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Scenario 1: '2022 AM' (FG1: '2022 AM', Plan 1: 'Network Control Plan 1')**Traffic Flows, Desired****Desired Flow :**

Origin	Destination					
		A	B	C	D	Tot.
	A	0	2	205	578	785
	B	9	0	4	7	20
	C	356	3	0	236	595
	D	532	3	183	0	718
	Tot.	897	8	392	821	2118

Traffic Lane Flows

Lane	Scenario 1: 2022 AM
Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction	
1/1 (short)	207
1/2 (with short)	785(In) 578(Out)
2/1 (with short)	20(In) 11(Out)
2/2 (short)	9
3/1 (short)	236
3/2 (with short)	595(In) 359(Out)
4/1 (with short)	718(In) 532(Out)
4/2 (short)	186
5/1	392
6/1	897
7/1	821
8/1	8

Lane Saturation Flows

Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction								
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 (Coxmoor Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	99.0 %	1913	1913
				Arm 8 Left	15.00	1.0 %		
1/2 (Coxmoor Road (N))	3.00	0.00	N	Arm 7 Right	12.00	100.0 %	1827	1827
2/1 (Cauldwell Road)	3.00	0.00	Y	Arm 5 Left	Inf	36.4 %	1748	1748
				Arm 7 Ahead	10.00	63.6 %		
2/2 (Cauldwell Road)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
3/1 (Coxmoor Road (S))	3.00	0.00	Y	Arm 7 Left	12.00	100.0 %	1702	1702
3/2 (Coxmoor Road (S))	3.50	0.00	Y	Arm 6 Ahead	Inf	99.2 %	1963	1963
				Arm 8 Right	10.00	0.8 %		
4/1 (Newark Road)	3.50	0.00	Y	Arm 6 Left	15.00	100.0 %	1786	1786
4/2 (Newark Road)	3.50	0.00	N	Arm 5 Right	12.00	98.4 %	1874	1874
				Arm 8 Ahead	Inf	1.6 %		
5/1	Infinite Saturation Flow					Inf	Inf	
6/1	This lane uses a directly entered Saturation Flow					1300	1300	
7/1	Infinite Saturation Flow					Inf	Inf	
8/1	Infinite Saturation Flow					Inf	Inf	

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

Traffic Flows, Desired

Desired Flow :

		Destination				
Origin		A	B	C	D	Tot.
	A	0	12	305	577	894
	B	9	0	3	6	18
	C	342	3	0	210	555
	D	684	10	221	0	915
	Tot.	1035	25	529	793	2382

Traffic Lane Flows

Lane	Scenario 2: 2022 PM
Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction	
1/1 (short)	317
1/2 (with short)	894(In) 577(Out)
2/1 (with short)	18(In) 9(Out)
2/2 (short)	9
3/1 (short)	210
3/2 (with short)	555(In) 345(Out)
4/1 (with short)	915(In) 684(Out)
4/2 (short)	231
5/1	529
6/1	1035
7/1	793
8/1	25

Lane Saturation Flows

Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction								
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 (Coxmoor Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	96.2 %	1908	1908
				Arm 8 Left	15.00	3.8 %		
1/2 (Coxmoor Road (N))	3.00	0.00	N	Arm 7 Right	12.00	100.0 %	1827	1827
2/1 (Cauldwell Road)	3.00	0.00	Y	Arm 5 Left	Inf	33.3 %	1741	1741
				Arm 7 Ahead	10.00	66.7 %		
2/2 (Cauldwell Road)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
3/1 (Coxmoor Road (S))	3.00	0.00	Y	Arm 7 Left	12.00	100.0 %	1702	1702
3/2 (Coxmoor Road (S))	3.50	0.00	Y	Arm 6 Ahead	Inf	99.1 %	1962	1962
				Arm 8 Right	10.00	0.9 %		
4/1 (Newark Road)	3.50	0.00	Y	Arm 6 Left	15.00	100.0 %	1786	1786
4/2 (Newark Road)	3.50	0.00	N	Arm 5 Right	12.00	95.7 %	1880	1880
				Arm 8 Ahead	Inf	4.3 %		
5/1	Infinite Saturation Flow					Inf	Inf	
6/1	This lane uses a directly entered Saturation Flow					1300	1300	
7/1	Infinite Saturation Flow					Inf	Inf	
8/1	Infinite Saturation Flow					Inf	Inf	

Scenario 3: '2032 AM BKG' (FG3: '2032 AM BKG', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
Origin		A	B	C	D	Tot.
	A	0	2	223	629	854
	B	10	0	4	8	22
	C	388	3	0	257	648
	D	578	3	199	0	780
	Tot.	976	8	426	894	2304

Traffic Lane Flows

Lane	Scenario 3: 2032 AM BKG
Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction	
1/1 (short)	225
1/2 (with short)	854(In) 629(Out)
2/1 (with short)	22(In) 12(Out)
2/2 (short)	10
3/1 (short)	257
3/2 (with short)	648(In) 391(Out)
4/1 (with short)	780(In) 578(Out)
4/2 (short)	202
5/1	426
6/1	976
7/1	894
8/1	8

Lane Saturation Flows

Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction								
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 (Coxmoor Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	99.1 %	1913	1913
				Arm 8 Left	15.00	0.9 %		
1/2 (Coxmoor Road (N))	3.00	0.00	N	Arm 7 Right	12.00	100.0 %	1827	1827
2/1 (Cauldwell Road)	3.00	0.00	Y	Arm 5 Left	Inf	33.3 %	1741	1741
				Arm 7 Ahead	10.00	66.7 %		
2/2 (Cauldwell Road)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
3/1 (Coxmoor Road (S))	3.00	0.00	Y	Arm 7 Left	12.00	100.0 %	1702	1702
3/2 (Coxmoor Road (S))	3.50	0.00	Y	Arm 6 Ahead	Inf	99.2 %	1963	1963
				Arm 8 Right	10.00	0.8 %		
4/1 (Newark Road)	3.50	0.00	Y	Arm 6 Left	15.00	100.0 %	1786	1786
4/2 (Newark Road)	3.50	0.00	N	Arm 5 Right	12.00	98.5 %	1874	1874
				Arm 8 Ahead	Inf	1.5 %		
5/1	Infinite Saturation Flow					Inf	Inf	
6/1	This lane uses a directly entered Saturation Flow					1300	1300	
7/1	Infinite Saturation Flow					Inf	Inf	
8/1	Infinite Saturation Flow					Inf	Inf	

Scenario 4: '2032 PM BKG' (FG4: '2032 PM BKG', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
Origin		A	B	C	D	Tot.
	A	0	13	331	627	971
	B	10	0	3	7	20
	C	371	3	0	229	603
	D	743	11	240	0	994
	Tot.	1124	27	574	863	2588

Traffic Lane Flows

Lane	Scenario 4: 2032 PM BKG
Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction	
1/1 (short)	344
1/2 (with short)	971(In) 627(Out)
2/1 (with short)	20(In) 10(Out)
2/2 (short)	10
3/1 (short)	229
3/2 (with short)	603(In) 374(Out)
4/1 (with short)	994(In) 743(Out)
4/2 (short)	251
5/1	574
6/1	1124
7/1	863
8/1	27

Lane Saturation Flows

Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction								
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 (Coxmoor Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	96.2 %	1908	1908
				Arm 8 Left	15.00	3.8 %		
1/2 (Coxmoor Road (N))	3.00	0.00	N	Arm 7 Right	12.00	100.0 %	1827	1827
2/1 (Cauldwell Road)	3.00	0.00	Y	Arm 5 Left	Inf	30.0 %	1733	1733
				Arm 7 Ahead	10.00	70.0 %		
2/2 (Cauldwell Road)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
3/1 (Coxmoor Road (S))	3.00	0.00	Y	Arm 7 Left	12.00	100.0 %	1702	1702
3/2 (Coxmoor Road (S))	3.50	0.00	Y	Arm 6 Ahead	Inf	99.2 %	1963	1963
				Arm 8 Right	10.00	0.8 %		
4/1 (Newark Road)	3.50	0.00	Y	Arm 6 Left	15.00	100.0 %	1786	1786
4/2 (Newark Road)	3.50	0.00	N	Arm 5 Right	12.00	95.6 %	1880	1880
				Arm 8 Ahead	Inf	4.4 %		
5/1	Infinite Saturation Flow					Inf	Inf	
6/1	This lane uses a directly entered Saturation Flow					1300	1300	
7/1	Infinite Saturation Flow					Inf	Inf	
8/1	Infinite Saturation Flow					Inf	Inf	

