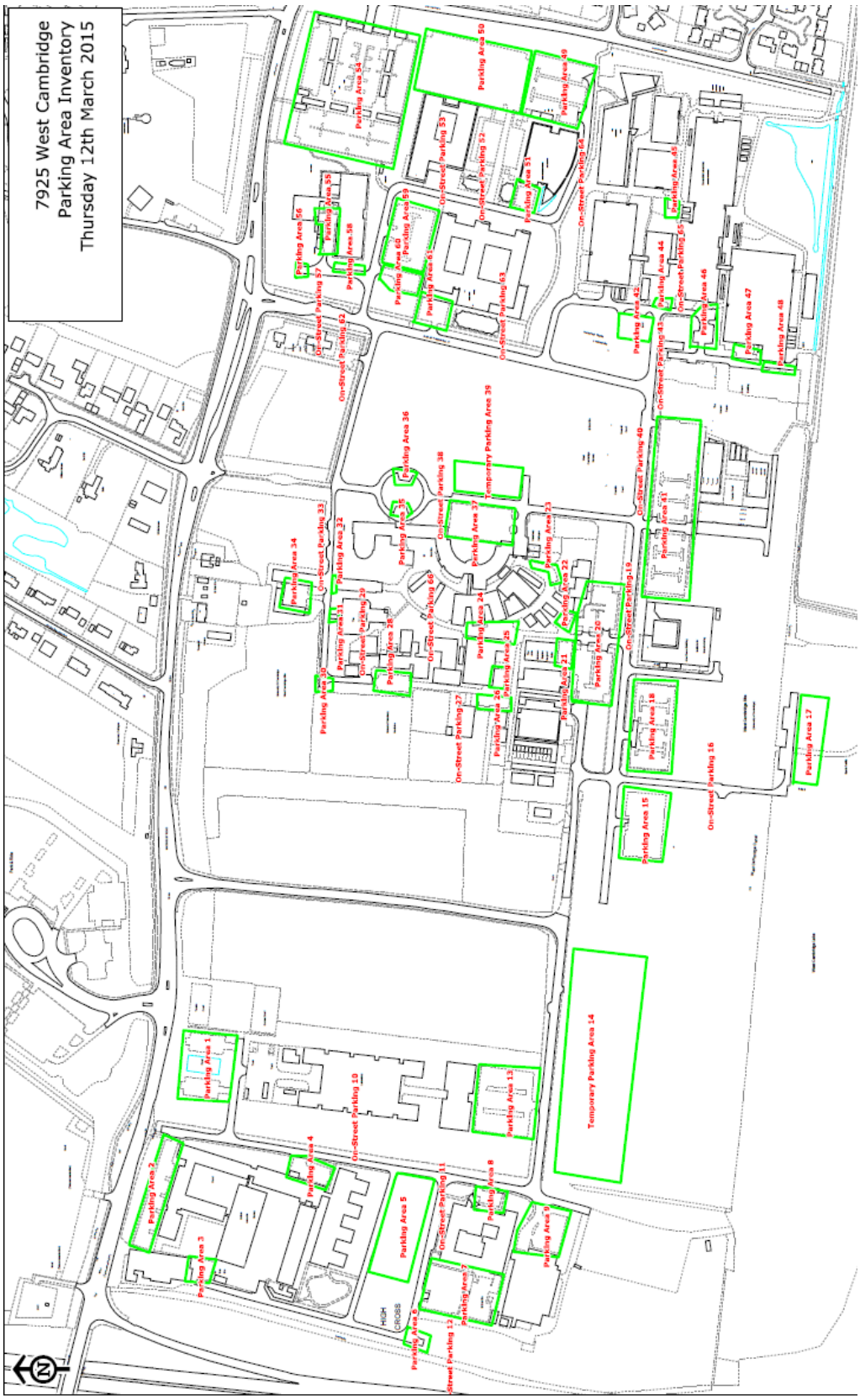
2031 AM Peak 3-hr

	Potential Users	Current Modelled Mode			
	All Modes	Walk	Cycle	Bus	Car
Arc	486	28	269	50	140
Universal	1263	472	517	39	192
Citi	1329	239	892	118	136
Within Walking Distance	146	103	17	0	17
Shared Space - Universal / Citi	267	100	134	6	22
Busway	1064	4	77	92	725

Appendix 8.1 - Car Parking Survey Results



EXISTING ON-SITE CAR PARKING PROVISION

Key

Parking Use Type	Car Parking Spaces (No)
University Parking	**1,164**
Private Parking	**407**
University Park and Cycle	**290**

Car Parking Area Reference taken from ATR Survey	Car Parking Spaces (No)	Parking Use Type
1	9	Private
2	51	Private
3	13	Private
4	0	Private
5	148	Private
6	6	Private
7	75	Private
8	7	Private
9	26	Private
10	0	University
11	0	Private
12	0	Private
13	72	Private
14	159	University
15	59	University
16	0	University
17	12	University
18	80	University
19	0	University
20	92	University
21	7	University
22	2	University
23	7	University
24	0	University
25	4	University
26	6	University
27	0	University
28	21	University
29	0	University
30	2	University
31	0	University
32	0	University
33	3	University
34	15	University
35	4	University
36	5	University
37	74	University
38	0	University
39	0	University
40	4	University
41	142	University
42	14	University
43	0	University
44	0	University

