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APPENDIX K

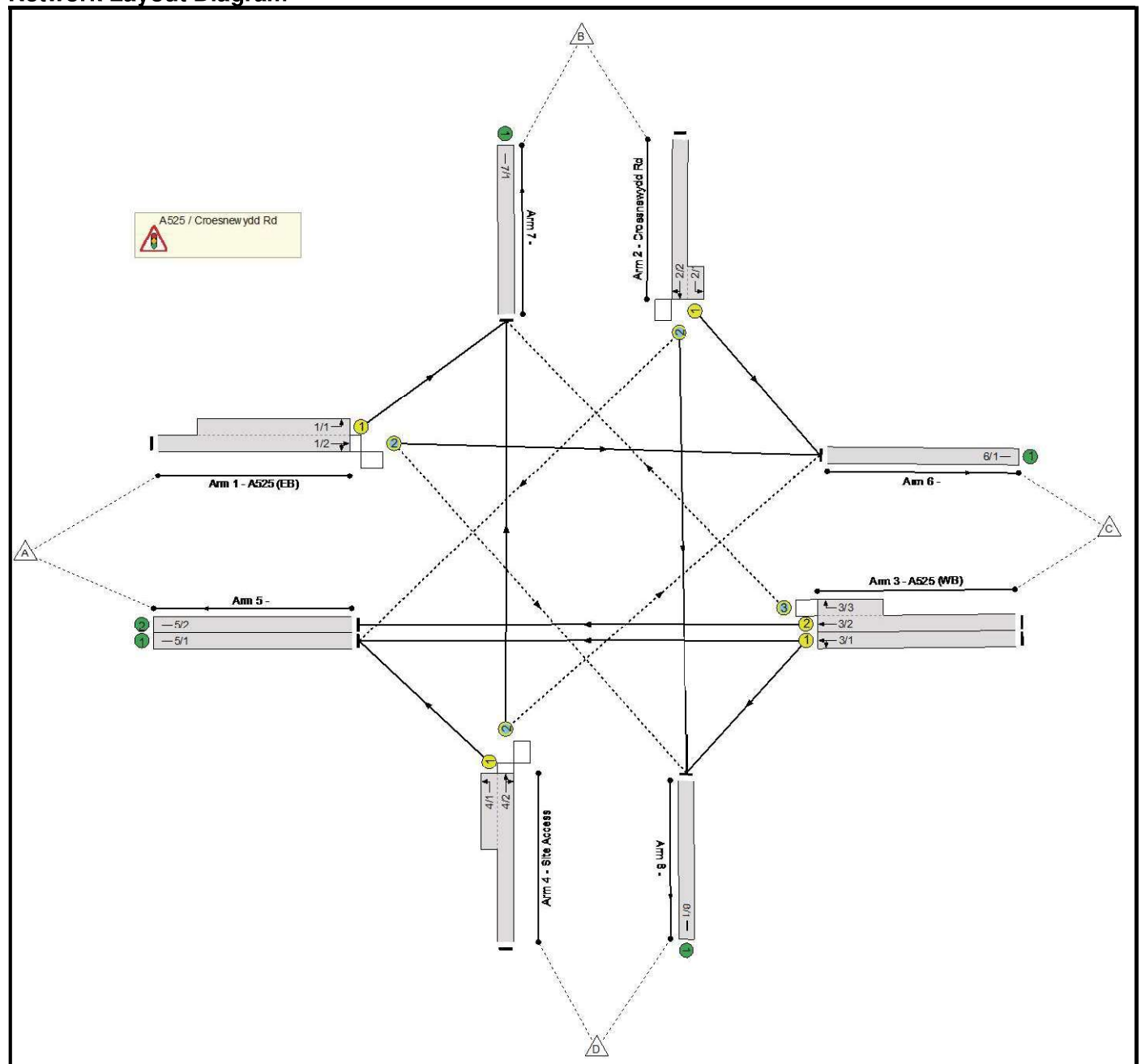
Full Input Data And Results

Full Input Data And Results

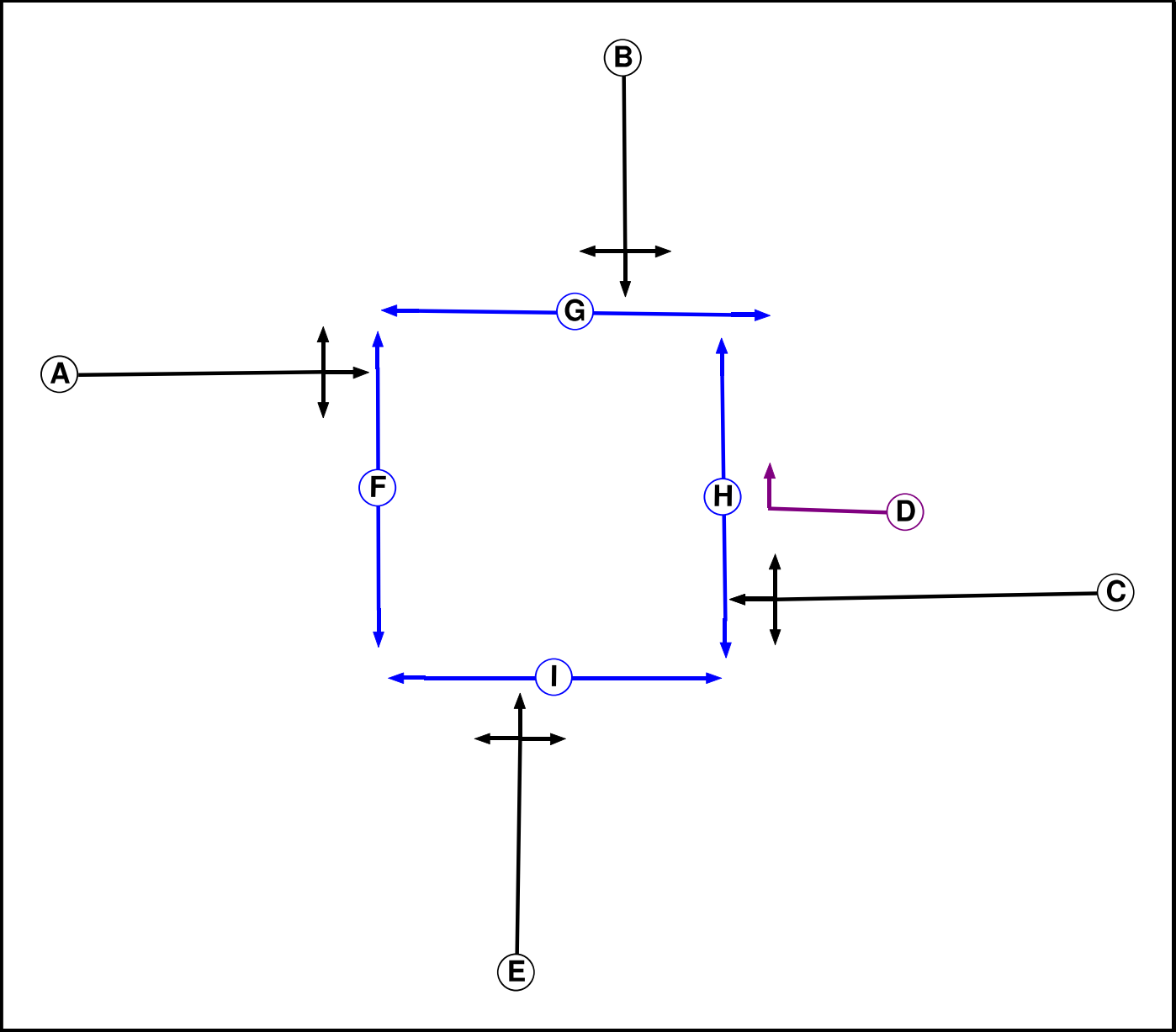
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	Proposed_A525_Croesnewydd Rd_06.02.24
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		7	7
C	Traffic		7	7
D	Ind. Arrow	C	4	4
