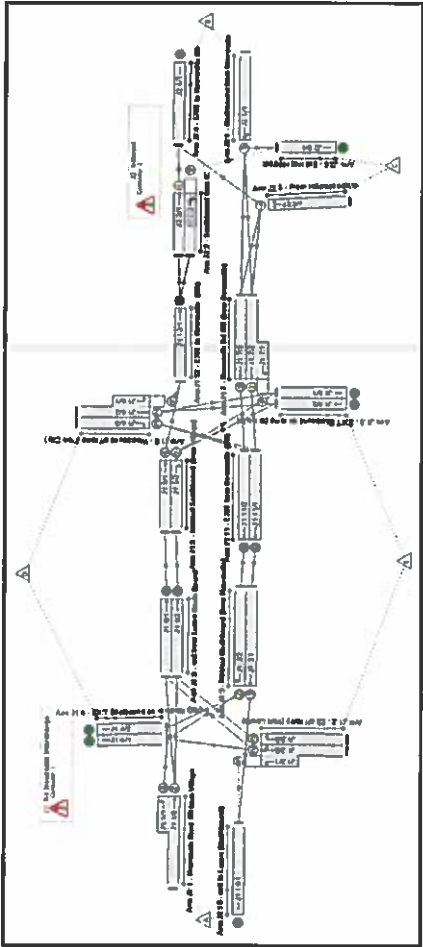


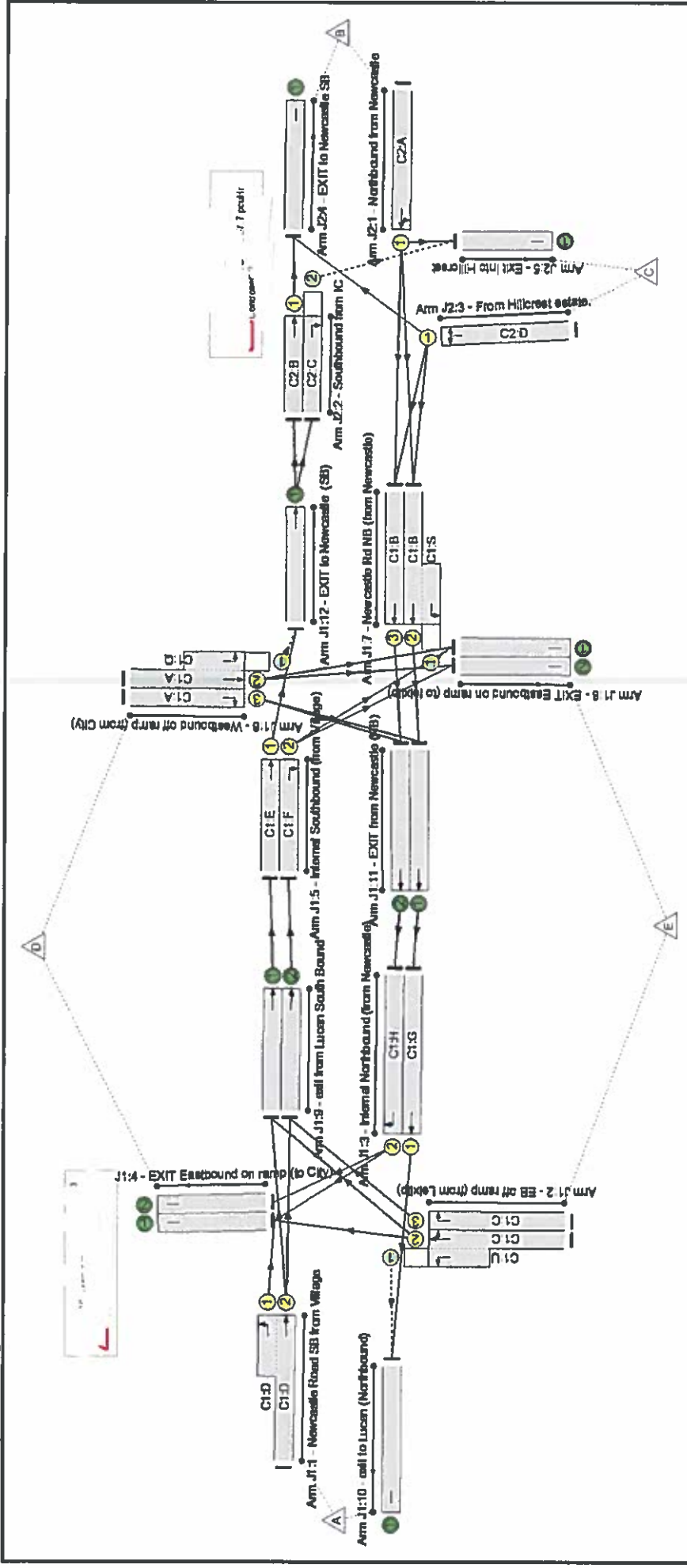
User and Project Details

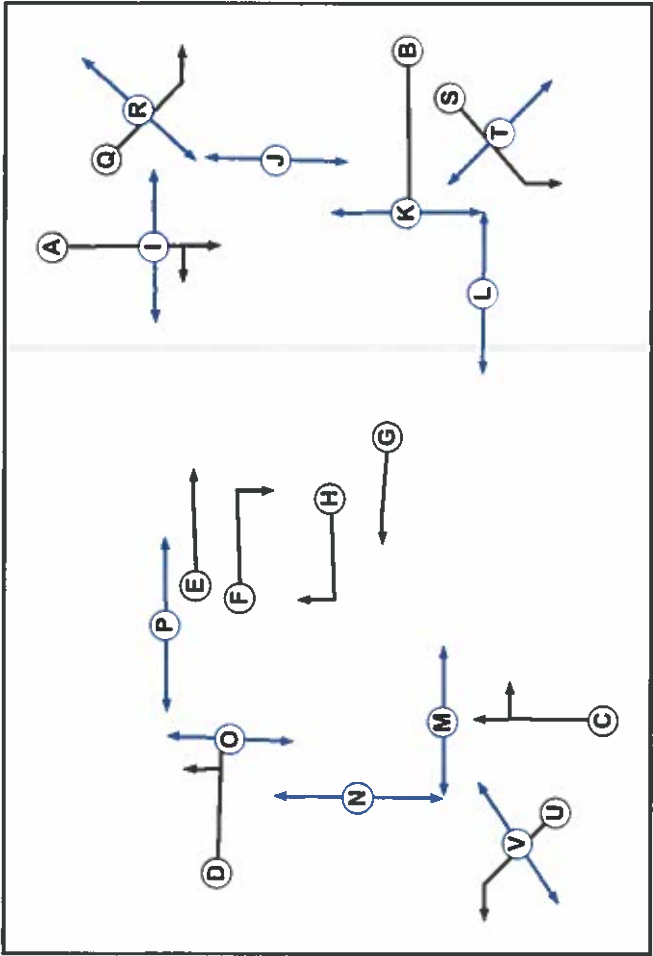
Project:	Newcastle Road Signals Review
Title:	Traffic Signals Current Arrangement
Location:	
Client:	SDCC
Additional detail:	
File name:	Newcastle I-C 2.lsg3x
Author:	K Reilly
Company:	SDCC
Address:	Traffic Section

Network Layout Diagram



Full Input Data And Results Network Layout Diagram





Full Input Data And Results

Phase Input Data				
Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		6	6
C	Traffic		7	7
D	Traffic		6	6
E	Traffic		6	6
F	Traffic		7	7
G	Traffic		6	6
H	Traffic		7	7
I	Pedestrian		6	6
J	Pedestrian		6	6
K	Pedestrian		7	7
L	Pedestrian		6	6
M	Pedestrian		6	6
N	Pedestrian		6	6
O	Pedestrian		7	7
P	Pedestrian		7	7
Q	Traffic		7	7
R	Pedestrian		6	6
S	Traffic		7	7
T	Pedestrian		6	6
U	Traffic		7	7
V	Pedestrian		6	6

Full Input Data And Results

Phase Intergreens Matrix

[illegible]

Phases in Stage

Stage No.	Phases in Stage
1	BDEGILMSU
2	BEGHILMSU
3	AGHJKMQTU
4	AGJKMPQTU
5	CEFIKNOSU

