Land off Crewe Road, Alsager (A086060)

Technical Note 2: Junction Capacity Assessment – Sensitivity Tests

30 January 2015

1. Introduction

1.1 This note has been prepared in response to a Cheshire East Council (CEC) request that further sensitivity tests are undertaken with regards the junction capacity assessments presented in the Transport Assessment (TA) dated May 2014 and the subsequent Technical Note 1 dated October 2014.

1.2 Effectively this provides a further sensitivity test from the assessments presented in Technical Note 1 which included traffic from a number of additional committed developments and the associated mitigation works.

1.3 It has been requested by CEC that the White Moss Quarry committed development and associated works are removed from the revised junction capacity assessments. As such the sensitivity assessment includes the following committed developments agreed with CEC:

- Hollins Strategic Land – 65 residential units (Ref: 12/0893C)
- Co-operative Food store Re-development (Ref:10/0741C)
- Dunnocksfold Road – 95 residential units (Ref: 13/4627C)
- Twyfords Bathrooms Site – 335 residential units (Ref: 11/4109C)
- Hall Drive 109 – residential units (Ref: 12/4150C)
- Land north of Crewe Road – 110 residential units (Ref: 13/3032C – Subject to Section 106 Agreement)
- Sandbach Road North – 155 residential units (Ref: 12/4872C – Application is subject to appeal and it is understood a new planning application with a lesser number of units will be submitted)

1.4 Given the assessments already provided this sensitivity test only includes additional modelling for the following junction:

- Sandbach Road / Lawton Road / Crewe Road Signalised Cross Roads

1.5 This technical note provides CEC with the results of the revised junction capacity assessments.

2. Traffic Flow Derivation

2.1 The base line traffic flows including the 2014 observed and 2019 design year flows including growth, as detailed in the TA, have been reproduced and shown in **Figures 1 to 3.**

2.2 As requested by CEC the traffic flows associated with the committed developments outlined earlier have been included in the junction capacity assessments.

2.3 The traffic flows are provided in **Figures 4a** to **4g** with the total committed development traffic is shown in **Figure 5.**

2.4 Subsequent to this the committed development flows have been added to the 2014 observed flows to derive the 2014 base plus committed flows. These are provided in **Figure 6.** This exercise was repeated for the 2019 design year flows with the 2019 base plus committed flows provided in **Figure 7**.

2.5 The residential development traffic detailed in the submitted TA has been added to the base plus committed flows for 2014 and 2019 to derive the Assessment flows. The development traffic distribution and the assessment flows are shown in **Figures 8** to **9** with the 2014 and 2019 assessment flows (base plus committed plus development) provided in **Figures 10** and **11** respectively.

3. Junction Capacity Assessment

3.1 This section provides the results of the junction capacity assessments undertaken at the Sandbach Road / Lawton Road / Crewe Road signalised crossroads with the operation of traffic signal controlled junction assessed using LINSIG (JCT Consultancy).

3.2 The following scenarios have been tested:

- 2014 Base plus Committed
- 2019 Base plus Committed
- 2014 Assessment Flows

Sandbach Road / Lawton Road / Crewe Road

3.3 The modelling results for the existing signalised junction are provided in **Table 1 and 2** below.

3.4 **Table 1** shows that in the 2014 base plus committed development scenario the B5077 Crewe Road / Sandbach Road junction currently suffers from queuing on the Crewe Road west arm and on the Sandbach Road south arm of the junction during the PM peak period, with the junction operating with spare capacity in the morning peak.

3.5 The 2019 base plus committed scenario unsurprisingly shows that conditions worsen in the evening peak with the degree of saturation and queues increasing accordingly given the additional demands caused by background traffic growth. Queuing on Crewe Road increases by 13 vehicles, with queues on Sandbach Road south predicted to increase by 6 vehicles.

3.6 In the morning peak the modelling shows that the junction operates with limited spare capacity with queues increasing slightly.

Table 1: Summary of LINSIG Results – Base Plus Committed Scenario (Sandbach Road/Lawton Road/ Crewe Road Signalised Junction)

Link Description	2014 Base Plus Committed Flows				2019 Base Plus Committed Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	DOS	Queue	DOS	Queue	DOS	Queue	DOS	Queue
B5077 Crewe Road	75.2%	13	101.5%	34	78.3%	14	106.0%	47
Sandbach Road (N)	64.5%	8	49.8%	6	67.5%	9	52.2%	6
Lawton Road	91.7%	14	75.1%	11	96.7%	15	78.1%	12
Sandbach Road (S)	82.9%	9	104.5%	24	92.8%	11	108.2%	30
Lawton Road EB	47.4%	8	82.5%	17	49.3%	8	86.1%	18
Co-op Access	24.8%	1	72.5%	6	24.8%	1	72.5%	6
Lawton Road WB	63.1%	12	55.5%	9	65.2%	13	57.4%	10

Table 2: Summary of LINSIG Results – Assessment
(Sandbach Road/Lawton Road/ Crewe Road Signalised Junction)

Link Description	2014 Assessment Flows			
	AM Peak		PM Peak	
	DOS	Queue	DOS	Queue
B5077 Crewe Road	76.7%	13	103.2%	38
Sandbach Road (N)	64.8%	8	50.3%	6
Lawton Road	92.8%	14	76.2%	11
Sandbach Road (S)	89.1%	10	104.6%	24
Lawton Road EB	48.1%	8	83.6%	17
Co-op Access	24.8%	1	72.5%	6
Lawton Road WB	63.6%	12	56.2%	9

3.7 **Table 2** presents the results of the 2014 sensitivity test including the proposed development flows.

3.8 It demonstrates that the proposed residential scheme has little impact on junction operation when comparing the 2014 assessment scenario to the 2014 base plus committed scenario shown in **Table 1**. There are only marginal increases in queuing and degree of saturation in the PM peak scenario with queues only increasing on the Crewe Road arm.

3.9 It is clear from the results shown in **Tables 1 and 2** however that the impacts shown in the modelling as a result of the traffic associated with the proposed development are minimal, whereas those associated with the inclusion of traffic growth using growth factors are more pronounced.

3.10 Given the level of committed development (869 residential units and a redeveloped food store) included in the modelling scenarios it is debateable whether the inclusion of traffic growth is justified as this clearly represents double counting of the committed developments flow given future developments are used in the calculation that sit being traffic growth factors.

3.11 This is particularly relevant when considering the removal of the White Moss Quarry Committed development along with the associated mitigation works form the sensitivity testing. These mitigation works and traffic flows have been included in the modelling contained in Technical Note 1 and this demonstrates that the junction will operate within acceptable capacity limits following the delivery of the scheme.

3.12 Further to this, any further additional developments that may result in additional traffic growth will also potentially include the provision of mitigation schemes.

3.13 It is clear therefore that a realistic assessment scenario to consider would be one without the inclusion of background growth given the level of committed development already included within the assessments and also the fact that mitigation works are not to be included in the sensitivity modelling.

3.14 The 2014 Assessment scenario modelling results, including the agreed committed development flows, are presented in **Table 2** and show that the proposed development will not have a material impact on the operation of the highways network with the degree of saturation only increasing marginally with associated increases in queuing of only 4 vehicles. These impacts are clearly minimal and cannot be considered as severe.

3.15 Notwithstanding the above it should be noted that the level of trips generated by the development that will actually use this junction in the peak hours is negligible. Figure 9 shows the development trips and it can be seen that the development only generates an additional 9 and 11 trips in the AM and PM peaks respectively on the critical Crewe Road approach.

3.16 This can be compared to the 103 and 108 additional trips generated and included in the assessments by the committed developments in the AM and PM peak hours respectively.

3.17 Further to this the additional 11 development trips in the PM peak hour only represents a 1.6% increase in vehicle flows on the Crewe Road approach and this level of additional flow will comfortable fall within the natural daily variation of flows on a day to day basis with this equating to only 1 additional vehicle approaching on this arm every c.6 minutes.

4. Conclusion

4.1 This note has been prepared in response to a further request from Cheshire East Council (CEC) that the junction capacity assessments presented in the Transport Assessment (TA) prepared in May 2014 include traffic from a number of additional committed developments but not include the White Moss Quarry scheme and associated mitigation proposals.

4.2 As such the following committed developments have been included within the revised junction capacity sensitivity assessments:

- Hollins Strategic Land – 65 residential units (Ref: 12/0893C)
- Co-operative Food store Re-development (Ref:10/0741C)
- Dunnocksfold Road – 95 residential units (Ref: 13/4627C)
- Twyfords Bathrooms Site – 335 residential units (Ref: 11/4109C)
- Hall Drive 109 – residential units (Ref: 12/4150C)
- Land north of Crewe Road – 110 residential units (Ref: 13/3032C – Subject to Section 106 Agreement)
- Sandbach Road North – 155 residential units (Ref: 12/4872C – Application is subject to appeal and it is understood a new planning application with a lesser number of units will be submitted)

4.3 The junction capacity assessments detailed in this note have shown that the proposed Sandbach Road / Lawton Road / Crewe Road signalised crossroads will operate without any material impacts in the 2014 assessment scenario when compared to the 2014 base plus committed development scenario.

4.4 Given the level of committed development included in the modelling scenarios it is concluded that traffic growth should not be included as this clearly represents double counting, exacerbating any potential future operational issues. Further to this additional development resulting in background traffic growth will also potentially include the provision of mitigation schemes, with these clearly not accounted for in the assessments undertaken.

4.5 This is particularly relevant when considering the removal of the White Moss Quarry Committed developments along with the associated mitigation works. These mitigation

works have previously been included in the modelling contained in Technical Note 1 and this demonstrated that the junction will operate within acceptable capacity limits following the delivery of the scheme.

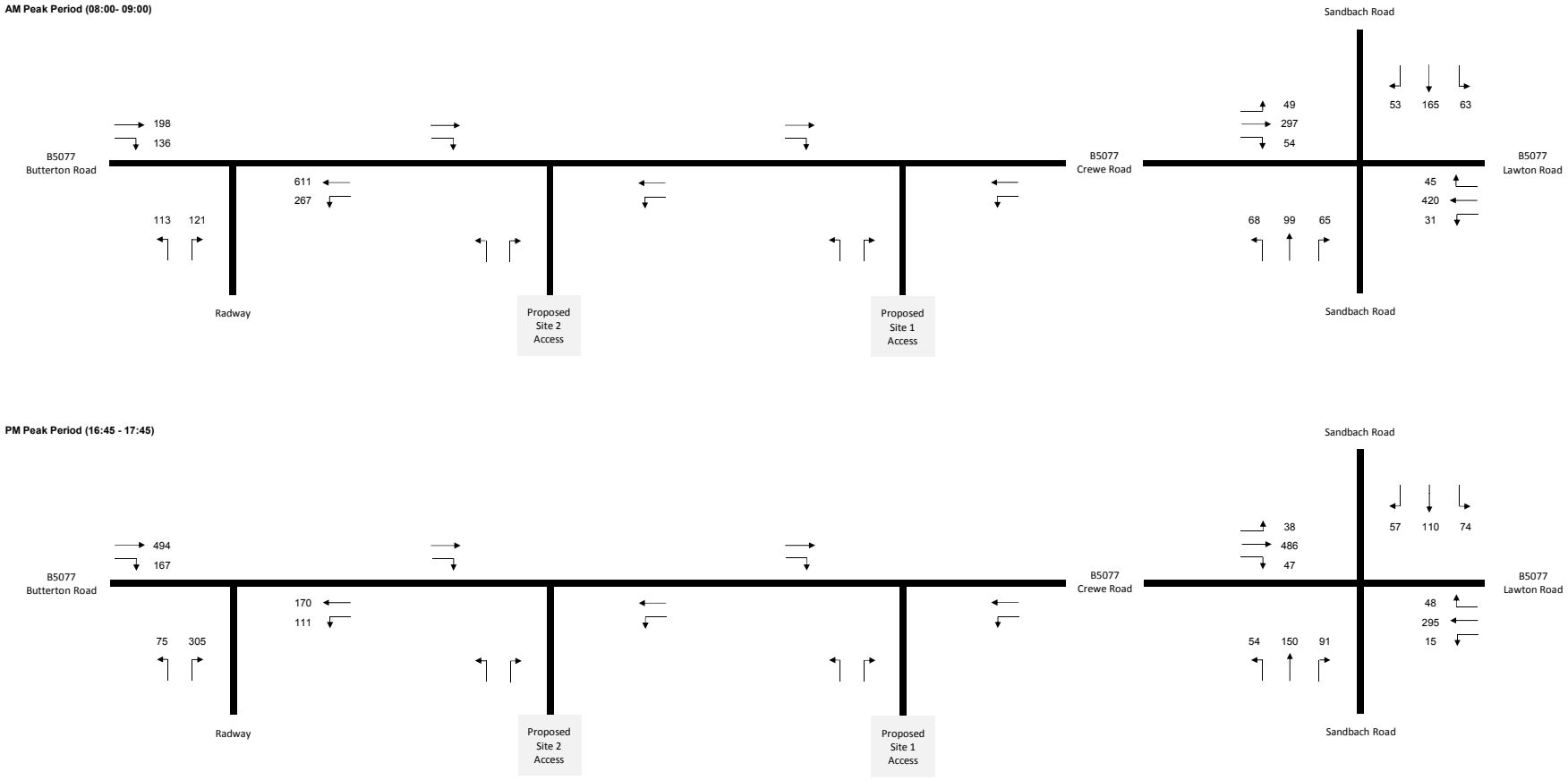
4.6 It is clear therefore that a realistic assessment scenario to consider would be one without the inclusion of growth given the level of committed development already included within the assessments and also the fact that mitigation works are not to be included in the sensitivity modelling.

4.7 In conclusion, the junction capacity assessments detailed in this note have demonstrated that the impacts of the development are minimal and that the proposals will cause no cumulative impacts that could be considered 'severe' by any measure. Therefore the proposals clearly pass the key test of acceptability stated in Paragraph 32 of the National Planning Policy Framework.

4.8 Further to this it can be also concluded that the additional traffic generated by this development is by comparison to the existing flows so small that it would not make any material difference to the safety or operation of the local highway network and is considered to be within the daily variation of the traffic flows in the area

4.8.1 In view of the above positive findings it is considered that the proposed development is acceptable in highway, traffic and transportation terms.

Figures



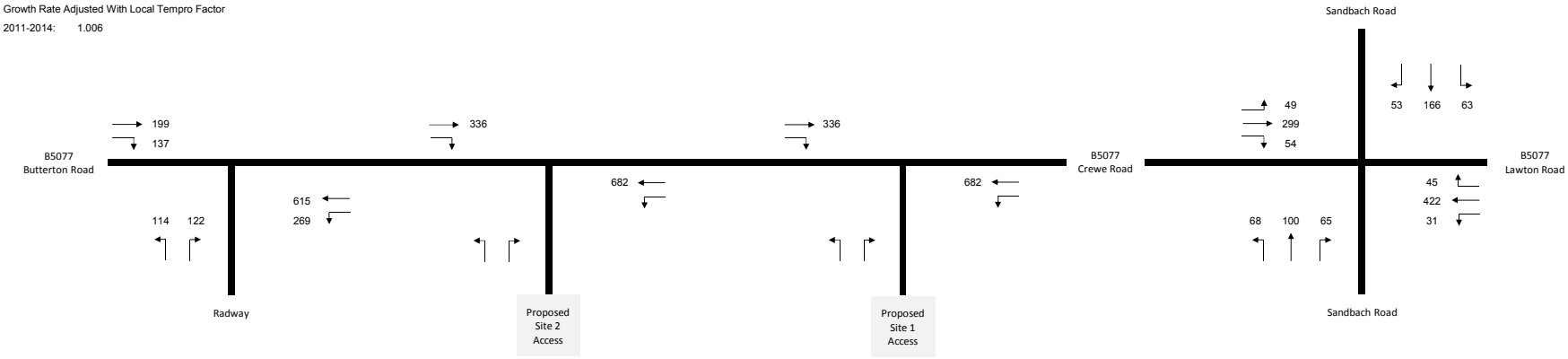
NB: Butterton Road/Radway Lane signal junction is surveyed on 29th November 2011
Sandbach Road/Lawton Road signal junction is surveyed on 29th November 2011

Fig 1: 2011 Observed Flows

AM Peak Period (08:00- 09:00)

Growth Rate Adjusted With Local Tempro Factor

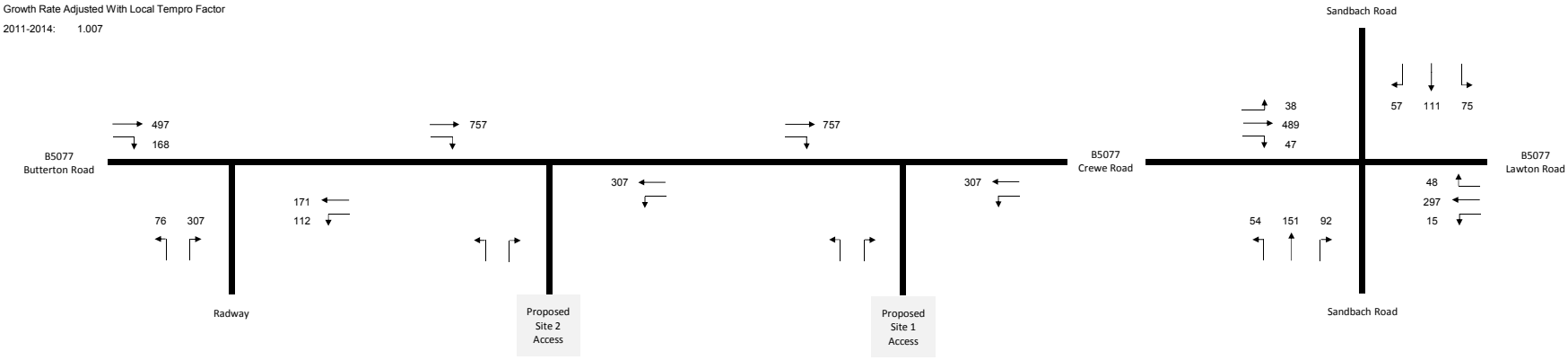
2011-2014: 1.006



PM Peak Period (16:45 - 17:45)

Growth Rate Adjusted With Local Tempro Factor

2011-2014: 1.007



NB: Butterton Road/Radway Lane signal junction is surveyed on 29th November 2011

Sandbach Road/Lawton Road signal junction is surveyed on 29th November 2011

All traffic flow across proposed and committed access frontage is surveyed as ATC between the 20th-21st March 2014

Fig 2: 2014 Observed Plus Growth Flows

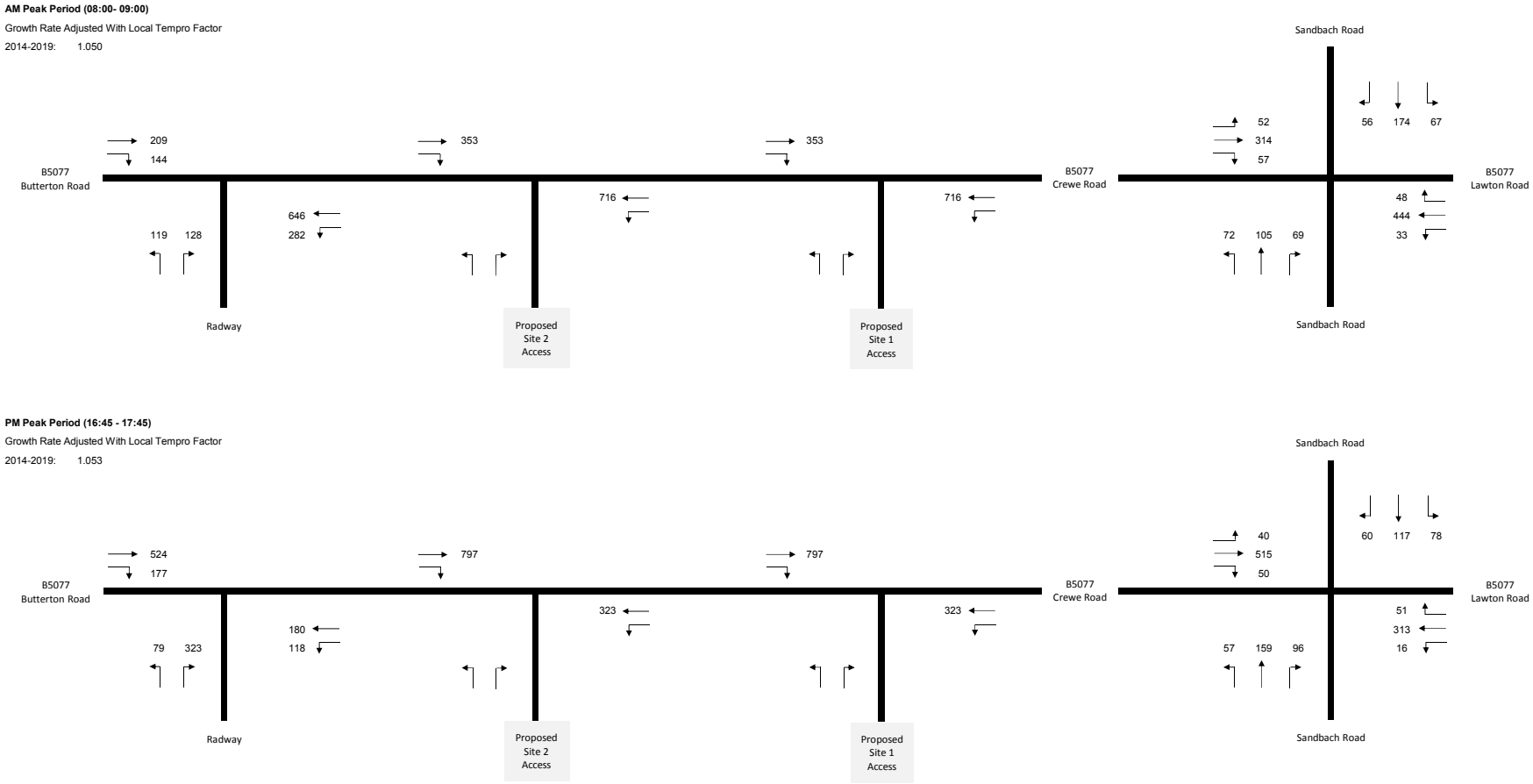


Fig 3: 2019 Observed Plus Growth Flows

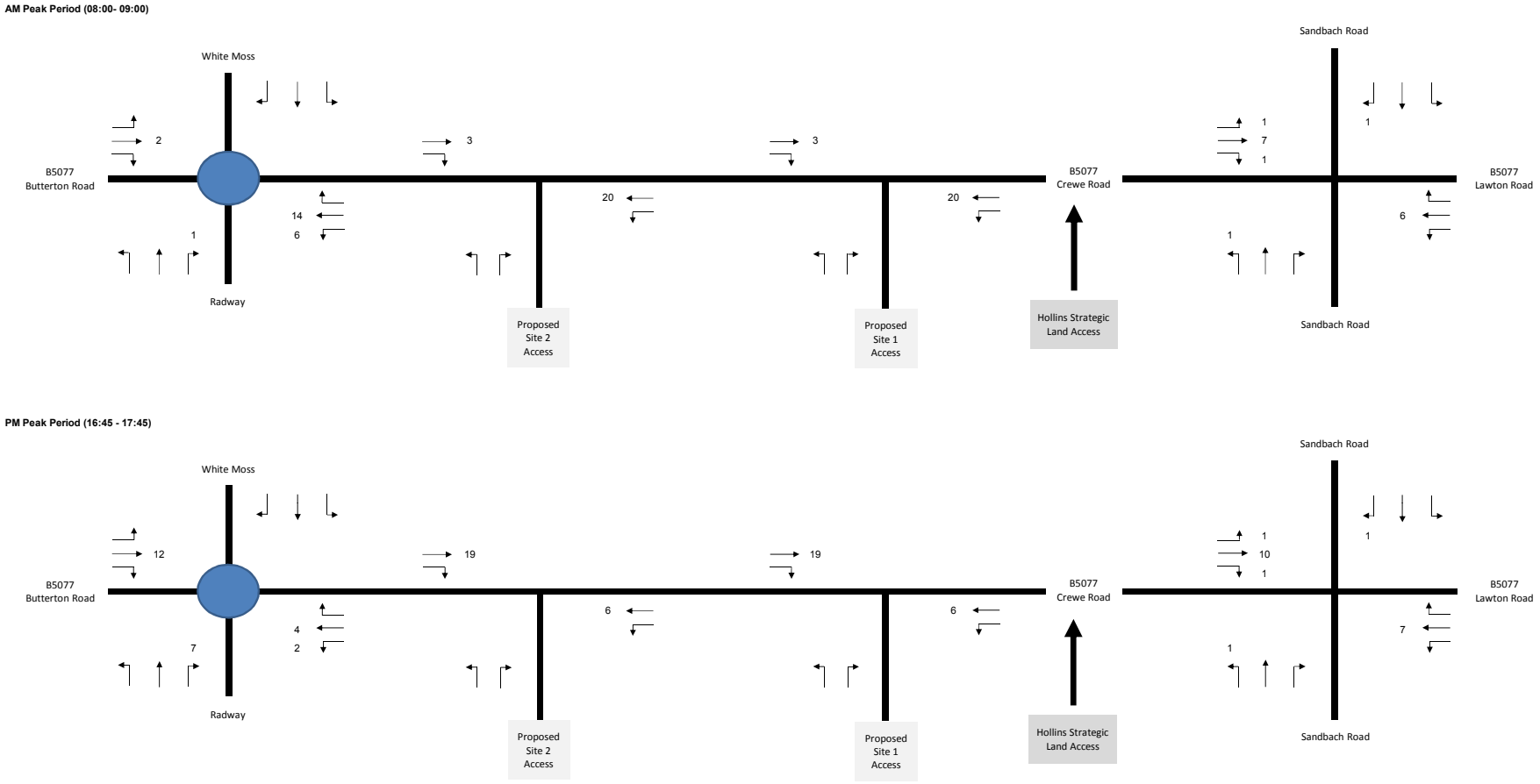


Fig 4a: Committed Development (Hollins Strategic Land)