E	Traffic		7	7
F	Pedestrian		7	7
G	Pedestrian		7	7
H	Pedestrian		7	7
I	Pedestrian		7	7

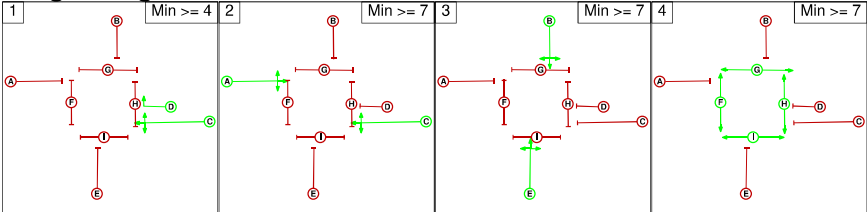
Phase Intergreens Matrix

Terminating Phase	Starting Phase									
		A	B	C	D	E	F	G	H	I
	A		7	-	5	6	5	6	9	10
	B	5		5	5	-	9	5	8	10
	C	-	5		-	5	8	-	-	5
	D	5	5	-		5	-	9	5	-
	E	7	-	5	5		9	8	10	5
	F	6	6	6	6	6		-	-	-
	G	6	6	-	6	6	-		-	-
	H	6	6	6	6	6	-	-		-
	I	6	6	6	-	6	-	-	-	