Scenario 5: '2032 AM WD' (FG5: '2032 AM WD', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
Origin		A	B	C	D	Tot.
	A	0	2	223	647	872
	B	10	0	4	8	22
	C	388	3	0	269	660
	D	628	3	232	0	863
	Tot.	1026	8	459	924	2417

Traffic Lane Flows

Lane	Scenario 5: 2032 AM WD
Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction	
1/1 (short)	225
1/2 (with short)	872(In) 647(Out)
2/1 (with short)	22(In) 12(Out)
2/2 (short)	10
3/1 (short)	269
3/2 (with short)	660(In) 391(Out)
4/1 (with short)	863(In) 628(Out)
4/2 (short)	235
5/1	459
6/1	1026
7/1	924
8/1	8

Lane Saturation Flows

Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction								
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 (Coxmoor Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	99.1 %	1913	1913
				Arm 8 Left	15.00	0.9 %		
1/2 (Coxmoor Road (N))	3.00	0.00	N	Arm 7 Right	12.00	100.0 %	1827	1827
2/1 (Cauldwell Road)	3.00	0.00	Y	Arm 5 Left	Inf	33.3 %	1741	1741
				Arm 7 Ahead	10.00	66.7 %		
2/2 (Cauldwell Road)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
3/1 (Coxmoor Road (S))	3.00	0.00	Y	Arm 7 Left	12.00	100.0 %	1702	1702
3/2 (Coxmoor Road (S))	3.50	0.00	Y	Arm 6 Ahead	Inf	99.2 %	1963	1963
				Arm 8 Right	10.00	0.8 %		
4/1 (Newark Road)	3.50	0.00	Y	Arm 6 Left	15.00	100.0 %	1786	1786
4/2 (Newark Road)	3.50	0.00	N	Arm 5 Right	12.00	98.7 %	1874	1874
				Arm 8 Ahead	Inf	1.3 %		
5/1	Infinite Saturation Flow					Inf	Inf	
6/1	This lane uses a directly entered Saturation Flow					1300	1300	
7/1	Infinite Saturation Flow					Inf	Inf	
8/1	Infinite Saturation Flow					Inf	Inf	

Scenario 6: '2032 PM WD' (FG6: '2032 PM WD', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
Origin		A	B	C	D	Tot.
	A	0	13	331	675	1019
	B	10	0	3	7	20
	C	371	3	0	261	635
	D	759	11	251	0	1021
	Tot.	1140	27	585	943	2695

Traffic Lane Flows

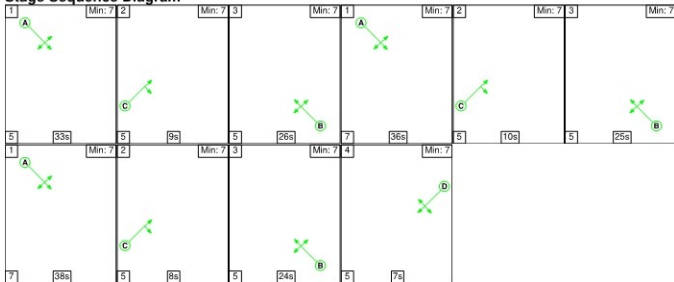
Lane	Scenario 6: 2032 PM WD
Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction	
1/1 (short)	344
1/2 (with short)	1019(In) 675(Out)
2/1 (with short)	20(In) 10(Out)
2/2 (short)	10
3/1 (short)	251
3/2 (with short)	635(In) 374(Out)
4/1 (with short)	1021(In) 759(Out)
4/2 (short)	262
5/1	585
6/1	1140
7/1	943
8/1	27

Lane Saturation Flows

Junction: Coxmoor Road/Newark Road/Cauldwell Road Junction								
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 (Coxmoor Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	96.2 %	1908	1908
				Arm 8 Left	15.00	3.8 %		
1/2 (Coxmoor Road (N))	3.00	0.00	N	Arm 7 Right	12.00	100.0 %	1827	1827
2/1 (Cauldwell Road)	3.00	0.00	Y	Arm 5 Left	Inf	30.0 %	1733	1733
				Arm 7 Ahead	10.00	70.0 %		
2/2 (Cauldwell Road)	3.00	0.00	Y	Arm 6 Right	15.00	100.0 %	1741	1741
3/1 (Coxmoor Road (S))	3.00	0.00	Y	Arm 7 Left	12.00	100.0 %	1702	1702
3/2 (Coxmoor Road (S))	3.50	0.00	Y	Arm 6 Ahead	Inf	99.2 %	1963	1963
				Arm 8 Right	10.00	0.8 %		
4/1 (Newark Road)	3.50	0.00	Y	Arm 6 Left	15.00	100.0 %	1786	1786
4/2 (Newark Road)	3.50	0.00	N	Arm 5 Right	12.00	95.8 %	1880	1880
				Arm 8 Ahead	Inf	4.2 %		
5/1	Infinite Saturation Flow					Inf	Inf	
6/1	This lane uses a directly entered Saturation Flow					1300	1300	
7/1	Infinite Saturation Flow					Inf	Inf	
8/1	Infinite Saturation Flow					Inf	Inf	

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

Stage Sequence Diagram

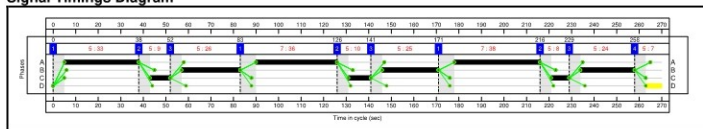


Full Input Data And Results

Stage Timings

Stage	1	2	3	1	2	3	1	2	3	4
Duration	33	9	26	36	10	25	38	8	24	7
Change Point	0	38	52	83	126	141	171	216	229	258

Signal Timings 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: Coxmoor Road/Newark Road/Cauldwell Road XRoads	-	-	N/A	-	-		-	-	-	-	-	-	91.6%
Coxmoor Road/Newark Road/Cauldwell Road Junction	-	-	N/A	-	-		-	-	-	-	-	-	91.6%
1/2+1/1	Coxmoor Road (N) Ahead Right Left	U	N/A	N/A	A		3	107	-	785	1827:1913	631+226	91.6 : 91.6%
2/1+2/2	Cauldwell Road Left Right Ahead	U	N/A	N/A	D		1	7	-	20	1748:1741	52+42	21.2 : 21.2%
3/2+3/1	Coxmoor Road (S) Ahead Left Right	U	N/A	N/A	B		3	75	-	595	1963:1702	396+260	90.7 : 90.7%
4/1+4/2	Newark Road Right Left Ahead	O+U	N/A	N/A	- C		-	-	-	718	1786:1874	596+208	89.3 : 89.3%
5/1		U	N/A	N/A	-		-	-	-	392	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	897	1300	1300	69.0%
7/1		U	N/A	N/A	-		-	-	-	821	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	8	Inf	Inf	0.0%

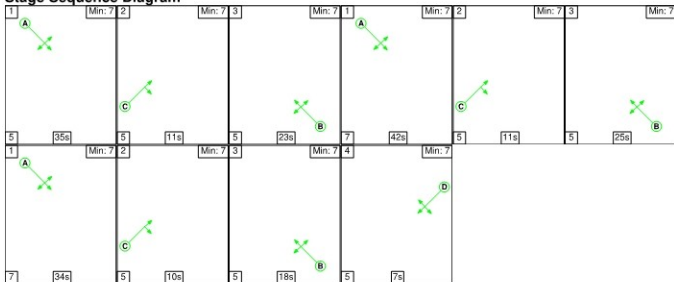
Full Input Data And Results

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Full Input Data And Results

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

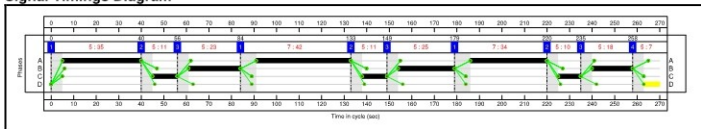
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2	3	1	2	3	4
Duration	35	11	23	42	11	25	34	10	18	7
Change Point	0	40	56	84	133	149	179	220	235	258