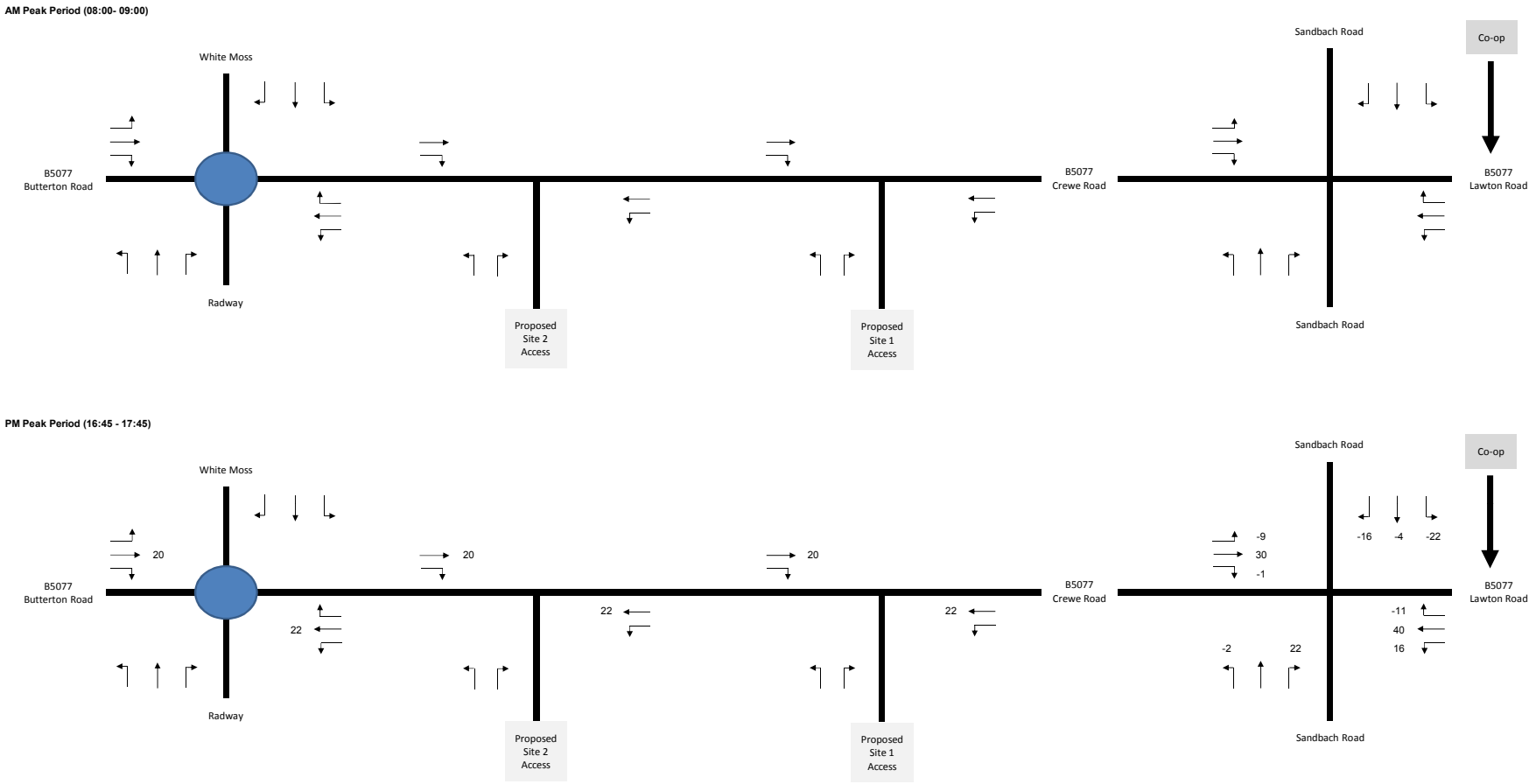


Fig 4b: Committed Development (Co-op Site)

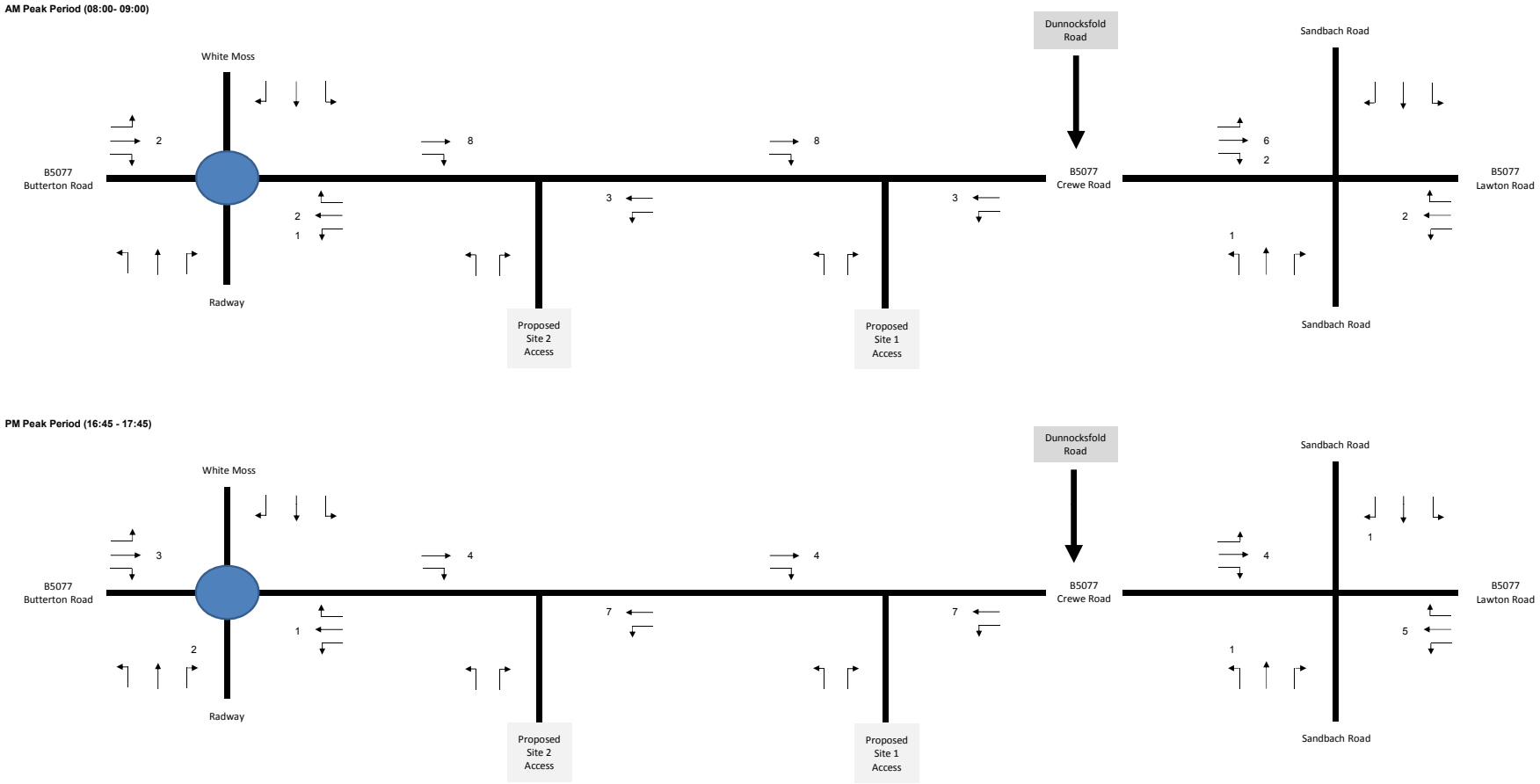


Fig 4c: Committed Development (Dunnocksfold Road)

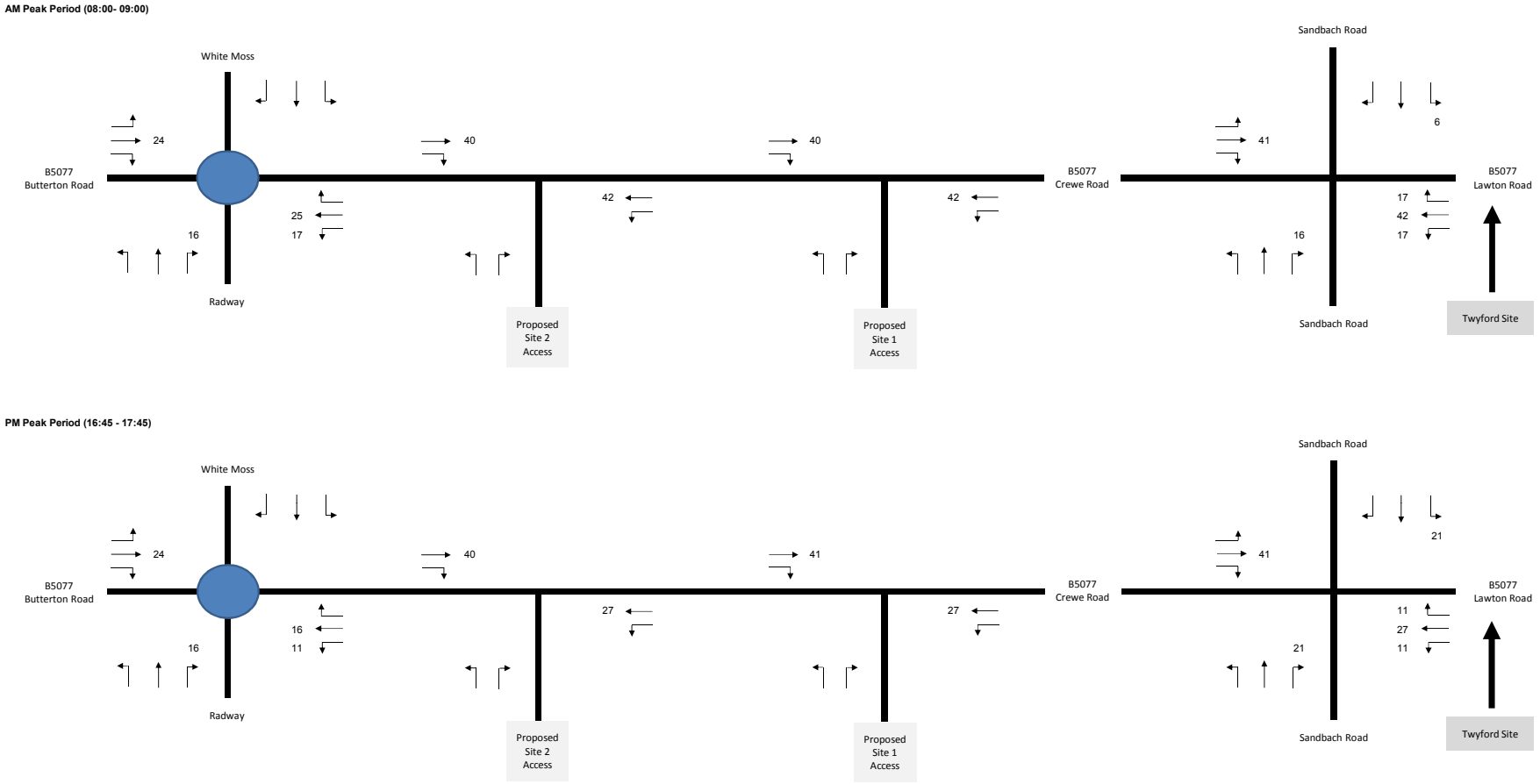


Fig 4d: Committed Development (Twyford Site)

Fig 4e: Committed Development (Hall Drive Site)

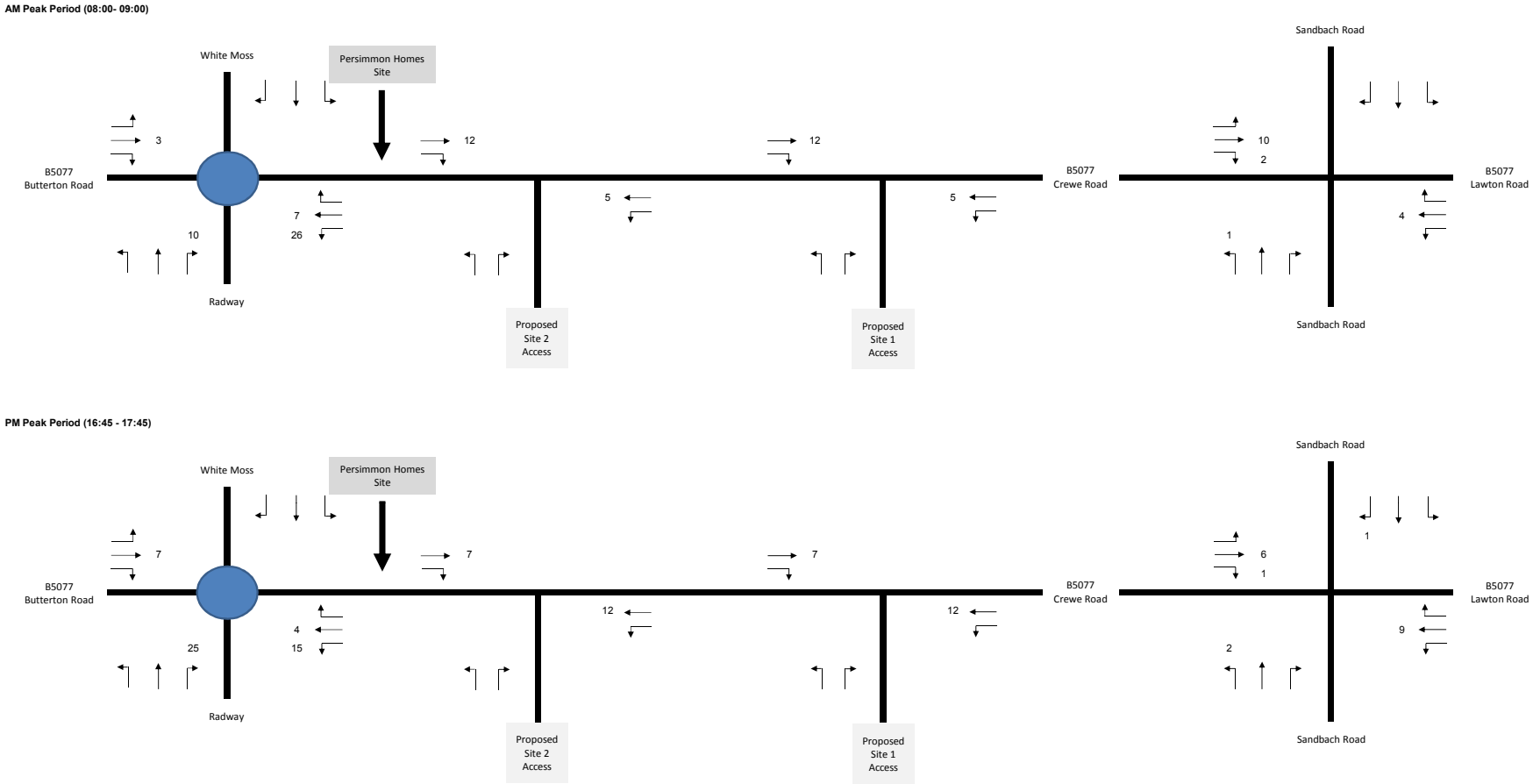


Fig 4f: Committed Development (Land North of Crewe Road)

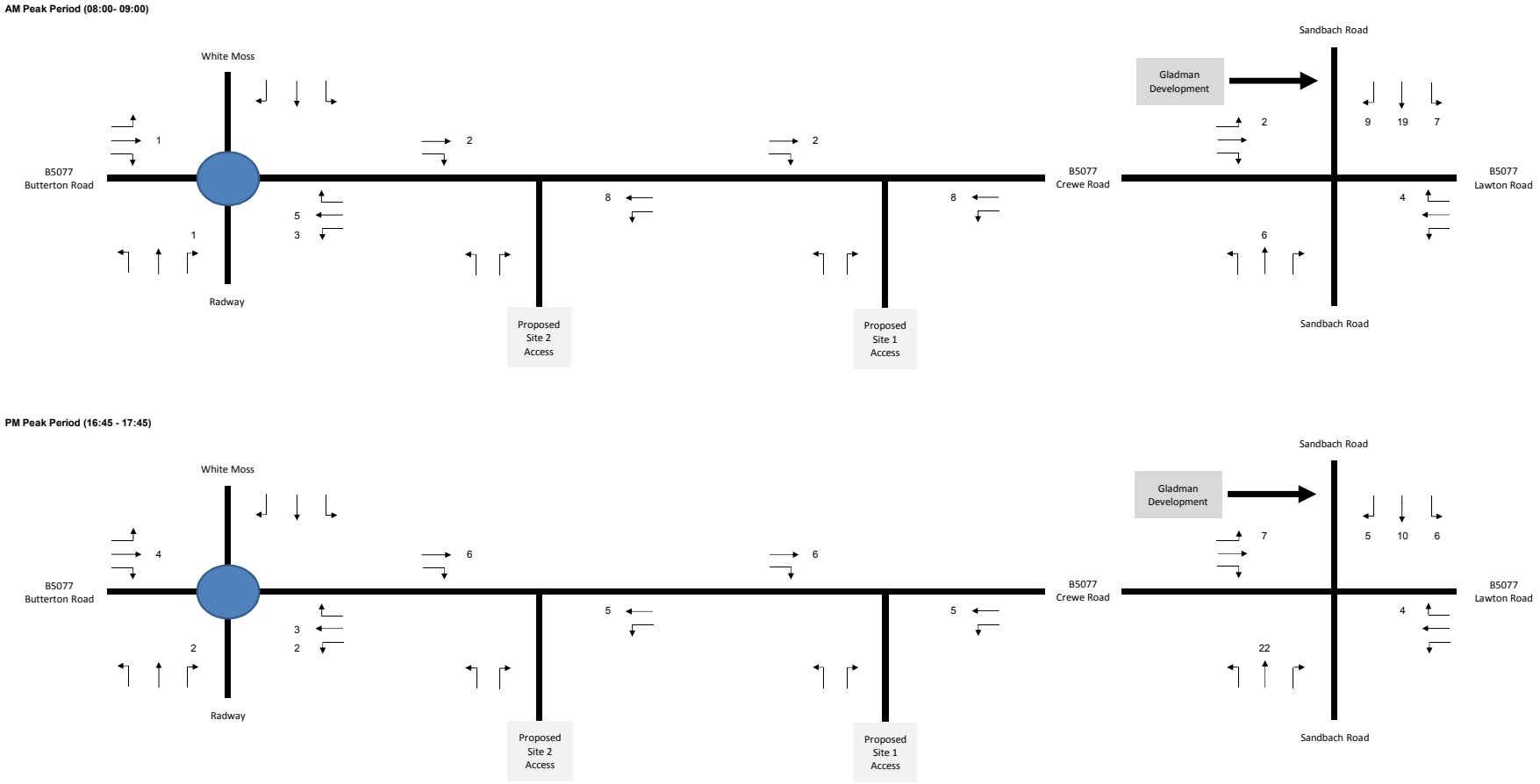


Fig 4g: Committed Development (Sandbach Road North)

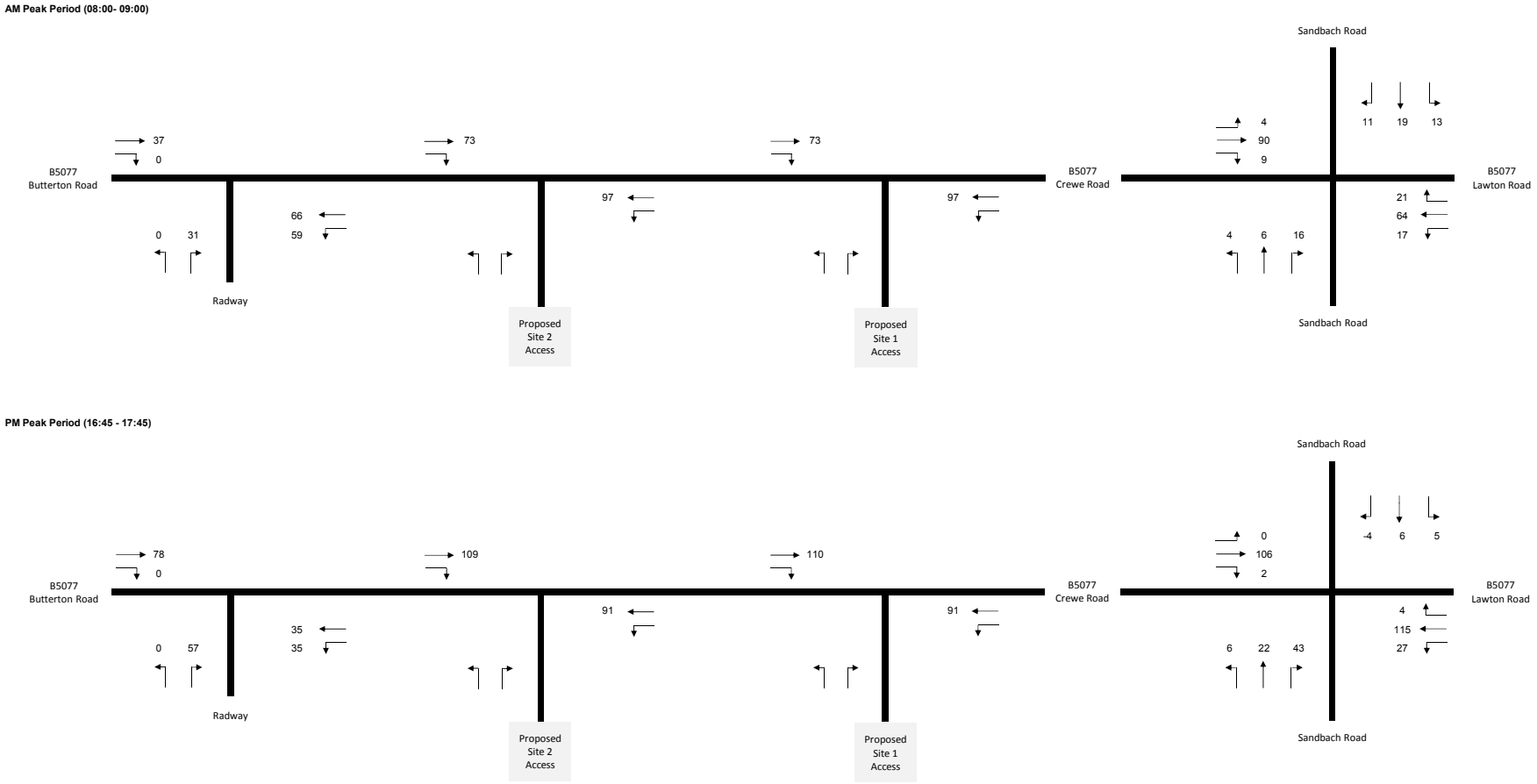


Fig 5: Total Committed Development (without White Moss Quarry)

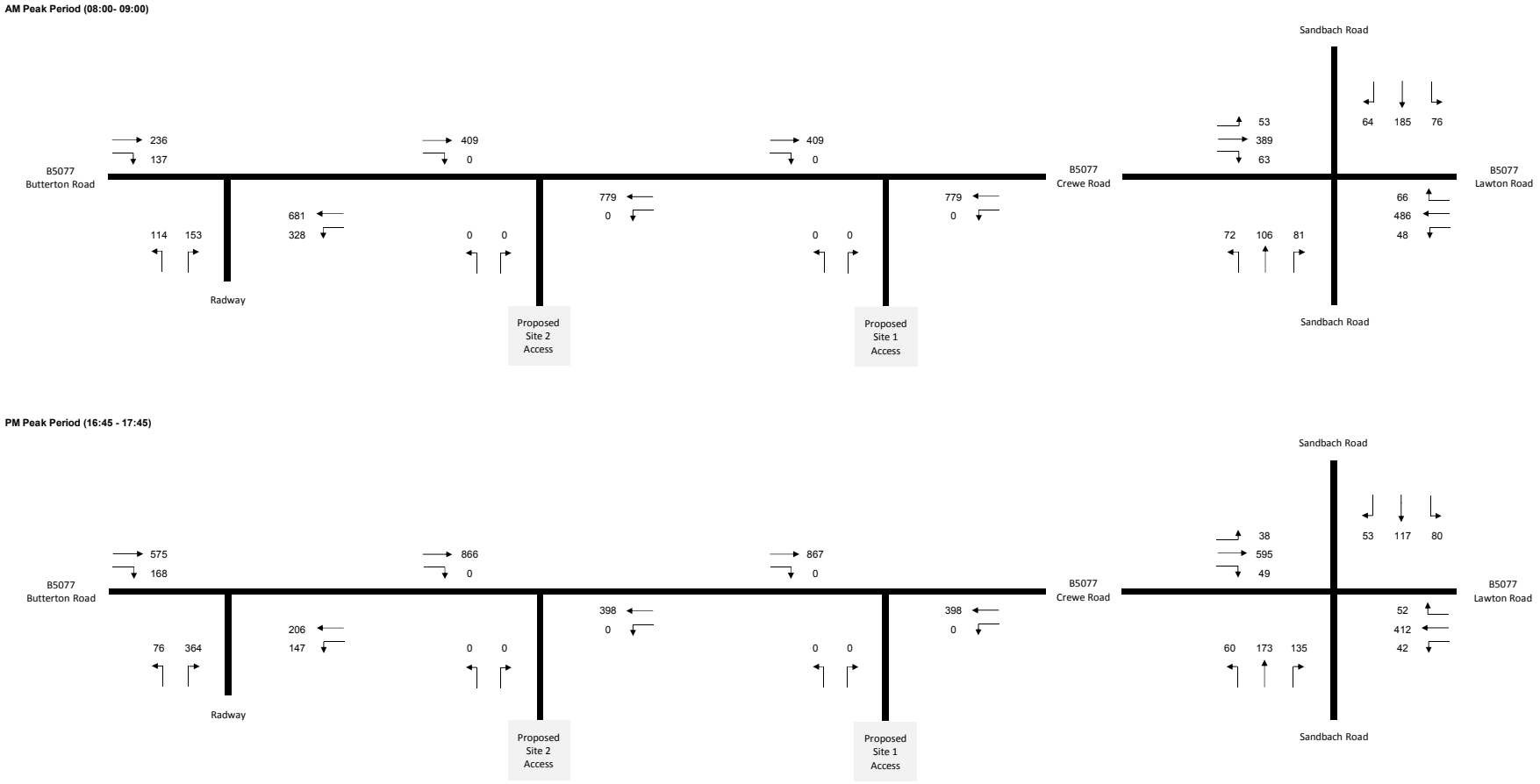


Fig 6: 2014 Base (plus Committed Flows - without White Moss Quarry)