Car Parking Area Reference taken from ATR Survey	Car Parking Spaces (No)	Parking Use Type
45	0	University
46	11	University
47	5	University
48	4	University
49	275	University
50		University
51	4	University
52	0	University
53	0	University
54	290	Park and Cycle
55	11	University
56	2	University
57	0	University
58	8	University
59	66	University
60	7	University
61	19	University
62	0	University
63	0	University
64	0	University
65	0	University
66	40	University
Total	1,861	

advanced transport research

Job Number & Name:	12389 West Cambridge
Site Number/Name:	West Cambridge
Client:	Peter Brett
Date:	20/10/2016
Weather:	
Comments:	

Advanced Transport Research

West Cambridge

Parking

Time of Beat	Parking Area 1			Parking Area 2			Parking Area 3			Parking Area 4			Parking Area 5			Parking Area 6			Parking Area 7			Parking Area 8			Parking Area 9			On-Street Parking 10			On-Street Parking 11		
	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor
Spaces	**9**	**0**	**0**	**50**	**1**	**0**	**12**	**1**	**0**	**0**	**0**	**0**	**148**	**0**	**0**	**6**	**0**	**0**	**75**	**0**	**0**	**7**	**0**	**0**	**26**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
08:00	0	0	0	37	0	0	3	0	0	0	0	0	26	0	0	4	0	0	31	0	0	0	0	0	14	0	0	0	0	0	0	0	0
09:00	1	0	0	47	0	0	6	0	0	0	0	0	84	0	0	4	0	0	69	0	0	3	0	0	29	0	0	0	0	0	25	0	0
10:00	1	0	0	40	0	4	17	0	0	0	0	0	136	0	0	5	0	0	67	0	0	4	0	0	36	0	0	0	0	0	28	0	0
11:00	1	0	0	39	0	4	6	1	0	0	0	0	137	0	0	4	0	0	63	0	0	4	0	0	36	0	0	0	0	0	28	0	0
12:00	1	0	0	40	0	4	6	1	0	0	0	0	139	0	0	5	0	0	65	0	0	4	0	0	37	0	0	0	0	0	0	0	0
13:00	1	0	0	39	0	2	1	0	1	0	0	0	137	0	0	4	0	0	65	0	0	5	0	1	24	0	0	0	0	0	21	0	0
14:00	1	0	0	39	0	3	7	0	0	0	0	0	134	0	0	5	0	0	65	0	0	5	0	0	26	0	0	0	0	0	0	0	0
15:00	1	0	0	35	0	1	7	1	0	0	0	0	84	0	0	5	0	0	67	0	0	4	0	0	28	0	0	0	0	0	18	0	0
16:00	1	0	0	35	0	0	7	1	0	0	0	0	81	0	0	5	0	0	62	0	0	3	0	0	26	0	0	0	0	0	0	0	0
17:00	1	0	0	12	0	0	3	0	0	0	0	0	49	0	0	3	0	0	37	0	0	3	0	0	11	0	0	0	0	0	4	0	0
18:00	0	0	0	10	0	0	3	0	0	0	0	0	45	0	0	1	0	0	33	0	0	2	0	0	9	0	0	0	0	0	0	0	0
19:00	0	0	0	4	0	0	2	0	0	0	0	0	19	0	0	0	0	0	7	0	0	2	0	0	5	0	0	0	0	0	1	0	0

On-Street Parking 12			Parking Area 13			Temp Parking Area 14			Parking Area 15			On-Street Parking 16			Parking Area 17			Parking Area 18			Parking Area 67			On-Street Parking 19			Parking Area 20			Parking Area 21			Parki
Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles
0	**0**	**0**	**70**	**2**	**0**	**151**	**8**	**0**	**55**	**4**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**76**	**4**	**0**	**40**	**0**	**0**	**0**	**0**	**0**	**88**	**4**	**0**	**7**	**0**	**0**	**2**
0	0	0	25	0	1	12	1	0	19	1	3	0	0	0	0	1	4	21	0	5	19	0	8	0	0	0	19	0	0	1	0	0	0
0	0	0	52	0	0	23	1	0	40	0	4	0	0	0	1	1	4	35	1	2	30	0	9	0	0	0	35	0	0	4	0	0	1
0	0	0	63	0	0	28	1	0	38	2	4	0	0	0	0	0	3	37	2	2	27	0	10	1	0	1	54	0	0	4	0	0	2
0	0	0	61	0	0	27	2	0	39	2	4	0	0	0	0	0	3	37	1	2	26	0	11	0	0	1	57	0	0	6	0	0	2
0	0	0	63	0	0	33	2	0	35	2	4	0	0	0	0	0	4	37	1	2	26	0	11	0	0	0	56	0	0	5	0	0	2
0	0	0	62	0	0	26	1	0	39	0	4	0	0	0	4	0	0	39	0	0	26	0	9	1	0	0	59	0	0	4	0	0	2
0	0	0	61	0	0	28	1	0	36	0	4	0	0	0	4	0	0	41	0	0	24	0	10	4	0	1	58	0	0	4	0	0	2
0	0	0	47	0	0	29	1	0	35	1	2	0	0	0	0	0	4	38	0	0	21	0	5	0	0	1	56	0	0	5	0	0	2
0	0	0	44	0	0	28	1	0	32	1	2	0	0	0	2	0	0	39	0	0	0	0	0	0	0	0	49	0	0	2	0	0	1
0	0	0	25	0	0	19	1	0	24	0	2	0	0	0	4	0	0	22	0	0	8	0	6	0	0	0	45	0	0	1	0	0	1
0	0	0	22	0	0	17	1	0	21	0	2	0	0	0	3	0	0	19	0	0	4	0	2	0	0	0	37	0	0	1	0	0	0
0	0	0	11	0	0	5	0	0	32	0	3	0	0	0	3	0	0	13	0	0	0	0	0	0	0	0	13	0	0	1	0	0	0