Phases in Stage

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

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	5	9
	2	5		7	10
	3	5	7		10
	4	6	6	6	

Give-Way Lane Input Data

Junction: A525 / Croesnewydd Rd											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (A525 (EB))	8/1 (Right)	1439	0	3/2	1.09	All	3.00	2.00	0.50	3	3.00
2/2 (Croesnewydd Rd)	5/1 (Right)	1439	0	4/1 4/2	1.09 1.09	All To 7/1 (Ahead)	2.00	2.00	0.50	2	2.00
3/3 (A525 (WB))	7/1 (Right)	1439	0	1/1 1/2	1.09 1.09	All To 6/1 (Ahead)	2.00	-	0.50	2	2.00
4/2 (Site Access)	6/1 (Right)	1439	0	2/2	1.09	To 5/1 (Right) To 8/1 (Ahead)	3.00	2.00	0.50	3	2.00

Full Input Data And Results

Lane Input Data

Junction: A525 / Croesnewydd Rd												
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 (A525 (EB))	U	A	2	3	13.9	Geom	-	2.00	0.00	Y	Arm 7 Left	19.00
1/2 (A525 (EB))	O	A	2	3	60.0	Geom	-	4.20	0.00	Y	Arm 6 Ahead	Inf
											Arm 8 Right	11.00
2/1 (Croesnewydd Rd)	U	B	2	3	3.0	Geom	-	3.25	0.00	Y	Arm 6 Left	Inf
2/2 (Croesnewydd Rd)	O	B	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 5 Right	18.00
											Arm 8 Ahead	Inf
3/1 (A525 (WB))	U	C	2	3	10.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	Inf
3/2 (A525 (WB))	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Ahead	Inf
3/3 (A525 (WB))	O	C D	2	3	6.0	Geom	-	3.50	0.00	Y	Arm 7 Right	14.00
4/1 (Site Access)	U	E	2	3	7.0	Geom	-	3.50	0.00	Y	Arm 5 Left	18.00
4/2 (Site Access)	O	E	2	3	60.0	Geom	-	3.40	0.00	Y	Arm 6 Right	20.00
											Arm 7 Ahead	Inf
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2028 Assess AM'	08:00	09:00	01:00	
2: '2028 Assess PM'	16:30	17:30	01:00	

Scenario 1: '2028 Assess AM' (FG1: '2028 Assess AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	24	401	139	564
	B	62	0	64	35	161
	C	609	684	0	25	1318
	D	163	14	142	0	319
	Tot.	834	722	607	199	2362

Traffic Lane Flows

Lane	Scenario 1: 2028 Assess AM
Junction: A525 / Croesnewydd Rd	
1/1 (short)	24
1/2 (with short)	564(In) 540(Out)
2/1 (short)	64
2/2 (with short)	161(In) 97(Out)
3/1	634
3/2 (with short)	684(In) 0(Out)
3/3 (short)	684
4/1 (short)	163
4/2 (with short)	319(In) 156(Out)
5/1	834
5/2	0
6/1	607
7/1	722
8/1	199

Lane Saturation Flows

Junction: A525 / Croesnewydd Rd								
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 (A525 (EB))	2.00	0.00	Y	Arm 7 Left	19.00	100.0 %	1682	1682
1/2 (A525 (EB))	4.20	0.00	Y	Arm 6 Ahead	Inf	74.3 %	1966	1966
				Arm 8 Right	11.00	25.7 %		
2/1 (Croesnewydd Rd)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (Croesnewydd Rd)	3.40	0.00	Y	Arm 5 Right	18.00	63.9 %	1856	1856
				Arm 8 Ahead	Inf	36.1 %		
3/1 (A525 (WB))	3.00	0.00	Y	Arm 5 Ahead	Inf	96.1 %	1915	1915
				Arm 8 Left	Inf	3.9 %		
3/2 (A525 (WB))	3.50	0.00	Y	Arm 5 Ahead	Inf	0.0 %	1965	1965
3/3 (A525 (WB))	3.50	0.00	Y	Arm 7 Right	14.00	100.0 %	1775	1775
4/1 (Site Access)	3.50	0.00	Y	Arm 5 Left	18.00	100.0 %	1814	1814
4/2 (Site Access)	3.40	0.00	Y	Arm 6 Right	20.00	91.0 %	1830	1830
				Arm 7 Ahead	Inf	9.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2028 Assess PM' (FG2: '2028 Assess PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	45	452	169	666
	B	38	0	40	21	99
	C	475	47	0	129	651
	D	154	26	323	0	503
	Tot.	667	118	815	319	1919