Stage Diagram

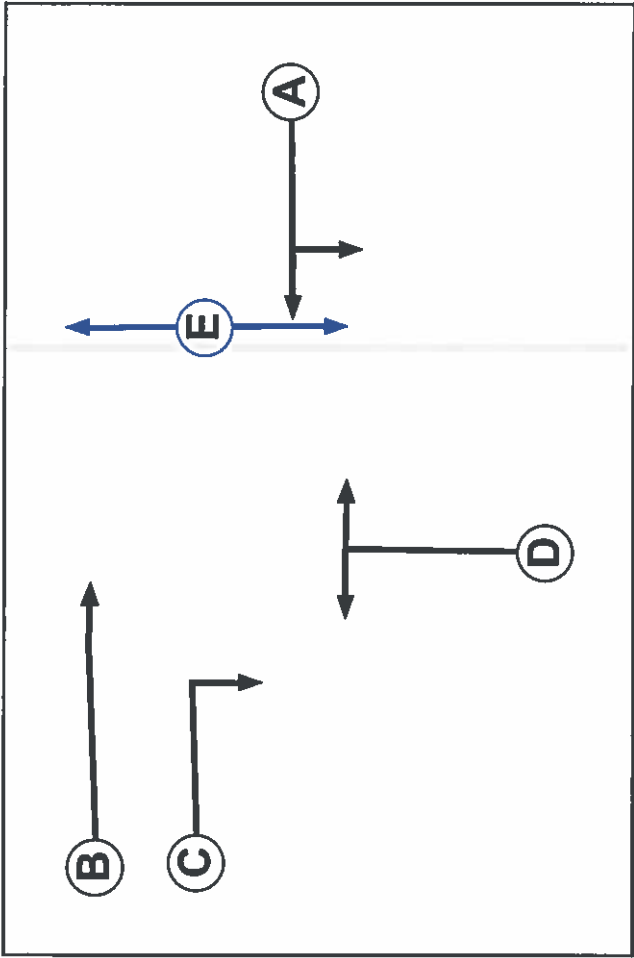


Phase Delays				
Term. Stage	Start Stage	Phase	Type	Value
There are no Phase Delays defined				

Prohibited Stage Change

	To Stage				
	1	2	3	4	5
From Stage	1	5	9	8	
	2	6	9	9	8
	3	9	9	8	8
	4	9	9	8	8
	5	9	9	8	9

C2 - Hillcrest
Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		6	6
B	Traffic		6	6
C	Traffic		7	7
D	Traffic		6	6
E	Pedestrian		6	6

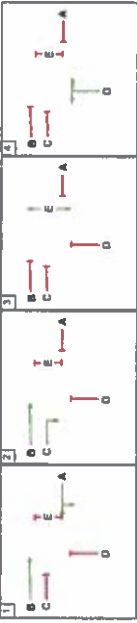
Phase Intergreens Matrix

Terminating Phase	Starting Phase				
	A	B	C	D	E
	A	-	5	6	6
	B	-	-	5	6
	C	5	-	5	6
	D	5	5	5	6
	E	9	9	9	9

Phases In Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage					
	1	2	3	4		
	1	5	6	6		
	2	5	6	5		
	3	9	9	9		
	4	5	5	6		

Lane Saturation Flows

[illegible]

Full Input Data And Results

J1:8/2 (EXIT Eastbound on ramp (to leixlip) Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:9/1 (exit from Lucan South Bound)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:9/2 (exit from Lucan South Bound)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:10/1 (exit to Lucan (Northbound) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:11/1 (EXIT from Newcastle (NB))	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:11/2 (EXIT from Newcastle (NB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:12/1 (EXIT to Newcastle (SB) Lane 1)	Infinite Saturation Flow						Inf	Inf

Junction: J2: Hillcrest										
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 (Northbound from Newcastle)	3.25	0.00	Y	Arm J1:7 Ahead	Inf	94.6 %	1940	1940		
				Arm J2:5 Left	Inf	5.4 %				
J2:2/1 (Southbound from IC)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940		
J2:2/2 (Southbound from IC)	3.25	0.00	Y	Arm J2:5 Right	Inf	100.0 %	1940	1940		
J2:3/1 (From Hillcrest estate.)	3.25	0.00	Y	Arm J1:7 Left	12.00	51.9 %	1762	1762		
				Arm J2:4 Right	20.00	48.1 %				
J2:4/1 (EXIT to Newcastle SB Lane 1)	Infinite Saturation Flow						Inf	Inf		
J2:5/1 (Exit into Hillcrest Lane 1)	Infinite Saturation Flow						Inf	Inf		

Scenario 1: 'Scenario 1' (FG1: 'Flow Group 1', Plan 1: 'Network Control Plan 1')