Signal Timings 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: Coxmoor Road/Newark Road/Cauldwell Road XRoads	-	-	N/A	-	-		-	-	-	-	-	-	94.8%
Coxmoor Road/Newark Road/Cauldwell Road Junction	-	-	N/A	-	-		-	-	-	-	-	-	94.8%
1/2+1/1	Coxmoor Road (N) Ahead Right Left	U	N/A	N/A	A		3	111	-	894	1827:1908	608+334	94.8 : 94.8%
2/1+2/2	Cauldwell Road Left Right Ahead	U	N/A	N/A	D		1	7	-	18	1741:1741	52+52	17.4 : 17.4%
3/2+3/1	Coxmoor Road (S) Ahead Left Right	U	N/A	N/A	B		3	66	-	555	1962:1702	365+222	94.5 : 94.5%
4/1+4/2	Newark Road Right Left Ahead	O+U	N/A	N/A	- C		-	-	-	915	1786:1880	722+244	94.8 : 94.8%
5/1		U	N/A	N/A	-		-	-	-	529	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	1035	1300	1300	79.6%
7/1		U	N/A	N/A	-		-	-	-	793	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	25	Inf	Inf	0.0%

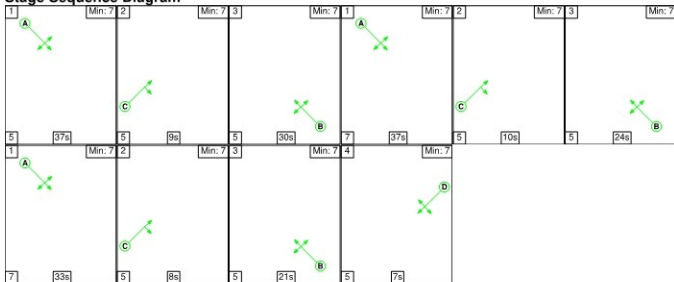
Full Input Data And Results

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)	Average Delay Per PCU (s/pcu)	Maximum Back of Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Coxmoor Road/Newark Road/Cauldwell Road XRoads	-	-	88	596	0	15.0	22.5	0.0	37.4	-	-	-	-
Coxmoor Road/Newark Road/Cauldwell Road Junction	-	-	88	596	0	15.0	22.5	0.0	37.4	-	-	-	-
1/2+1/1	894	894	-	-	-	5.6	7.1	-	12.7	51.0	18.1	7.1	25.2
2/1+2/2	18	18	-	-	-	0.6	0.1	-	0.7	148.9	0.7	0.1	0.8
3/2+3/1	555	555	-	-	-	4.9	6.2	-	11.1	71.9	12.1	6.2	18.3
4/1+4/2	915	915	88	596	0	3.3	7.1	-	10.3	40.7	7.6	7.1	14.7
5/1	529	529	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1035	1035	-	-	-	0.7	1.9	-	2.6	9.0	19.2	1.9	21.1
7/1	793	793	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	25	25	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):		-5.4 -5.4	Total Delay for Signalled Lanes (pcuHr):		24.50 37.43	Cycle Time (s): 270					

Full Input Data And Results

Scenario 3: '2032 AM BKG' (FG3: '2032 AM BKG', Plan 1: 'Network Control Plan 1')

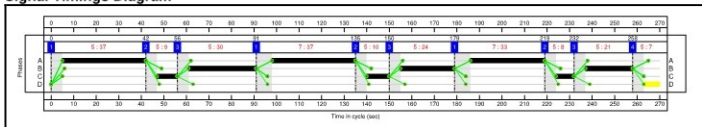
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2	3	1	2	3	4
Duration	37	9	30	37	10	24	33	8	21	7
Change Point	0	42	56	91	135	150	179	219	232	258

Signal Timings 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: Coxmoor Road/Newark Road/Cauldwell Road XRoads	-	-	N/A	-	-		-	-	-	-	-	-	99.6%
Coxmoor Road/Newark Road/Cauldwell Road Junction	-	-	N/A	-	-		-	-	-	-	-	-	99.6%
1/2+1/1	Coxmoor Road (N) Ahead Right Left	U	N/A	N/A	A		3	107	-	854	1827:1913	631+226	99.6 : 99.6%
2/1+2/2	Cauldwell Road Left Right Ahead	U	N/A	N/A	D		1	7	-	22	1741:1741	52+43	23.3 : 23.3%
3/2+3/1	Coxmoor Road (S) Ahead Left Right	U	N/A	N/A	B		3	75	-	648	1963:1702	396+260	98.8 : 98.8%
4/1+4/2	Newark Road Right Left Ahead	O+U	N/A	N/A	- C		-	-	-	780	1786:1874	596+208	97.0 : 97.0%
5/1		U	N/A	N/A	-		-	-	-	426	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	976	1300	1300	75.1%
7/1		U	N/A	N/A	-		-	-	-	894	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	8	Inf	Inf	0.0%

Full Input Data And Results

[illegible]

Scenario 4: '2032 PM BKG' (FG4: '2032 PM BKG', Plan 1: 'Network Control Plan 1')

Figure 1: A 2x6 grid of diagrams showing the sequence of moves for a 3x3x3 Rubik's cube. The top row shows moves A, C, B, A, C, B with times 41s, 10s, 24s, 34s, 10s, 20s. The bottom row shows moves A, C, B, D, B with times 36s, 12s, 22s, 7s. Each move is represented by a green arrow and a letter in a circle.

Stage	1	2	3	1	2	3	1	2	3	4
Duration	41	10	24	34	10	20	36	12	22	7
Change Point	0	46	61	90	131	146	171	214	231	258

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: Coxmoor Road/Newark Road/Cauldwell Road XRoads	-	-	N/A	-	-		-	-	-	-	-	-	103.0%
Coxmoor Road/Newark Road/Cauldwell Road Junction	-	-	N/A	-	-		-	-	-	-	-	-	103.0%
1/2+1/1	Coxmoor Road (N) Ahead Right Left	U	N/A	N/A	A		3	111	-	971	1827:1908	608+334	103.0 : 103.0%
2/1+2/2	Cauldwell Road Left Right Ahead	U	N/A	N/A	D		1	7	-	20	1733:1741	51+52	19.5 : 19.4%
3/2+3/1	Coxmoor Road (S) Ahead Left Right	U	N/A	N/A	B		3	66	-	603	1963:1702	365+223	102.6 : 102.6%
4/1+4/2	Newark Road Right Left Ahead	O+U	N/A	N/A	- C		-	-	-	994	1786:1880	721+244	103.0 : 103.0%
5/1		U	N/A	N/A	-		-	-	-	574	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	1124	1300	1300	85.7%
7/1		U	N/A	N/A	-		-	-	-	863	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	27	Inf	Inf	0.0%

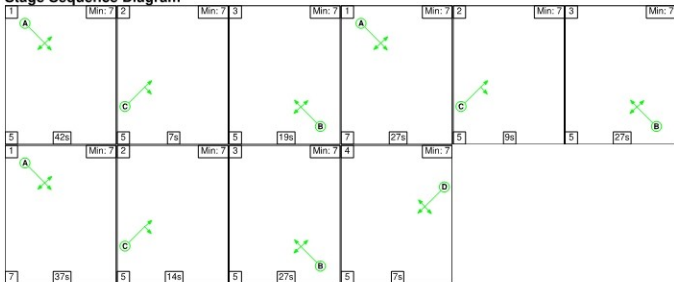
Full Input Data And Results

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: Coxmoor Road/Newark Road/Cauldwell Road XRoads	-	-	66	677	0	25.2	68.6	0.0	93.8	-	-	-	-
Coxmoor Road/Newark Road/Cauldwell Road Junction	-	-	66	677	0	25.2	68.6	0.0	93.8	-	-	-	-
1/2+1/1	971	942	-	-	-	10.8	24.3	-	35.1	130.2	27.8	24.3	52.1
2/1+2/2	20	20	-	-	-	0.7	0.1	-	0.8	149.6	0.7	0.1	0.9
3/2+3/1	603	588	-	-	-	7.6	16.7	-	24.3	144.8	16.3	16.7	33.0
4/1+4/2	994	987	66	677	0	5.2	24.6	-	29.8	108.0	9.5	24.6	34.1
5/1	557	557	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1115	1115	-	-	-	0.8	2.9	-	3.8	12.1	22.8	2.9	25.7
7/1	839	839	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	26	26	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):			-14.5 -14.5	Total Delay for Signalled Lanes (pcuHr):			60.21 93.78	Cycle Time (s): 270			
		PRC Over All Lanes (%):				Total Delay Over All Lanes(pcuHr):							