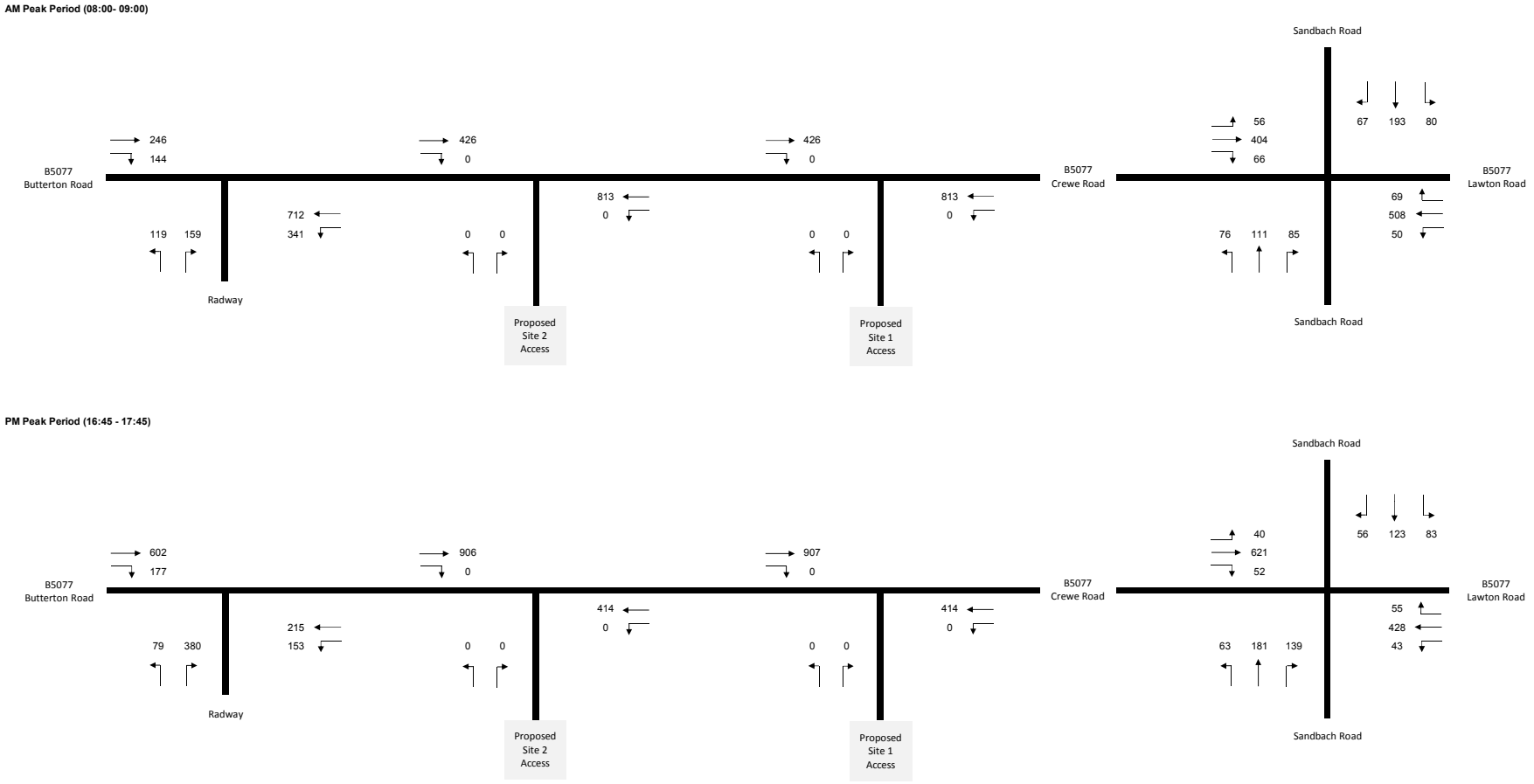


Fig 7: 2019 Base (plus Committed Flows - without White Moss Quarry)

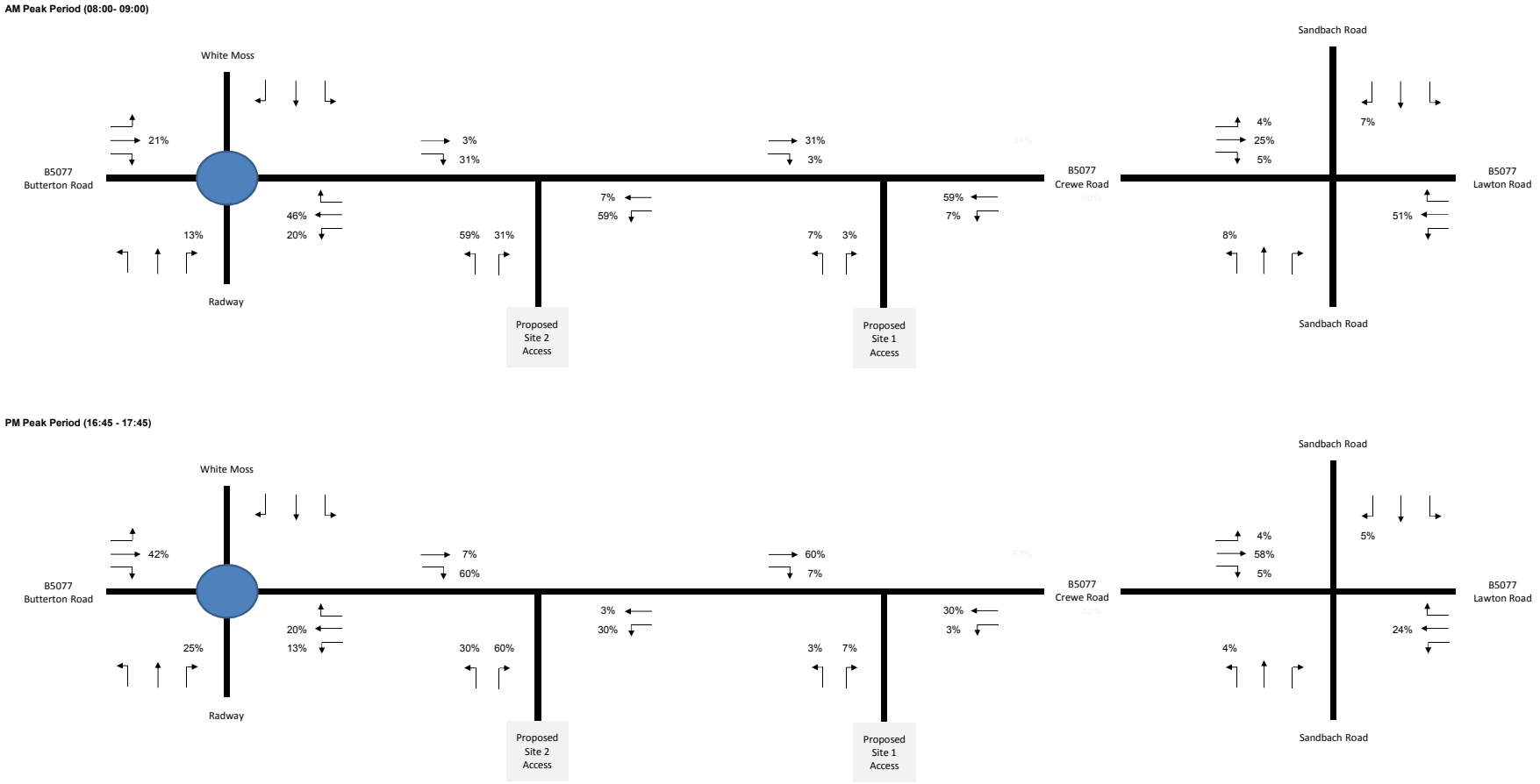


Fig 8: Residential Distribution

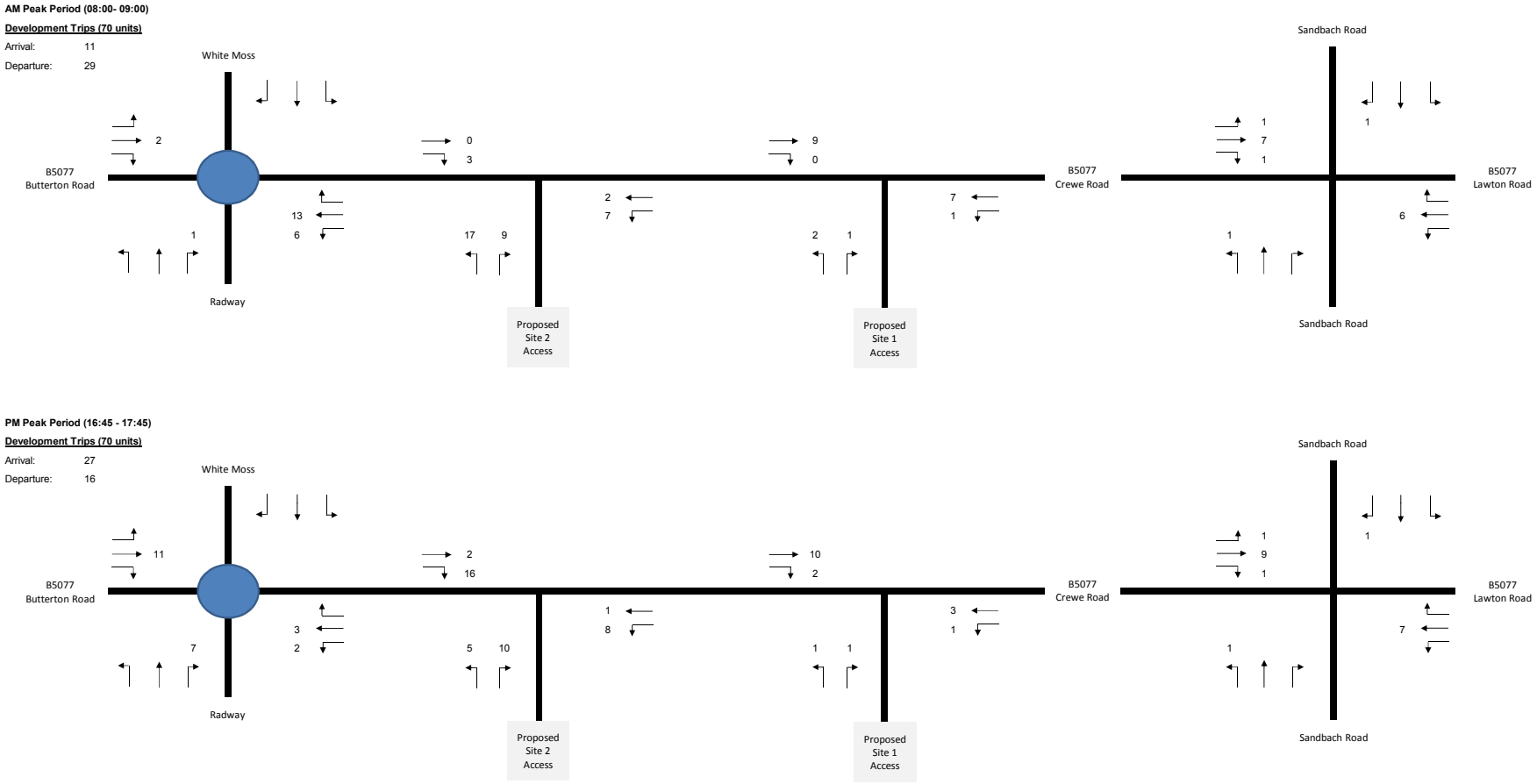


Fig 9: Residential Trips (70 Units)

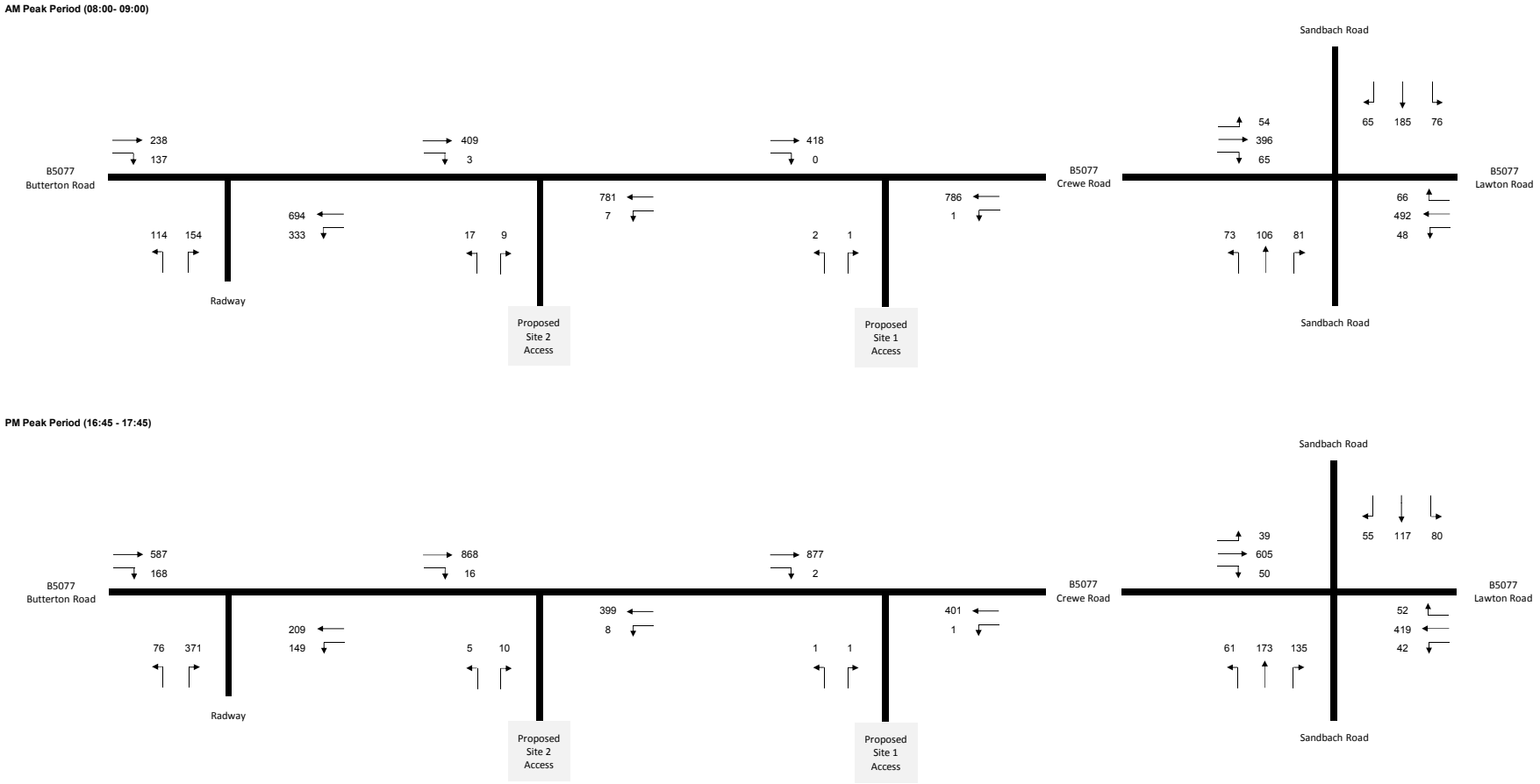


Fig 10: 2014 Assessment Flows (without White Moss Quarry)

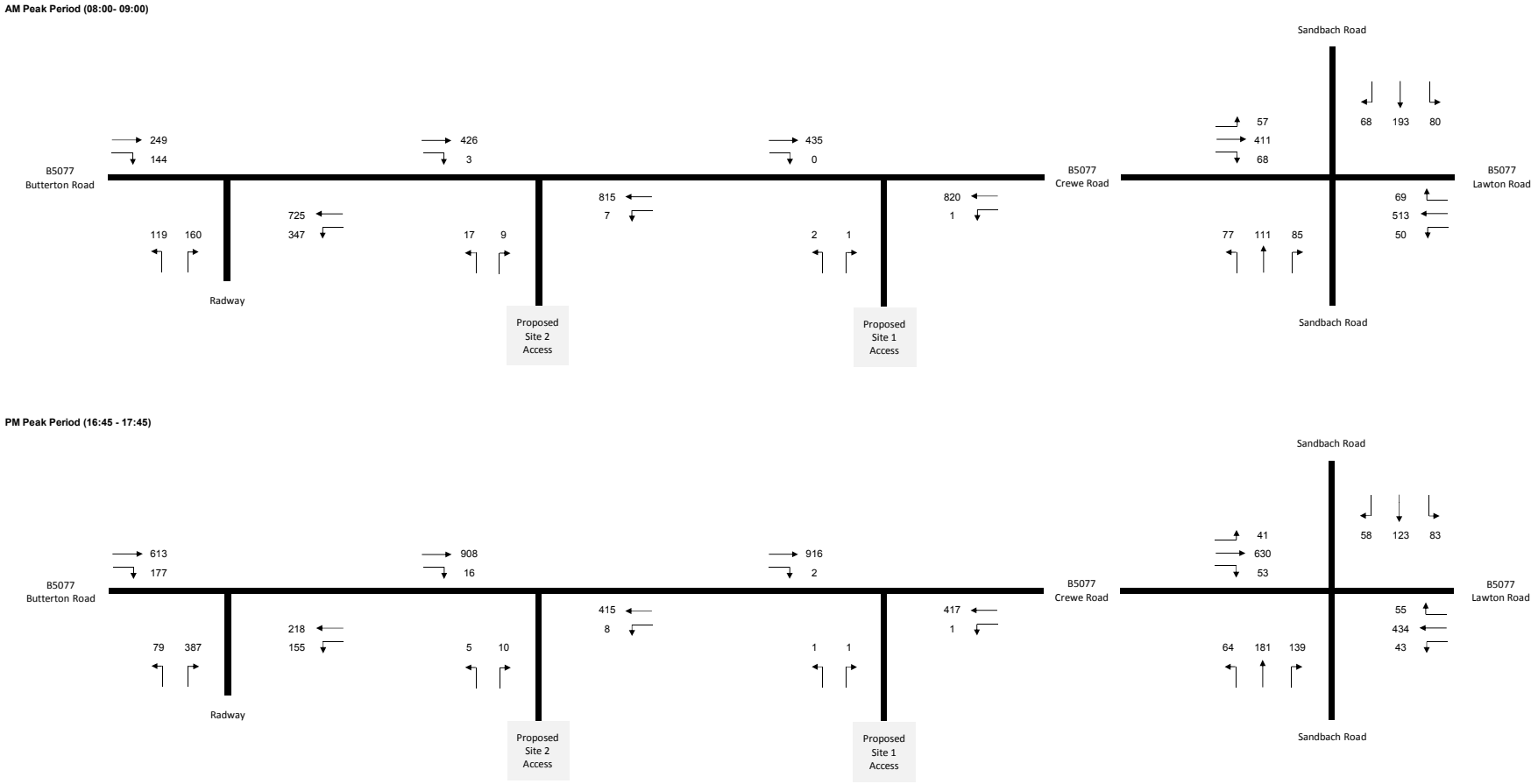


Fig 11: 2019 Assessment Flows (without White Moss Quarry)

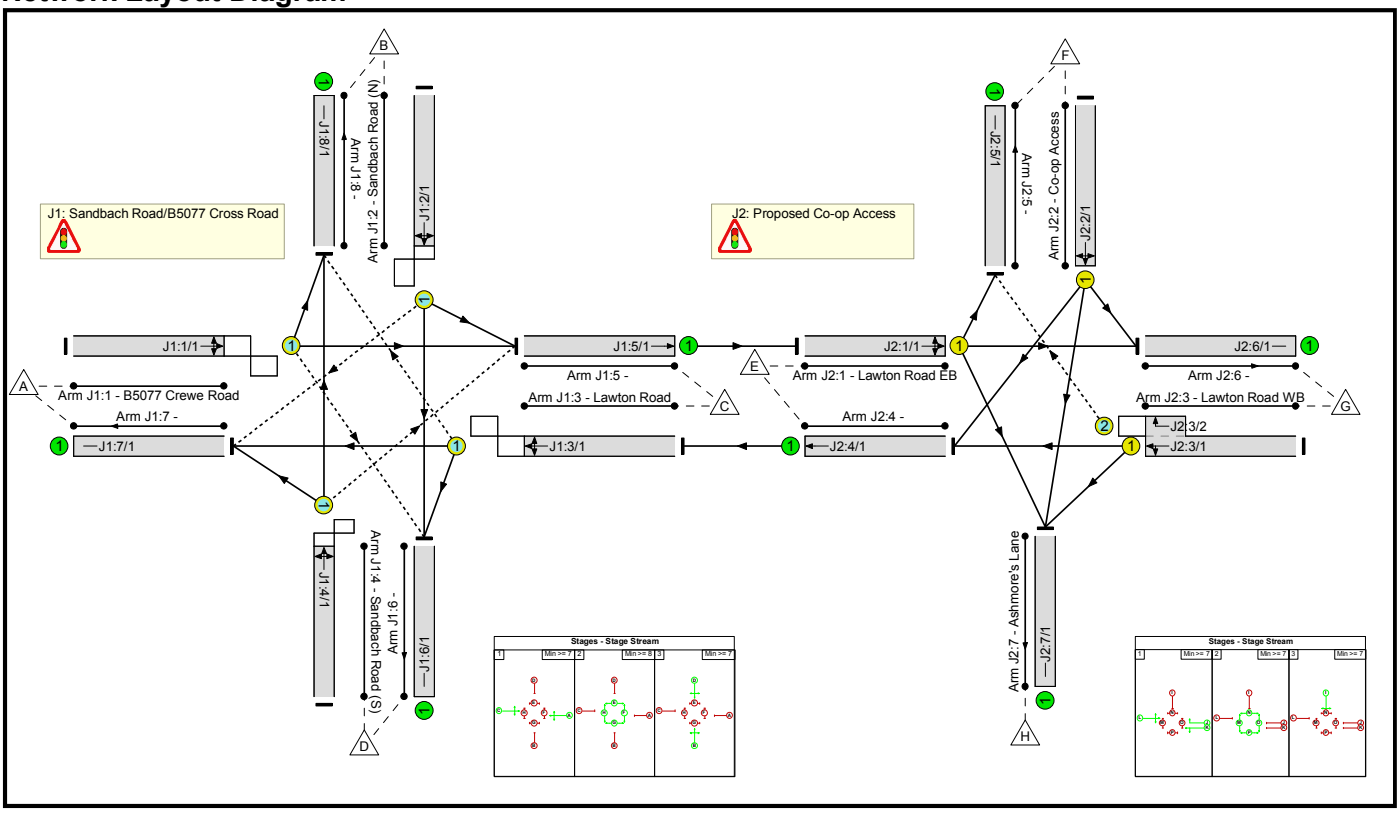
Appendix A – LINSIG Outputs (Sandbach Road/Lawton Road/Crewe Road)

Full Input Data And Results

User and Project Details

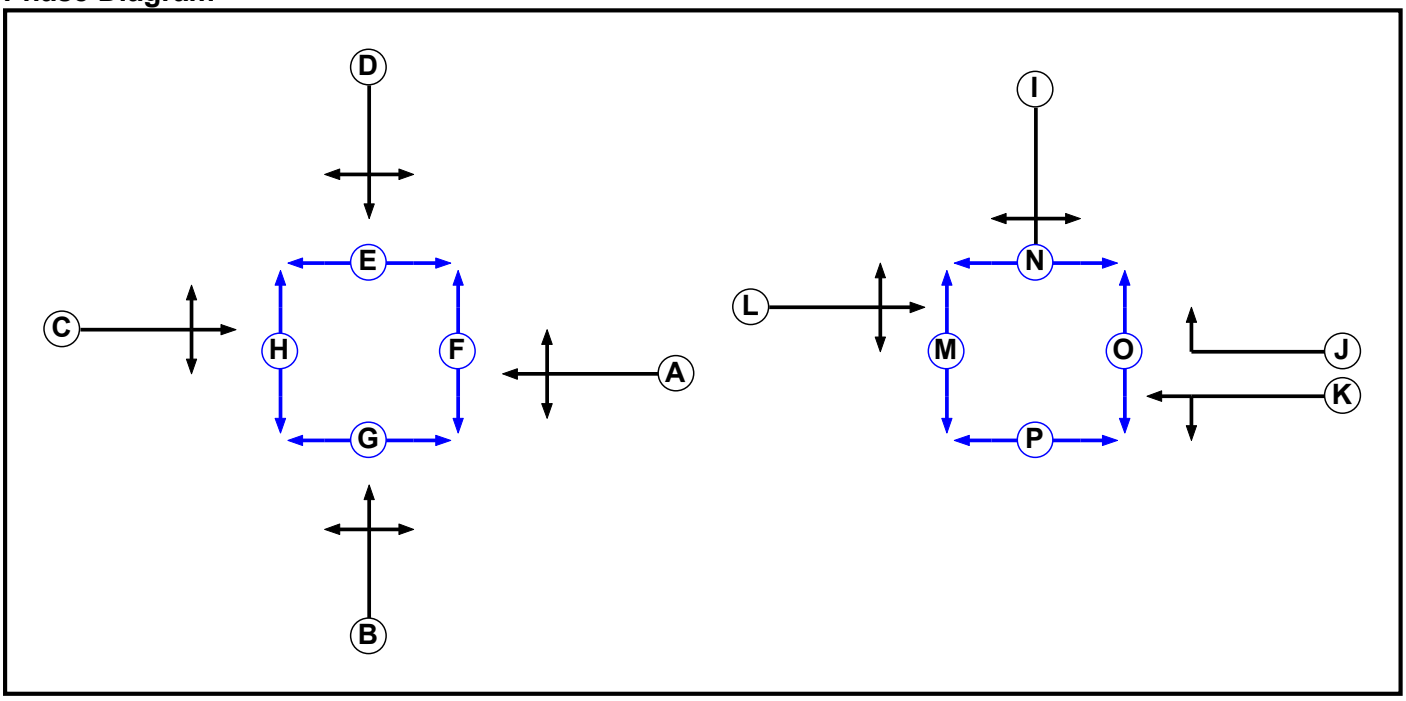
Project:	**Crewe Road, Alsager**
Title:	**Sandbach Road/B5077 Crewe Road/Co-op Access**
Location:	Sandbach Road/B5077 Crewe Road Signal Junction
File name:	Sandbach Road_B5077 Cross Road (with Co-op Improvements).lsg3x
Author:	
Company:	WYG
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	1		7	7
D	Traffic	1		7	7
E	Pedestrian	1		8	8
F	Pedestrian	1		8	8
G	Pedestrian	1		8	8
H	Pedestrian	1		8	8
I	Traffic	2		7	7
J	Traffic	2		7	7
K	Traffic	2		7	7
L	Traffic	2		7	7
M	Pedestrian	2		7	7
N	Pedestrian	2		7	7
O	Pedestrian	2		7	7
P	Pedestrian	2		7	7