C1 - ST 800

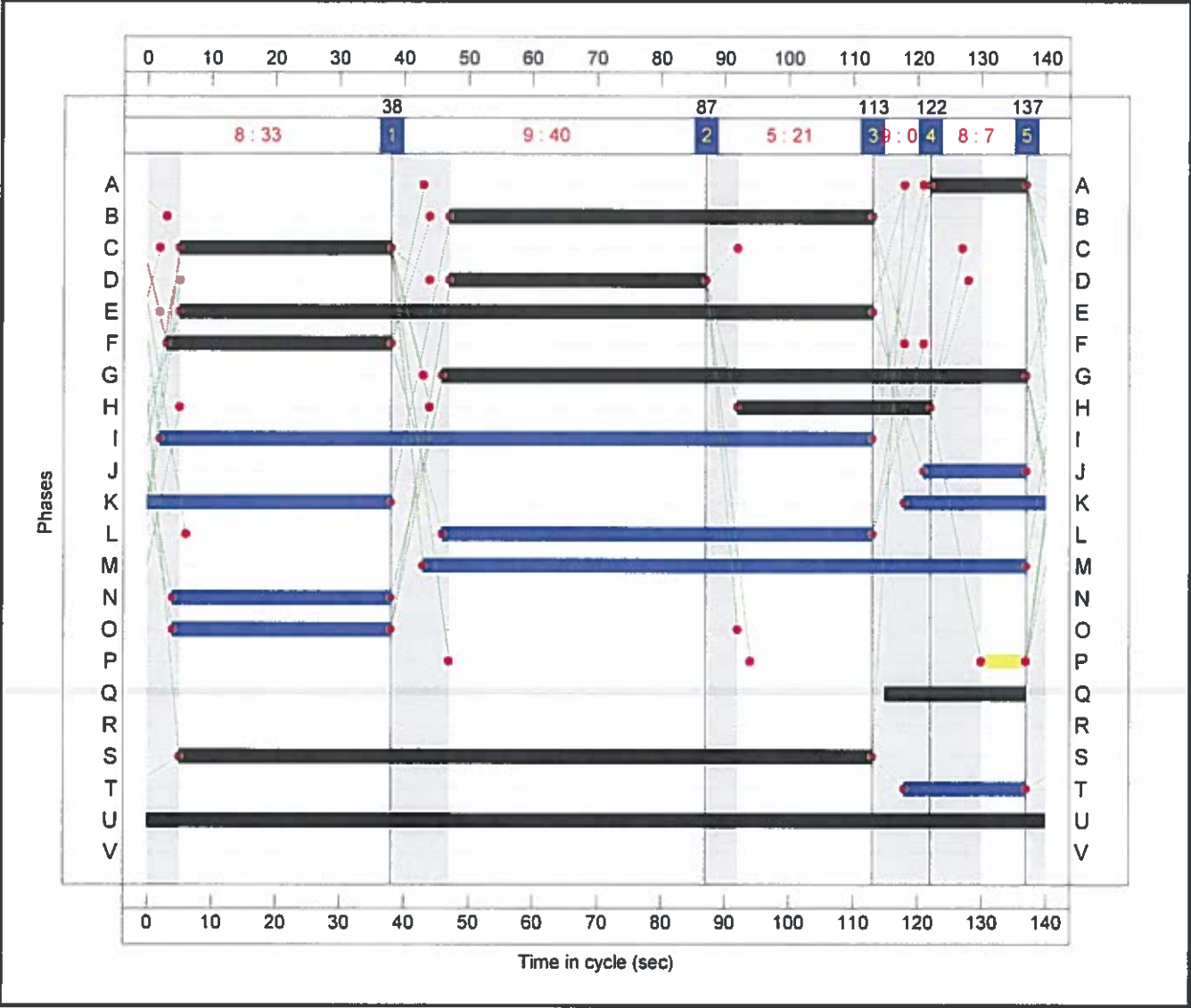
Stage Sequence Diagram



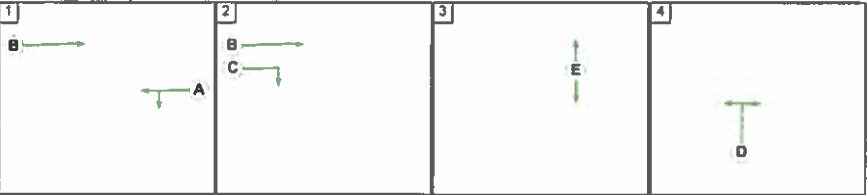
Stage Timings

Stage	1	2	3	4	5
Duration	40	21	0	7	33
Change Point	38	87	113	122	137

Signal Timings Diagram



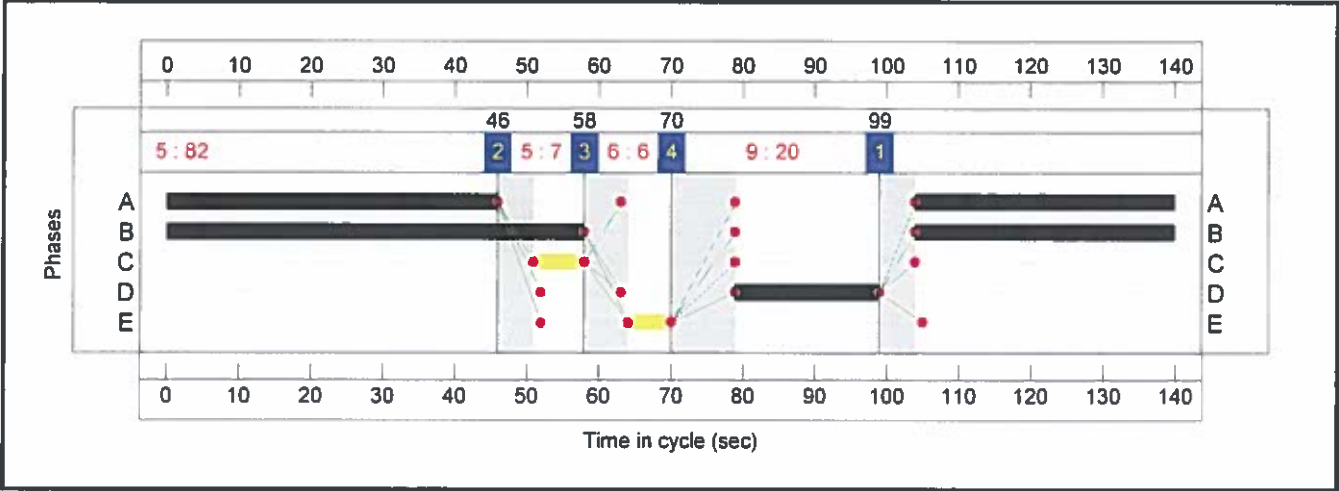
C2 - Hillcrest
Stage Sequence Diagram



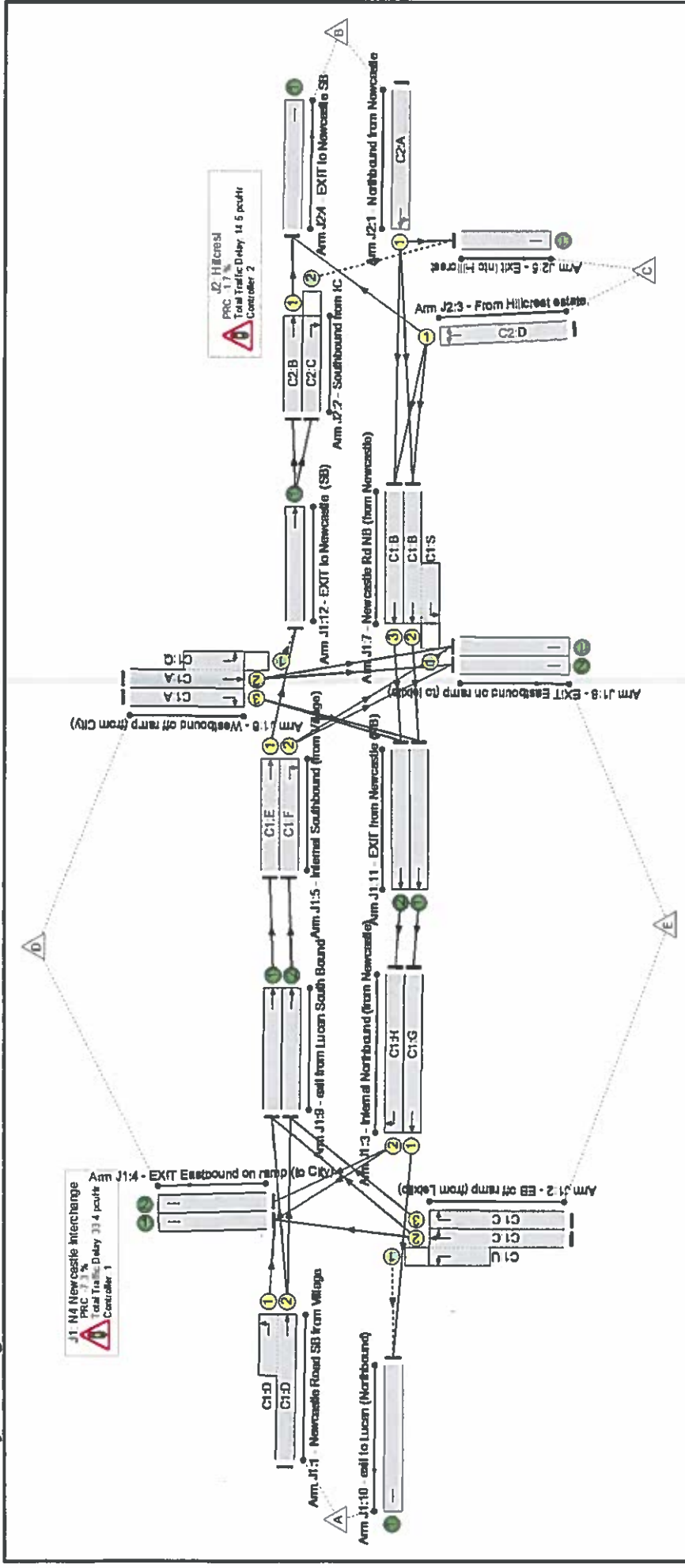
Stage Timings

Stage	1	2	3	4
Duration	82	7	6	20
Change Point	99	46	58	70

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: Traffic Signals Current Arrangement	-	-	N/A	-	-		-	-	-	-	-	-	96.6%
J1: N4 Newcastle Interchange	-	-	N/A	-	-		-	-	-	-	-	-	96.6%
1/2+1/1	Newcastle Road SB from Village Left Ahead	U	N/A	N/A	C1:D		1	40	-	302	1940:1724	497+89	51.5 : 51.5%
2/2+2/1	EB off ramp (from Leixlip) Ahead Right Left	U+O	N/A	N/A	C1:C C1:U		1	33:140	-	422	2080:1724	494+7	84.3 : 84.3%
2/3	EB off ramp (from Leixlip) Right	U	N/A	N/A	C1:C		1	33	-	0	1940	471	0.0%
3/1	Internal Northbound (from Newcastle) Ahead	U	N/A	N/A	C1:G		1	91	-	215	1940	1275	16.9%