ing Area 22		Parking Area 23			Parking Area 24			Parking Area 25			Parking Area 26			On-Street Parking 27			Parking Area 28			On-Street Parking 29			Parking Area 30			Parking Area 31			Parking Area 32			On-Street Pa 33	
Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits
0	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**20**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**
0	1	3	0	0	0	0	0	2	0	0	2	0	0	1	0	0	4	0	0	1	0	0	2	0	0	1	0	0	0	0	0	1	0
0	0	2	0	0	0	0	0	2	0	0	2	0	0	2	0	0	6	0	0	3	0	0	1	0	1	2	0	0	0	0	0	1	0
0	0	2	0	0	0	0	0	1	0	0	2	0	0	1	0	0	5	0	0	3	0	0	2	0	0	1	0	0	0	0	0	1	0
0	0	2	0	0	0	0	0	1	0	0	2	0	0	2	0	1	6	0	0	3	0	0	2	0	0	1	0	0	0	0	0	1	0
0	0	2	0	0	0	0	0	1	0	0	2	0	0	2	0	0	5	0	0	1	0	0	2	0	0	0	0	0	0	0	0	1	0
0	0	3	0	0	4	0	0	2	0	0	1	0	0	0	0	0	8	0	0	2	0	0	4	0	0	0	0	0	0	0	0	1	0
0	0	3	0	0	5	0	0	2	0	0	1	0	0	0	0	0	8	0	0	0	0	0	2	0	0	1	0	0	0	0	0	1	0
0	0	3	0	0	0	0	0	2	0	0	2	0	0	2	0	0	9	0	0	5	0	0	2	0	0	0	0	0	0	0	0	1	0
0	0	3	0	0	0	0	0	0	0	0	1	0	0	2	0	0	7	0	0	4	0	0	2	0	0	0	0	0	0	0	0	1	0
0	0	3	0	0	3	0	0	1	0	0	1	0	0	2	0	0	4	0	0	5	0	0	2	0	0	0	0	0	0	0	0	1	0
0	0	3	0	0	0	0	0	1	0	0	1	0	0	2	0	0	4	0	0	4	0	0	2	0	0	0	0	0	0	0	0	1	0
0	0	3	0	0	0	0	0	1	0	0	1	0	0	2	0	0	3	0	0	1	0	0	2	0	0	0	0	0	0	0	0	1	0

rking	Parking Area 34			Parking Area 35			Parking Area 36			Parking Area 37			On-Street Parking 38			Temp Parking Area 39			On-Street Parking 40			Parking Area 41			Parking Area 42			On-Street Parking 43			Parking Area 44		
Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor
0	**15**	**0**	**0**	**4**	**0**	**0**	**5**	**0**	**0**	**73**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**142**	**0**	**0**	**10**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0	10	0	0	1	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	38	3	0	0	0	1	0	0	0	1	0	1
1	14	0	0	2	0	2	3	0	1	69	0	0	0	0	0	0	0	0	0	0	0	67	3	0	0	0	1	0	0	0	1	0	3
1	14	0	0	3	0	0	2	0	2	72	0	0	0	0	0	0	0	0	0	0	0	80	5	0	0	0	2	0	0	0	4	0	3
1	13	0	0	4	0	0	2	0	1	73	1	1	0	0	0	0	0	0	0	2	0	82	5	1	0	0	2	0	0	0	2	0	1
0	12	0	0	4	0	0	1	0	1	69	1	0	0	0	0	0	0	0	0	0	0	83	5	0	0	0	1	0	0	0	3	0	0
2	14	0	0	3	0	0	3	0	1	68	0	0	0	0	0	0	0	0	0	0	0	90	5	0	0	0	0	0	0	0	1	0	2
1	14	0	0	3	0	0	3	0	1	70	0	0	0	0	0	0	0	0	3	0	1	89	5	0	0	0	0	1	0	0	4	0	2
1	14	0	0	4	0	0	3	0	1	66	1	0	0	0	0	0	0	0	0	0	0	70	5	0	3	0	0	0	0	0	0	0	0
1	10	0	0	3	0	1	3	0	0	60	0	1	0	0	0	0	0	0	6	0	0	66	4	0	3	0	0	2	0	2	0	0	0
0	8	0	0	3	0	0	3	0	0	48	0	0	0	0	0	0	0	0	5	1	0	57	2	0	2	0	0	0	0	0	1	0	1
0	7	0	0	3	0	0	2	0	0	33	0	0	0	0	0	0	0	0	8	2	0	52	2	0	2	0	0	0	0	0	0	0	0
0	2	0	0	1	0	0	1	0	0	9	0	0	0	0	0	0	0	0	0	0	0	36	1	0	1	0	0	0	0	0	1	0	0