Full Input Data And Results

Phase Intergreens Matrix

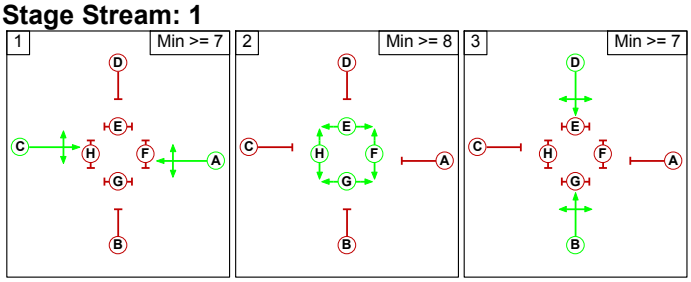
Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A		6	-	6	14	14	14	14	-	-	-	-	-	-	-	-
B	7		7	-	10	10	10	10	-	-	-	-	-	-	-	-
C	-	6		6	14	14	14	14	-	-	-	-	-	-	-	-
D	7	-	7		10	10	10	10	-	-	-	-	-	-	-	-
E	8	8	8	8		-	-	-	-	-	-	-	-	-	-	-
F	8	8	8	8	-		-	-	-	-	-	-	-	-	-	-
G	8	8	8	8	-	-		-	-	-	-	-	-	-	-	-
H	8	8	8	8	-	-	-		-	-	-	-	-	-	-	-
I	-	-	-	-	-	-	-	-		6	6	6	6	6	6	6
J	-	-	-	-	-	-	-	-	6		-	-	6	6	6	6
K	-	-	-	-	-	-	-	-	6	-		-	6	-	6	6
L	-	-	-	-	-	-	-	-	6	-	-		6	6	6	6
M	-	-	-	-	-	-	-	-	10	10	10	10		-	-	-
N	-	-	-	-	-	-	-	-	10	10	-	10	-		-	-
O	-	-	-	-	-	-	-	-	10	10	10	10	-	-		-
P	-	-	-	-	-	-	-	-	10	10	10	10	-	-	-	

Phases in Stage

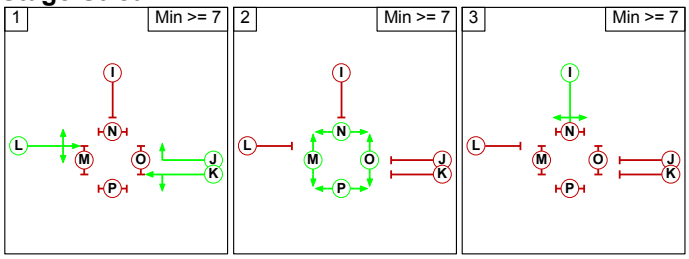
Stream	Stage No.	Phases in Stage
1	1	A C
1	2	E F G H
1	3	B D
2	1	J K L
2	2	M N O P
2	3	I

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

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

Stage Stream: 2

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

Prohibited Stage Change

Stage Stream: 1

From Stage \ To Stage	1	2	3
1		14	6
2	8		8
3	7	10	

Stage Stream: 2

From Stage \ To Stage	1	2	3
1		6	6
2	10		10
3	6	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: Sandbach Road/B5077 Cross Road

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)
J1:1/1 (B5077 Crewe Road)	J1:6/1 (Right)	1440	0	J1:3/1	1.09	To J1:6/1 (Left) To J1:7/1 (Ahead)	4.00	2.00	0.50	4	2.00
J1:2/1 (Sandbach Road (N))	J1:7/1 (Right)	1440	0	J1:4/1	1.09	To J1:7/1 (Left) To J1:8/1 (Ahead)	3.00	2.00	0.50	3	2.00
J1:3/1 (Lawton Road)	J1:8/1 (Right)	1440	0	J1:1/1	1.09	To J1:5/1 (Ahead) To J1:8/1 (Left)	4.00	2.00	0.50	4	2.00
J1:4/1 (Sandbach Road (S))	J1:5/1 (Right)	1440	0	J1:2/1	1.09	To J1:5/1 (Left) To J1:6/1 (Ahead)	2.00	1.00	0.50	2	2.00

Junction: J2: Proposed Co-op Access

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)
J2:3/2 (Lawton Road WB)	J2:5/1 (Right)	1439	0	J2:2/1	1.09	To J2:6/1 (Left) To J2:7/1 (Ahead)	2.00	-	0.50	2	2.00

Full Input Data And Results

Lane Input Data

Junction: J1: Sandbach Road/B5077 Cross Road												
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 (B5077 Crewe Road)	O	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:5 Ahead	Inf
											Arm J1:6 Right	60.00
											Arm J1:8 Left	15.00
J1:2/1 (Sandbach Road (N))	O	D	2	3	60.0	Geom	-	4.00	0.00	Y	Arm J1:5 Left	45.00
											Arm J1:6 Ahead	Inf
											Arm J1:7 Right	20.00
J1:3/1 (Lawton Road)	O	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J1:6 Left	15.00
											Arm J1:7 Ahead	Inf
											Arm J1:8 Right	55.00
J1:4/1 (Sandbach Road (S))	O	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:5 Right	20.00
											Arm J1:7 Left	40.00
											Arm J1:8 Ahead	Inf
J1:5/1	U		2	3	5.2	Inf	-	-	-	-	-	-
J1:6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J2: Proposed Co-op 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 (Lawton Road EB)	U	L	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J2:5 Left	10.00
											Arm J2:6 Ahead	Inf
											Arm J2:7 Right	9.00
J2:2/1 (Co-op Access)	U	I	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:4 Right	14.00
											Arm J2:6 Left	10.00
											Arm J2:7 Ahead	Inf
J2:3/1 (Lawton Road WB)	U	K	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:4 Ahead	Inf
											Arm J2:7 Left	8.00
J2:3/2 (Lawton Road WB)	O	J	2	3	3.0	Geom	-	2.50	0.00	Y	Arm J2:5 Right	15.00
J2:4/1	U		2	3	3.5	Inf	-	-	-	-	-	-
J2:5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:7/1 (Ashmore's Lane)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2014 Base - AM Peak (No WMQ)'	08:00	09:00	01:00	
2: '2014 Base - PM Peak (No WMQ)'	16:45	17:45	01:00	
3: '2019 Base - AM Peak (No WMQ)'	08:00	09:00	01:00	
4: '2019 Base - PM Peak (No WMQ)'	16:45	17:45	01:00	
5: '2014 Assessment - AM Peak (No WMQ)'	08:00	09:00	01:00	
6: '2014 Assessment - PM Peak (No WMQ)'	16:45	17:45	01:00	
7: '2019 Assessment - AM Peak (No WMQ)'	08:00	09:00	01:00	
8: '2019 Assessment - PM Peak (No WMQ)'	16:45	17:45	01:00	

Scenario 1: '1' (FG1: '2014 Base - AM Peak (No WMQ)', Plan 1: 'single cycle')

Traffic Flows, Desired

Desired Flow :

		Destination								
		A	B	C	D	E	F	G	H	Tot.
Origin	A	0	53	389	63	0	0	0	0	505
	B	64	0	76	185	0	0	0	0	325
	C	486	66	0	48	0	0	0	0	600
	D	72	106	81	0	0	0	0	0	259
	E	0	0	0	0	0	10	527	14	551
	F	0	0	0	0	6	0	24	8	38
	G	0	0	0	0	598	62	0	63	723
	H	0	0	0	0	0	0	0	0	0
	Tot.	622	225	546	296	604	72	551	85	3001

Traffic Lane Flows

Lane	Scenario 1: 1
Junction: J1: Sandbach Road/B5077 Cross Road	
J1:1/1	505
J1:2/1	325
J1:3/1	600
J1:4/1	259
J1:5/1	546
J1:6/1	296
J1:7/1	622
J1:8/1	225
Junction: J2: Proposed Co-op Access	
J2:1/1	551
J2:2/1	38
J2:3/1 (with short)	723(In) 661(Out)
J2:3/2 (short)	62
J2:4/1	604
J2:5/1	72
J2:6/1	551
J2:7/1	85

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Sandbach Road/B5077 Cross Road								
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 (B5077 Crewe Road)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	77.0 %	1889	1889
				Arm J1:6 Right	60.00	12.5 %		
				Arm J1:8 Left	15.00	10.5 %		
J1:2/1 (Sandbach Road (N))	4.00	0.00	Y	Arm J1:5 Left	45.00	23.4 %	1971	1971
				Arm J1:6 Ahead	Inf	56.9 %		
				Arm J1:7 Right	20.00	19.7 %		
J1:3/1 (Lawton Road)	3.00	0.00	Y	Arm J1:6 Left	15.00	8.0 %	1894	1894
				Arm J1:7 Ahead	Inf	81.0 %		
				Arm J1:8 Right	55.00	11.0 %		
J1:4/1 (Sandbach Road (S))	3.50	0.00	Y	Arm J1:5 Right	20.00	31.3 %	1901	1901
				Arm J1:7 Left	40.00	27.8 %		
				Arm J1:8 Ahead	Inf	40.9 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: Proposed Co-op 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 (Lawton Road EB)	3.00	0.00	Y	Arm J2:5 Left	10.00	1.8 %	1902	1902
				Arm J2:6 Ahead	Inf	95.6 %		
				Arm J2:7 Right	9.00	2.5 %		
J2:2/1 (Co-op Access)	3.00	0.00	Y	Arm J2:4 Right	14.00	15.8 %	1723	1723
				Arm J2:6 Left	10.00	63.2 %		
				Arm J2:7 Ahead	Inf	21.1 %		
J2:3/1 (Lawton Road WB)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	90.5 %	1881	1881
				Arm J2:7 Left	8.00	9.5 %		
J2:3/2 (Lawton Road WB)	2.50	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1695	1695
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:6/1	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Ashmore's Lane Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2' (FG2: '2014 Base - PM Peak (No WMQ)', Plan 1: 'single cycle')

Traffic Flows, Desired

Desired Flow :

		Destination								
		A	B	C	D	E	F	G	H	Tot.
Origin	A	0	38	596	49	0	0	0	0	683
	B	53	0	80	117	0	0	0	0	250
	C	412	52	0	42	0	0	0	0	506
	D	60	173	135	0	0	0	0	0	368
	E	0	0	0	0	0	95	700	14	809
	F	0	0	0	0	87	0	116	17	220
	G	0	0	0	0	419	88	0	40	547
	H	0	0	0	0	0	0	0	0	0
	Tot.	525	263	811	208	506	183	816	71	3383

Traffic Lane Flows

Lane	Scenario 2: 2
Junction: J1: Sandbach Road/B5077 Cross Road	
J1:1/1	683
J1:2/1	250
J1:3/1	506
J1:4/1	368
J1:5/1	811
J1:6/1	208
J1:7/1	525
J1:8/1	263
Junction: J2: Proposed Co-op Access	
J2:1/1	809
J2:2/1	220
J2:3/1 (with short)	547(In) 459(Out)
J2:3/2 (short)	88
J2:4/1	506
J2:5/1	183
J2:6/1	816
J2:7/1	71

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Sandbach Road/B5077 Cross Road

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 (B5077 Crewe Road)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	87.3 %	1901	1901
				Arm J1:6 Right	60.00	7.2 %		
				Arm J1:8 Left	15.00	5.6 %		
J1:2/1 (Sandbach Road (N))	4.00	0.00	Y	Arm J1:5 Left	45.00	32.0 %	1963	1963
				Arm J1:6 Ahead	Inf	46.8 %		
				Arm J1:7 Right	20.00	21.2 %		
J1:3/1 (Lawton Road)	3.00	0.00	Y	Arm J1:6 Left	15.00	8.3 %	1894	1894
				Arm J1:7 Ahead	Inf	81.4 %		
				Arm J1:8 Right	55.00	10.3 %		
J1:4/1 (Sandbach Road (S))	3.50	0.00	Y	Arm J1:5 Right	20.00	36.7 %	1901	1901
				Arm J1:7 Left	40.00	16.3 %		
				Arm J1:8 Ahead	Inf	47.0 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: Proposed Co-op 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 (Lawton Road EB)	3.00	0.00	Y	Arm J2:5 Left	10.00	11.7 %	1877	1877
				Arm J2:6 Ahead	Inf	86.5 %		
				Arm J2:7 Right	9.00	1.7 %		
J2:2/1 (Co-op Access)	3.00	0.00	Y	Arm J2:4 Right	14.00	39.5 %	1708	1708
				Arm J2:6 Left	10.00	52.7 %		
				Arm J2:7 Ahead	Inf	7.7 %		
J2:3/1 (Lawton Road WB)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	91.3 %	1884	1884
				Arm J2:7 Left	8.00	8.7 %		
J2:3/2 (Lawton Road WB)	2.50	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1695	1695
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:6/1	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Ashmore's Lane Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: '3' (FG3: '2019 Base - AM Peak (No WMQ)', Plan 1: 'single cycle')

Traffic Flows, Desired

Desired Flow :

		Destination								
		A	B	C	D	E	F	G	H	Tot.
Origin	A	0	56	404	66	0	0	0	0	526
	B	67	0	80	193	0	0	0	0	340
	C	508	69	0	50	0	0	0	0	627
	D	76	111	85	0	0	0	0	0	272
	E	0	0	0	0	0	10	549	14	573
	F	0	0	0	0	6	0	24	8	38
	G	0	0	0	0	623	62	0	63	748
	H	0	0	0	0	0	0	0	0	0
	Tot.	651	236	569	309	629	72	573	85	3124

Traffic Lane Flows

Lane	Scenario 3: 3
Junction: J1: Sandbach Road/B5077 Cross Road	
J1:1/1	526
J1:2/1	340
J1:3/1	627
J1:4/1	272
J1:5/1	569
J1:6/1	309
J1:7/1	651
J1:8/1	236
Junction: J2: Proposed Co-op Access	
J2:1/1	573
J2:2/1	38
J2:3/1 (with short)	748(In) 686(Out)
J2:3/2 (short)	62
J2:4/1	629
J2:5/1	72
J2:6/1	573
J2:7/1	85

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Sandbach Road/B5077 Cross Road								
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 (B5077 Crewe Road)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	76.8 %	1889	1889
				Arm J1:6 Right	60.00	12.5 %		
				Arm J1:8 Left	15.00	10.6 %		
J1:2/1 (Sandbach Road (N))	4.00	0.00	Y	Arm J1:5 Left	45.00	23.5 %	1970	1970
				Arm J1:6 Ahead	Inf	56.8 %		
				Arm J1:7 Right	20.00	19.7 %		
J1:3/1 (Lawton Road)	3.00	0.00	Y	Arm J1:6 Left	15.00	8.0 %	1894	1894
				Arm J1:7 Ahead	Inf	81.0 %		
				Arm J1:8 Right	55.00	11.0 %		
J1:4/1 (Sandbach Road (S))	3.50	0.00	Y	Arm J1:5 Right	20.00	31.3 %	1901	1901
				Arm J1:7 Left	40.00	27.9 %		
				Arm J1:8 Ahead	Inf	40.8 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: Proposed Co-op 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 (Lawton Road EB)	3.00	0.00	Y	Arm J2:5 Left	10.00	1.7 %	1902	1902
				Arm J2:6 Ahead	Inf	95.8 %		
				Arm J2:7 Right	9.00	2.4 %		
J2:2/1 (Co-op Access)	3.00	0.00	Y	Arm J2:4 Right	14.00	15.8 %	1723	1723
				Arm J2:6 Left	10.00	63.2 %		
				Arm J2:7 Ahead	Inf	21.1 %		
J2:3/1 (Lawton Road WB)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	90.8 %	1883	1883
				Arm J2:7 Left	8.00	9.2 %		
J2:3/2 (Lawton Road WB)	2.50	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1695	1695
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:6/1	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Ashmore's Lane Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: '4' (FG4: '2019 Base - PM Peak (No WMQ)', Plan 1: 'single cycle')

Traffic Flows, Desired

Desired Flow :

		Destination								
		A	B	C	D	E	F	G	H	Tot.
Origin	A	0	40	621	52	0	0	0	0	713
	B	56	0	83	123	0	0	0	0	262
	C	428	55	0	43	0	0	0	0	526
	D	63	181	139	0	0	0	0	0	383
	E	0	0	0	0	0	95	735	14	844
	F	0	0	0	0	87	0	116	17	220
	G	0	0	0	0	438	88	0	40	566
	H	0	0	0	0	0	0	0	0	0
	Tot.	547	276	843	218	525	183	851	71	3514

Traffic Lane Flows

Lane	Scenario 4: 4
Junction: J1: Sandbach Road/B5077 Cross Road	
J1:1/1	713
J1:2/1	262
J1:3/1	526
J1:4/1	383
J1:5/1	843
J1:6/1	218
J1:7/1	547
J1:8/1	276
Junction: J2: Proposed Co-op Access	
J2:1/1	844
J2:2/1	220
J2:3/1 (with short)	566(In) 478(Out)
J2:3/2 (short)	88
J2:4/1	525
J2:5/1	183
J2:6/1	851
J2:7/1	71

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Sandbach Road/B5077 Cross Road								
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 (B5077 Crewe Road)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	87.1 %	1901	1901
				Arm J1:6 Right	60.00	7.3 %		
				Arm J1:8 Left	15.00	5.6 %		
J1:2/1 (Sandbach Road (N))	4.00	0.00	Y	Arm J1:5 Left	45.00	31.7 %	1963	1963
				Arm J1:6 Ahead	Inf	46.9 %		
				Arm J1:7 Right	20.00	21.4 %		
J1:3/1 (Lawton Road)	3.00	0.00	Y	Arm J1:6 Left	15.00	8.2 %	1894	1894
				Arm J1:7 Ahead	Inf	81.4 %		
				Arm J1:8 Right	55.00	10.5 %		
J1:4/1 (Sandbach Road (S))	3.50	0.00	Y	Arm J1:5 Right	20.00	36.3 %	1902	1902
				Arm J1:7 Left	40.00	16.4 %		
				Arm J1:8 Ahead	Inf	47.3 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: Proposed Co-op 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 (Lawton Road EB)	3.00	0.00	Y	Arm J2:5 Left	10.00	11.3 %	1878	1878
				Arm J2:6 Ahead	Inf	87.1 %		
				Arm J2:7 Right	9.00	1.7 %		
J2:2/1 (Co-op Access)	3.00	0.00	Y	Arm J2:4 Right	14.00	39.5 %	1708	1708
				Arm J2:6 Left	10.00	52.7 %		
				Arm J2:7 Ahead	Inf	7.7 %		
J2:3/1 (Lawton Road WB)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	91.6 %	1885	1885
				Arm J2:7 Left	8.00	8.4 %		
J2:3/2 (Lawton Road WB)	2.50	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1695	1695
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:6/1	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Ashmore's Lane Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 5: '5' (FG5: '2014 Assessment - AM Peak (No WMQ)', Plan 1: 'single cycle')

Traffic Flows, Desired

Desired Flow :

		Destination								
		A	B	C	D	E	F	G	H	Tot.
Origin	A	0	54	396	65	0	0	0	0	515
	B	65	0	76	185	0	0	0	0	326
	C	492	66	0	48	0	0	0	0	606
	D	73	106	81	0	0	0	0	0	260
	E	0	0	0	0	0	10	535	14	559
	F	0	0	0	0	6	0	24	8	38
	G	0	0	0	0	604	62	0	63	729
	H	0	0	0	0	0	0	0	0	0
	Tot.	630	226	553	298	610	72	559	85	3033

Traffic Lane Flows

Lane	Scenario 5: 5
Junction: J1: Sandbach Road/B5077 Cross Road	
J1:1/1	515
J1:2/1	326
J1:3/1	606
J1:4/1	260
J1:5/1	553
J1:6/1	298
J1:7/1	630
J1:8/1	226
Junction: J2: Proposed Co-op Access	
J2:1/1	559
J2:2/1	38
J2:3/1 (with short)	729(In) 667(Out)
J2:3/2 (short)	62
J2:4/1	610
J2:5/1	72
J2:6/1	559
J2:7/1	85

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Sandbach Road/B5077 Cross Road

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 (B5077 Crewe Road)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	76.9 %	1889	1889
				Arm J1:6 Right	60.00	12.6 %		
				Arm J1:8 Left	15.00	10.5 %		
J1:2/1 (Sandbach Road (N))	4.00	0.00	Y	Arm J1:5 Left	45.00	23.3 %	1970	1970
				Arm J1:6 Ahead	Inf	56.7 %		
				Arm J1:7 Right	20.00	19.9 %		
J1:3/1 (Lawton Road)	3.00	0.00	Y	Arm J1:6 Left	15.00	7.9 %	1894	1894
				Arm J1:7 Ahead	Inf	81.2 %		
				Arm J1:8 Right	55.00	10.9 %		
J1:4/1 (Sandbach Road (S))	3.50	0.00	Y	Arm J1:5 Right	20.00	31.2 %	1901	1901
				Arm J1:7 Left	40.00	28.1 %		
				Arm J1:8 Ahead	Inf	40.8 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: Proposed Co-op 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 (Lawton Road EB)	3.00	0.00	Y	Arm J2:5 Left	10.00	1.8 %	1902	1902
				Arm J2:6 Ahead	Inf	95.7 %		
				Arm J2:7 Right	9.00	2.5 %		
J2:2/1 (Co-op Access)	3.00	0.00	Y	Arm J2:4 Right	14.00	15.8 %	1723	1723
				Arm J2:6 Left	10.00	63.2 %		
				Arm J2:7 Ahead	Inf	21.1 %		
J2:3/1 (Lawton Road WB)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	90.6 %	1882	1882
				Arm J2:7 Left	8.00	9.4 %		
J2:3/2 (Lawton Road WB)	2.50	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1695	1695
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:6/1	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Ashmore's Lane Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 6: '6' (FG6: '2014 Assessment - PM Peak (No WMQ)', Plan 1: 'single cycle')

Traffic Flows, Desired

Desired Flow :

		Destination								
		A	B	C	D	E	F	G	H	Tot.
Origin	A	0	39	605	50	0	0	0	0	694
	B	55	0	80	117	0	0	0	0	252
	C	419	52	0	42	0	0	0	0	513
	D	61	173	135	0	0	0	0	0	369
	E	0	0	0	0	0	95	710	14	819
	F	0	0	0	0	87	0	116	17	220
	G	0	0	0	0	426	88	0	40	554
	H	0	0	0	0	0	0	0	0	0
	Tot.	535	264	820	209	513	183	826	71	3421

Traffic Lane Flows

Lane	Scenario 6: 6
Junction: J1: Sandbach Road/B5077 Cross Road	
J1:1/1	694
J1:2/1	252
J1:3/1	513
J1:4/1	369
J1:5/1	820
J1:6/1	209
J1:7/1	535
J1:8/1	264
Junction: J2: Proposed Co-op Access	
J2:1/1	819
J2:2/1	220
J2:3/1 (with short)	554(In) 466(Out)
J2:3/2 (short)	88
J2:4/1	513
J2:5/1	183
J2:6/1	826
J2:7/1	71

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Sandbach Road/B5077 Cross Road								
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 (B5077 Crewe Road)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	87.2 %	1901	1901
				Arm J1:6 Right	60.00	7.2 %		
				Arm J1:8 Left	15.00	5.6 %		
J1:2/1 (Sandbach Road (N))	4.00	0.00	Y	Arm J1:5 Left	45.00	31.7 %	1962	1962
				Arm J1:6 Ahead	Inf	46.4 %		
				Arm J1:7 Right	20.00	21.8 %		
J1:3/1 (Lawton Road)	3.00	0.00	Y	Arm J1:6 Left	15.00	8.2 %	1894	1894
				Arm J1:7 Ahead	Inf	81.7 %		
				Arm J1:8 Right	55.00	10.1 %		
J1:4/1 (Sandbach Road (S))	3.50	0.00	Y	Arm J1:5 Right	20.00	36.6 %	1901	1901
				Arm J1:7 Left	40.00	16.5 %		
				Arm J1:8 Ahead	Inf	46.9 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: Proposed Co-op 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 (Lawton Road EB)	3.00	0.00	Y	Arm J2:5 Left	10.00	11.6 %	1877	1877
				Arm J2:6 Ahead	Inf	86.7 %		
				Arm J2:7 Right	9.00	1.7 %		
J2:2/1 (Co-op Access)	3.00	0.00	Y	Arm J2:4 Right	14.00	39.5 %	1708	1708
				Arm J2:6 Left	10.00	52.7 %		
				Arm J2:7 Ahead	Inf	7.7 %		
J2:3/1 (Lawton Road WB)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	91.4 %	1885	1885
				Arm J2:7 Left	8.00	8.6 %		
J2:3/2 (Lawton Road WB)	2.50	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1695	1695
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:6/1	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Ashmore's Lane Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 7: '7' (FG7: '2019 Assessment - AM Peak (No WMQ)', Plan 1: 'single cycle')

Traffic Flows, Desired

Desired Flow :

		Destination								
		A	B	C	D	E	F	G	H	Tot.
Origin	A	0	57	411	68	0	0	0	0	536
	B	68	0	80	193	0	0	0	0	341
	C	513	69	0	50	0	0	0	0	632
	D	77	111	85	0	0	0	0	0	273
	E	0	0	0	0	0	10	556	14	580
	F	0	0	0	0	6	0	24	8	38
	G	0	0	0	0	629	62	0	63	754
	H	0	0	0	0	0	0	0	0	0
	Tot.	658	237	576	311	635	72	580	85	3154