3/2	Internal Northbound (from Newcastle) Right	U	N/A	N/A	C1:H		1	30	-	415	1940	430	96.6%
4/1	EXIT Eastbound on ramp (to City)	U	N/A	N/A	-		-	-	-	279	Inf	Inf	0.0%
4/2	EXIT Eastbound on ramp (to City)	U	N/A	N/A	-		-	-	-	207	Inf	Inf	0.0%
5/1	Internal Southbound (from Village) Ahead	U	N/A	N/A	C1:E		1	108	-	607	1940	1510	40.2%
5/2	Internal Southbound (from Village) Right	U	N/A	N/A	C1:F		1	35	-	40	1940	499	8.0%
6/2+6/1	Westbound off ramp (from City) Ahead Left	U+O	N/A	N/A	C1:A C1:Q		1	15:22	-	168	1940:1940	6+319	51.8 : 51.8%
6/3	Westbound off ramp (from City) Right	U	N/A	N/A	C1:A		1	15	-	12	1940	222	5.4%
7/2+7/1	Newcastle Rd NB (from Newcastle) Left Ahead	U+O	N/A	N/A	C1:B C1:S		1	66:108	-	372	1940:1940	567+472	35.8 : 35.8%

Full Input Data And Results

7/3	Newcastle Rd NB (from Newcastle) Ahead	U	N/A	N/A	C1:B		1	66	-	415	1940	928	44.7%
8/1	EXIT Eastbound on ramp (to leixlip)	U	N/A	N/A	-		-	-	-	191	Inf	Inf	0.0%