Parking Area 45			Parking Area 46			Parking Area 47			Parking Area 48			Parking Area 49 & 50			Parking Area 51			On-Street Parking 52			On-Street Parking 53			Parking Area 54			Parking Area 55			Parking Area 56			On-St
Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles
0	**0**	**0**	**10**	**1**	**0**	**5**	**0**	**0**	**4**	**0**	**0**	**270**	**5**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**286**	**4**	**0**	**0**	**11**	**0**	**2**	**0**	**0**	**0**
0	0	0	0	0	0	1	0	2	3	0	0	55	3	6	0	0	0	0	0	0	0	0	0	102	0	0	3	2	0	0	0	0	0
0	0	0	1	0	0	2	0	2	3	0	0	133	2	5	5	0	0	0	0	0	0	0	0	162	0	0	10	0	0	2	0	0	0
0	0	0	3	0	0	3	0	2	2	0	0	169	1	5	6	4	0	0	0	0	0	0	0	184	0	0	10	0	0	2	0	0	0
0	0	0	4	0	0	3	0	2	2	0	1	192	1	5	7	3	0	0	0	0	0	0	0	200	0	0	12	0	0	3	0	0	0
0	0	0	3	0	0	3	0	2	2	0	0	167	1	6	5	2	0	1	0	0	0	0	0	203	0	0	12	0	0	3	0	0	0
0	0	0	3	0	0	3	0	2	2	0	2	153	1	7	4	1	0	2	0	0	0	0	0	205	0	0	11	0	0	3	0	0	0
0	0	0	3	1	0	3	0	2	2	0	2	161	2	6	4	2	0	0	0	0	0	0	0	203	0	0	9	0	0	3	0	0	0
0	0	0	2	0	0	3	0	2	3	0	0	170	2	5	6	3	0	0	0	0	0	0	0	199	0	0	10	0	0	3	0	0	0
0	0	0	2	0	1	2	0	2	3	0	0	137	3	5	7	3	0	0	0	0	0	0	0	185	0	0	5	0	0	3	0	0	0
0	0	0	4	0	0	1	0	1	2	0	0	38	0	1	6	1	0	0	0	0	0	0	0	62	0	0	2	0	0	1	0	0	0
0	0	0	5	1	0	1	0	1	1	0	0	26	1	4	4	1	0	0	0	0	0	0	0	42	0	0	2	0	0	1	0	0	0
0	0	0	1	0	0	1	0	1	1	0	0	21	1	4	4	1	0	0	0	0	0	0	0	31	0	0	2	0	0	0	0	0	0

Job Number & Name:	**12389 West Cambridge**
Client:	**Peter Brett**
Date:	**Thursday 20 October 2016**

reet Parking 57		Parking Area 58			Parking Area 59			Parking Area 60			Parking Area 61			On-Street Parking 62			On-Street Parking 63			On-Street Parking 64			On-Street Parking 65			On-Street Parking 66							
Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Vehicles	Permits	Contractor	Total	*Capacity*
0	**0**	**8**	**0**	**0**	**66**	**0**	**0**	**7**	**0**	**0**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1752**	**69**	**0**	**1752**	
0	0	0	0	0	12	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	484	11	24	**508**	*29%*
0	0	2	0	0	31	0	0	5	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	995	8	27	**1022**	*58%*
0	0	4	0	0	42	0	0	5	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1192	15	29	**1221**	*70%*
0	0	6	0	0	46	0	0	5	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1234	18	30	**1264**	*72%*
0	0	5	0	0	43	0	0	5	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1178	15	24	**1202**	*69%*
0	0	4	0	0	43	0	0	5	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1184	8	24	**1208**	*69%*
0	0	5	0	0	44	0	0	6	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1185	11	23	**1208**	*69%*
0	0	5	0	0	46	0	0	6	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1110	14	17	**1127**	*64%*
0	0	5	0	0	41	0	0	6	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	996	13	15	**1011**	*58%*
0	0	3	0	0	14	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	554	5	5	**559**	*32%*
0	0	1	0	0	6	0	0	4	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	443	8	7	**450**	*26%*
0	0	1	0	0	6	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255	3	8	**263**	*15%*

Appendix 8.2 – Car Parking Delivery Framework

PETER BRETT ASSOCIATES LLP

UNIVERSITY OF CAMBRIDGE

WEST CAMBRIDGE DEVELOPMENT

FRAMEWORK - CAR PARKING DELIVERY – Version 1

1. Introduction

1.1 This document forms the Car Parking Delivery Framework for West Cambridge Development.

1.2 It summarises the information for future car parking requirements to be submitted to the Joint Authorities on an agreed cyclic basis. This is to provide the Joint Authorities with certainty that the West Cambridge Development would deliver an appropriate level of car parking in a reasonable and timely manner reflecting the identified development programme.

1.3 The Car Parking Delivery Framework consists of the following sections:

- Background
- Proposed Car Parking provision
- Timescales
- Document Contents

2. Background

2.1 The University of Cambridge has submitted an outline planning application relating to the intensification of development of an extant site at West Cambridge for academic and commercial research, and various associated facilities providing a mix of teaching and research space.

2.2 The Proposed Development will achieve the University's Development Vision through a series of parameter plans and a broadly defined description. This will allow flexibility in the description of the development. This reflects a key aim of the Proposed Development, to build in flexibility into the planning consent, so that the University can respond to changes in academic and commercial demand over the next twenty years or so, without needing to revisit the outline planning permission.

2.3 The University is committed to delivering a high quality development. Under-provision of car parking within the Site could be detrimental to the street-scene, with "fly-parking" occurring across the area. Similarly, an over-generous provision would be equally likely to be detrimental to the sustainability credentials of the Development, with excessive numbers of car driver trips attracted by the easy car parking provision.

2.4 Similarly, to reflect that car use demand will decrease as the various transport mitigation measures are implemented as the Development progresses – such as public transport services increasing in frequency and coverage – and that non-car travel becomes easier, a less generous car parking provision will become less essential: it is proposed that the maximum car parking provision decreases towards the later phases of delivery of the West Cambridge Development. Any future reduction in car parking provision over time will need to be carefully managed and timed to follow wider transport improvements, and the University will need to ensure that any loss of provision reflects a demonstrable improvement in accessibility by non-car modes.

2.5 Whilst the Joint Authorities support this approach, they require certainty that the West Cambridge Development would deliver an appropriate level of car parking in a reasonable manner.

2.6 As such, the University has sought that this requirement be resolved by a planning condition referencing this Car Parking Delivery Framework, that such information be provided on a regular basis and to support each individual Reserved Matters application.