Traffic Lane Flows

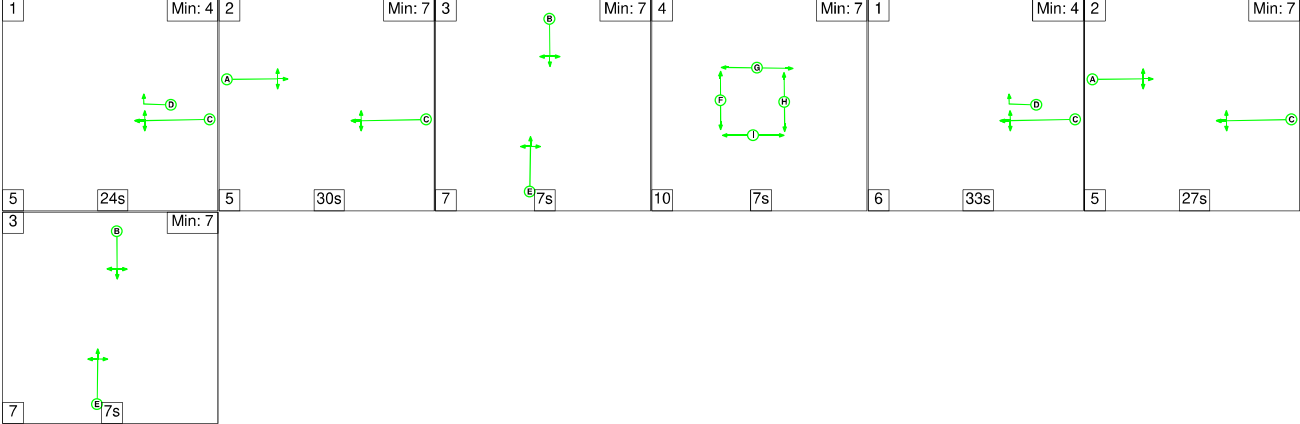
Lane	Scenario 2: 2028 Assess PM
Junction: A525 / Croesnewydd Rd	
1/1 (short)	45
1/2 (with short)	666(In) 621(Out)
2/1 (short)	40
2/2 (with short)	99(In) 59(Out)
3/1	299
3/2 (with short)	352(In) 305(Out)
3/3 (short)	47
4/1 (short)	154
4/2 (with short)	503(In) 349(Out)
5/1	362
5/2	305
6/1	815
7/1	118
8/1	319

Lane Saturation Flows

Junction: A525 / Croesnewydd Rd								
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 (A525 (EB))	2.00	0.00	Y	Arm 7 Left	19.00	100.0 %	1682	1682
1/2 (A525 (EB))	4.20	0.00	Y	Arm 6 Ahead	Inf	72.8 %	1962	1962
				Arm 8 Right	11.00	27.2 %		
2/1 (Croesnewydd Rd)	3.25	0.00	Y	Arm 6 Left	Inf	100.0 %	1940	1940
2/2 (Croesnewydd Rd)	3.40	0.00	Y	Arm 5 Right	18.00	64.4 %	1855	1855
				Arm 8 Ahead	Inf	35.6 %		
3/1 (A525 (WB))	3.00	0.00	Y	Arm 5 Ahead	Inf	56.9 %	1915	1915
				Arm 8 Left	Inf	43.1 %		
3/2 (A525 (WB))	3.50	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1965	1965
3/3 (A525 (WB))	3.50	0.00	Y	Arm 7 Right	14.00	100.0 %	1775	1775
4/1 (Site Access)	3.50	0.00	Y	Arm 5 Left	18.00	100.0 %	1814	1814
4/2 (Site Access)	3.40	0.00	Y	Arm 6 Right	20.00	92.6 %	1828	1828
				Arm 7 Ahead	Inf	7.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2028 Assess AM' (FG1: '2028 Assess AM', Plan 1: 'Network Control Plan 1')