8/2	EXIT Eastbound on ramp (to leixlip)	U	N/A	N/A	-		-	-	-	21	Inf	Inf	0.0%
9/1	exit from Lucan South Bound Ahead	U	N/A	N/A	-		-	-	-	607	1940	1940	31.3%
9/2	exit from Lucan South Bound Ahead	U	N/A	N/A	-		-	-	-	40	1940	1940	2.1%
10/1	exit to Lucan (Northbound)	U	N/A	N/A	-		-	-	-	221	Inf	Inf	0.0%
11/1	EXIT from Newcastle (NB) Ahead	U	N/A	N/A	-		-	-	-	215	1940	1940	11.1%
11/2	EXIT from Newcastle (NB) Ahead	U	N/A	N/A	-		-	-	-	415	Inf	Inf	0.0%
12/1	EXIT to Newcastle (SB) Ahead	U	N/A	N/A	-		-	-	-	772	Inf	Inf	0.0%
J2: Hillcrest	-	-	N/A	-	-		-	-	-	-	-	-	91.6%
1/1	Northbound from Newcastle Ahead Left	U	N/A	N/A	C2:A		1	82	-	699	1940	1150	60.8%
2/1	Southbound from IC Ahead	U	N/A	N/A	C2:B		1	94	-	758	1940	1316	57.6%
2/2	Southbound from IC Right	O	N/A	N/A	C2:C		1	7	-	14	1940	75	18.6%
3/1	From Hillcrest estate, Left Right	U	N/A	N/A	C2:D		1	20	-	242	1762	264	91.6%
4/1	EXIT to Newcastle SB	U	N/A	N/A	-		-	-	-	874	Inf	Inf	0.0%
5/1	Exit into Hillcrest	U	N/A	N/A	-		-	-	-	52	Inf	Inf	0.0%

