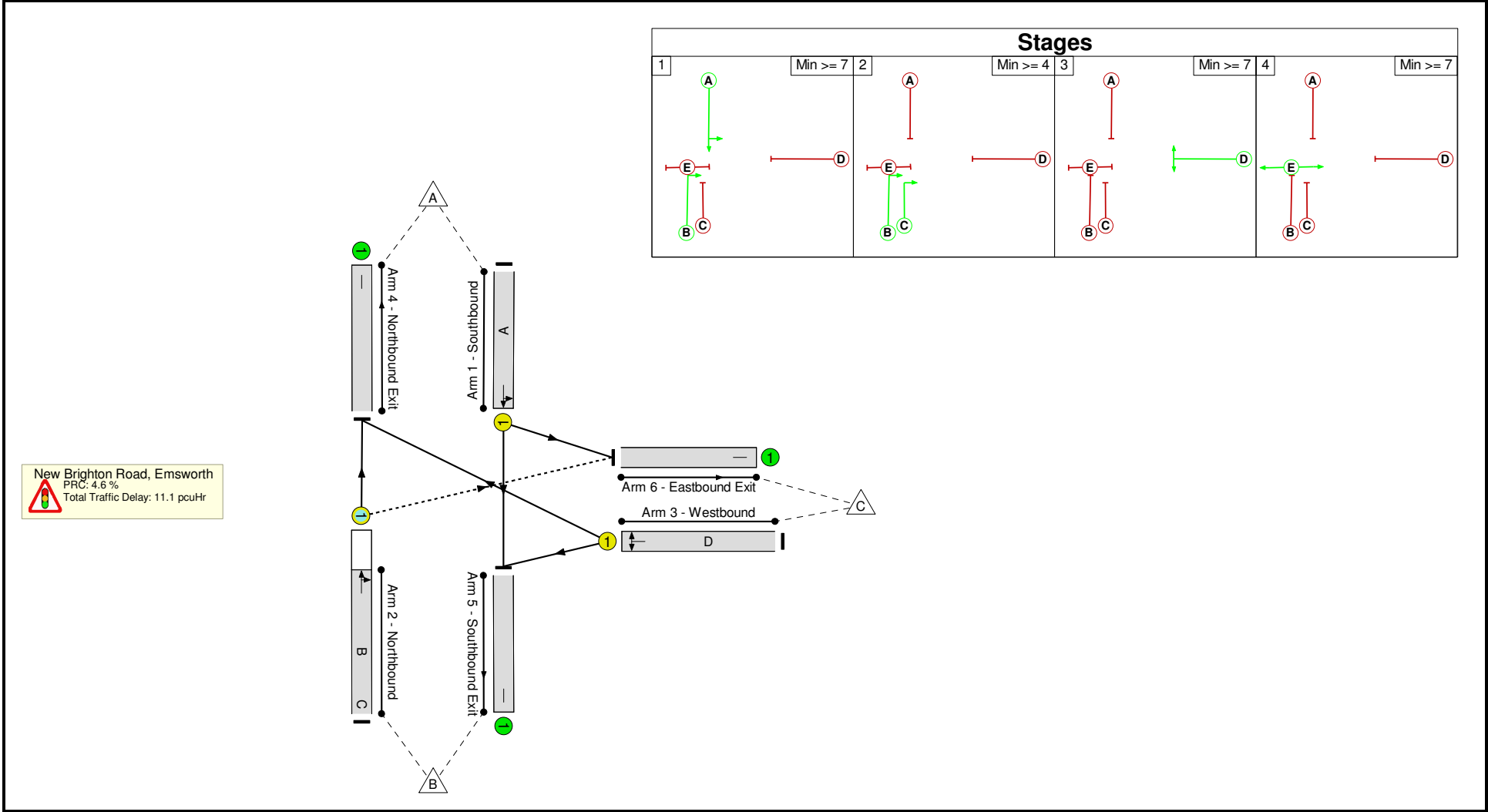
Stage Timings

Stage	1	2	3	4	1	2	3
Duration	44	5	7	7	50	4	7
Change Point	0	50	60	73	88	146	155

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



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: Proposed Traffic Signal Installation Model	-	-	N/A	-	-		-	-	-	-	-	-	86.0%
New Brighton Road, Emsworth	-	-	N/A	-	-		-	-	-	-	-	-	86.0%
1/1	Southbound Ahead Left	U	N/A	N/A	A		2	94	-	599	2010	1149	52.2%
2/1	Northbound Ahead Right	O	N/A	N/A	B	C	2	113	9	828	1947	963	86.0%
3/1	Westbound Right Left	U	N/A	N/A	D		2	14	-	88	1805	172	51.2%
4/1	Northbound Exit	U	N/A	N/A	-		-	-	-	828	1940	1940	42.7%
5/1	Southbound Exit	U	N/A	N/A	-		-	-	-	599	Inf	Inf	0.0%
6/1	Eastbound Exit	U	N/A	N/A	-		-	-	-	88	Inf	Inf	0.0%
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: Proposed Traffic Signal Installation Model	-	-	35	6	3	6.7	4.4	0.0	11.1	-	-	-	-
New Brighton Road, Emsworth	-	-	35	6	3	6.7	4.4	0.0	11.1	-	-	-	-
1/1	599	599	-	-	-	1.9	0.5	-	2.5	14.9	10.6	0.5	11.2
2/1	828	828	35	6	3	3.9	2.9	0.0	6.8	29.7	21.4	2.9	24.3
3/1	88	88	-	-	-	0.9	0.5	-	1.4	58.1	2.2	0.5	2.7
4/1	828	828	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
5/1	599	599	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	88	88	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - New Brighton Road, Emsworth	PRC for Signalled Lanes (%):	4.6	Total Delay for Signalled Lanes (pcuHr):	10.75	Cycle Time (s):	168
	PRC Over All Lanes (%):	4.6	Total Delay Over All Lanes(pcuHr):	11.12		