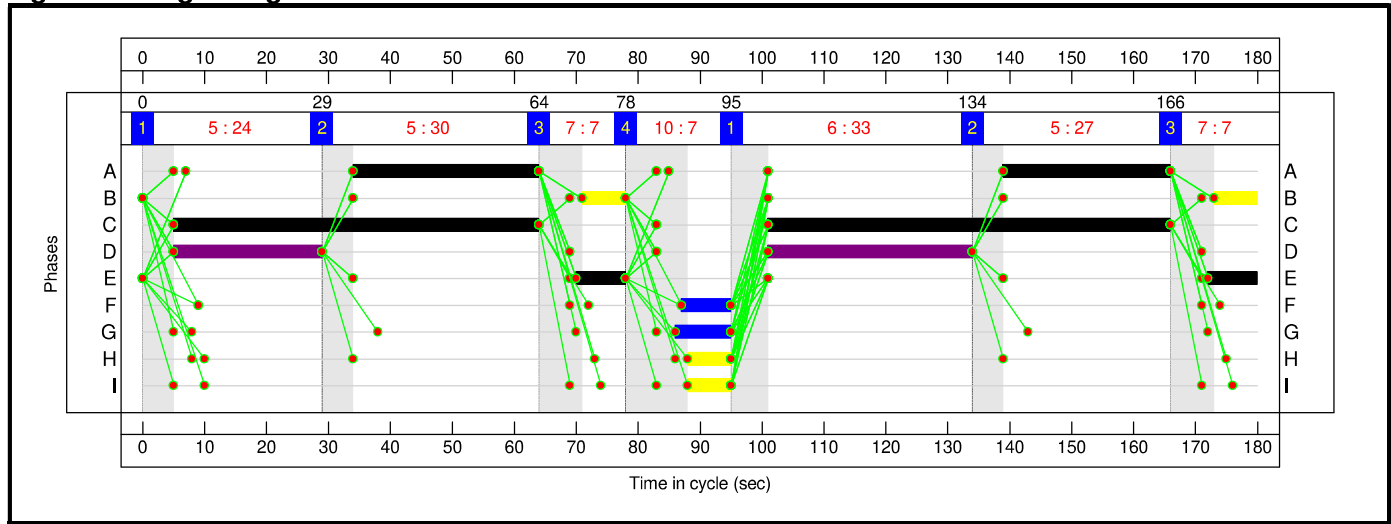
Stage Sequence Diagram

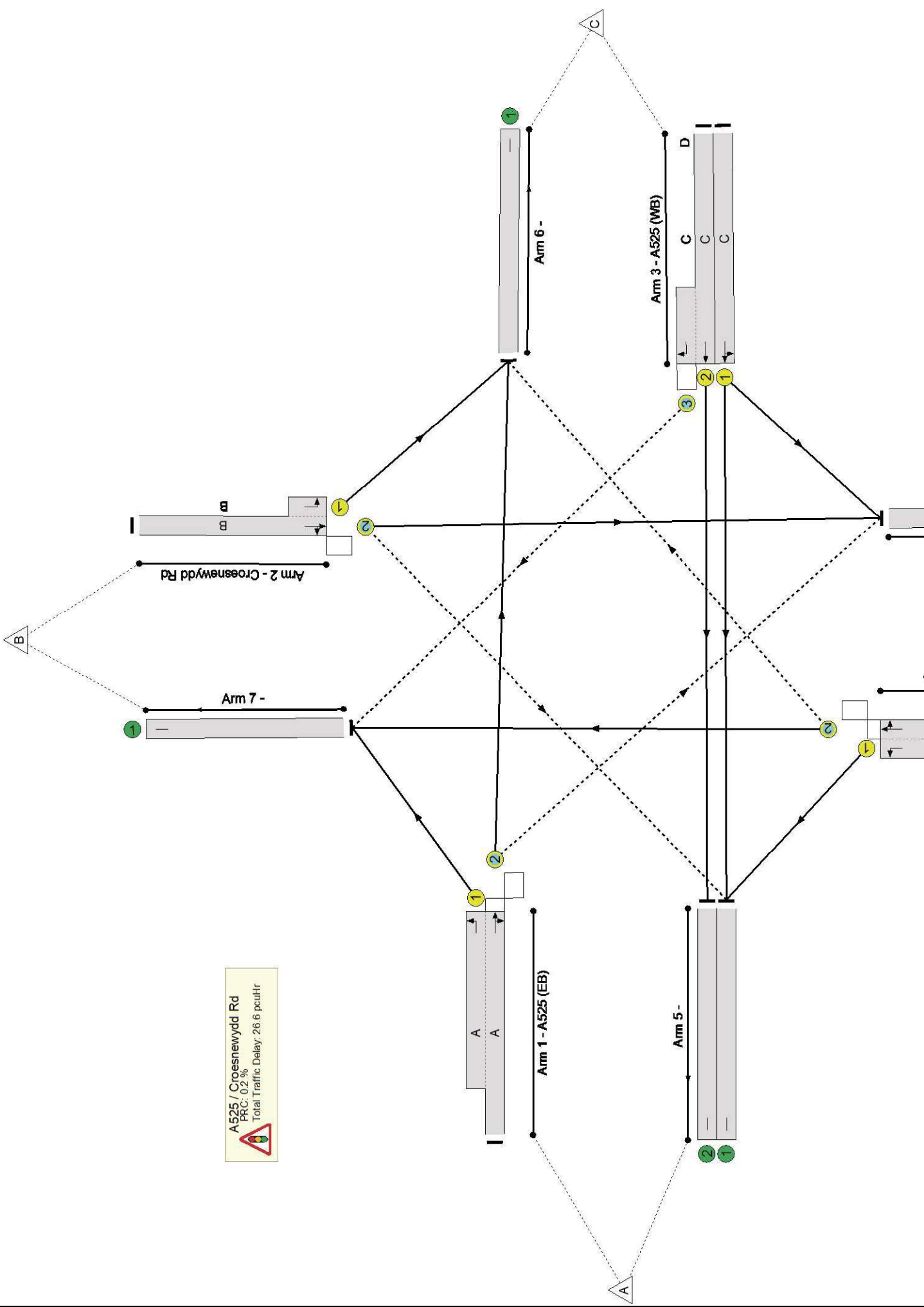


Stage Timings

Stage	1	2	3	4	1	2	3
Duration	24	30	7	7	33	27	7
Change Point	0	29	64	78	95	134	166

Signal Timings Diagram





Network Results

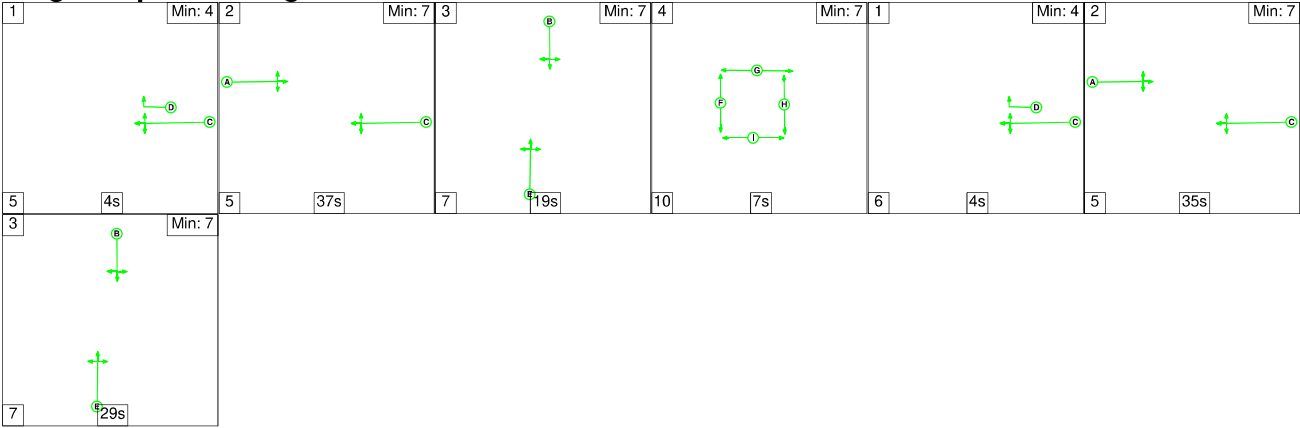
Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	89.9%
A525 / Croesnewydd Rd	-	-	N/A	-	-		-	-	-	-	-	-	89.9%
1/2+1/1	A525 (EB) Ahead Left Right	O+U	N/A	N/A	A		2	57	-	564	1966:1682	644+29	83.8 : 83.8%
2/2+2/1	Croesnewydd Rd Right Left Ahead	O+U	N/A	N/A	B		2	14	-	161	1856:1940	125+83	77.5 : 77.5%
3/1	A525 (WB) Ahead Left	U	N/A	N/A	C		2	124	-	634	1915	1340	47.3%
3/2+3/3	A525 (WB) Ahead Right	U+O	N/A	N/A	C	D	2	124	57	684	1965:1775	0+761	0.0 : 89.8%
4/2+4/1	Site Access Left Right Ahead	O+U	N/A	N/A	E		2	16	-	319	1830:1814	183+181	85.2 : 89.9%
5/1		U	N/A	N/A	-		-	-	-	834	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	607	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	722	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	199	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	-	-	309	544	174	14.1	11.6	0.8	26.6	-	-	-	-
A525 / Croesnewydd Rd	-	-	309	544	174	14.1	11.6	0.8	26.6	-	-	-	-
1/2+1/1	564	564	133	0	6	4.6	2.5	0.0	7.1	45.1	15.3	2.5	17.8
2/2+2/1	161	161	16	0	46	1.8	1.6	0.1	3.5	78.4	2.7	1.6	4.3
3/1	634	634	-	-	-	1.2	0.4	-	1.6	9.3	9.3	0.4	9.8
3/2+3/3	684	684	71	544	69	2.9	4.0	0.6	7.5	39.6	13.5	4.0	17.5
4/2+4/1	319	319	89	0	53	3.7	3.1	0.1	6.8	77.3	4.6	3.1	7.7
5/1	834	834	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	607	607	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	722	722	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	199	199	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%): PRC Over All Lanes (%):	0.2 0.2	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):			26.58 26.58	Cycle Time (s): 180				