Traffic Lane Flows

Lane	Scenario 7: 7
Junction: J1: Sandbach Road/B5077 Cross Road	
J1:1/1	536
J1:2/1	341
J1:3/1	632
J1:4/1	273
J1:5/1	576
J1:6/1	311
J1:7/1	658
J1:8/1	237
Junction: J2: Proposed Co-op Access	
J2:1/1	580
J2:2/1	38
J2:3/1 (with short)	754(In) 692(Out)
J2:3/2 (short)	62
J2:4/1	635
J2:5/1	72
J2:6/1	580
J2:7/1	85

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Sandbach Road/B5077 Cross Road

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 (B5077 Crewe Road)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	76.7 %	1889	1889
				Arm J1:6 Right	60.00	12.7 %		
				Arm J1:8 Left	15.00	10.6 %		
J1:2/1 (Sandbach Road (N))	4.00	0.00	Y	Arm J1:5 Left	45.00	23.5 %	1970	1970
				Arm J1:6 Ahead	Inf	56.6 %		
				Arm J1:7 Right	20.00	19.9 %		
J1:3/1 (Lawton Road)	3.00	0.00	Y	Arm J1:6 Left	15.00	7.9 %	1894	1894
				Arm J1:7 Ahead	Inf	81.2 %		
				Arm J1:8 Right	55.00	10.9 %		
J1:4/1 (Sandbach Road (S))	3.50	0.00	Y	Arm J1:5 Right	20.00	31.1 %	1901	1901
				Arm J1:7 Left	40.00	28.2 %		
				Arm J1:8 Ahead	Inf	40.7 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: Proposed Co-op 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 (Lawton Road EB)	3.00	0.00	Y	Arm J2:5 Left	10.00	1.7 %	1902	1902
				Arm J2:6 Ahead	Inf	95.9 %		
				Arm J2:7 Right	9.00	2.4 %		
J2:2/1 (Co-op Access)	3.00	0.00	Y	Arm J2:4 Right	14.00	15.8 %	1723	1723
				Arm J2:6 Left	10.00	63.2 %		
				Arm J2:7 Ahead	Inf	21.1 %		
J2:3/1 (Lawton Road WB)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	90.9 %	1883	1883
				Arm J2:7 Left	8.00	9.1 %		
J2:3/2 (Lawton Road WB)	2.50	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1695	1695
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:6/1	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Ashmore's Lane Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 8: '8' (FG8: '2019 Assessment - PM Peak (No WMQ)', Plan 1: 'single cycle')

Traffic Flows, Desired

Desired Flow :

		Destination								
		A	B	C	D	E	F	G	H	Tot.
Origin	A	0	41	630	53	0	0	0	0	724
	B	58	0	83	123	0	0	0	0	264
	C	434	55	0	43	0	0	0	0	532
	D	64	181	139	0	0	0	0	0	384
	E	0	0	0	0	0	95	744	14	853
	F	0	0	0	0	87	0	116	17	220
	G	0	0	0	0	445	88	0	40	573
	H	0	0	0	0	0	0	0	0	0
	Tot.	556	277	852	219	532	183	860	71	3550

Traffic Lane Flows

Lane	Scenario 8: 8
Junction: J1: Sandbach Road/B5077 Cross Road	
J1:1/1	724
J1:2/1	264
J1:3/1	532
J1:4/1	384
J1:5/1	852
J1:6/1	219
J1:7/1	556
J1:8/1	277
Junction: J2: Proposed Co-op Access	
J2:1/1	853
J2:2/1	220
J2:3/1 (with short)	573(In) 485(Out)
J2:3/2 (short)	88
J2:4/1	532
J2:5/1	183
J2:6/1	860
J2:7/1	71

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Sandbach Road/B5077 Cross Road								
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 (B5077 Crewe Road)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	87.0 %	1901	1901
				Arm J1:6 Right	60.00	7.3 %		
				Arm J1:8 Left	15.00	5.7 %		
J1:2/1 (Sandbach Road (N))	4.00	0.00	Y	Arm J1:5 Left	45.00	31.4 %	1962	1962
				Arm J1:6 Ahead	Inf	46.6 %		
				Arm J1:7 Right	20.00	22.0 %		
J1:3/1 (Lawton Road)	3.00	0.00	Y	Arm J1:6 Left	15.00	8.1 %	1894	1894
				Arm J1:7 Ahead	Inf	81.6 %		
				Arm J1:8 Right	55.00	10.3 %		
J1:4/1 (Sandbach Road (S))	3.50	0.00	Y	Arm J1:5 Right	20.00	36.2 %	1901	1901
				Arm J1:7 Left	40.00	16.7 %		
				Arm J1:8 Ahead	Inf	47.1 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

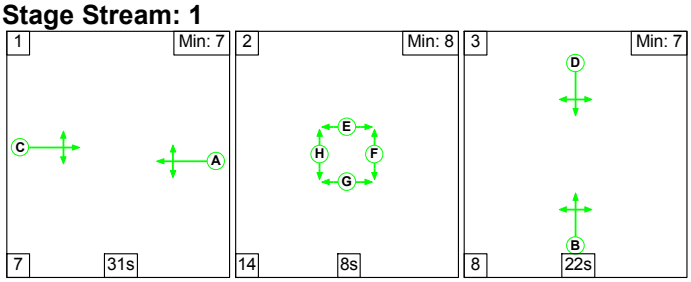
Junction: J2: Proposed Co-op Access								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (Lawton Road EB)	3.00	0.00	Y	Arm J2:5 Left	10.00	11.1 %	1878	1878
				Arm J2:6 Ahead	Inf	87.2 %		
				Arm J2:7 Right	9.00	1.6 %		
J2:2/1 (Co-op Access)	3.00	0.00	Y	Arm J2:4 Right	14.00	39.5 %	1708	1708
				Arm J2:6 Left	10.00	52.7 %		
				Arm J2:7 Ahead	Inf	7.7 %		
J2:3/1 (Lawton Road WB)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	91.8 %	1886	1886
				Arm J2:7 Left	8.00	8.2 %		
J2:3/2 (Lawton Road WB)	2.50	0.00	Y	Arm J2:5 Right	15.00	100.0 %	1695	1695
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:6/1	Infinite Saturation Flow						Inf	Inf
J2:7/1 (Ashmore's Lane Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

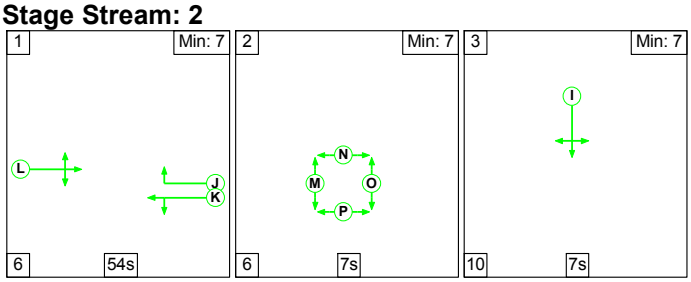
Scenario 1: '1' (FG1: '2014 Base - AM Peak (No WMQ)', Plan 1: 'single cycle')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

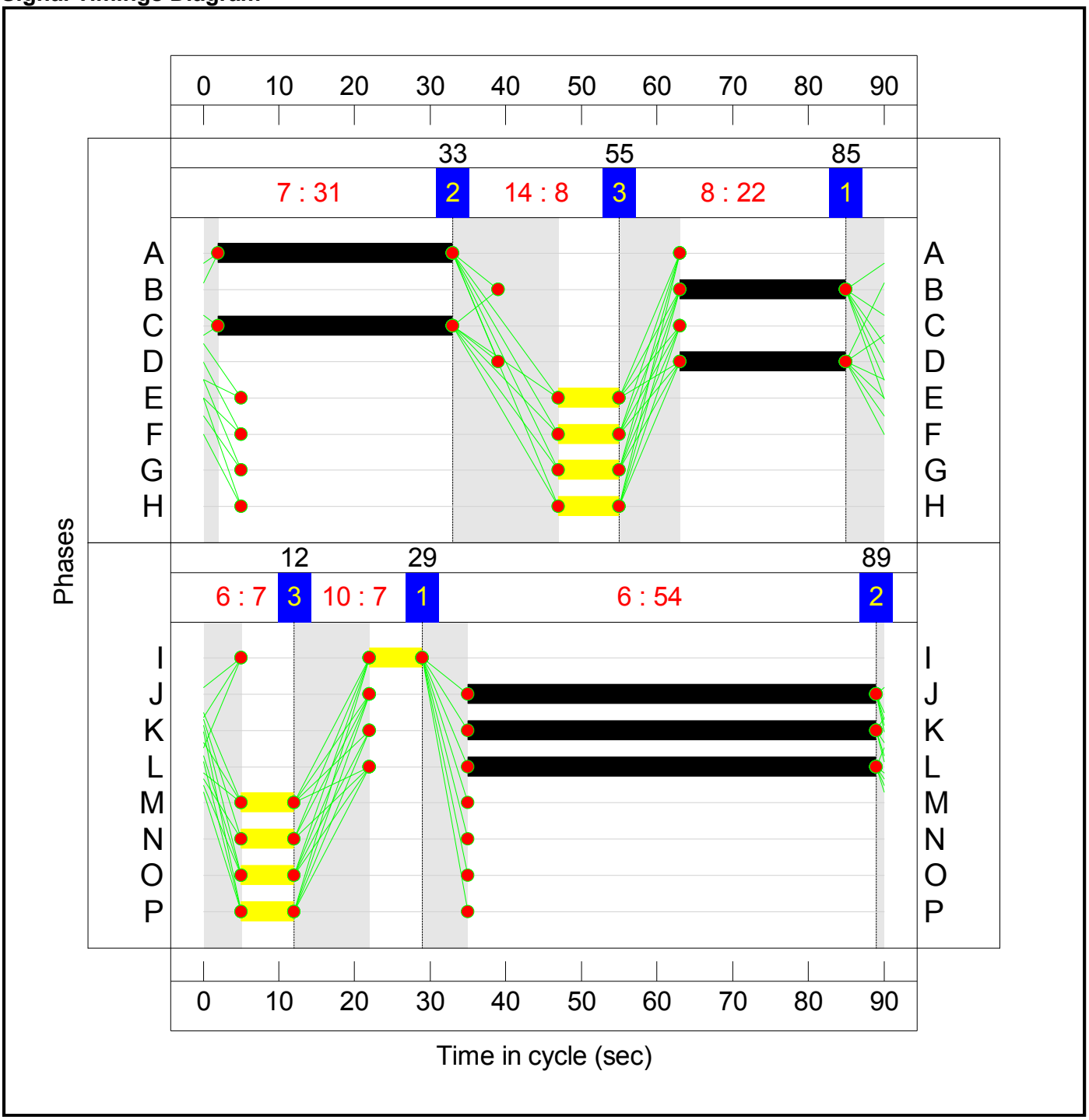
Stage	1	2	3
Duration	31	8	22
Change Point	85	33	55

Stage Stream: 2

Stage	1	2	3
Duration	54	7	7
Change Point	29	89	12

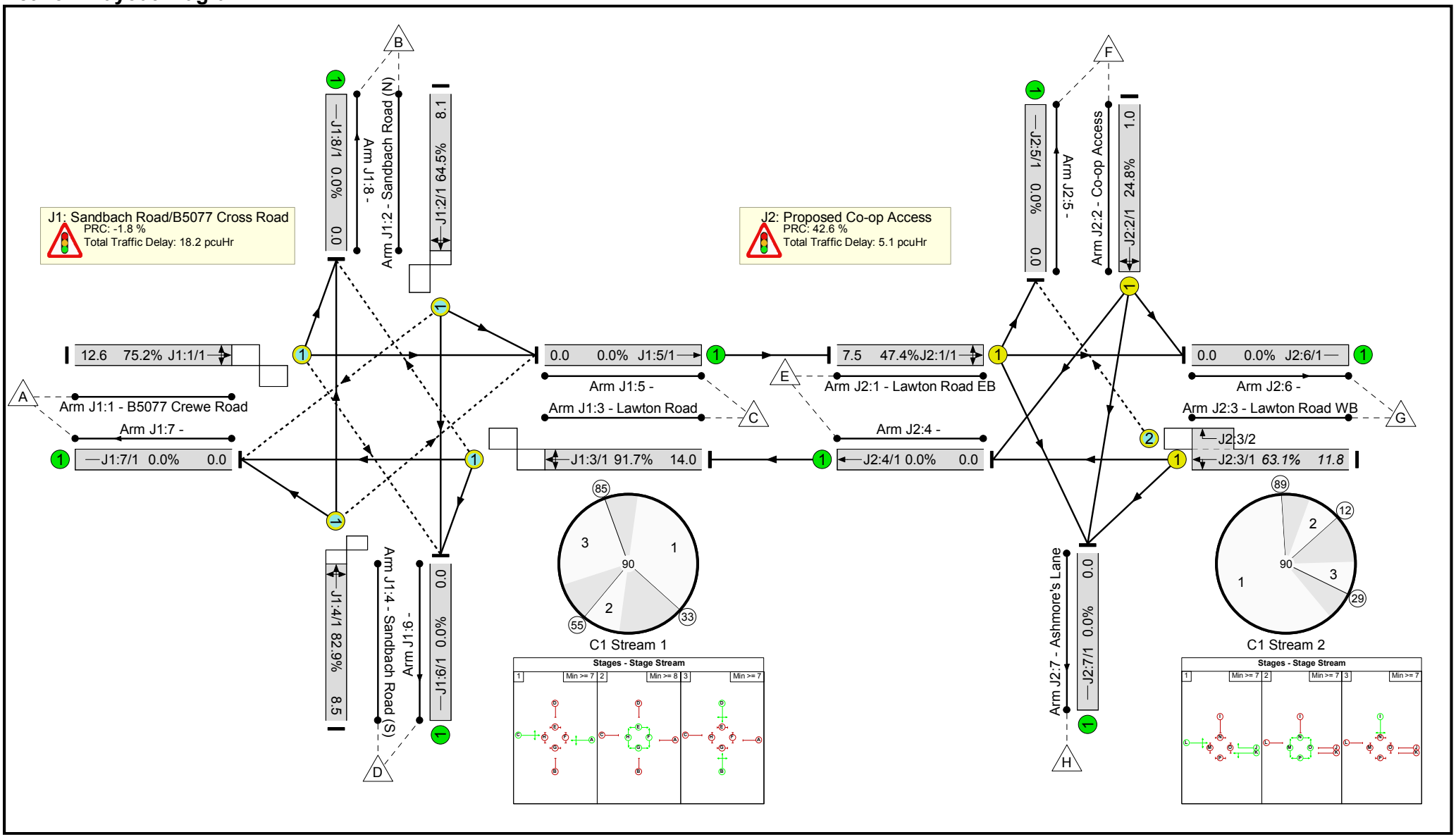
Full Input Data And Results

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: Sandbach Road/B5077 Crewe Road/Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.7%**
J1: Sandbach Road/B5077 Cross Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**91.7%**
1/1	B5077 Crewe Road Ahead Right Left	O	1	N/A	C		1	31	-	505	1889	672	75.2%
2/1	Sandbach Road (N) Left Ahead Right	O	1	N/A	D		1	22	-	325	1971	504	64.5%
3/1	Lawton Road Left Ahead Right	O	1	N/A	A		1	31	-	600	1894	655	91.7%
4/1	Sandbach Road (S) Right Left Ahead	O	1	N/A	B		1	22	-	259	1901	313	82.9%
5/1	Ahead	U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	296	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	622	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	225	Inf	Inf	0.0%
J2: Proposed Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.1%**
1/1	Lawton Road EB Left Ahead Right	U	2	N/A	L		1	54	-	551	1902	1162	47.4%
2/1	Co-op Access Right Left Ahead	U	2	N/A	I		1	7	-	38	1723	153	24.8%
3/1+3/2	Lawton Road WB Ahead Right Left	U+O	2	N/A	K J		1	54	-	723	1881:1695	1146	63.1%
4/1	Ahead	U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	72	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	551	Inf	Inf	0.0%

Full Input Data And Results

7/1	Ashmore's Lane	U	N/A	N/A	-		-	-	-	85	Inf	Inf	0.0%

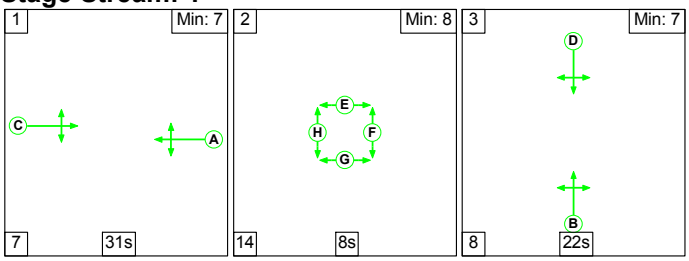
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Sandbach Road/B5077 Crewe Road/Co-op Access	**-**	**-**	**235**	**61**	**40**	**17.0**	**5.6**	**0.6**	**23.3**	**-**	**-**	**-**	**-**
J1: Sandbach Road/B5077 Cross Road	**-**	**-**	**235**	**0**	**39**	**13.0**	**4.6**	**0.6**	**18.2**	**-**	**-**	**-**	**-**
1/1	505	505	27	0	36	3.6	1.5	0.2	5.3	37.9	11.1	1.5	12.6
2/1	325	325	63	0	1	2.7	0.9	0.0	3.6	40.3	7.2	0.9	8.1
3/1	600	600	65	0	1	4.6	0.0	0.2	4.7	28.4	14.0	0.0	14.0
4/1	259	259	80	0	1	2.1	2.2	0.2	4.6	63.3	6.3	2.2	8.5
5/1	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	296	296	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	622	622	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	225	225	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Co-op Access	**-**	**-**	**0**	**61**	**1**	**4.1**	**1.0**	**0.0**	**5.1**	**-**	**-**	**-**	**-**
1/1	551	551	-	-	-	1.5	0.0	-	1.5	9.6	7.5	0.0	7.5
2/1	38	38	-	-	-	0.4	0.2	-	0.6	53.8	0.9	0.2	1.0
3/1+3/2	723	723	0	61	1	2.2	0.9	0.0	3.0	15.1	11.0	0.9	11.8
4/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	72	72	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	551	551	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	85	85	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	-1.8	Total Delay for Signalled Lanes (pcuHr):	18.23	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	42.6	Total Delay for Signalled Lanes (pcuHr):	5.07	Cycle Time (s): 90
	PRC Over All Lanes (%):	-1.8	Total Delay Over All Lanes(pcuHr):	23.30	

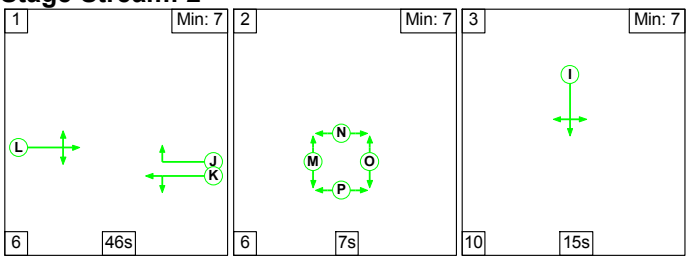
Full Input Data And Results
Scenario 2: '2' (FG2: '2014 Base - PM Peak (No WMQ)', Plan 1: 'single cycle')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

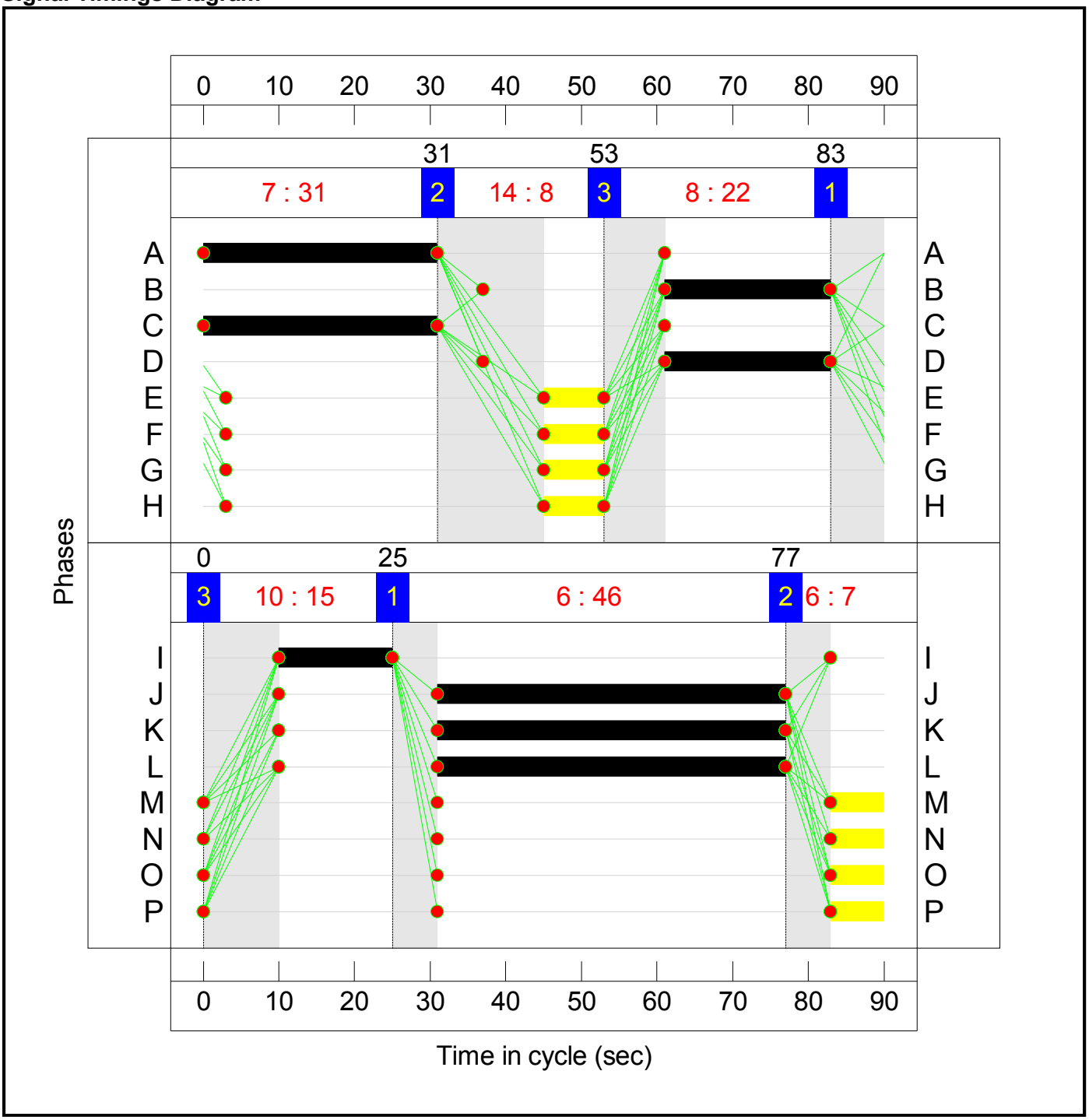
Stage	1	2	3
Duration	31	8	22
Change Point	83	31	53

Stage Stream: 2

Stage	1	2	3
Duration	46	7	15
Change Point	25	77	0

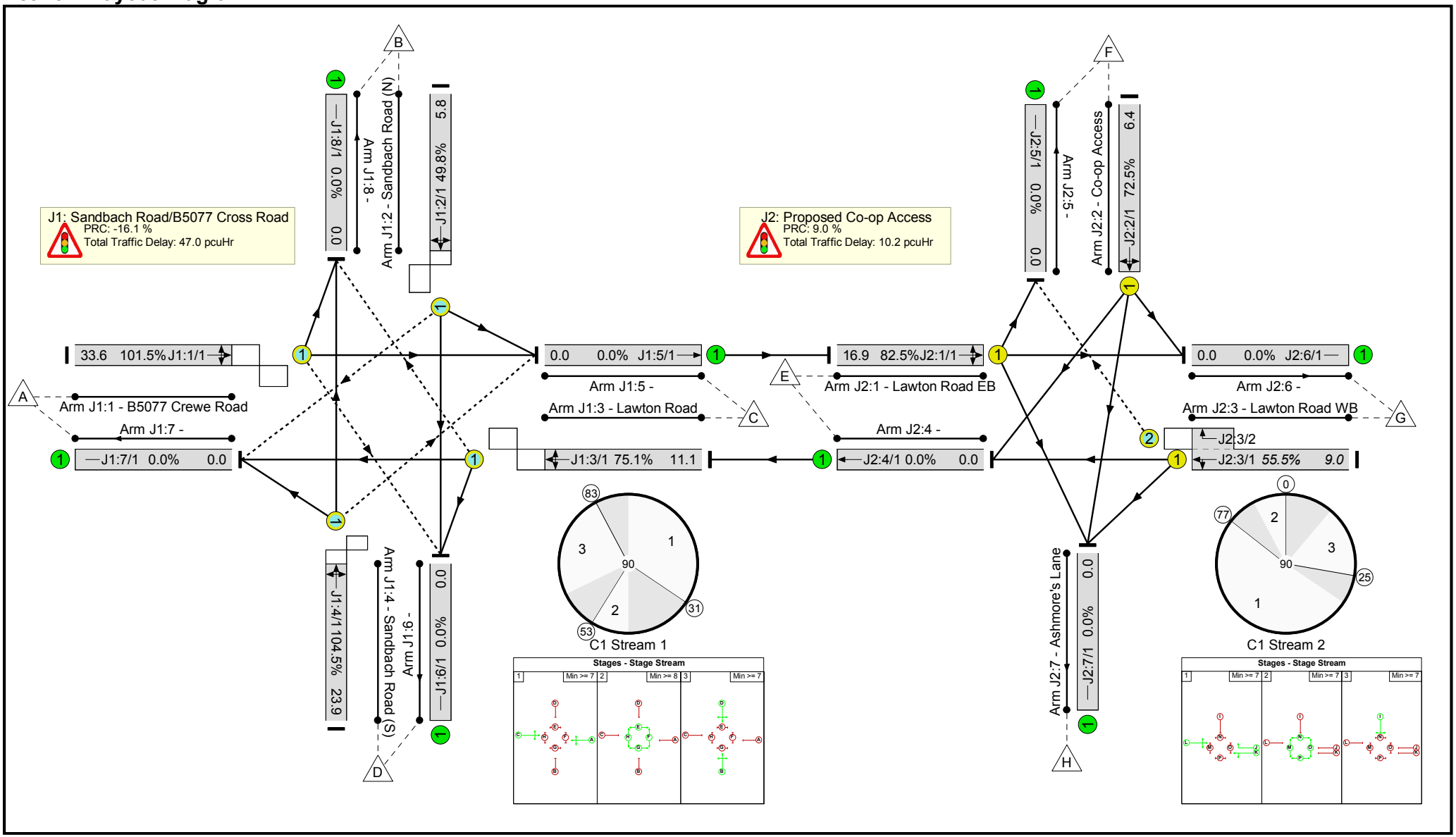
Full Input Data And Results

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: Sandbach Road/B5077 Crewe Road/Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.5%**
J1: Sandbach Road/B5077 Cross Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.5%**
1/1	B5077 Crewe Road Ahead Right Left	O	1	N/A	C		1	31	-	683	1901	673	101.5%
2/1	Sandbach Road (N) Left Ahead Right	O	1	N/A	D		1	22	-	250	1963	502	49.8%
3/1	Lawton Road Left Ahead Right	O	1	N/A	A		1	31	-	506	1894	673	75.1%
4/1	Sandbach Road (S) Right Left Ahead	O	1	N/A	B		1	22	-	368	1901	352	104.5%
5/1	Ahead	U	N/A	N/A	-		-	-	-	811	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	208	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	525	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	263	Inf	Inf	0.0%
J2: Proposed Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.5%**
1/1	Lawton Road EB Left Ahead Right	U	2	N/A	L		1	46	-	809	1877	980	82.5%
2/1	Co-op Access Right Left Ahead	U	2	N/A	I		1	15	-	220	1708	304	72.5%
3/1+3/2	Lawton Road WB Ahead Right Left	U+O	2	N/A	K J		1	46	-	547	1884:1695	986	55.5%
4/1	Ahead	U	N/A	N/A	-		-	-	-	506	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	816	Inf	Inf	0.0%