3. Car parking provision

3.1 The proposed maximum car parking standards to be applied at West Cambridge are summarised in Section 8 of the West Cambridge Development Transport Assessment.

3.2 These have been derived with initial reference to the maximum car parking standard applied at the adjacent North West Cambridge Development, and the current car parking patronage at West Cambridge. The proposed car parking maximum standards through the life of the West Cambridge Development are summarised in Table 1.

Table 1: Car Parking Maximum Provision Proposals

Land-Use	Development Phase	Car Parking Provision (Maxima)
Academic Research	Initial	1 car parking space per 4 staff
		No provision for students
	Later	1 car parking space per 5 staff
		No provision for students
Commercial Research	Initial	1 car parking space per 40m^2 GFA
	Later	1 car parking space per 70m^2 GFA

3.3 Using the above standards, the following car parking provision is identified, and compared to that consented in 1999:

Table 2: Car Parking Provision

Development Phase	Car Parking Provision (spaces)
Current Car Parking Provision (excluding Park and Cycle)	*1,571*
Stated Extant Consent Car Parking Provision	*3,150*
Initial Phase	2,570
Full Development	4,390

3.4 The University will review the car parking provision, and seek to reduce the provision as appropriate and in agreement with the Joint Authorities as West Cambridge progresses.

4. Timescales

4.1 A Car Parking Delivery document will be submitted:

i) in support of each Reserved Matters Application for all individual plots; and

ii) in the event of no Reserved Matters Applications being made for two years after the previous one until West Cambridge has completed to an agreed level.

5. Review document contents

5.1 The contents of the Car Parking Delivery review document will be scoped and agreed with the Joint Authorities before each submission to ensure that all aspects are responded to. It is anticipated to include:

i) Introduction – including:

- document control;
- the driver for this Car Parking Review;
- details of the Car Parking Review Scoping with the Joint Authorities;

Monitoring of the existing situation

ii) Existing Estate car park provision;

iii) Existing car park occupation. This will be informed with a “beat” survey to an agreed specification, undertaken throughout the day in question on an hourly basis, and will be undertaken within a year of the Review;

iv) Existing car park permit allocations;

v) General commentary on car parking conditions – including feedback from (inter alia):

- Cambridge City Council, the Local Planning Authority;
- local residents’ groups;
- the on-site Annual Travel Surveys;
- the Estate Management.

Changes to the Existing Development car parking provision:

vi) Temporary changes to the on-site car parking requirements, including:

- future building work on the existing car park provision;

- construction activity on the existing car park provision;
- update on the previously committed building floor space closures / occupation timescales;

vii) Long-term proposed changes to the on-site car parking requirements, including:

- completion of new car parking spaces;
- proposed building floor space changes;
- proposed amendments to the car parking provision;
- the car park management regime;

v) Accessibility car parking issues; and

vi) Construction car parking management proposals.

Version 1

31500 / NTN / GLC / JPH May 1st 2017

Appendix 11.1 - Assessment of Construction Movements

Summary of Assessment

11.1 The construction activities that generate the highest volume of daily trips normally relate to:

i) removal of material off-site;

ii) the construction of a carriageway; or

iii) the casting of foundations for a major building.

11.2 As the majority of these could occur during the Initial Phase, the peak construction movements generated during this phase have been considered.

11.3 It has been assumed that the following major elements of the Development will be constructed in Year 1 of the Initial Phase:

i) on-site earthworks and landscaping – including construction of balancing ponds, and excavation of building foundations;

ii) construction of the on-site drainage;

iii) construction of a secondary access road and at-grade car parking;

iv) an initial construction phase of a major building.

11.4 The traffic generation of the remainder of the Development to be implemented in other phases would be less.

11.5 As further activities could not occur simultaneously (for example, the construction of the secondary site access carriageway may prevent other construction activities on site that day), this assessment considers a realistic peak construction movement.

11.6 The movements generated by these activities are considered individually.

Earthworks

11.7 As there is no requirement for the construction of large noise bunds, nor is land available for landscaping, the material arising during excavation will need to be removed off-site. Until a contractor is appointed and the disposal site identified, it is uncertain unto where this material will be removed to.

11.8 This operation is likely to be programmed away from the winter months, to minimise the days lost to poor weather.

11.9 The daily movements are assumed to include:

i) fuel deliveries and maintenance - assumed to be 2 heavy vehicle trips per day;

ii) a total of ten heavy vehicles, serving two excavators, each making eight journeys per day – a total of 80 heavy movements per day;

iii) operatives' journeys to work trips - assumed to be 20 operatives, 10 car trips per day with 2 occupants per vehicle.

On-site drainage

11.10 The majority of the on-site drainage construction works are assumed to be undertaken during the first year. As on-site storage of materials will be limited, most of the drainage construction works are unlikely to generate high volumes of light or heavy vehicle movements on the surrounding highway network.

11.11 The daily movements are assumed to include:

i) deliveries of aggregate, pipe materials and concrete supplies for drainage chambers – assumed to be 4 heavy vehicle trips per day;

ii) operatives' journeys to work trips - assumed to be 8 operatives, 4 car trips per day with 2 occupants per vehicle.

Carriageway Construction

11.12 For the purposes of deriving a reasonable worst case assessment, it is assumed that there would be a total of 12 operatives on site, with one paving machine receiving deliveries every 10 minutes through the day for ten hours. The daily movements are assumed to include:

i) a total of 60 heavy vehicle trips delivering the bitumen;

ii) operatives' journeys to work trips - assumed to be 12 operatives, 6 car trips per day with 2 occupants per vehicle.