Full Input Data And Results

Scenario 5: '2032 AM WD' (FG5: '2032 AM WD', Plan 1: 'Network Control Plan 1')

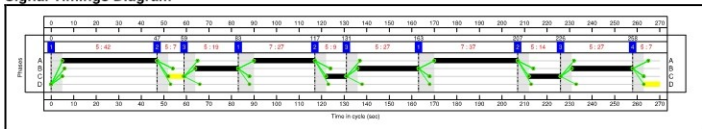
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2	3	1	2	3	4
Duration	42	7	19	27	9	27	37	14	27	7
Change Point	0	47	59	83	117	131	163	207	226	258

Signal Timings 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: Coxmoor Road/Newark Road/Cauldwell Road XRoads	-	-	N/A	-	-		-	-	-	-	-	-	102.9%
Coxmoor Road/Newark Road/Cauldwell Road Junction	-	-	N/A	-	-		-	-	-	-	-	-	102.9%
1/2+1/1	Coxmoor Road (N) Ahead Right Left	U	N/A	N/A	A		3	106	-	872	1827:1913	629+219	102.9 : 102.9%
2/1+2/2	Cauldwell Road Left Right Ahead	U	N/A	N/A	D		1	7	-	22	1741:1741	52+43	23.3 : 23.3%
3/2+3/1	Coxmoor Road (S) Ahead Left Right	U	N/A	N/A	B		3	73	-	660	1963:1702	383+263	102.1 : 102.1%
4/1+4/2	Newark Road Right Left Ahead	O+U	N/A	N/A	- C		-	-	-	863	1786:1874	612+229	102.6 : 102.6%
5/1		U	N/A	N/A	-		-	-	-	459	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	1026	1300	1300	78.3%
7/1		U	N/A	N/A	-		-	-	-	924	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	8	Inf	Inf	0.0%

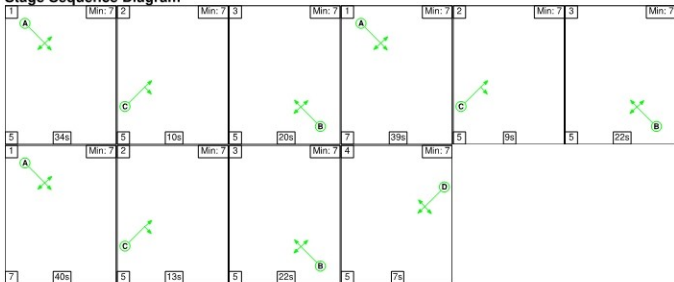
Full Input Data And Results

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: Coxmoor Road/Newark Road/Cauldwell Road XRoads	-	-	83	545	0	25.1	62.0	0.0	87.0	-	-	-	-
Coxmoor Road/Newark Road/Cauldwell Road Junction	-	-	83	545	0	25.1	62.0	0.0	87.0	-	-	-	-
1/2+1/1	872	847	-	-	-	9.9	22.2	-	32.1	132.4	27.7	22.2	49.9
2/1+2/2	22	22	-	-	-	0.8	0.2	-	0.9	152.7	0.9	0.2	1.0
3/2+3/1	660	646	-	-	-	8.4	16.7	-	25.1	136.9	17.5	16.7	34.2
4/1+4/2	863	857	83	545	0	5.3	21.1	-	26.5	110.5	8.7	21.1	29.8
5/1	447	447	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1018	1018	-	-	-	0.7	1.8	-	2.4	8.6	21.3	1.8	23.1
7/1	900	900	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	8	8	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1		PRC for Signalled Lanes (%):			-14.4 -14.4	Total Delay for Signalled Lanes (pcuHr):		58.12 87.05	Cycle Time (s): 270				
		PRC Over All Lanes (%):			-14.4	Total Delay Over All Lanes(pcuHr):		87.05					

Full Input Data And Results

Scenario 6: '2032 PM WD' (FG6: '2032 PM WD', Plan 1: 'Network Control Plan 1')

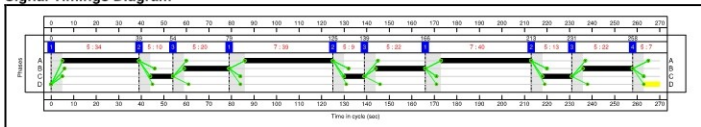
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	1	2	3	1	2	3	4
Duration	34	10	20	39	9	22	40	13	22	7
Change Point	0	39	54	79	125	139	166	213	231	258

Signal Timings 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: Coxmoor Road/Newark Road/Cauldwell Road XRoads	-	-	N/A	-	-		-	-	-	-	-	-	108.3%
Coxmoor Road/Newark Road/Cauldwell Road Junction	-	-	N/A	-	-		-	-	-	-	-	-	108.3%
1/2+1/1	Coxmoor Road (N) Ahead Right Left	U	N/A	N/A	A		3	113	-	1019	1827:1908	625+319	107.9 : 107.9%
2/1+2/2	Cauldwell Road Left Right Ahead	U	N/A	N/A	D		1	7	-	20	1733:1741	51+52	19.5 : 19.4%
3/2+3/1	Coxmoor Road (S) Ahead Left Right	U	N/A	N/A	B		3	64	-	635	1963:1702	345+241	108.3 : 108.3%
4/1+4/2	Newark Road Right Left Ahead	O+U	N/A	N/A	- C		-	-	-	1021	1786:1880	706+244	107.5 : 107.5%
5/1		U	N/A	N/A	-		-	-	-	585	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	1140	1300	1300	84.4%
7/1		U	N/A	N/A	-		-	-	-	943	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	27	Inf	Inf	0.0%

Full Input Data And Results

[illegible]

APPENDIX P

JUNCTION 4: B6139 COXMOOR ROAD/NEWARK ROAD/CAULDWELL ROAD SIGNAL CONTROLLED JUNCTION (MITIGATED WITH SITE ACCESS JUNCTION)

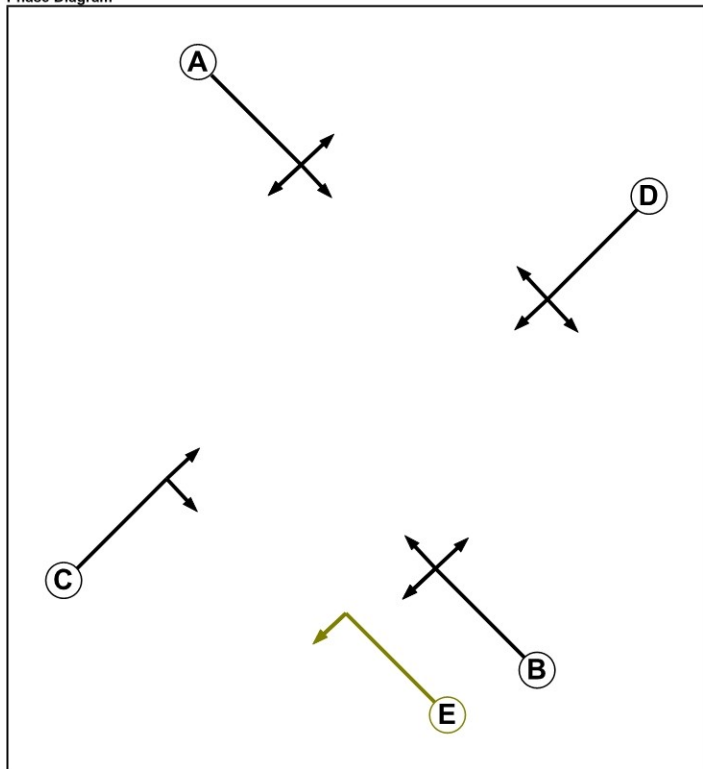
Full Input Data And Results**User and Project Details**

Project:	Newark Road, Sutton in Ashfield
Title:	Coxmoor Road/Newark Road/Cauldwell Road - Mitigation Option 2
Location:	
Additional detail:	
File name:	Jct 4 - Coxmoor Road-Newark Road-Cauldwell Road LinSig Model - Mitigation Rev 3.lsg3x
Author:	
Company:	ADC Infrastructure Limited
Address:	Western House, Western Street, Nottingham NG1 3AZ