Full Input Data And Results
Scenario 2: '2028 Assess PM' (FG2: '2028 Assess PM', Plan 1: 'Network Control Plan 1')

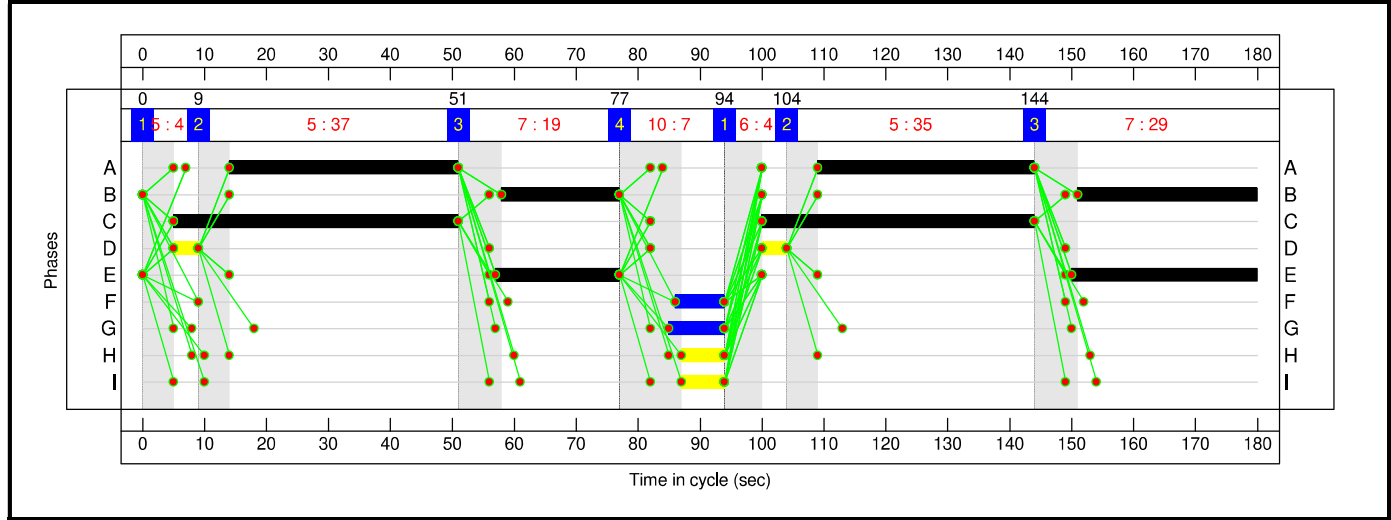
Stage Sequence Diagram

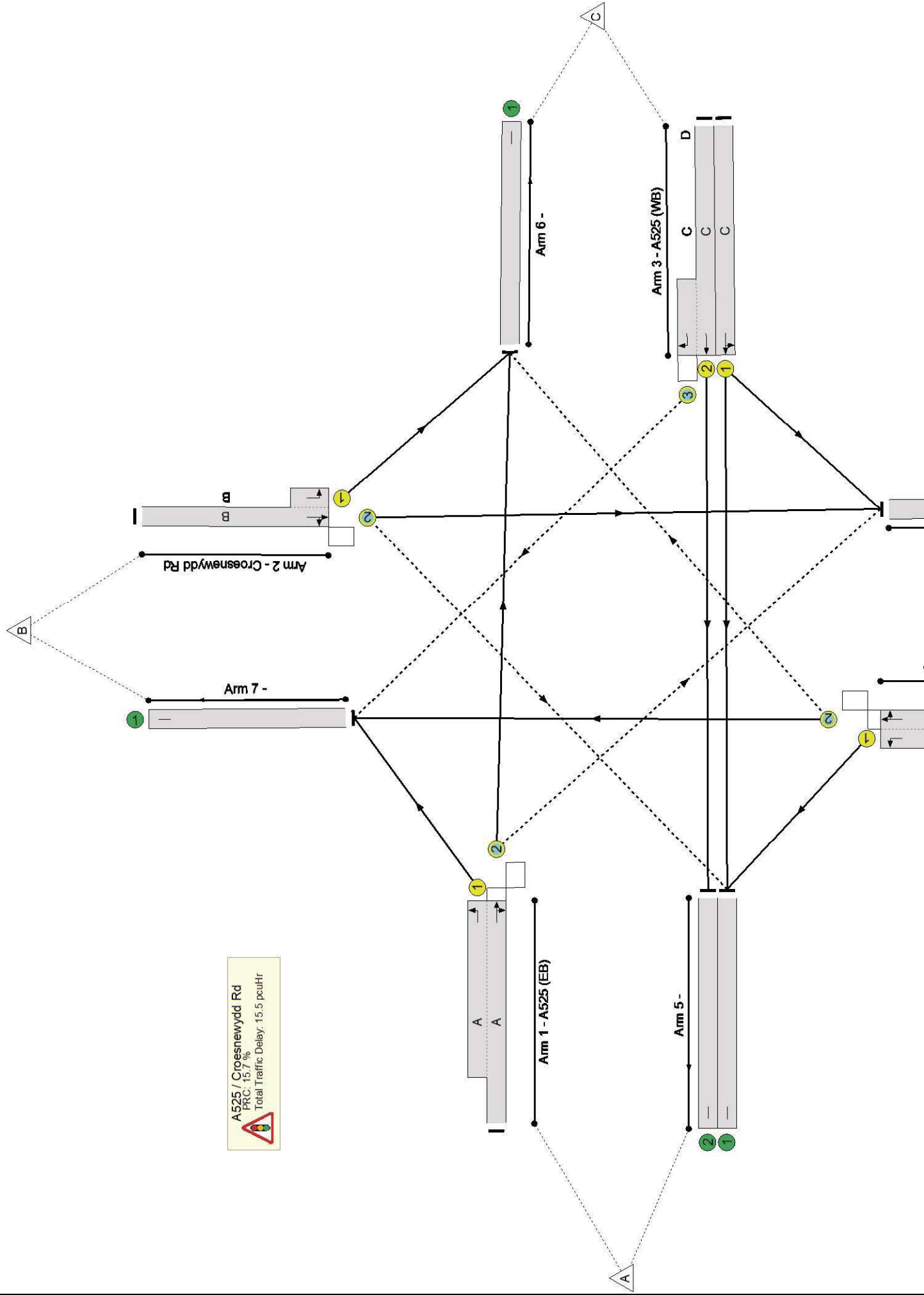


Stage Timings

Stage	1	2	3	4	1	2	3
Duration	4	37	19	7	4	35	29
Change Point	0	9	51	77	94	104	144

Signal Timings Diagram





Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	77.8%
A525 / Croesnewydd Rd	-	-	N/A	-	-		-	-	-	-	-	-	77.8%
1/2+1/1	A525 (EB) Ahead Left Right	O+U	N/A	N/A	A		2	72	-	666	1962:1682	799+58	77.7 : 77.7%
2/2+2/1	Croesnewydd Rd Right Left Ahead	O+U	N/A	N/A	B		2	48	-	99	1855:1940	358+242	16.5 : 16.5%
3/1	A525 (WB) Ahead Left	U	N/A	N/A	C		2	90	-	299	1915	979	30.5%
3/2+3/3	A525 (WB) Ahead Right	U+O	N/A	N/A	C	D	2	90	8	352	1965:1775	893+138	34.2 : 34.2%
4/2+4/1	Site Access Left Right Ahead	O+U	N/A	N/A	E		2	50	-	503	1828:1814	449+198	77.8 : 77.8%
5/1		U	N/A	N/A	-		-	-	-	362	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	305	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	815	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	118	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	319	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	-	-	541	27	9	11.1	4.0	0.4	15.5	-	-	-	-
A525 / Croesnewydd Rd	-	-	541	27	9	11.1	4.0	0.4	15.5	-	-	-	-
1/2+1/1	666	666	167	0	2	4.2	1.7	0.0	5.9	31.9	14.3	1.7	16.0
2/2+2/1	99	99	38	0	0	0.7	0.1	0.0	0.8	29.5	1.2	0.1	1.3
3/1	299	299	-	-	-	1.1	0.2	-	1.3	15.5	4.7	0.2	4.9
3/2+3/3	352	352	20	27	0	1.2	0.3	0.0	1.5	15.6	4.7	0.3	5.0
4/2+4/1	503	503	316	0	7	3.9	1.7	0.3	5.9	42.5	9.6	1.7	11.3
5/1	362	362	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	305	305	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	815	815	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	118	118	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	319	319	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
C1			PRC for Signalled Lanes (%): PRC Over All Lanes (%)	15.7 15.7	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):			15.47 15.47	Cycle Time (s): 180				