11.13 The number of days when the carriageway construction operation is on-going at full capacity and generating these higher levels of flow are anticipated to be limited due to the limited area of carriageway construction required. It is thought that these flows would be generated on carriageway construction work on around 10 days in total across the whole project.

Initial construction works to a major building

11.14 The main construction of the buildings is assumed to start after the first year. However, it has been assumed that initial groundworks would start to one building in the first year.

11.15 For the purposes of deriving a reasonable worst case assessment, the works are assumed to consist of the casting of an average 750mm slab, across an area of 2,000m^2. This base is assumed to be cast in 5 days.

11.16 it is assumed that there would be a total of 20 operatives on site, receiving concrete deliveries every 10 minutes through the day for ten hours. The daily movements are assumed to include:

i) a total of 50 heavy vehicle trips delivering the concrete (6m^3 per wagon);

ii) operatives' journeys to work trips (assumed to be 20 operatives, 10 car trips per day with 2 occupants per vehicle).

Total movements

11.17 As part of the Construction Access Strategy, a Construction Environment Management Plan (CEMP) will be prepared. The CEMP will set out the University's aim to reduce the transport impacts of the construction traffic servicing the Site, and the movements associated with construction waste. This CEMP will apply to all the individual construction sites within the Development, and will manage when activities generating significant levels of movement on the network may occur.

11.18 As such, the peak movements associated with each of the above activities will be managed: the University will manage when the carriageway and building construction peak delivery days may occur, only one of these may occur on one day.

11.19 As such, for the purposes of this assessment it is assumed that the CEMP would programme the works so that the initial construction works (the concrete casting) would not occur at the same time as the carriageway construction.

11.20 The assumed Initial Phase Peak Daily Construction traffic flows are summarised in Table 11.1:

Table 11.1 – Peak Daily Construction Movements

Activity	Max Light Vehicle Movts / day			Max Heavy Vehicle Movts / day			Max Total Vehicle Movts / day		
Earthworks	10	10	20	82	82	164	92	92	184
On-Site Drainage	4	4	8	4	4	8	8	8	16
Carriageway construction	6	6	12	60	60	120	66	66	132
Building construction	10	10	20	0	0	0	10	10	20
Total	**30**	**30**	**60**	**146**	**146**	**292**	**176**	**176**	**352**

11.21 These flows are used to assess the impact of the Development on the surrounding highway network.

Appendix 12.1 - Technical Note 7 – Summary of Transport Modelling to support the West Cambridge Application

TECHNICAL NOTE

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Job Name: West Cambridge Development

Job No: 31500

Note No: Technical Note 7a

Date: 17th February 2017

Prepared By: Darren Rawls / Tom Althorpe

Approved By: John Hopkins / Greg Callaghan

Subject: **Summary of Transport Modelling to support the West Cambridge Application.**

1. Introduction

1.1 This Technical Note 7 has been prepared by Peter Brett Associates LLP in support of the University of Cambridge's proposals for West Cambridge. It summarises the Transport modelling work undertaken by Peter Brett Associates to support the forthcoming application for West Cambridge, and is to be read in conjunction with the information provided on the supporting CD.

1.2 This Transport Model was originally developed in conjunction with the Highway Authorities – Cambridgeshire County Council and the Highways Agency (now operating as Highways England) - to assess development trips resulting from the adjacent North West Cambridge Development. It has since been expanded to include the West Cambridge site, as well as the additional modelling zones for other development sites in the wider Cambridge area.

1.3 The modelling process estimates trip numbers generated by the West Cambridge Development and other developments in the Cambridge area by combining a series of processes:

- the spreadsheet-based part of the modelling process produces trip matrices for different scenarios, transport modes and time periods;
- these matrices can then be assigned to the appropriate transport and development network in OmniTrans (the transport modelling software).

This information then enables the assessment of link flows and junction movement flows for these scenarios.

1.4 This Technical Note provides further details of the following model components:

- the Network and Zoning System:
  - Transport Network;
  - Zoning System;
- Spreadsheet Model:
  - Control Sheet;
  - Development Land-Use Data;
  - Housing Trip Generation;
  - Trip Generation for Non-Residential Land-Uses;
  - Distribution of Development Employment Trips;

- Distribution of Academic Research Trips;
- Distribution of Trips Generated by Residents within Developments;
- Distribution of Trips Generated by Other Development Land-Uses;
- Trip Matrices By Mode;
- West Cambridge Student Trips; and
- All Purpose Trip Matrices and Parking Constraints;

- Post-Processing of Trip Matrices.

2. Network and Zoning System

Transport Network

2.1 A detailed road network was developed for the wider Cambridge area, including all of South Cambridgeshire and parts of Essex and Hertfordshire.

2.2 The existing road network was extracted from a national digital road network (Navteq data) which includes measured link speeds from GPS systems for individual links in the network, enabling network distances and travel times to be calculated. The network is shown in Appendix 1.

Zoning System

2.3 Development is loaded onto the network by a series of zones. These zones were devised in GIS, based on Census single and multiple output areas in and around Cambridge. Outside of Cambridge, these areas broaden to single and multiple wards, with larger zones representing local authorities on the periphery of the zoning system.

2.4 In addition to the Census-based zones around the periphery of the model, a series of smaller zones were introduced for development areas, with multiple zones used for North West Cambridge and West Cambridge so that relatively short trips can be modelled sufficiently - typically by foot or bicycle:

- 12 zones are used to represent West Cambridge (107 to 118);
- 95 zones are used to represent the wider range of land uses at North West Cambridge (numbered 12 to 106);
- a further 16 zones are used to represent other development sites in the wider Cambridge area - such as NIAB (Darwin Green), Northstowe and Landbeach, using one zone each. These are referenced 1 to 11 and 201 to 205.