Network Layout Diagram

C1

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		5	5
E	Filter	B	4	0

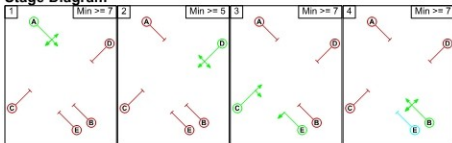
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

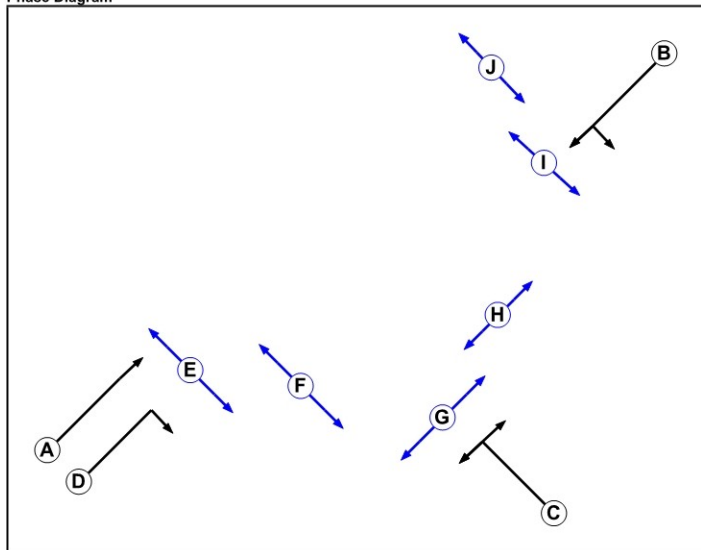
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

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

C2

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5
G	Pedestrian		5	5
H	Pedestrian		5	5
I	Pedestrian		5	5
J	Pedestrian		5	5

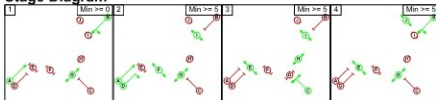
Phase Intergreens Matrix

Terminating Phase	Starting Phase									
	A	B	C	D	E	F	G	H	I	J
	A	-	5	-	5	-	-	-	-	10
	B	-	-	5	5	-	7	-	5	5
	C	5	5	-	5	-	7	5	-	10
	D	-	5	5	-	5	-	-	7	-
	E	7	-	-	7	-	-	-	-	-
	F	-	5	5	-	-	-	-	-	-
	G	-	-	5	-	-	-	-	-	-
	H	-	5	-	5	-	-	-	-	-
	I	-	5	-	-	-	-	-	-	-
	J	5	-	5	-	-	-	-	-	-

Phases in Stage

Stage No.	Phases in Stage
1	A B G
2	A D F G I
3	C E H I
4	B E G J

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		7	5
	2	5		7
	3	7	7	
	4	7	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: Coxmoor Road-Newark Road X-Roads											
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)
J1:4/1 (Newark Road)	J1:6/1 (Left)	1439	0	J1:3/2	1.09	To J1:6/1 (Ahead)	-	-	-	-	-

Junction: J2: Newark Road-Site Access

There are no Opposed Lanes in this Junction

Lane Input Data

Junction: J1: Coxmoor Road-Newark Road X-Roads												
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)
J1:1/1 (Coxmoor Road (N))	U	A	2	3	13.9	Geom	-	3.30	0.00	Y	Arm J1:5 Ahead	Inf
											Arm J1:8 Left	15.00
J1:1/2 (Coxmoor Road (N))	U	A	2	3	60.0	Geom	-	3.30	0.00	N	Arm J1:7 Right	12.00
J1:2/1 (Cauldwell Road)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:5 Left	Inf
											Arm J1:7 Ahead	10.00
J1:2/2 (Cauldwell Road)	U	D	2	3	4.0	Geom	-	3.00	0.00	Y	Arm J1:6 Right	15.00
J1:3/1 (Coxmoor Road (S))	U	B E	2	3	20.9	Geom	-	3.10	0.00	Y	Arm J1:7 Left	18.00
J1:3/2 (Coxmoor Road (S))	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:6 Ahead	Inf
											Arm J1:8 Right	10.00
J1:4/1 (Newark Road)	O		2	3	20.9	Inf	-	-	-	-	-	-
J1:4/2 (Newark Road)	U	C	2	3	13.9	Geom	-	3.60	0.00	N	Arm J1:5 Right	12.00
											Arm J1:8 Ahead	Inf
J1:5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1	U		2	3	60.0	User	1300	-	-	-	-	-
J1:7/1	U		2	3	8.7	Inf	-	-	-	-	-	-
J1:7/2	U		2	3	8.7	Inf	-	-	-	-	-	-
J1:8/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:9/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:9/2	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J2: Newark Road-Site Access												
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)
J2:1/1 (Newark Road)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:4 Ahead	Inf
J2:1/2 (Newark Road)	U	D	2	3	9.2	Geom	-	3.25	0.00	Y	Arm J2:5 Right	15.00
J2:2/1 (Site Access)	U	C	2	3	8.7	Geom	-	3.50	0.00	Y	Arm J1:9 Left	12.00
J2:2/2 (Site Access)	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J2:4 Right	20.00
J2:3/1 (Newark Road (E))	U	B	2	3	10.4	Geom	-	3.40	0.00	Y	Arm J1:9 Ahead Arm J2:5 Left	Inf 12.00
J2:3/2 (Newark Road (E))	U	B	2	3	10.4	Geom	-	3.00	0.00	Y	Arm J1:9 Ahead	Inf
J2:4/1	U		2	3	10.4	Geom	-	3.25	0.00	Y	Arm J1:4 Ahead	Inf
J2:5/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2032 AM WD'	08:00	09:00	01:00	
2: '2032 PM WD'	17:00	18:00	01:00	

Scenario 1: '2032 AM WD' (FG1: '2032 AM WD', Plan 3: 'Network Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
Origin		A	B	C	D	E	Tot.
	A	0	2	231	618	24	875
	B	10	0	4	8	0	22
	C	399	3	0	254	6	662
	D	548	3	207	0	20	778
	E	68	0	17	55	0	140
	Tot.	1025	8	459	935	50	2477

Traffic Lane Flows

Lane	Scenario 1: 2032 AM WD
Junction: J1: Coxmoor Road-Newark Road X-Roads	
J1:1/1 (short)	233
J1:1/2 (with short)	875(In) 642(Out)
J1:2/1 (with short)	22(In) 12(Out)
J1:2/2 (short)	10
J1:3/1 (short)	260
J1:3/2 (with short)	662(In) 402(Out)
J1:4/1 (with short)	843(In) 616(Out)
J1:4/2 (short)	227
J1:5/1	459
J1:6/1	1025
J1:7/1	735
J1:7/2	175
J1:8/1	8
J1:9/1	732
J1:9/2	203
Junction: J2: Newark Road-Site Access	
J2:1/1 (with short)	778(In) 758(Out)
J2:1/2 (short)	20
J2:2/1 (short)	55
J2:2/2 (with short)	140(In) 85(Out)
J2:3/1	735
J2:3/2	175
J2:4/1	843
J2:5/1	50

Lane Saturation Flows

Junction: J1: Coxmoor Road-Newark Road X-Roads								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Coxmoor Road (N))	3.30	0.00	Y	Arm J1:5 Ahead	Inf	99.1 %	1943	1943
				Arm J1:8 Left	15.00	0.9 %		
J1:1/2 (Coxmoor Road (N))	3.30	0.00	N	Arm J1:7 Right	12.00	100.0 %	1853	1853
J1:2/1	3.00	0.00	Y	Arm J1:5 Left	Inf	33.3 %	1741	1741

Full Input Data And Results

(Cauldwell Road)				Arm J1:7 Ahead	10.00	66.7 %		
J1:2/2 (Cauldwell Road)	3.00	0.00	Y	Arm J1:6 Right	15.00	100.0 %	1741	1741
J1:3/1 (Coxmoor Road (S))	3.10	0.00	Y	Arm J1:7 Left	18.00	100.0 %	1777	1777
J1:3/2 (Coxmoor Road (S))	3.50	0.00	Y	Arm J1:6 Ahead	Inf	99.3 %	1963	1963
J1:4/1 (Newark Road Lane 1)				Arm J1:8 Right	10.00	0.7 %		
				Infinite Saturation Flow			Inf	Inf
J1:4/2 (Newark Road)	3.60	0.00	N	Arm J1:5 Right	12.00	98.7 %	1883	1883
				Arm J1:8 Ahead	Inf	1.3 %		
J1:5/1				Infinite Saturation Flow			Inf	Inf
J1:6/1				This lane uses a directly entered Saturation Flow			1300	1300
J1:7/1				Infinite Saturation Flow			Inf	Inf
J1:7/2				Infinite Saturation Flow			Inf	Inf
J1:8/1				Infinite Saturation Flow			Inf	Inf
J1:9/1				Infinite Saturation Flow			Inf	Inf
J1:9/2				Infinite Saturation Flow			Inf	Inf