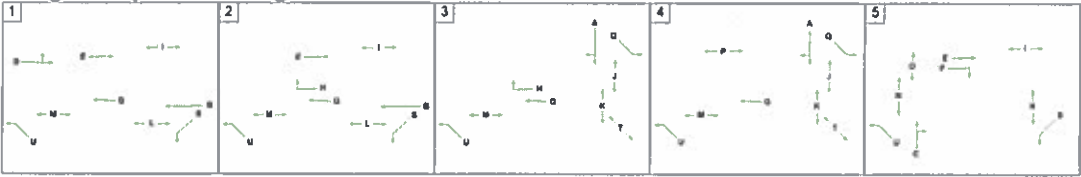
Full Input Data And Results

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: Traffic Signals Current Arrangement	-	-	121	230	4	30.1	17.8	0.0	47.9	-	-	-	-
J1: N4 Newcastle Interchange	-	-	107	230	4	21.1	12.2	0.0	33.4	-	-	-	-
1/2+1/1	302	302	-	-	-	3.4	0.5	-	3.9	46.5	8.7	0.5	9.3
2/2+2/1	422	422	2	4	0	5.9	2.5	0.0	8.4	71.6	15.5	2.5	18.1
2/3	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	215	215	-	-	-	0.2	0.1	-	0.3	4.3	0.8	0.1	0.9
3/2	415	415	-	-	-	1.8	7.2	-	9.0	78.0	15.8	7.2	22.9
4/1	279	279	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	207	207	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	607	607	-	-	-	0.1	0.3	-	0.4	2.6	0.6	0.3	0.9
5/2	40	40	-	-	-	0.5	0.0	-	0.5	45.5	1.5	0.0	1.6
6/2+6/1	168	168	0	163	2	2.5	0.5	0.0	3.0	64.9	5.8	0.5	6.4
6/3	12	12	-	-	-	0.2	0.0	-	0.2	63.9	0.4	0.0	0.4
7/2+7/1	372	372	105	63	1	2.1	0.3	0.0	2.4	23.3	8.4	0.3	8.7
7/3	415	415	-	-	-	4.6	0.4	-	5.0	43.1	15.5	0.4	15.9
8/1	191	191	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	21	21	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	607	607	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
9/2	40	40	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
10/1	221	221	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	215	215	-	-	-	0.0	0.1	-	0.1	1.0	0.0	0.1	0.1
11/2	415	415	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	772	772	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Hillcrest	-	-	14	0	0	8.9	5.6	0.0	14.5	-	-	-	-
1/1	699	699	-	-	-	3.5	0.8	-	4.3	22.1	17.3	0.8	18.1

Full Input Data And Results

2/1	758	758	-	-	-	-	-	1.2	0.7	-	1.9	9.0	12.9	0.7	13.6
2/2	14	14	14	0	0	0	0	0.3	0.1	0.0	0.4	97.3	0.5	0.1	0.6
3/1	242	242	-	-	-	-	-	3.9	4.0	-	7.9	118.1	9.2	4.0	13.2
4/1	874	874	-	-	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	52	52	-	-	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1 - ST 800		PRC for Signalled Lanes (%)		-7.3		Total Delay for Signalled Lanes (pcuHr)		33.09		Cycle Time (s)		140			
C2 - Hillcrest		PRC for Signalled Lanes (%)		-1.7		Total Delay for Signalled Lanes (pcuHr)		14.49		Cycle Time (s)		140			
		PRC Over All Lanes (%)		-7.3		Total Delay Over All Lanes (pcuHr)		47.89							