The Zoning system is also shown in Appendix 1.

2.5 The GIS files that constitute the base road network and zoning system were imported into Omnitrans, with additional foot and cycle-ways added to the local West Cambridge and North West Cambridge areas to form the base year (2015) network variant.

2.6 The variant was duplicated and the networks amended as appropriate, to form variants for years 2021 and 2031, including the addition and revision of internal development links. Zone-to-zone distance matrices were generated for each OmniTrans variant for use in the distribution and mode share stages of the process, within the spreadsheet-based model.

3. Spreadsheet-Based Model

3.1 The elements that form the Spreadsheet Model are considered individually.

Control sheet

3.2 This sheet enables the user to set the required criteria for the model, so that the output trip matrices will reflect the choices made on this sheet.

3.3 The key choices for the West Cambridge Development Transport Assessment are the choice of the following:

- 2016 Base
- 2021 Do Minimum
- 2021 Do Something
- 2031 Do Minimum
- 2031 Do Something

3.4 The scenario and distance matrices from surrounding developments correspond to the choice of West Cambridge scenario.

3.5 There are six time period options available in the model, with output from the one-hour AM and PM peak options being assessed as part of this modelling work.

Development Land Use Data

3.6 The assembly and calculation of land use data for all the development zones in the model reflects the selections made in the Control sheet for:

- 'Housing';
- 'Other Uses'; and
- 'Wider Area Devts'.

These sheets are considered individually.

3.7 The Sheet '**Housing**' makes an estimated disaggregation of the number of housing units in each of the development zones into different housing types. This enables an estimate of the number of residents in each zone within each of three age bands, reflecting their different economic activity:

- 0 - 16 years (i.e., those in full-time education);
- 17 – 64 years (those more economically active); and
- 65 + years (those of a retirement age).

The housing type split for North West Cambridge was advised by the University.

3.8 The Sheet '**Other Uses**' assembles the non-housing data for each of the development zones In a similar manner to Sheet '**Housing**', according to user selections. The 'West Cambridge' section at the foot of this sheet shows the gross floor areas allocated to each modelling zone for each of the scenarios:

- academic research;
- commercial research; and
- nursery land uses.

3.9 The disaggregation into zones for West Cambridge has been derived from data within the West Cambridge Capacity Schedule (Version 5), an external file that details development information for each plot on the site. A separate check has confirmed that the total gross floor areas for each land use across the whole site are correct for each scenario. To the right hand side of each of the blocks of data on this sheet are collated the data used for the particular model run, according to the selections made in the Control sheet.

3.10 The Sheet '**Wider Area Devts**' contains all of the incoming wider Cambridge area development information, including the assumed likelihood which is used in the corresponding user option. The sites have been assigned zones, then the forecast number of housing units and jobs are collated by zone at the foot of this sheet for the options selected by the user.

Housing Trip Generation

3.11 The Sheet '**Housing Trip Gen**' calculates the number of trips generated by the residential population of each development zone, for each of the three age groups, for the scenario and time period selected in the Control sheet. The population data is carried across from the Sheet '**Housing'**.

3.12 Reflecting standard practice, trip numbers are calculated for home-to-purpose and purpose-to-home, for each of the following six trip purposes:

- Work (and Employers' Business);
- Education;
- Shop – Food;
- Shop – Non-Food;
- Escort Education; and
- Other.

3.13 The residential trip numbers are calculated using trip rates derived from the 2016 National Travel Survey (NTS) data, presented in Sheet '**NTS Rates**' for:

- the required age groups;
- time periods; and
- trip purposes.

3.14 The all-modes person trip rates have been extracted from the NTS dataset using appropriate criteria; for surveyed households within an urban area (of 25K+ population), excluding London, using Monday to Friday trips, excluding August trips.

Trip Generation for Non-Residential Land Uses

3.15 The Sheet '**Other Trip Gen**' calculates the number of trips generated by each of the non-residential land uses in each development zone, for each scenario and time period selected in the Control sheet. The land use data is carried across from the Sheet '**Other Uses**'.

3.16 Trip numbers are calculated for all major land uses, including those existing and proposed for the West Cambridge site. The trip rates for each of the land uses are in Sheet '**Other Rates**' and have been assembled from various sources:

- Academic Research - derived from person trip survey data undertaken at the Department of Material Sciences and Metallurgy (DMSM) Building at West Cambridge;
- Commercial Research - trip rates from a synthesised 12 hour data set has been calculated for Commercial Research assessed with reference to four recent Commercial Development applications as follows:
    - Cambridge Biomedical Campus – January 2016;
    - AstraZeneca – October 2014;
    - Abcam – January 2016; and
    - CCL Phase 7 Cambridge Science Park – February 2016
- Commercial - in the wider area development zones - TRICS trip rate for Office per employee;
- for all Other land uses – use has been made of the appropriate TRICS trip rates.

Distribution of Development Employment Trips

3.17 The total number of trips made by people commuting to / from employment in each development zone (excluding academic research) is estimated in Sheet '**Other Trip Gen**' and distributed in the Sheet '**Employment**'.

3.18 It is assumed that for each of the trips generated by the 'Other' land uses (calculated within Sheet '**Other Trip Gen**'), a proportion of these will be commuting trips made by employees at each of these development land uses.

3.19 Within Sheet '**Employment**' a matrix of trips for people arriving at employment in the development zones is calculated by distributing the generated arrivals (column totals) across all rows representing the residential origins of the trips.