Junction: J2: Newark Road-Site Access								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (Newark Road)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:1/2 (Newark Road)	3.25	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1764	1764
J2:2/1 (Site Access)	3.50	0.00	Y	Arm J1:9 Left	12.00	100.0 %	1747	1747
J2:2/2 (Site Access)	3.50	0.00	Y	Arm J2:4 Right	20.00	100.0 %	1828	1828
J2:3/1 (Newark Road (E))	3.40	0.00	Y	Arm J1:9 Ahead	Inf	95.9 %	1945	1945
				Arm J2:5 Left	12.00	4.1 %		
J2:3/2 (Newark Road (E))	3.00	0.00	Y	Arm J1:9 Ahead	Inf	100.0 %	1915	1915
J2:4/1	3.25	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1940	1940
J2:5/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 2: '2032 PM WD' (FG2: '2032 PM WD', Plan 3: 'Network Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination						
		A	B	C	D	E	Tot.
	A	0	13	335	600	64	1012
	B	10	0	3	7	0	20
	C	375	3	0	237	16	631
	D	732	11	243	0	52	1038
	E	23	0	4	18	0	45
	Tot.	1140	27	585	862	132	2746

Traffic Lane Flows

Lane	Scenario 2: 2032 PM WD
Junction: J1: Coxmoor Road-Newark Road X-Roads	
J1:1/1 (short)	348
J1:1/2 (with short)	1012(In) 664(Out)
J1:2/1 (with short)	20(In) 10(Out)
J1:2/2 (short)	10
J1:3/1 (short)	253
J1:3/2 (with short)	631(In) 378(Out)
J1:4/1 (with short)	1013(In) 755(Out)
J1:4/2 (short)	258
J1:5/1	585
J1:6/1	1140
J1:7/1	483
J1:7/2	441
J1:8/1	27
J1:9/1	412
J1:9/2	450
Junction: J2: Newark Road-Site Access	
J2:1/1 (with short)	1038(In) 986(Out)
J2:1/2 (short)	52
J2:2/1 (short)	18
J2:2/2 (with short)	45(In) 27(Out)
J2:3/1	483
J2:3/2	441
J2:4/1	1013
J2:5/1	132

Lane Saturation Flows

Junction: J1: Coxmoor Road-Newark Road X-Roads								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (Coxmoor Road (N))	3.30	0.00	Y	Arm J1:5 Ahead	Inf	96.3 %	1938	1938
				Arm J1:8 Left	15.00	3.7 %		
J1:1/2 (Coxmoor Road (N))	3.30	0.00	N	Arm J1:7 Right	12.00	100.0 %	1853	1853
J1:2/1	3.00	0.00	Y	Arm J1:5 Left	Inf	30.0 %	1733	1733

Full Input Data And Results

(Cauldwell Road)				Arm J1:7 Ahead	10.00	70.0 %		
J1:2/2 (Cauldwell Road)	3.00	0.00	Y	Arm J1:6 Right	15.00	100.0 %	1741	1741
J1:3/1 (Coxmoor Road (S))	3.10	0.00	Y	Arm J1:7 Left	18.00	100.0 %	1777	1777
J1:3/2 (Coxmoor Road (S))	3.50	0.00	Y	Arm J1:6 Ahead	Inf	99.2 %	1963	1963
J1:4/1 (Newark Road Lane 1)				Arm J1:8 Right	10.00	0.8 %		
				Infinite Saturation Flow			Inf	Inf
J1:4/2 (Newark Road)	3.60	0.00	N	Arm J1:5 Right	12.00	95.7 %	1889	1889
				Arm J1:8 Ahead	Inf	4.3 %		
J1:5/1				Infinite Saturation Flow			Inf	Inf
J1:6/1				This lane uses a directly entered Saturation Flow			1300	1300
J1:7/1				Infinite Saturation Flow			Inf	Inf
J1:7/2				Infinite Saturation Flow			Inf	Inf
J1:8/1				Infinite Saturation Flow			Inf	Inf
J1:9/1				Infinite Saturation Flow			Inf	Inf
J1:9/2				Infinite Saturation Flow			Inf	Inf

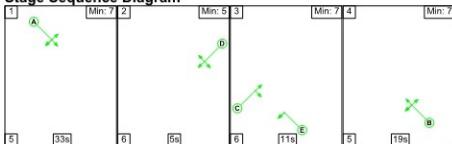
Junction: J2: Newark Road-Site Access

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J2:1/1 (Newark Road)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:1/2 (Newark Road)	3.25	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1764	1764
J2:2/1 (Site Access)	3.50	0.00	Y	Arm J1:9 Left	12.00	100.0 %	1747	1747
J2:2/2 (Site Access)	3.50	0.00	Y	Arm J2:4 Right	20.00	100.0 %	1828	1828
J2:3/1 (Newark Road (E))	3.40	0.00	Y	Arm J1:9 Ahead	Inf	83.4 %	1915	1915
				Arm J2:5 Left	12.00	16.6 %		
J2:3/2 (Newark Road (E))	3.00	0.00	Y	Arm J1:9 Ahead	Inf	100.0 %	1915	1915
J2:4/1	3.25	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1940	1940
J2:5/1				Infinite Saturation Flow			Inf	Inf

Scenario 1: '2032 AM WD' (FG1: '2032 AM WD', Plan 3: 'Network Plan 1')

C1

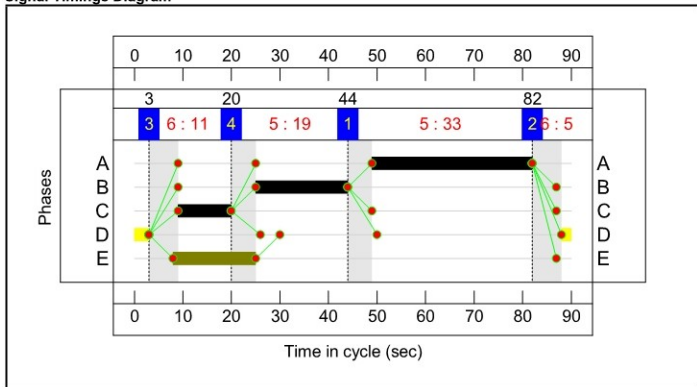
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	33	5	11	19
Change Point	44	82	3	20

Signal Timings Diagram



C2

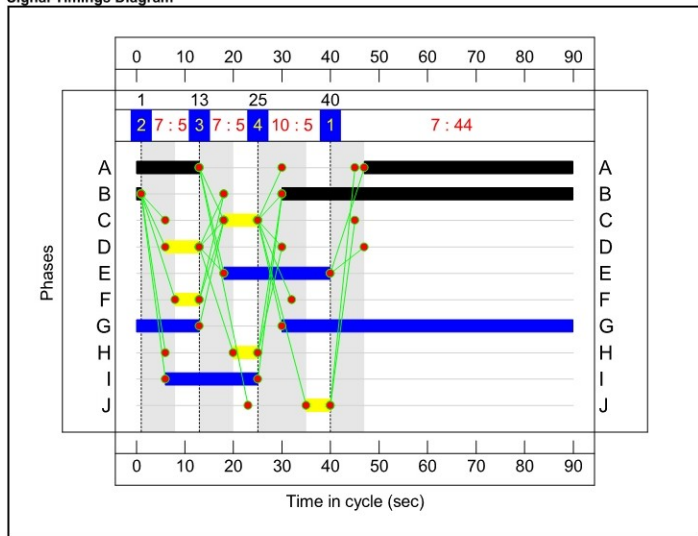
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	44	5	5	5
Change Point	40	1	13	25