Full Input Data And Results

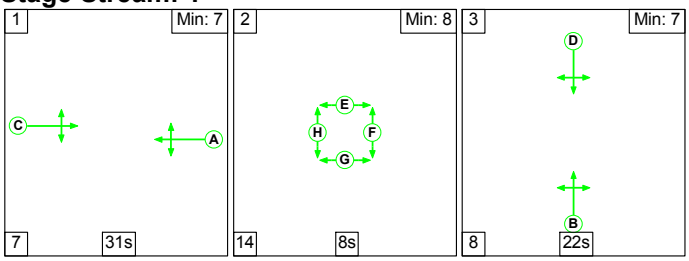
7/1	Ashmore's Lane	U	N/A	N/A	-		-	-	-	71	Inf	Inf	0.0%
Item	**Arriving (pcu)**	**Leaving (pcu)**	**Turners In Gaps (pcu)**	**Turners When Unopposed (pcu)**	**Turners In Intergreen (pcu)**	**Uniform Delay (pcuHr)**	**Rand + Oversat Delay (pcuHr)**	**Storage Area Uniform Delay (pcuHr)**	**Total Delay (pcuHr)**	**Av. Delay Per PCU (s/pcu)**	**Max. Back of Uniform Queue (pcu)**	**Rand + Oversat Queue (pcu)**	**Mean Max Queue (pcu)**
Network: Sandbach Road/B5077 Crewe Road/Co-op Access	**-**	**-**	**219**	**86**	**66**	**24.0**	**32.6**	**0.5**	**57.2**	**-**	**-**	**-**	**-**
J1: Sandbach Road/B5077 Cross Road	**-**	**-**	**219**	**0**	**64**	**15.7**	**30.7**	**0.5**	**47.0**	**-**	**-**	**-**	**-**
1/1	683	676	45	0	3	6.3	15.9	0.1	22.3	117.4	17.7	15.9	33.6
2/1	250	250	52	0	1	2.0	0.5	0.0	2.5	36.0	5.3	0.5	5.8
3/1	506	506	0	0	52	3.6	0.0	0.3	3.9	27.5	11.1	0.0	11.1
4/1	368	352	121	0	8	3.9	14.3	0.1	18.3	179.5	9.6	14.3	23.9
5/1	799	799	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	207	207	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	522	522	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	255	255	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Co-op Access	**-**	**-**	**0**	**86**	**2**	**8.3**	**1.9**	**0.0**	**10.2**	**-**	**-**	**-**	**-**
1/1	809	809	-	-	-	4.1	0.0	-	4.1	18.1	16.9	0.0	16.9
2/1	220	220	-	-	-	2.1	1.3	-	3.4	55.8	5.1	1.3	6.4
3/1+3/2	547	547	0	86	2	2.1	0.6	0.0	2.7	18.0	8.4	0.6	9.0
4/1	506	506	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	816	816	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	71	71	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	-16.1	Total Delay for Signalled Lanes (pcuHr):	46.97	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	9.0	Total Delay for Signalled Lanes (pcuHr):	10.21	Cycle Time (s): 90
	PRC Over All Lanes (%):	-16.1	Total Delay Over All Lanes(pcuHr):	57.18	

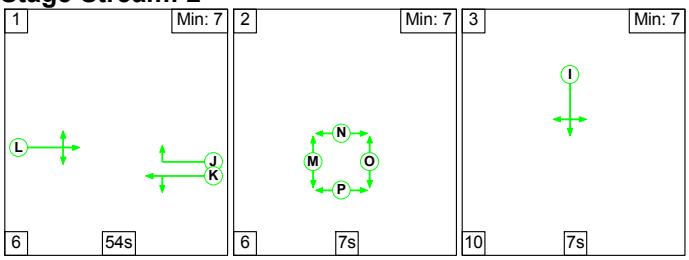
Full Input Data And Results
Scenario 3: '3' (FG3: '2019 Base - AM Peak (No WMQ)', Plan 1: 'single cycle')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

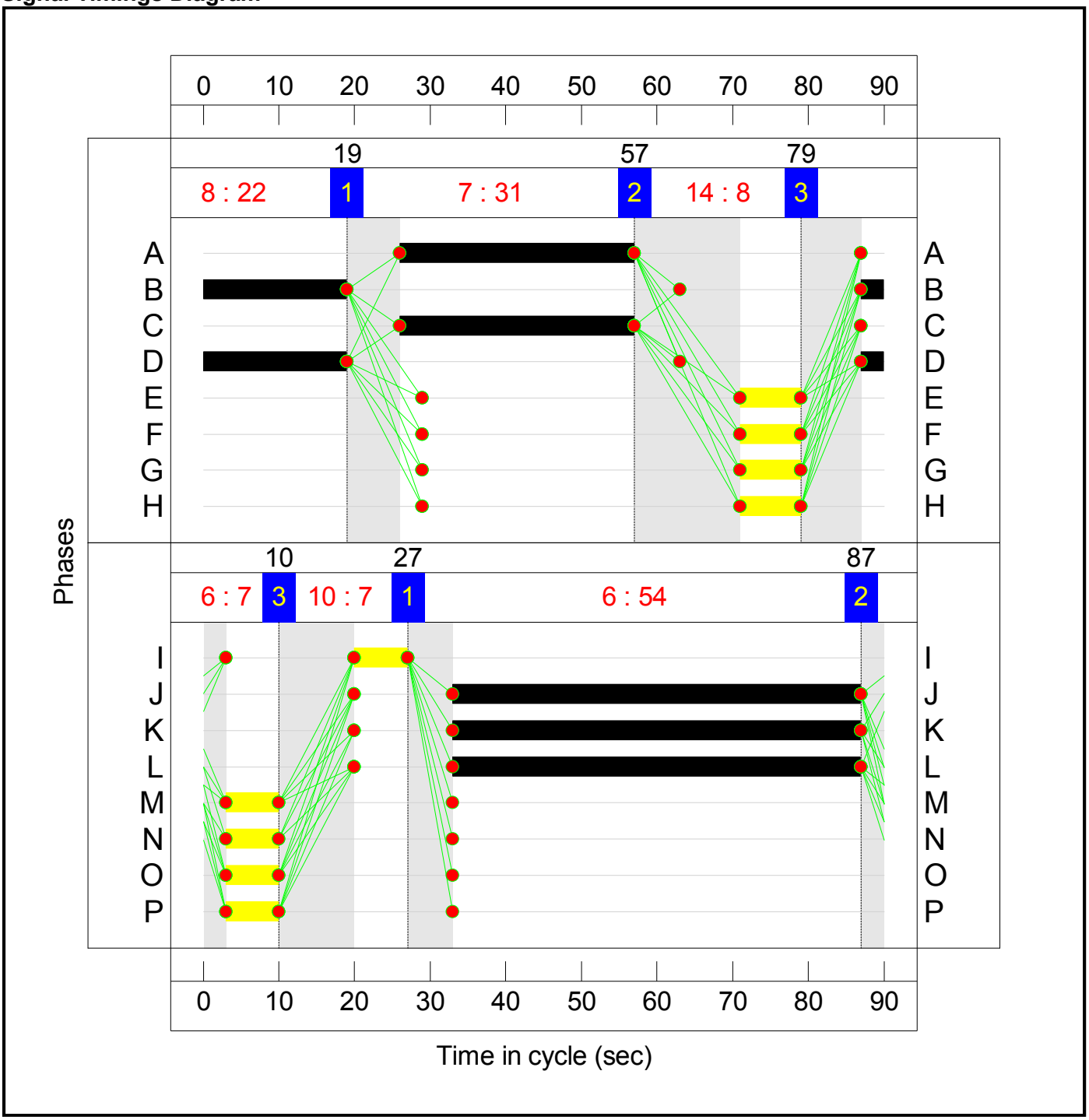
Stage	1	2	3
Duration	31	8	22
Change Point	19	57	79

Stage Stream: 2

Stage	1	2	3
Duration	54	7	7
Change Point	27	87	10

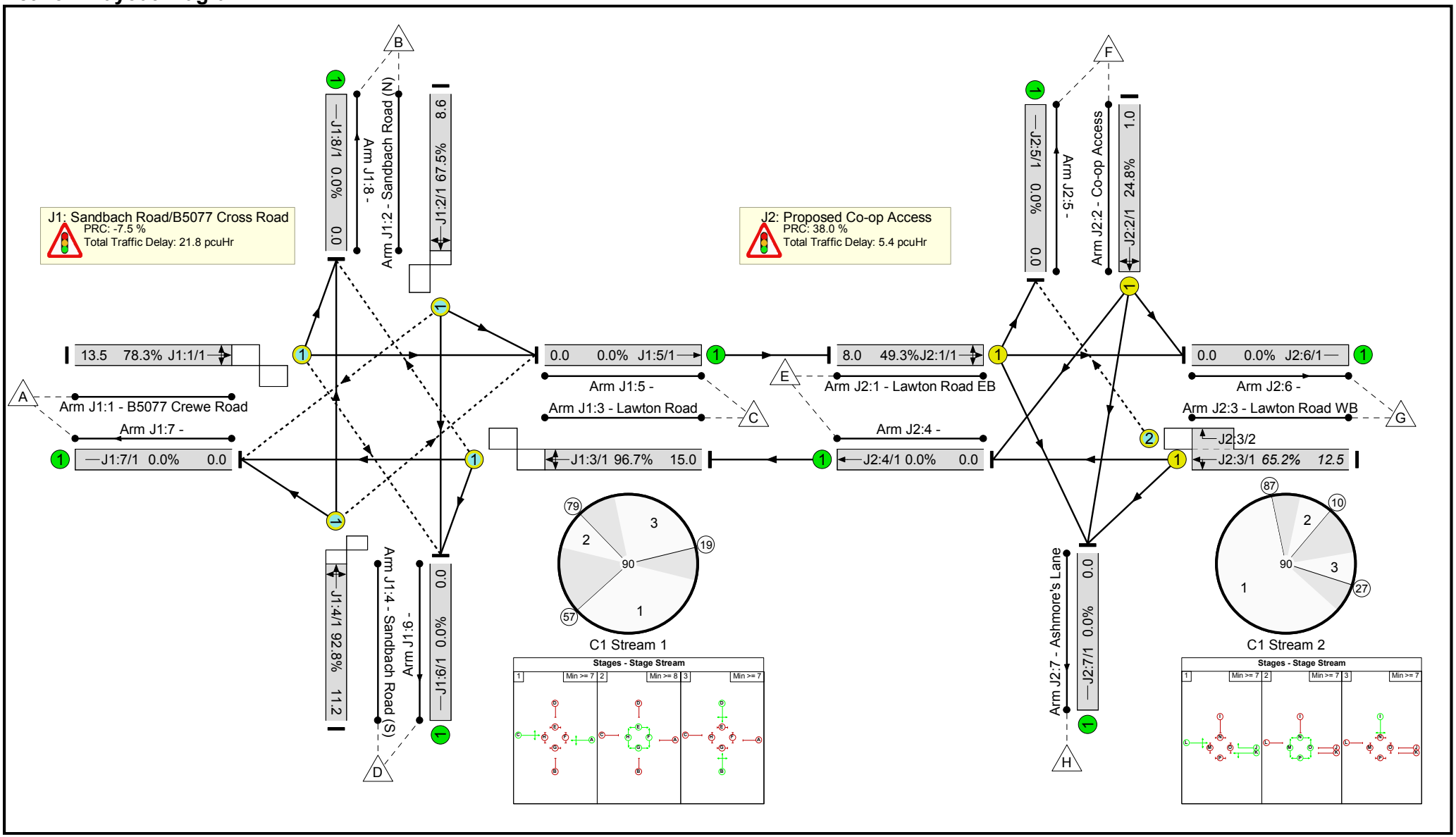
Full Input Data And Results

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: Sandbach Road/B5077 Crewe Road/Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**96.7%**
J1: Sandbach Road/B5077 Cross Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**96.7%**
1/1	B5077 Crewe Road Ahead Right Left	O	1	N/A	C		1	31	-	526	1889	672	78.3%
2/1	Sandbach Road (N) Left Ahead Right	O	1	N/A	D		1	22	-	340	1970	503	67.5%
3/1	Lawton Road Left Ahead Right	O	1	N/A	A		1	31	-	627	1894	648	96.7%
4/1	Sandbach Road (S) Right Left Ahead	O	1	N/A	B		1	22	-	272	1901	293	92.8%
5/1	Ahead	U	N/A	N/A	-		-	-	-	569	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	309	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	651	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	236	Inf	Inf	0.0%
J2: Proposed Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**65.2%**
1/1	Lawton Road EB Left Ahead Right	U	2	N/A	L		1	54	-	573	1902	1162	49.3%
2/1	Co-op Access Right Left Ahead	U	2	N/A	I		1	7	-	38	1723	153	24.8%
3/1+3/2	Lawton Road WB Ahead Right Left	U+O	2	N/A	K J		1	54	-	748	1883:1695	1147	65.2%
4/1	Ahead	U	N/A	N/A	-		-	-	-	629	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	72	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	573	Inf	Inf	0.0%

Full Input Data And Results

7/1	Ashmore's Lane	U	N/A	N/A	-		-	-	-	85	Inf	Inf	0.0%

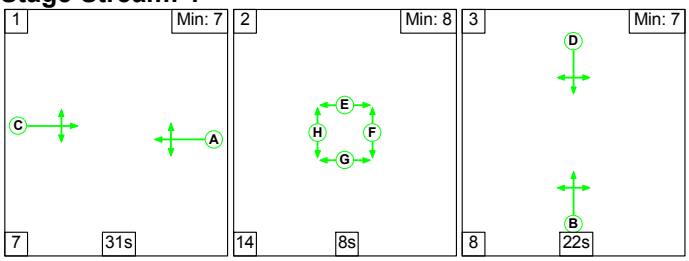
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Sandbach Road/B5077 Crewe Road/Co-op Access	**-**	**-**	**227**	**61**	**61**	**18.1**	**8.4**	**0.7**	**27.2**	**-**	**-**	**-**	**-**
J1: Sandbach Road/B5077 Cross Road	**-**	**-**	**227**	**0**	**60**	**13.8**	**7.3**	**0.7**	**21.8**	**-**	**-**	**-**	**-**
1/1	526	526	10	0	56	3.8	1.8	0.3	5.8	39.8	11.7	1.8	13.5
2/1	340	340	66	0	1	2.8	1.0	0.0	3.9	41.5	7.6	1.0	8.6
3/1	627	627	67	0	2	4.9	0.0	0.2	5.1	29.1	15.0	0.0	15.0
4/1	272	272	84	0	1	2.3	4.5	0.2	7.0	93.0	6.6	4.5	11.2
5/1	569	569	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	309	309	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	651	651	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	236	236	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Co-op Access	**-**	**-**	**0**	**61**	**1**	**4.3**	**1.1**	**0.0**	**5.4**	**-**	**-**	**-**	**-**
1/1	573	573	-	-	-	1.6	0.0	-	1.6	9.7	8.0	0.0	8.0
2/1	38	38	-	-	-	0.4	0.2	-	0.6	53.8	0.9	0.2	1.0
3/1+3/2	748	748	0	61	1	2.3	0.9	0.0	3.2	15.6	11.6	0.9	12.5
4/1	629	629	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	72	72	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	573	573	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	85	85	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	-7.5	Total Delay for Signalled Lanes (pcuHr):	21.83	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	38.0	Total Delay for Signalled Lanes (pcuHr):	5.37	Cycle Time (s): 90
	PRC Over All Lanes (%):	-7.5	Total Delay Over All Lanes(pcuHr):	27.19	

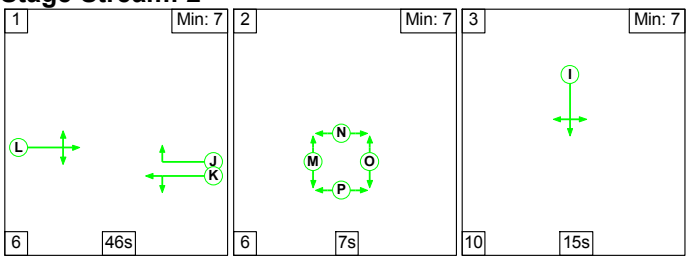
Full Input Data And Results
Scenario 4: '4' (FG4: '2019 Base - PM Peak (No WMQ)', Plan 1: 'single cycle')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

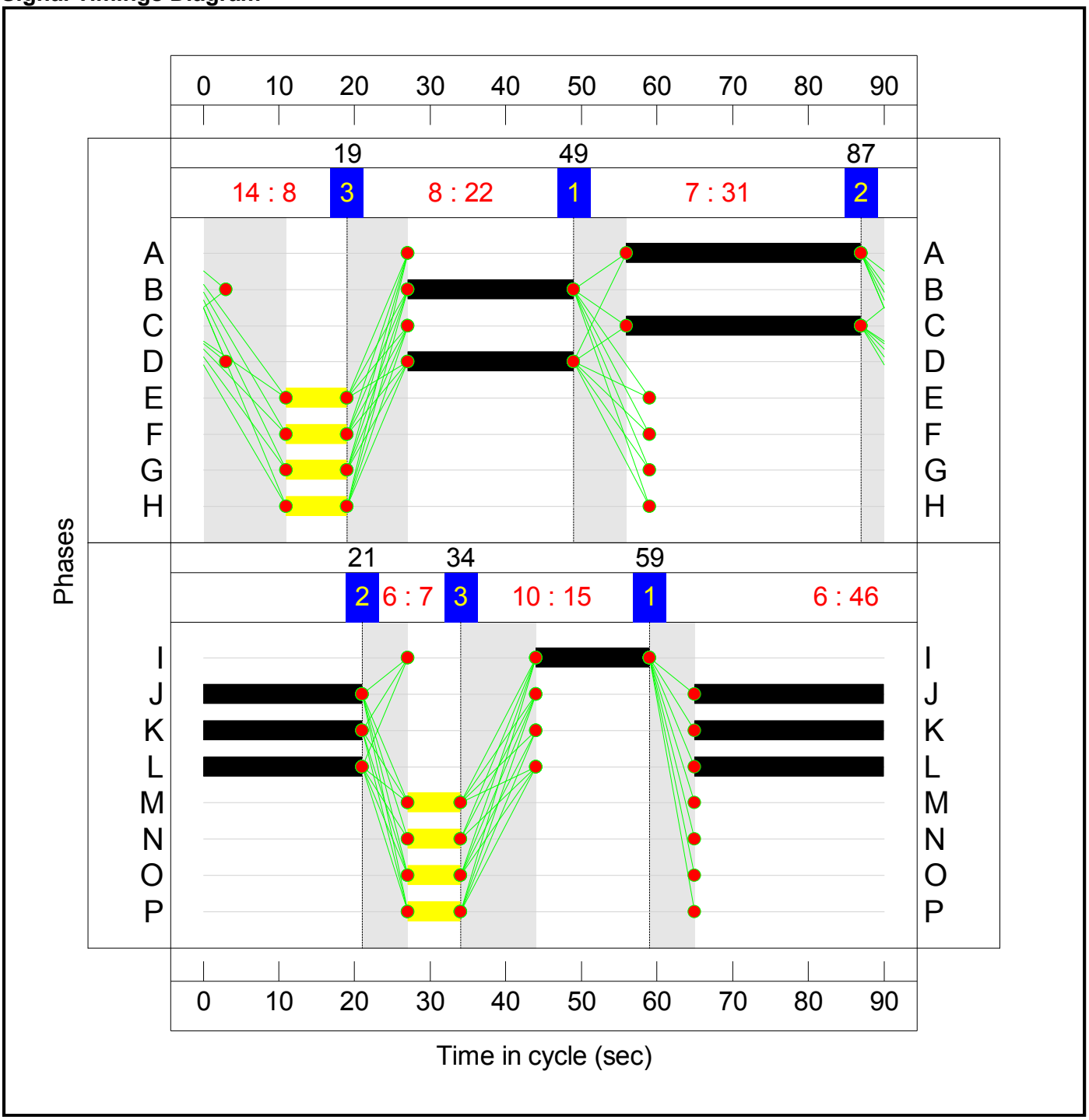
Stage	1	2	3
Duration	31	8	22
Change Point	49	87	19

Stage Stream: 2

Stage	1	2	3
Duration	46	7	15
Change Point	59	21	34

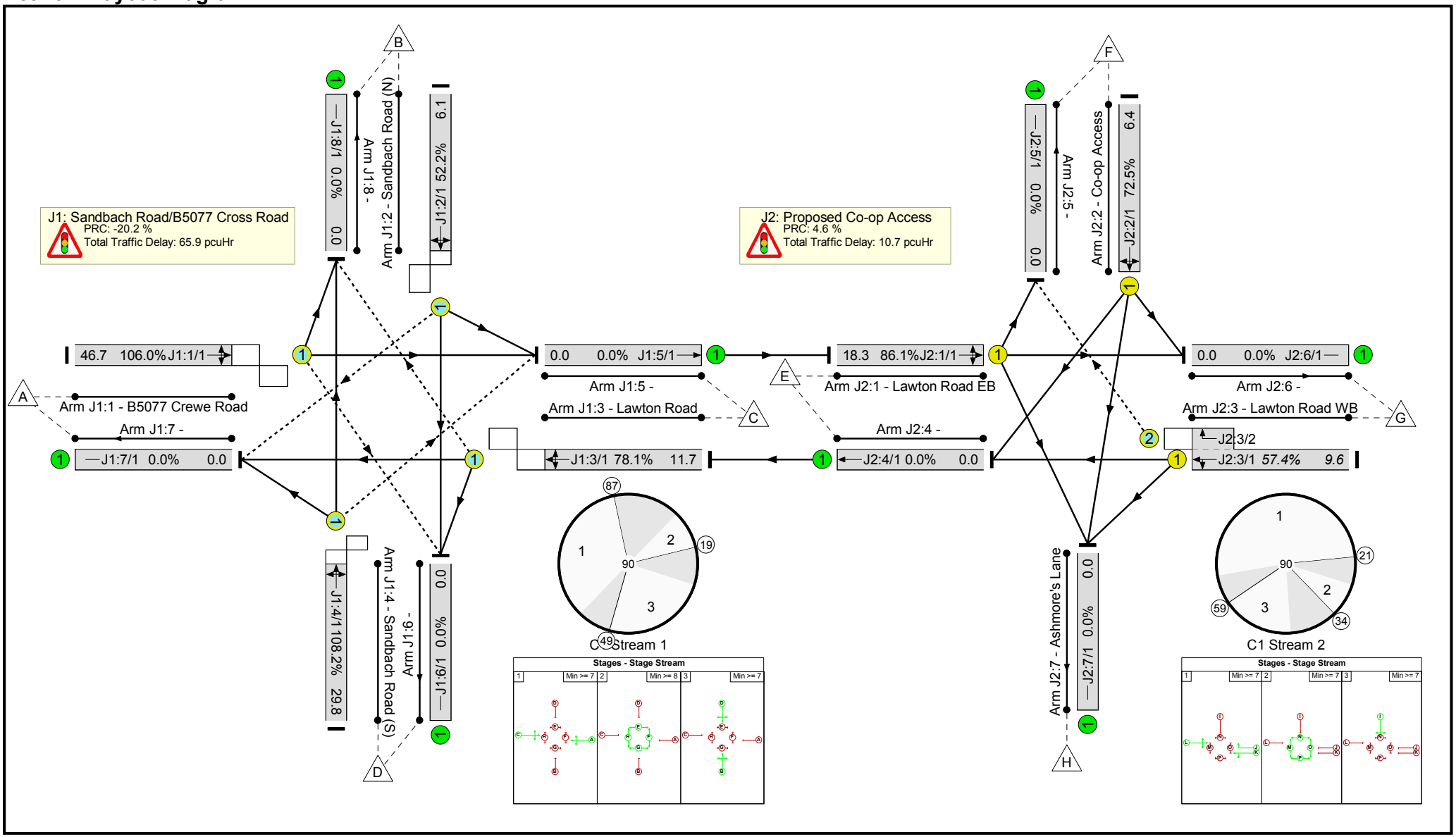
Full Input Data And Results

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: Sandbach Road/B5077 Crewe Road/Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**108.2%**
J1: Sandbach Road/B5077 Cross Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**108.2%**
1/1	B5077 Crewe Road Ahead Right Left	O	1	N/A	C		1	31	-	713	1901	672	106.0%
2/1	Sandbach Road (N) Left Ahead Right	O	1	N/A	D		1	22	-	262	1963	502	52.2%
3/1	Lawton Road Left Ahead Right	O	1	N/A	A		1	31	-	526	1894	673	78.1%
4/1	Sandbach Road (S) Right Left Ahead	O	1	N/A	B		1	22	-	383	1902	354	108.2%
5/1	Ahead	U	N/A	N/A	-		-	-	-	843	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	218	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	547	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	276	Inf	Inf	0.0%
J2: Proposed Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.1%**
1/1	Lawton Road EB Left Ahead Right	U	2	N/A	L		1	46	-	844	1878	981	86.1%
2/1	Co-op Access Right Left Ahead	U	2	N/A	I		1	15	-	220	1708	304	72.5%
3/1+3/2	Lawton Road WB Ahead Right Left	U+O	2	N/A	K J		1	46	-	566	1885:1695	986	57.4%
4/1	Ahead	U	N/A	N/A	-		-	-	-	525	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	851	Inf	Inf	0.0%