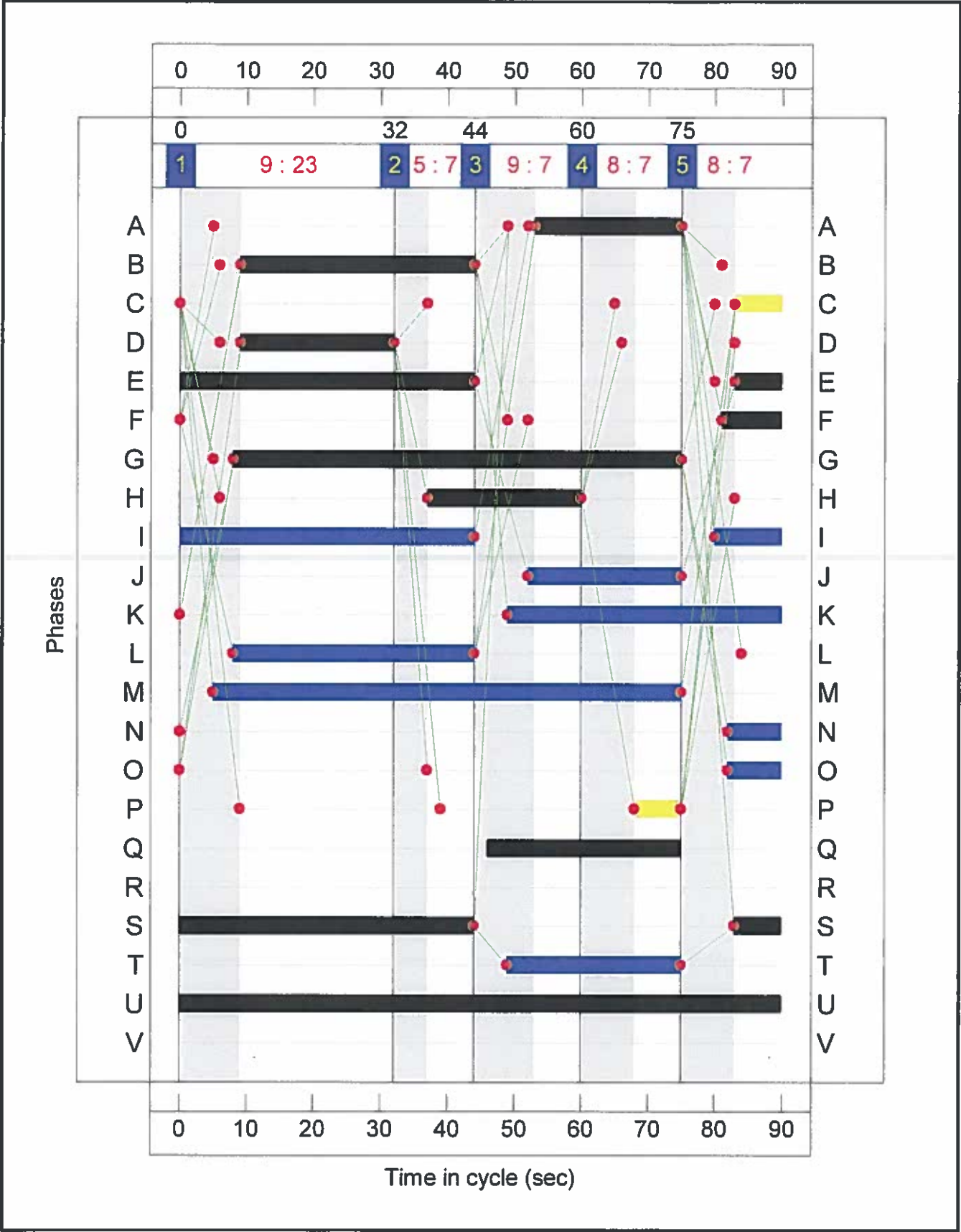
Stage Sequence Diagram



Stage Timings

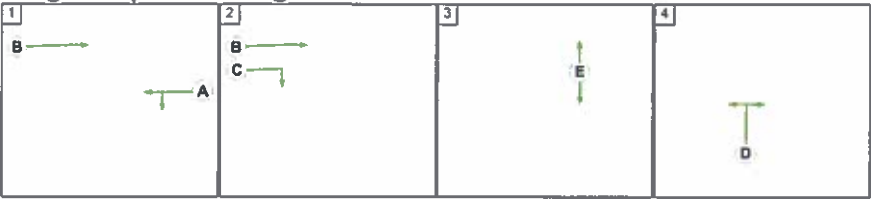
Stage	1	2	3	4	5
Duration	23	7	7	7	7
Change Point	0	32	44	60	75

Signal Timings Diagram



Full Input Data And Results

C2 - Hillcrest
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	46	7	6	6
Change Point	0	51	63	75

Signal Timings Diagram