Signal Timings 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: Coxmoor Road/Newark Road/Cauldwell Road - Mitigation Option 2	-	-	N/A	-	-		-	-	-	-	-	-	94.4%
J1: Coxmoor Road-Newark Road X-Roads	-	-	N/A	-	-		-	-	-	-	-	-	94.4%
1/2+1/1	Coxmoor Road (N) Ahead Right Left	U	N/A	N/A	C1:A		1	33	-	875	1853:1943	680+247	94.4 : 94.4%
2/1+2/2	Cauldwell Road Left Right Ahead	U	N/A	N/A	C1:D		1	5	-	22	1741:1741	116+114	10.3 : 8.8%
3/2+3/1	Coxmoor Road (S) Ahead Left Right	U	N/A	N/A	C1:B	C1:E	1	19:36	17	662	1963:1777	436+282	92.2 : 92.2%
4/1+4/2	Newark Road Right Left Ahead	O+U	N/A	N/A	- C1:C		-	-	-	843	Inf :1883	1132+251	54.4 : 90.4%
5/1		U	N/A	N/A	-		-	-	-	459	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	1025	1300	1300	78.8%
7/1	Ahead	U	N/A	N/A	-		-	-	-	735	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	175	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	8	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	732	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	203	Inf	Inf	0.0%
J2: Newark Road-Site Access	-	-	N/A	-	-		-	-	-	-	-	-	63.1%
1/1+1/2	Newark Road Ahead Right	U	N/A	N/A	C2:A C2:D		1	56:7	-	778	1940:1764	1202+32	63.1 : 63.1%
2/2+2/1	Site Access Left Right	U	N/A	N/A	C2:C		1	7	-	140	1828:1747	162+125	52.3 : 44.0%
3/1	Newark Road (E) Ahead Left	U	N/A	N/A	C2:B		1	61	-	735	1945	1340	54.9%

Full Input Data And Results

3/2	Newark Road (E) Ahead	U	N/A	N/A	C2-B		1	61	-	175	1915	1319	13.3%
4/1	Ahead	U	N/A	N/A	-		-	-	-	843	1940	1940	43.5%
5/1		U	N/A	N/A	-		-	-	-	50	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: Coxmoor Road/Newark Road/Cauldwell Road - Mitigation Option 2	-	-	22	594	0	19.0	16.7	0.0	35.8	-	-	-	-
J1: Coxmoor Road-Newark Road X-Roads	-	-	22	594	0	14.4	14.3	0.0	28.8	-	-	-	-
1/2+1/1	875	875	-	-	-	6.0	6.7	-	12.7	52.3	15.8	6.7	22.5
2/1+2/2	22	22	-	-	-	0.2	0.1	-	0.3	48.3	0.3	0.1	0.3
3/2+3/1	662	662	-	-	-	5.1	5.0	-	10.1	55.1	9.8	5.0	14.8
4/1+4/2	843	843	22	594	0	2.3	0.8	-	3.1	13.2	5.6	0.8	6.3
5/1	459	459	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1025	1025	-	-	-	0.7	1.8	-	2.5	9.0	12.9	1.8	14.7
7/1	735	735	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	175	175	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	8	8	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	732	732	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	203	203	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Newark Road-Site Access	-	-	0	0	0	4.6	2.4	0.0	7.0	-	-	-	-
1/1+1/2	778	778	-	-	-	2.3	0.9	-	3.2	14.6	11.6	0.9	12.4
2/2+2/1	140	140	-	-	-	1.5	0.5	-	2.0	51.1	2.0	0.5	2.5
3/1	735	735	-	-	-	0.6	0.6	-	1.2	5.8	3.5	0.6	4.1
3/2	175	175	-	-	-	0.2	0.1	-	0.3	5.8	2.7	0.1	2.8
4/1	843	843	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
5/1	50	50	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

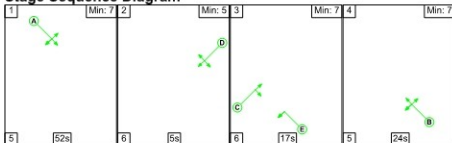
C1	PRC for Signalled Lanes (%):	-4.8	Total Delay for Signalled Lanes (pcuHr):	23.14	Cycle Time (s):	90
C2	PRC for Signalled Lanes (%):	42.7	Total Delay for Signalled Lanes (pcuHr):	8.60	Cycle Time (s):	90
	PRC Over All Lanes (%):	-4.8	Total Delay Over All Lanes(pcuHr):	35.76		

Full Input Data And Results

Scenario 2: '2032 PM WD' (FG2: '2032 PM WD', Plan 3: 'Network Plan 1')

C1

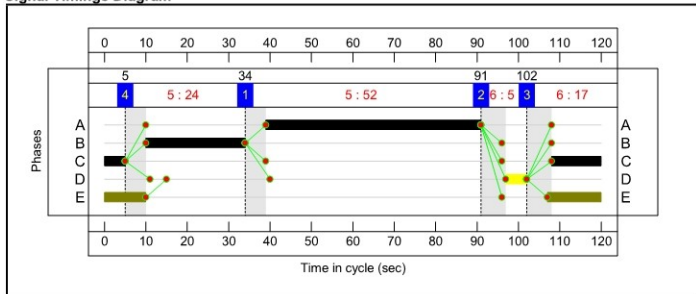
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	52	5	17	24
Change Point	34	91	102	5

Signal Timings Diagram



C2

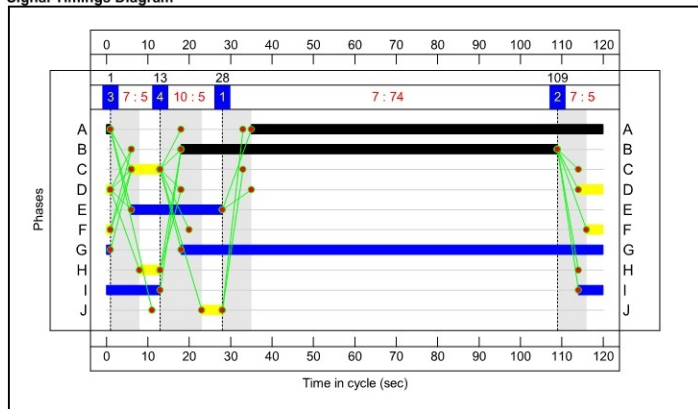
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	74	5	5	5
Change Point	28	109	1	13

Signal Timings 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: Coxmoor Road/Newark Road/Cauldwell Road - Mitigation Option 2	-	-	N/A	-	-		-	-	-	-	-	-	95.4%
J1: Coxmoor Road-Newark Road X-Roads	-	-	N/A	-	-		-	-	-	-	-	-	95.4%
1/2+1/1	Coxmoor Road (N) Ahead Right Left	U	N/A	N/A	C1:A		1	52	-	1012	1853:1938	696+365	95.4 : 95.4%
2/1+2/2	Cauldwell Road Left Right Ahead	U	N/A	N/A	C1:D		1	5	-	20	1733:1741	87+87	11.5 : 11.5%
3/2+3/1	Coxmoor Road (S) Ahead Left Right	U	N/A	N/A	C1:B	C1:E	1	24:47	23	631	1963:1777	409+274	92.4 : 92.4%
4/1+4/2	Newark Road Right Left Ahead	O+U	N/A	N/A	- C1:C		-	-	-	1013	Inf:1889	829+283	91.1 : 91.1%
5/1		U	N/A	N/A	-		-	-	-	585	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	1140	1300	1300	87.7%
7/1	Ahead	U	N/A	N/A	-		-	-	-	483	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	441	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	27	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	412	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	450	Inf	Inf	0.0%
J2: Newark Road-Site Access	-	-	N/A	-	-		-	-	-	-	-	-	73.4%
1/1+1/2	Newark Road Ahead Right	U	N/A	N/A	C2:A C2:D		1	86:7	-	1038	1940:1764	1343+71	73.4 : 73.4%
2/2+2/1	Site Access Left Right	U	N/A	N/A	C2:C		1	7	-	45	1828:1747	122+116	22.2 : 15.5%
3/1	Newark Road (E) Ahead Left	U	N/A	N/A	C2:B		1	91	-	483	1915	1468	32.9%
3/2	Newark Road (E) Ahead	U	N/A	N/A	C2:B		1	91	-	441	1915	1468	30.0%