Full Input Data And Results

7/1	Ashmore's Lane	U	N/A	N/A	-		-	-	-	71	Inf	Inf	0.0%

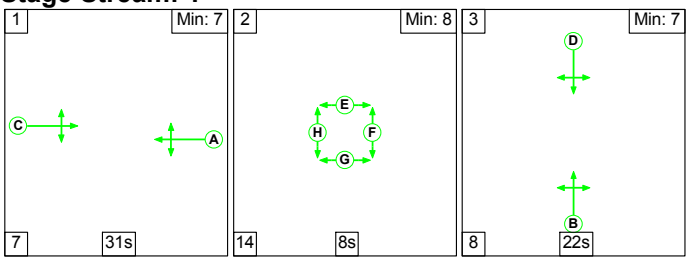
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Sandbach Road/B5077 Crewe Road/Co-op Access	**-**	**-**	**226**	**86**	**65**	**27.1**	**48.9**	**0.6**	**76.6**	**-**	**-**	**-**	**-**
J1: Sandbach Road/B5077 Cross Road	**-**	**-**	**226**	**0**	**63**	**18.4**	**46.9**	**0.6**	**65.9**	**-**	**-**	**-**	**-**
1/1	713	672	46	0	3	7.8	26.9	0.1	34.9	176.3	19.8	26.9	46.7
2/1	262	262	55	0	1	2.1	0.5	0.0	2.7	36.6	5.6	0.5	6.1
3/1	526	526	4	0	51	3.8	0.0	0.3	4.0	27.6	11.7	0.0	11.7
4/1	383	354	121	0	8	4.7	19.5	0.1	24.3	228.2	10.3	19.5	29.8
5/1	797	797	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	215	215	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	542	542	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	260	260	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Co-op Access	**-**	**-**	**0**	**86**	**2**	**8.7**	**1.9**	**0.0**	**10.7**	**-**	**-**	**-**	**-**
1/1	844	844	-	-	-	4.4	0.0	-	4.4	18.7	18.3	0.0	18.3
2/1	220	220	-	-	-	2.1	1.3	-	3.4	55.8	5.1	1.3	6.4
3/1+3/2	566	566	0	86	2	2.2	0.7	0.0	2.9	18.5	8.9	0.7	9.6
4/1	525	525	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	851	851	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	71	71	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	-20.2	Total Delay for Signalled Lanes (pcuHr):	65.89	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	4.6	Total Delay for Signalled Lanes (pcuHr):	10.69	Cycle Time (s): 90
	PRC Over All Lanes (%):	-20.2	Total Delay Over All Lanes(pcuHr):	76.57	

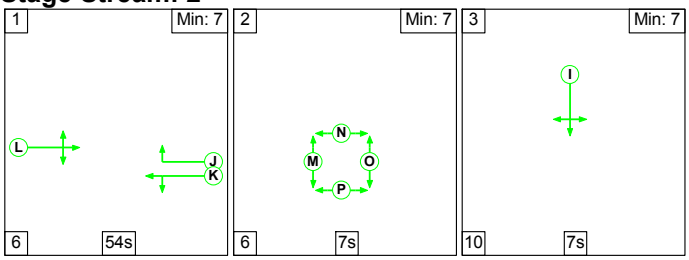
Full Input Data And Results
Scenario 5: '5' (FG5: '2014 Assessment - AM Peak (No WMQ)', Plan 1: 'single cycle')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

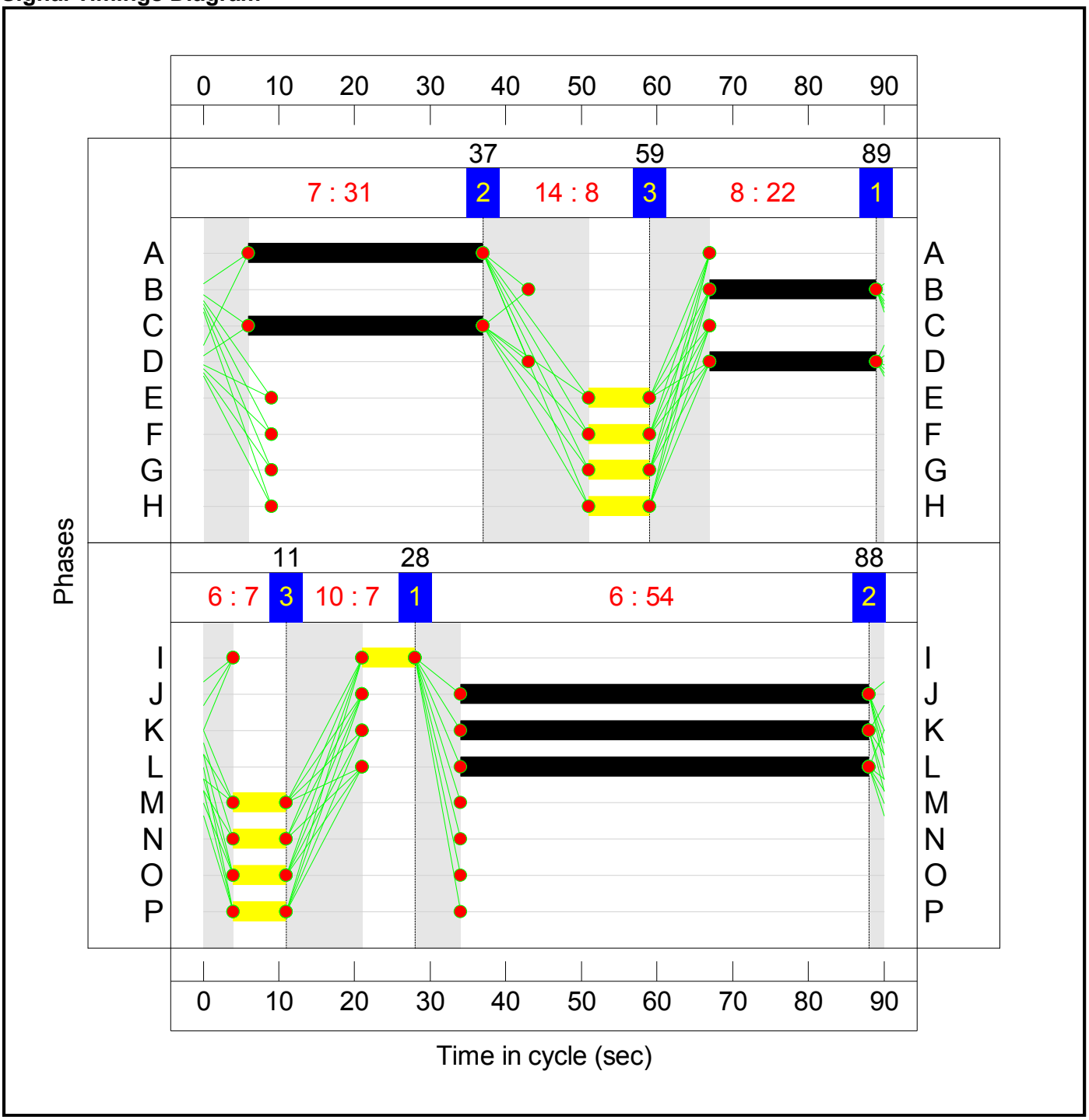
Stage	1	2	3
Duration	31	8	22
Change Point	89	37	59

Stage Stream: 2

Stage	1	2	3
Duration	54	7	7
Change Point	28	88	11

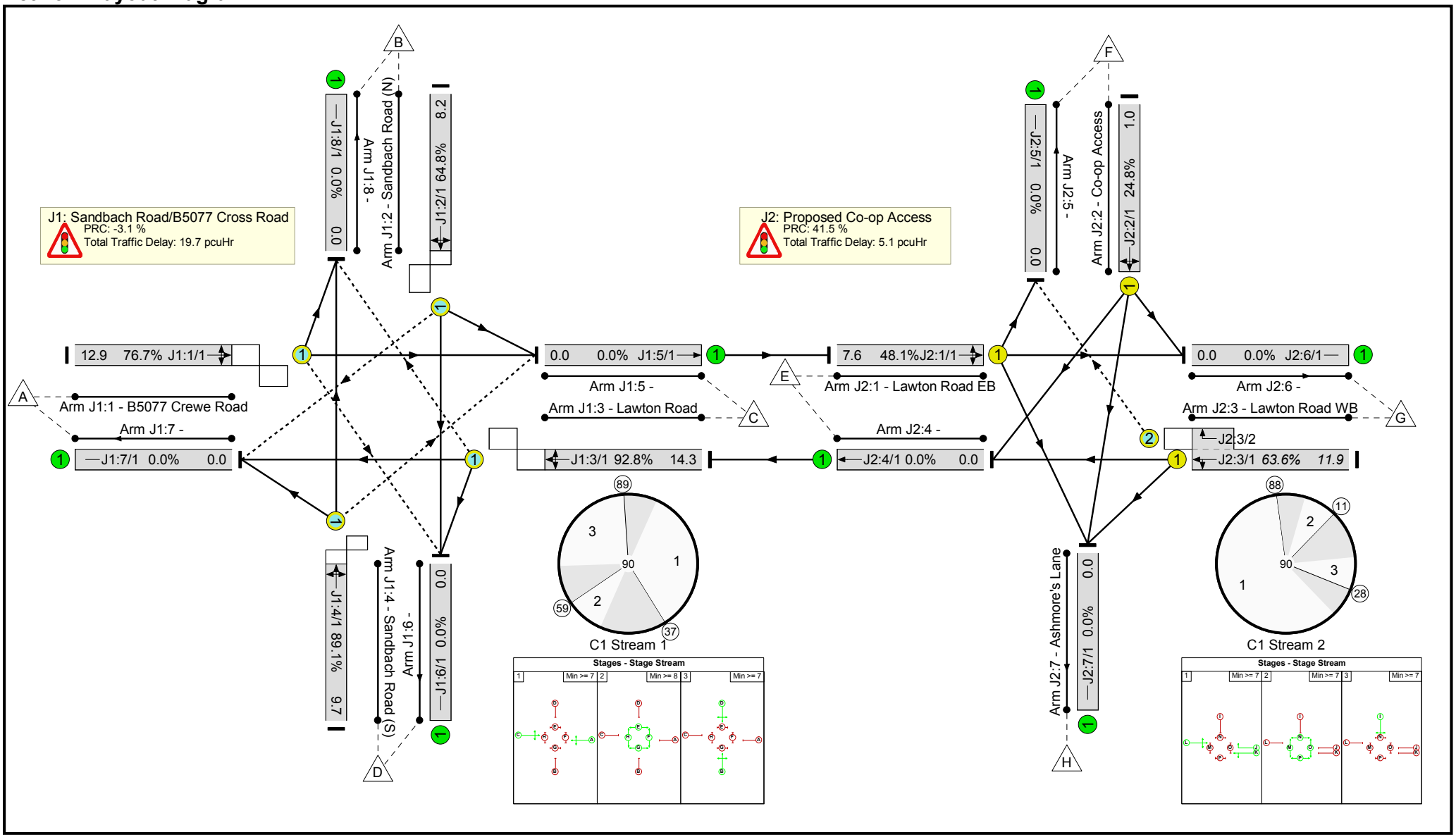
Full Input Data And Results

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: Sandbach Road/B5077 Crewe Road/Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.8%**
J1: Sandbach Road/B5077 Cross Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.8%**
1/1	B5077 Crewe Road Ahead Right Left	O	1	N/A	C		1	31	-	515	1889	672	76.7%
2/1	Sandbach Road (N) Left Ahead Right	O	1	N/A	D		1	22	-	326	1970	503	64.8%
3/1	Lawton Road Left Ahead Right	O	1	N/A	A		1	31	-	606	1894	653	92.8%
4/1	Sandbach Road (S) Right Left Ahead	O	1	N/A	B		1	22	-	260	1901	292	89.1%
5/1	Ahead	U	N/A	N/A	-		-	-	-	553	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	298	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	630	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	226	Inf	Inf	0.0%
J2: Proposed Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.6%**
1/1	Lawton Road EB Left Ahead Right	U	2	N/A	L		1	54	-	559	1902	1162	48.1%
2/1	Co-op Access Right Left Ahead	U	2	N/A	I		1	7	-	38	1723	153	24.8%
3/1+3/2	Lawton Road WB Ahead Right Left	U+O	2	N/A	K J		1	54	-	729	1882:1695	1146	63.6%
4/1	Ahead	U	N/A	N/A	-		-	-	-	610	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	72	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	559	Inf	Inf	0.0%

Full Input Data And Results

7/1	Ashmore's Lane	U	N/A	N/A	-		-	-	-	85	Inf	Inf	0.0%

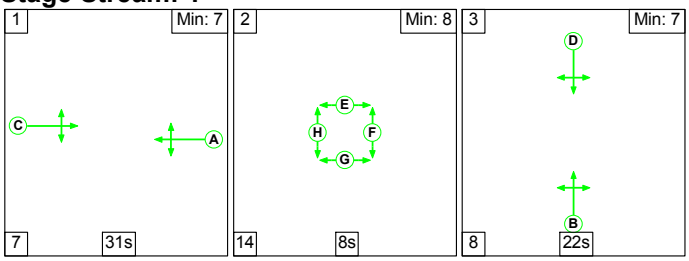
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Sandbach Road/B5077 Crewe Road/Co-op Access	**-**	**-**	**230**	**61**	**49**	**17.3**	**6.9**	**0.7**	**24.9**	**-**	**-**	**-**	**-**
J1: Sandbach Road/B5077 Cross Road	**-**	**-**	**230**	**0**	**47**	**13.2**	**5.9**	**0.7**	**19.7**	**-**	**-**	**-**	**-**
1/1	515	515	21	0	44	3.7	1.6	0.3	5.5	38.8	11.3	1.6	12.9
2/1	326	326	64	0	1	2.7	0.9	0.0	3.7	40.4	7.2	0.9	8.2
3/1	606	606	65	0	1	4.6	0.0	0.2	4.8	28.5	14.3	0.0	14.3
4/1	260	260	80	0	1	2.2	3.4	0.2	5.7	78.9	6.4	3.4	9.7
5/1	553	553	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	298	298	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	630	630	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	226	226	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Co-op Access	**-**	**-**	**0**	**61**	**1**	**4.1**	**1.0**	**0.0**	**5.1**	**-**	**-**	**-**	**-**
1/1	559	559	-	-	-	1.5	0.0	-	1.5	9.6	7.6	0.0	7.6
2/1	38	38	-	-	-	0.4	0.2	-	0.6	53.8	0.9	0.2	1.0
3/1+3/2	729	729	0	61	1	2.2	0.9	0.0	3.1	15.2	11.1	0.9	11.9
4/1	610	610	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	72	72	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	559	559	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	85	85	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	-3.1	Total Delay for Signalled Lanes (pcuHr):	19.71	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	41.5	Total Delay for Signalled Lanes (pcuHr):	5.15	Cycle Time (s):	90
	PRC Over All Lanes (%):	-3.1	Total Delay Over All Lanes(pcuHr):	24.86		

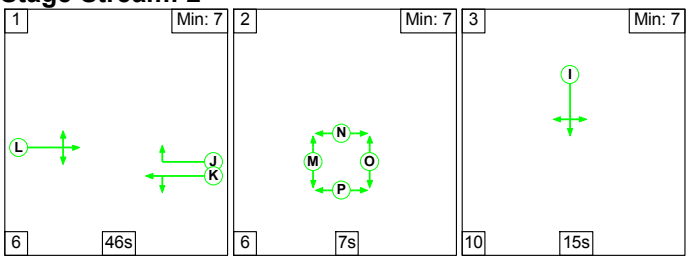
Full Input Data And Results
Scenario 6: '6' (FG6: '2014 Assessment - PM Peak (No WMQ)', Plan 1: 'single cycle')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

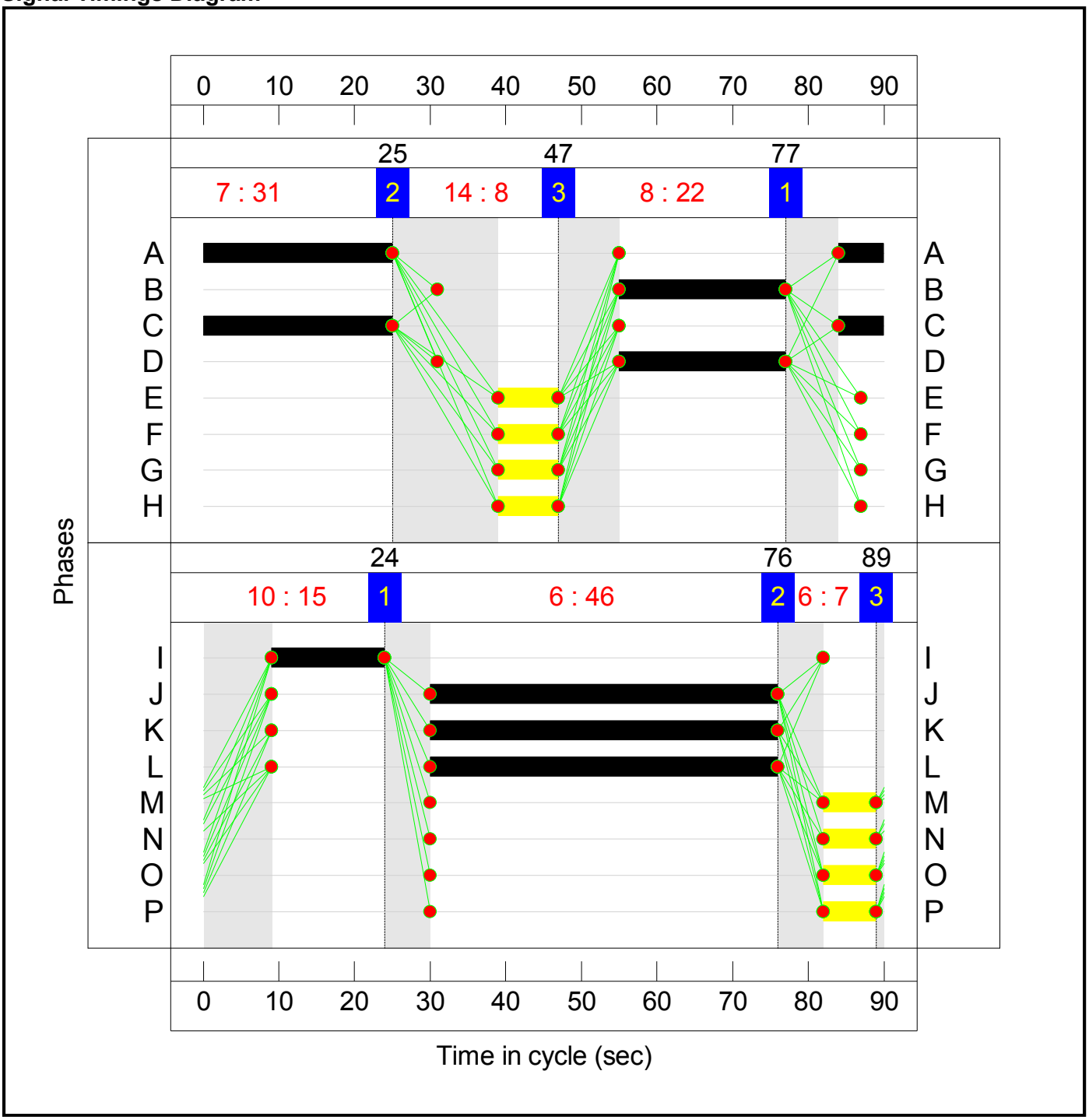
Stage	1	2	3
Duration	31	8	22
Change Point	77	25	47

Stage Stream: 2

Stage	1	2	3
Duration	46	7	15
Change Point	24	76	89

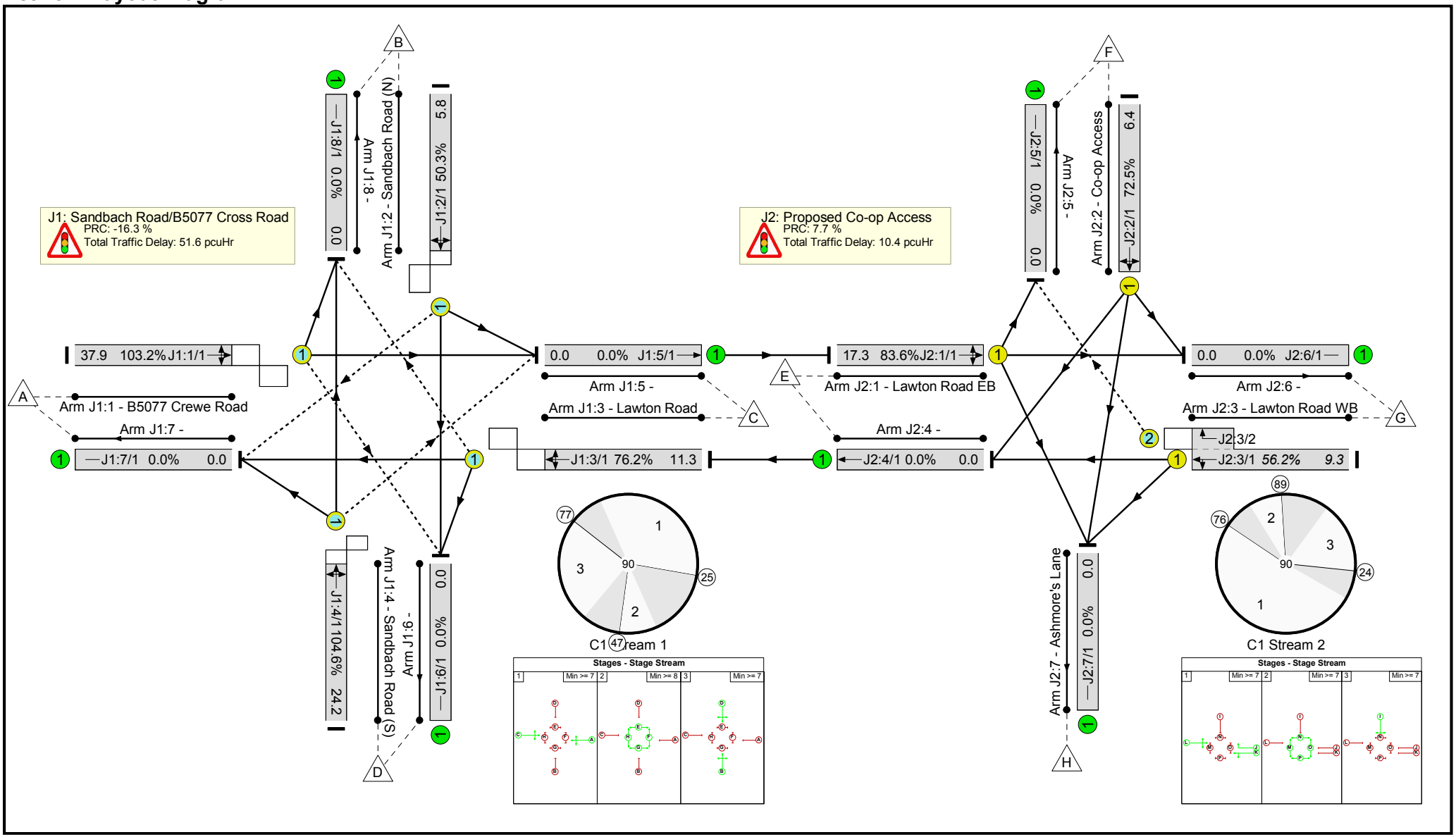
Full Input Data And Results

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: Sandbach Road/B5077 Crewe Road/Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.6%**
J1: Sandbach Road/B5077 Cross Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**104.6%**
1/1	B5077 Crewe Road Ahead Right Left	O	1	N/A	C		1	31	-	694	1901	673	103.2%
2/1	Sandbach Road (N) Left Ahead Right	O	1	N/A	D		1	22	-	252	1962	501	50.3%
3/1	Lawton Road Left Ahead Right	O	1	N/A	A		1	31	-	513	1894	673	76.2%
4/1	Sandbach Road (S) Right Left Ahead	O	1	N/A	B		1	22	-	369	1901	353	104.6%
5/1	Ahead	U	N/A	N/A	-		-	-	-	820	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	209	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	535	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	264	Inf	Inf	0.0%
J2: Proposed Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**83.6%**
1/1	Lawton Road EB Left Ahead Right	U	2	N/A	L		1	46	-	819	1877	980	83.6%
2/1	Co-op Access Right Left Ahead	U	2	N/A	I		1	15	-	220	1708	304	72.5%
3/1+3/2	Lawton Road WB Ahead Right Left	U+O	2	N/A	K J		1	46	-	554	1885:1695	986	56.2%
4/1	Ahead	U	N/A	N/A	-		-	-	-	513	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	826	Inf	Inf	0.0%