Full Input Data And Results

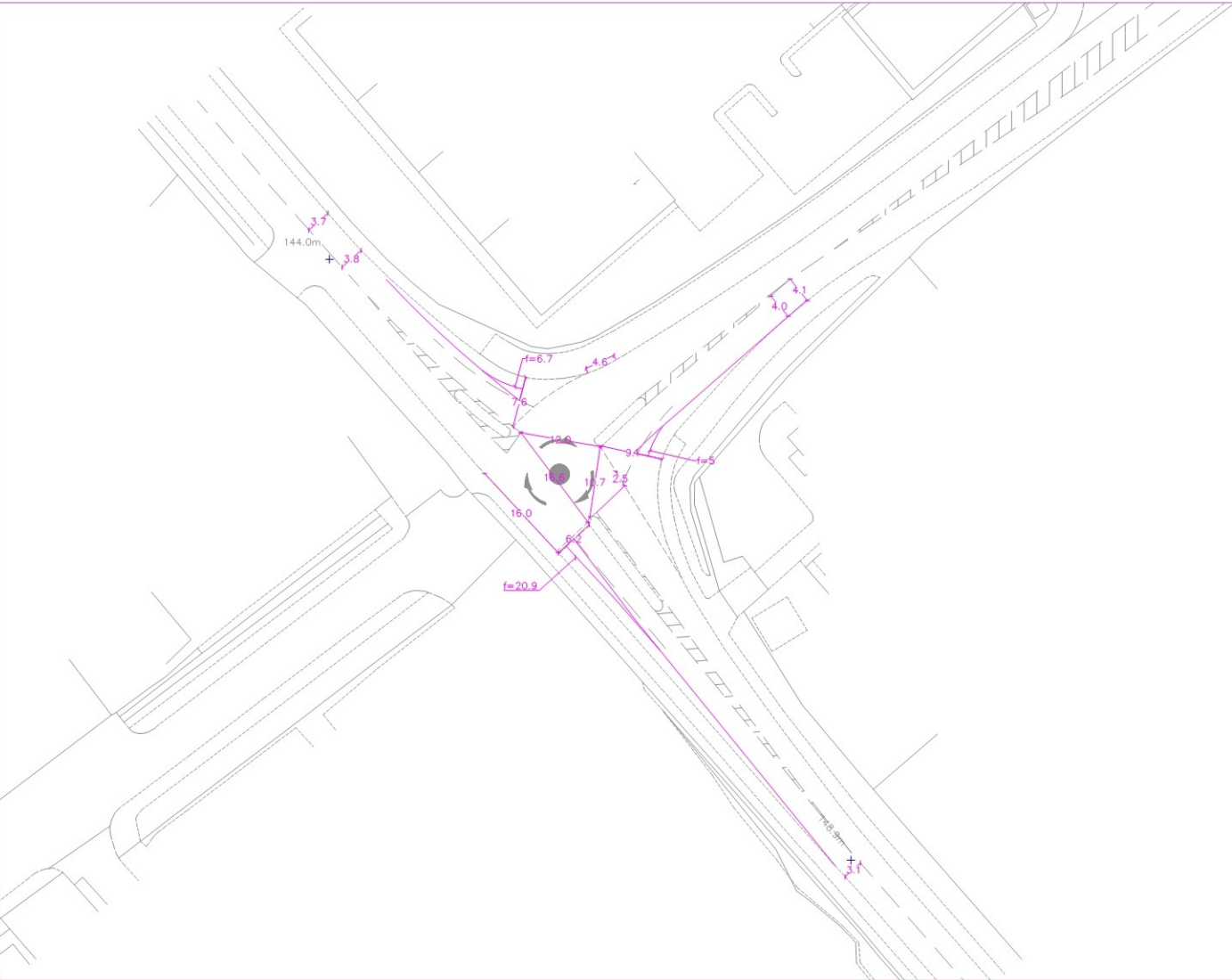
4/1	Ahead	U	N/A	N/A	-		-	-	-	1013	1940	1940	52.2%
5/1		U	N/A	N/A	-		-	-	-	132	Inf	Inf	0.0%
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Coxmoor Road/Newark Road/Cauldwell Road - Mitigation Option 2	-	-	17	738	0	24.0	23.5	0.0	47.5	-	-	-	-
J1: Coxmoor Road-Newark Road X-Roads	-	-	17	738	0	19.2	21.1	0.0	40.2	-	-	-	-
1/2+1/1	1012	1012	-	-	-	7.9	7.8	-	15.7	56.0	24.5	7.8	32.3
2/1+2/2	20	20	-	-	-	0.3	0.1	-	0.4	66.3	0.3	0.1	0.4
3/2+3/1	631	631	-	-	-	6.7	5.1	-	11.8	67.1	12.3	5.1	17.4
4/1+4/2	1013	1013	17	738	0	3.3	4.7	-	8.0	28.4	8.5	4.7	13.1
5/1	585	585	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1140	1140	-	-	-	0.9	3.4	-	4.3	13.7	17.3	3.4	20.8
7/1	483	483	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	441	441	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	27	27	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	412	412	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	450	450	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Newark Road-Site Access	-	-	0	0	0	4.8	2.5	0.0	7.3	-	-	-	-
1/1+1/2	1038	1038	-	-	-	3.4	1.4	-	4.7	16.4	19.4	1.4	20.8
2/2+2/1	45	45	-	-	-	0.7	0.1	-	0.8	62.3	0.8	0.1	1.0
3/1	483	483	-	-	-	0.4	0.2	-	0.6	4.7	3.3	0.2	3.5
3/2	441	441	-	-	-	0.4	0.2	-	0.6	5.1	3.6	0.2	3.8
4/1	1013	1013	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
5/1	132	132	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1	PRC for Signalled Lanes (%):	-6.0	Total Delay for Signalled Lanes (pcuHr):	27.87	Cycle Time (s):	120
C2	PRC for Signalled Lanes (%):	22.6	Total Delay for Signalled Lanes (pcuHr):	6.77	Cycle Time (s):	120
	PRC Over All Lanes (%):	-6.0	Total Delay Over All Lanes(pcuHr):	47.52		

APPENDIX Q

JUNCTION 5: B6139 COXMOOR ROAD/HAMILTON ROAD MINI- ROUNABOUT (EXISTING)



Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: Jct 5 - Coxmoor Rd-Hamilton Rd ARCADY Model.arc8

Path: C:\Users\ADC\Dropbox (ADC Infrastructure)\!!! ADC Projects\ADC1580 Newark Road, Sutton In Ashfield\Calculations\7. 2022 NEW Transport Assessment\1. Existing Models

Report generation date: 08/06/2022 10:10:18

- » Existing layout - 2022 observed, AM
- » Existing layout - 2022 observed, PM
- » Existing layout - 2032 background, AM
- » Existing layout - 2032 background, PM
- » Existing layout - 2032 with development, AM
- » Existing layout - 2032 with development, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
Existing layout - 2022 observed						
Arm A	1.22	10.67	0.55	2.99	21.20	0.76
Arm B	3.82	23.16	0.80	14.44	76.34	0.97
Arm C	4.80	18.74	0.84	17.25	57.48	0.97
Existing layout - 2032 background						
Arm A	1.64	13.26	0.63	4.78	31.74	0.84
Arm B	6.92	39.57	0.89	41.81	182.15	1.09
Arm C	8.84	32.47	0.91	48.00	130.90	1.06
Existing layout - 2032 with development						
Arm A	1.85	14.71	0.66	6.01	38.77	0.88
Arm B	8.29	46.69	0.91	61.90	263.61	1.16
Arm C	14.37	49.69	0.96	53.94	144.04	1.07

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

"D1 - 2022 observed, AM" model duration: 07:45 - 09:15

"D2 - 2022 observed, PM" model duration: 16:45 - 18:15

"D3 - 2032 background, AM" model duration: 07:45 - 09:15

"D4 - 2032 background, PM" model duration: 16:45 - 18:15

"D5 - 2032 with development, AM" model duration: 07:45 - 09:15

"D6 - 2032 with development, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 08/06/2022 10:10:14

File summary

Title	Jct 5 Coxmoor Rd/Hamilton Rd mini (existing layout)
Location	
Site Number	
Date	07/06/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ADCteam
Description	geometry from OS mapping

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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	Veh	Veh	perHour	s	-Min	perMin

Existing layout - 2022 observed, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Existing layout	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relatio
2022 observed, AM	2022 observed	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	A,B,C	18.43	C