Full Input Data And Results

7/1	Ashmore's Lane	U	N/A	N/A	-		-	-	-	71	Inf	Inf	0.0%

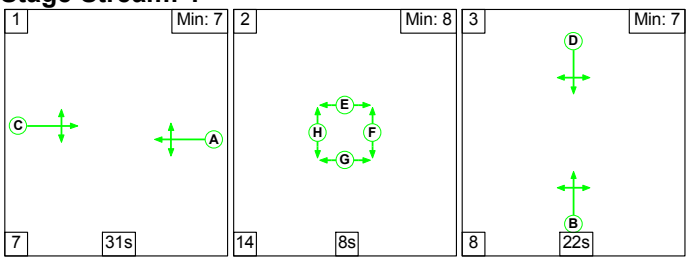
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Sandbach Road/B5077 Crewe Road/Co-op Access	**-**	**-**	**224**	**86**	**62**	**25.0**	**36.5**	**0.5**	**62.0**	**-**	**-**	**-**	**-**
J1: Sandbach Road/B5077 Cross Road	**-**	**-**	**224**	**0**	**60**	**16.5**	**34.6**	**0.5**	**51.6**	**-**	**-**	**-**	**-**
1/1	694	676	45	0	3	6.9	19.6	0.1	26.6	138.1	18.3	19.6	37.9
2/1	252	252	54	0	1	2.0	0.5	0.0	2.5	36.1	5.3	0.5	5.8
3/1	513	513	3	0	49	3.7	0.0	0.2	3.9	27.4	11.3	0.0	11.3
4/1	369	353	121	0	8	3.9	14.5	0.1	18.6	181.5	9.6	14.5	24.2
5/1	795	795	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	208	208	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	255	255	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Co-op Access	**-**	**-**	**0**	**86**	**2**	**8.4**	**1.9**	**0.0**	**10.4**	**-**	**-**	**-**	**-**
1/1	819	819	-	-	-	4.1	0.0	-	4.1	18.2	17.3	0.0	17.3
2/1	220	220	-	-	-	2.1	1.3	-	3.4	55.8	5.1	1.3	6.4
3/1+3/2	554	554	0	86	2	2.2	0.6	0.0	2.8	18.2	8.7	0.6	9.3
4/1	513	513	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	826	826	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	71	71	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	-16.3	Total Delay for Signalled Lanes (pcuHr):	51.65	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	7.7	Total Delay for Signalled Lanes (pcuHr):	10.35	Cycle Time (s): 90
	PRC Over All Lanes (%):	-16.3	Total Delay Over All Lanes(pcuHr):	62.00	

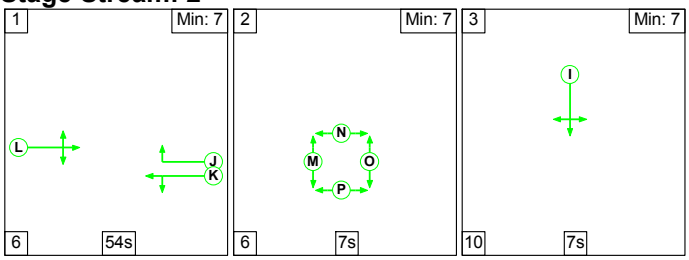
Full Input Data And Results
Scenario 7: '7' (FG7: '2019 Assessment - AM Peak (No WMQ)', Plan 1: 'single cycle')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

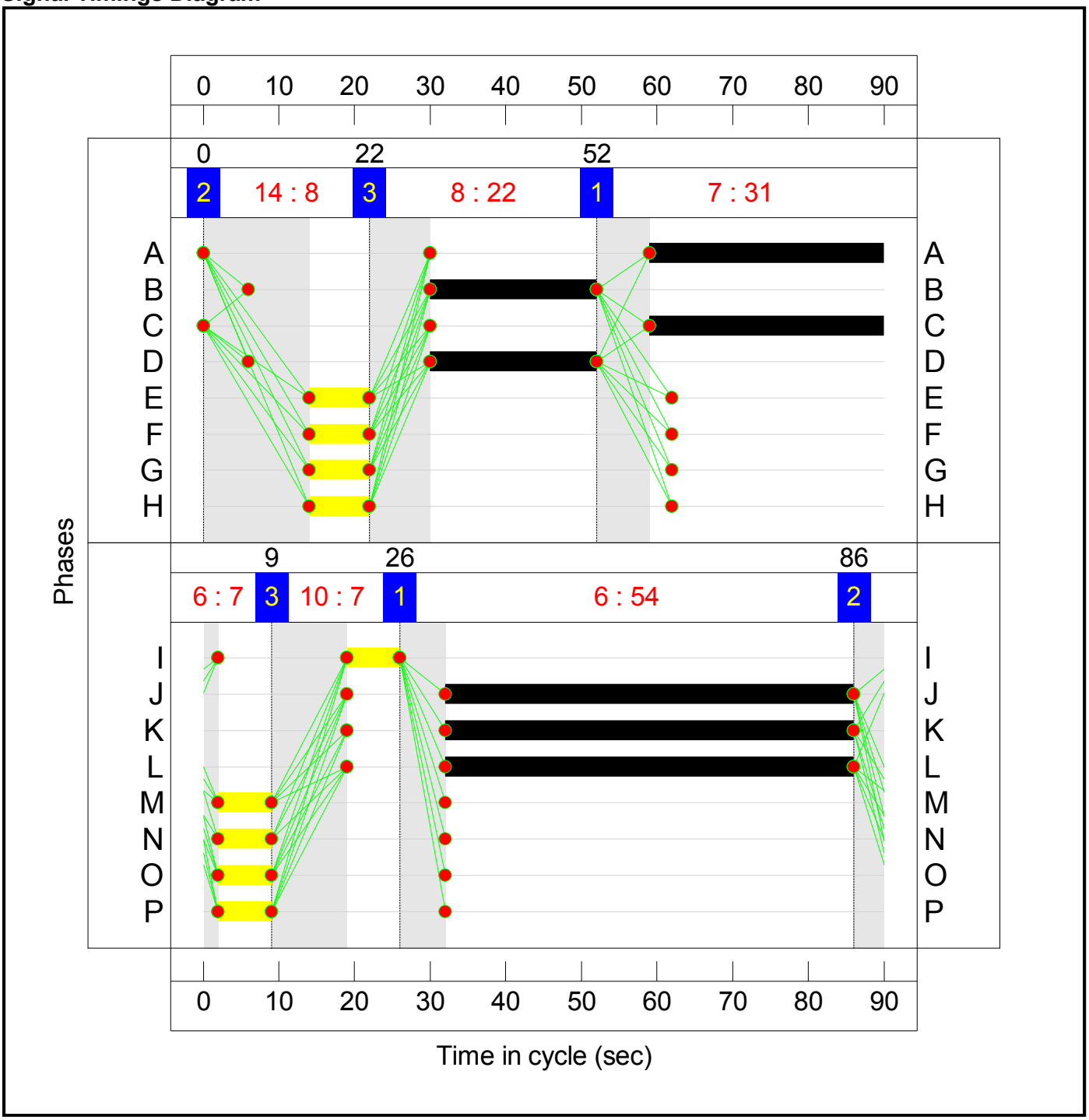
Stage	1	2	3
Duration	31	8	22
Change Point	52	0	22

Stage Stream: 2

Stage	1	2	3
Duration	54	7	7
Change Point	26	86	9

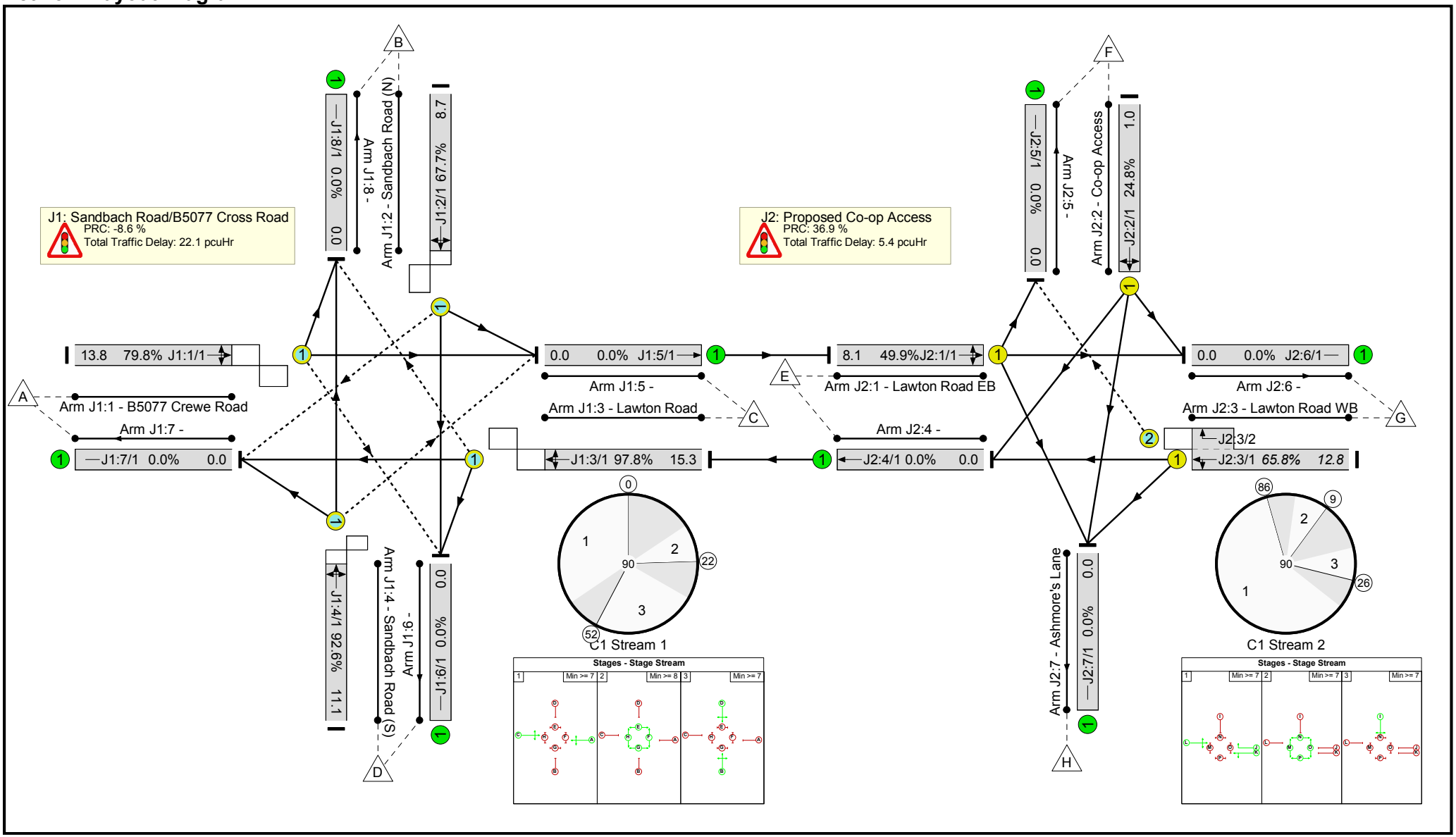
Full Input Data And Results

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: Sandbach Road/B5077 Crewe Road/Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.8%**
J1: Sandbach Road/B5077 Cross Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.8%**
1/1	B5077 Crewe Road Ahead Right Left	O	1	N/A	C		1	31	-	536	1889	672	79.8%
2/1	Sandbach Road (N) Left Ahead Right	O	1	N/A	D		1	22	-	341	1970	503	67.7%
3/1	Lawton Road Left Ahead Right	O	1	N/A	A		1	31	-	632	1894	646	97.8%
4/1	Sandbach Road (S) Right Left Ahead	O	1	N/A	B		1	22	-	273	1901	295	92.6%
5/1	Ahead	U	N/A	N/A	-		-	-	-	576	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	311	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	658	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	237	Inf	Inf	0.0%
J2: Proposed Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**65.8%**
1/1	Lawton Road EB Left Ahead Right	U	2	N/A	L		1	54	-	580	1902	1162	49.9%
2/1	Co-op Access Right Left Ahead	U	2	N/A	I		1	7	-	38	1723	153	24.8%
3/1+3/2	Lawton Road WB Ahead Right Left	U+O	2	N/A	K J		1	54	-	754	1883:1695	1147	65.8%
4/1	Ahead	U	N/A	N/A	-		-	-	-	635	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	72	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	580	Inf	Inf	0.0%

Full Input Data And Results

7/1	Ashmore's Lane	U	N/A	N/A	-		-	-	-	85	Inf	Inf	0.0%

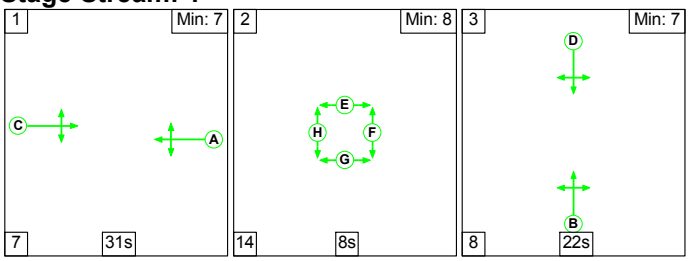
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Sandbach Road/B5077 Crewe Road/Co-op Access	**-**	**-**	**235**	**61**	**56**	**18.3**	**8.5**	**0.7**	**27.6**	**-**	**-**	**-**	**-**
J1: Sandbach Road/B5077 Cross Road	**-**	**-**	**235**	**0**	**55**	**14.0**	**7.4**	**0.7**	**22.1**	**-**	**-**	**-**	**-**
1/1	536	536	17	0	51	3.9	1.9	0.3	6.1	40.8	11.9	1.9	13.8
2/1	341	341	66	0	2	2.9	1.0	0.0	3.9	41.6	7.7	1.0	8.7
3/1	632	632	67	0	2	4.9	0.0	0.2	5.1	29.3	15.3	0.0	15.3
4/1	273	273	84	0	1	2.3	4.5	0.2	7.0	91.8	6.7	4.5	11.1
5/1	576	576	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	310	310	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	645	645	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	237	237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Co-op Access	**-**	**-**	**0**	**61**	**1**	**4.3**	**1.1**	**0.0**	**5.4**	**-**	**-**	**-**	**-**
1/1	580	580	-	-	-	1.6	0.0	-	1.6	9.8	8.1	0.0	8.1
2/1	38	38	-	-	-	0.4	0.2	-	0.6	53.8	0.9	0.2	1.0
3/1+3/2	754	754	0	61	1	2.3	1.0	0.0	3.3	15.8	11.9	1.0	12.8
4/1	635	635	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	72	72	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	580	580	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	85	85	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	-8.6	Total Delay for Signalled Lanes (pcuHr):	22.12	Cycle Time (s):	90
C1	Stream: 2 PRC for Signalled Lanes (%):	36.9	Total Delay for Signalled Lanes (pcuHr):	5.45	Cycle Time (s):	90
	PRC Over All Lanes (%):	-8.6	Total Delay Over All Lanes(pcuHr):	27.56		

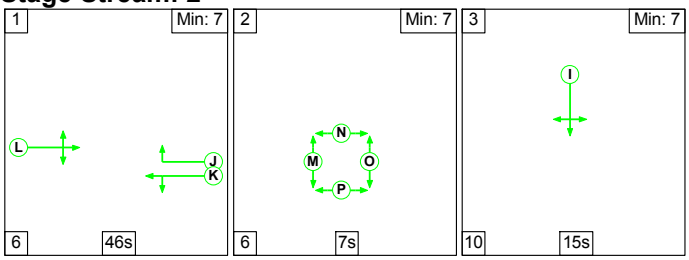
Full Input Data And Results
Scenario 8: '8' (FG8: '2019 Assessment - PM Peak (No WMQ)', Plan 1: 'single cycle')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

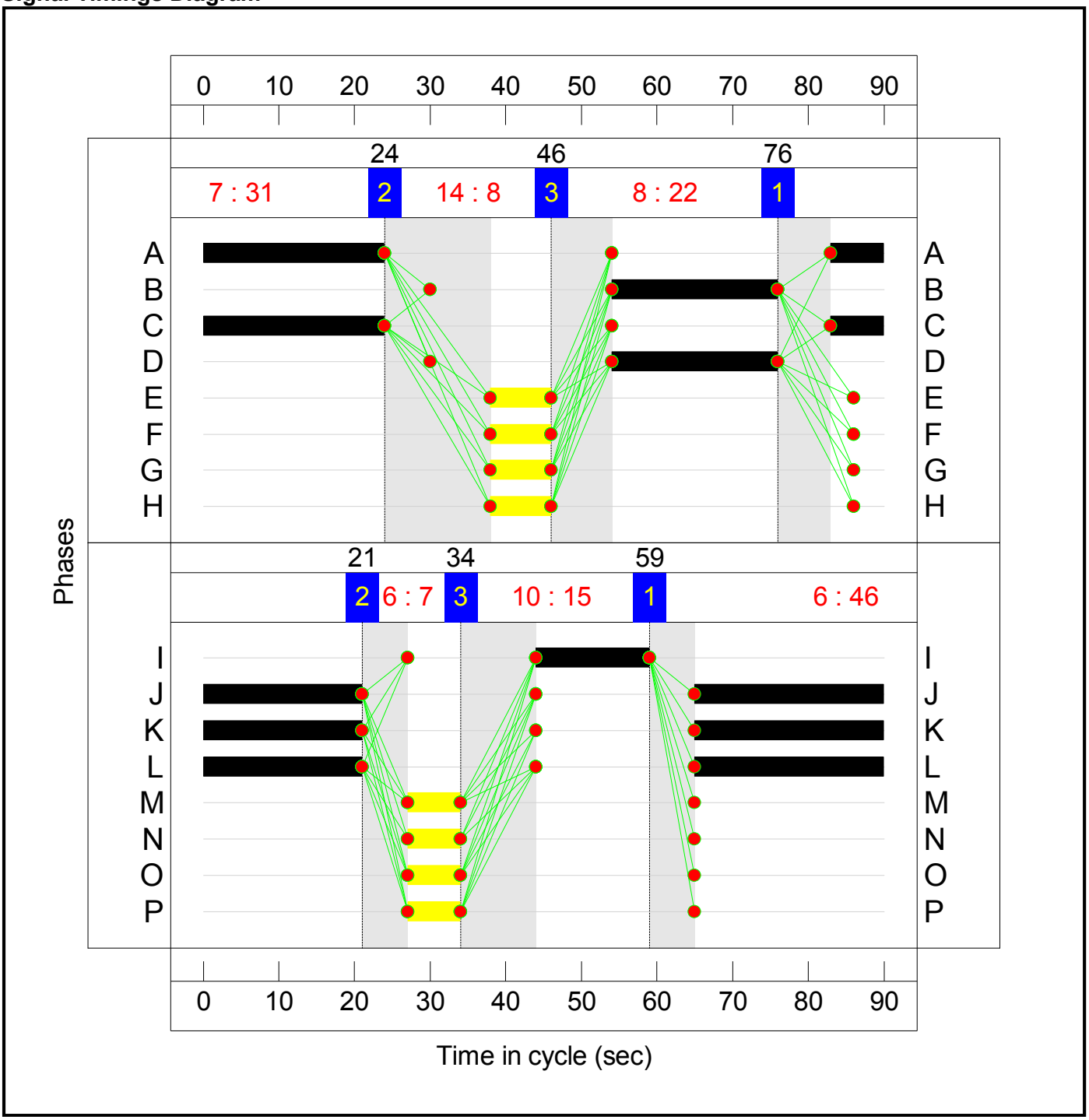
Stage	1	2	3
Duration	31	8	22
Change Point	76	24	46

Stage Stream: 2

Stage	1	2	3
Duration	46	7	15
Change Point	59	21	34

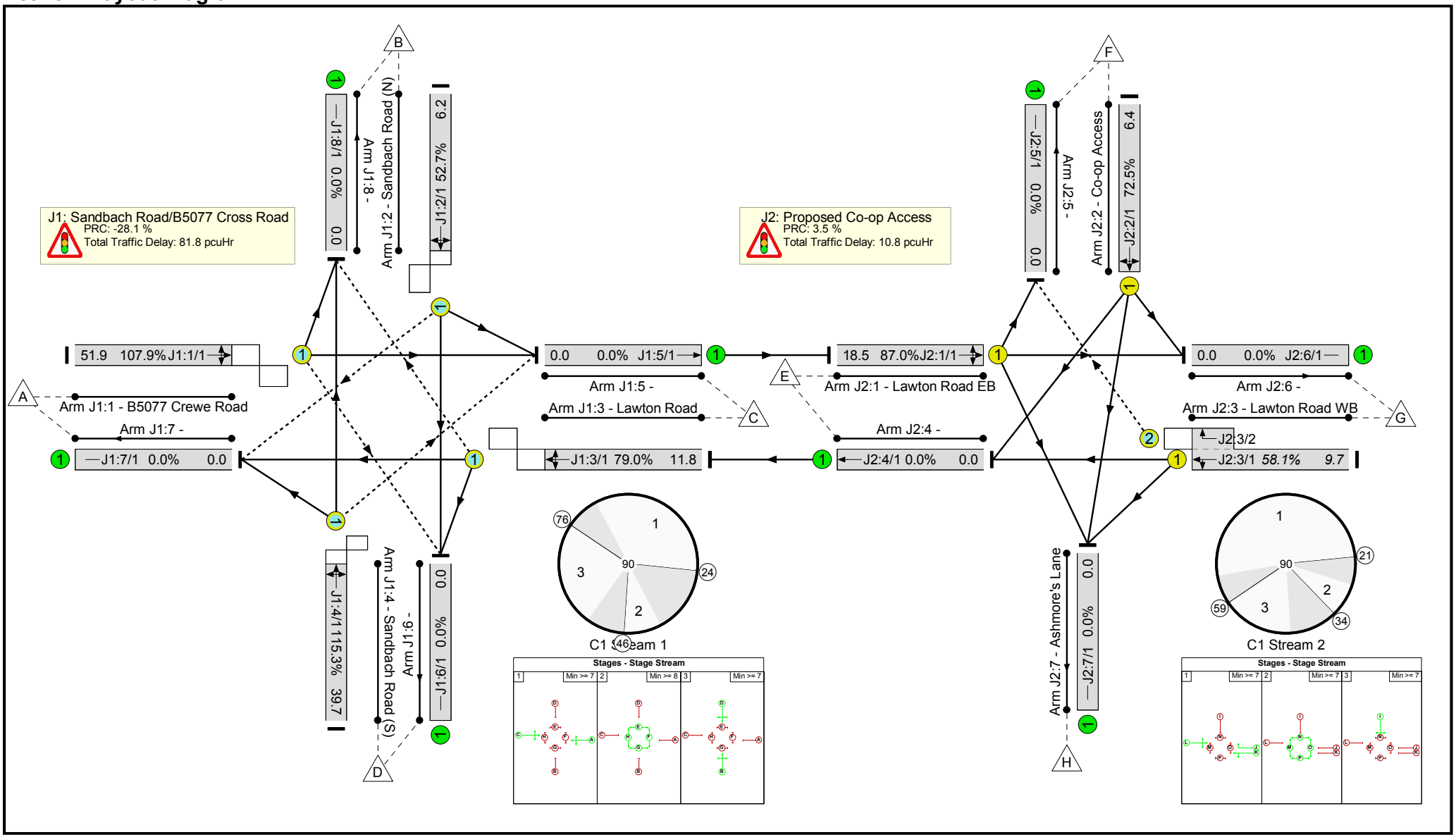
Full Input Data And Results

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: Sandbach Road/B5077 Crewe Road/Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**115.3%**
J1: Sandbach Road/B5077 Cross Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**115.3%**
1/1	B5077 Crewe Road Ahead Right Left	O	1	N/A	C		1	31	-	724	1901	671	107.9%
2/1	Sandbach Road (N) Left Ahead Right	O	1	N/A	D		1	22	-	264	1962	501	52.7%
3/1	Lawton Road Left Ahead Right	O	1	N/A	A		1	31	-	532	1894	673	79.0%
4/1	Sandbach Road (S) Right Left Ahead	O	1	N/A	B		1	22	-	384	1901	333	115.3%
5/1	Ahead	U	N/A	N/A	-		-	-	-	852	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	556	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	277	Inf	Inf	0.0%
J2: Proposed Co-op Access	-	-	**N/A**	-	-		-	-	-	-	-	-	**87.0%**
1/1	Lawton Road EB Left Ahead Right	U	2	N/A	L		1	46	-	853	1878	981	87.0%
2/1	Co-op Access Right Left Ahead	U	2	N/A	I		1	15	-	220	1708	304	72.5%
3/1+3/2	Lawton Road WB Ahead Right Left	U+O	2	N/A	K J		1	46	-	573	1886:1695	986	58.1%
4/1	Ahead	U	N/A	N/A	-		-	-	-	532	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	860	Inf	Inf	0.0%

Full Input Data And Results

7/1	Ashmore's Lane	U	N/A	N/A	-		-	-	-	71	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: Sandbach Road/B5077 Crewe Road/Co-op Access	**-**	**-**	**217**	**86**	**68**	**28.7**	**63.3**	**0.6**	**92.6**	**-**	**-**	**-**	**-**
J1: Sandbach Road/B5077 Cross Road	**-**	**-**	**217**	**0**	**66**	**19.9**	**61.3**	**0.6**	**81.8**	**-**	**-**	**-**	**-**
1/1	724	676	46	0	3	8.7	32.0	0.1	40.8	203.1	19.9	32.0	51.9
2/1	264	264	57	0	1	2.1	0.6	0.0	2.7	36.7	5.6	0.6	6.2
3/1	532	532	0	0	55	3.8	0.0	0.3	4.1	27.9	11.8	0.0	11.8
4/1	384	333	113	0	8	5.2	28.8	0.1	34.1	320.0	11.0	28.8	39.7
5/1	788	788	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	215	215	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	548	548	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	250	250	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Proposed Co-op Access	**-**	**-**	**0**	**86**	**2**	**8.9**	**2.0**	**0.0**	**10.8**	**-**	**-**	**-**	**-**
1/1	853	853	-	-	-	4.5	0.0	-	4.5	18.8	18.5	0.0	18.5
2/1	220	220	-	-	-	2.1	1.3	-	3.4	55.8	5.1	1.3	6.4
3/1+3/2	573	573	0	86	2	2.3	0.7	0.0	3.0	18.6	9.0	0.7	9.7
4/1	532	532	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	860	860	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	71	71	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	-28.1	Total Delay for Signalled Lanes (pcuHr):	81.79	Cycle Time (s): 90
C1	Stream: 2 PRC for Signalled Lanes (%):	3.5	Total Delay for Signalled Lanes (pcuHr):	10.83	Cycle Time (s): 90
	PRC Over All Lanes (%):	-28.1	Total Delay Over All Lanes(pcuHr):	92.62	