3.20 While the destination zones (columns) are development zones only, the origin zones (rows) are the development and non-development zones, distributed using a matrix of weights calculated in Sheet '**Work Weights**'. This matrix of weights is calculated using a gravity modelling approach - using the number of residential units in each zone as the attraction quantity and a distance weight for each distance band, calculated using Census journey-to-work data, as the distance decay component.

3.21 Using a similar method, a matrix of trips for people departing from employment in development zones is calculated by distributing the generated departures (row totals) across all columns representing the residential destinations of the trips. In this case, the origin zones are development zones only, and the destination zones are development and non-development zones, but the same matrix of weights can be used (these weights are transposed within this matrix).

Distribution of Academic Research Trips

3.22 The numbers of academic research trips generated by each development zone (calculated in Sheet '**Other Trip Gen**') are distributed within Sheet '**Acad Res**' to form a matrix of trips arriving at academic research employment – and Similarly, a matrix of trips departing from academic research employment.

3.23 The distribution for these trips, located in Sheet '**Acad Res Weights**', is based on a survey of University of Cambridge staff working at the West Cambridge site in 2016. The distribution included development zones at the residential end by calculating the overall number of staff per residential unit, from the survey (separately for staff resident within Cambridge and staff resident outside Cambridge), and applying these rates to the residential units forecast for the development zones.

Distribution of Trips Generated by Residents within Developments

3.24 The trips generated by the residential content of each development zone (in Sheet '**Housing Trip Gen**') are distributed separately for each trip purpose to form separate home-to-purpose and purpose-to-home matrices. The resulting matrices are in Sheets:

- '**Resid Work**';
- '**Resid Educ**';
- '**Resid Shopping**'; and
- '**Resid Other**'.

3.25 These are calculated using a gravity modelling approach using matrices of weights within sheets:

- '**Work Weights**';
- '**Educ Weights**';
- '**Shop Weights**'; and
- '**Resid Other Weights**' respectively.

3.26 For each development zone, the residential work trips distributed in Sheet '**Resid Work**' have all the trips made by residents employed in the same development zone removed so as not to double-count these trips - these have already been accounted for and distributed in Sheet '**Employment'**. The remainder are distributed using employment places as the attraction quantity, distributed across the workplaces of non-development zones only.

3.27 The residential Education trips are processed separately for the 0-16 age group and the 17+ age group, with separate trip matrices being calculated for each group, using distinct trip weights:

- half of the education trips made by age 0-16 are distributed using primary school locations as the attraction quantity in the gravity model;
- the other half of the education trips made by age 0-16 are distributed using secondary school locations; and
- the education trips made by the 17+ age group are distributed using the locations of tertiary education providers as the attraction quantity.

3.28 The Shopping and Other trips made by the developments' residential population are distributed using a similar, gravity-modelling approach to the Work and Education trips. The residential Other trips use a combination of household units and workplaces as the attraction quantity.

3.29 Each of the weighting matrices use a matrix of distance bands for the distance element of the gravity model, which can be found in Sheet '**Distances**'. The distance bands are calculated using the distance matrices that have been generated in OmniTrans, for the network variant appropriate for the scenario selected in the Control sheet.

Distribution of Trips Generated by Other Development Land Uses

3.30 Retail trips generated by the retail facilities within development zones – especially for North West Cambridge - are distributed within Sheet '**Devt Retail**'. The work trips to and from these facilities are not included in the trip numbers - they are counted as part of the development employment trips. The distribution of trips made by people using the West Cambridge sports facilities is calculated within Sheet '**Hotel etc**', in addition to the NWC GP surgery's trip distribution.

Trip Matrices by Mode

3.31 The all-mode person trip matrices resulting from the trip distribution process (described above) are disaggregated into matrices by transport mode in the series of '**ByMode**' sheets.

3.32 In each sheet:

- the first stage is the calculation of pedestrian and cycle matrices. For each cell in each all-mode matrix, the proportion travelling on foot and by bicycle is determined using the distance band for the trips in conjunction with the appropriate table of walking and cycling proportions, by band, for each broad trip purpose, found in Sheet '**WalkCyc**'. In this sheet, the non-Cambridge-specific tables are derived from NTS data for each trip purpose, which are then adjusted using Cambridge-specific Census data. The proportion of academic research trips walking and cycling, by distance band, is derived from the 2016 University of Cambridge staff data;

- once these walking and cycling trips are removed, for each trip purpose the matrix of remaining trips is further split into rail, bus and other-mode (including car) trip matrices;

- the proportion travelling by rail and bus are determined using matrices of proportions by rail and by bus, in Sheet '**RailBus**'. For work-related trips the matrices are calculated using Census 2011 journey-to-work data by mode, and for other trip purposes the same work trip matrices of rail and bus shares are used, but adjusted for other purposes using factors calculated using NTS data;

- once the public transport trip matrices have been calculated, the remainder consists of car drivers, plus car passengers and any other modes. The proportion of this remainder that is car-driver is determined using the corresponding NTS split, as given in Sheet '**CarDrive**' for each trip purpose. This enables the calculation of a car-driver trip matrix for each trip purpose, which is equivalent to vehicle trips.

West Cambridge Student Trips

3.33 The number of students travelling to attend West Cambridge academic facilities is estimated in Sheet '**Students**' for each scenario and time period. The necessary data - such as the student population and the required cycling provision which is used to calculate matrices of student trips by bicycle (majority mode), on-foot and by bus - has been obtained from the West Cambridge Capacity Schedule. The distribution of the student trips is estimated using the location of each of the university colleges and an estimate of their overall student numbers.

All-Purpose Trip Matrices and Parking Constraints

3.34 The trip matrices by mode for each of the trip purposes are aggregated together in Sheet '**ByMode All**'. This contains a matrix of development trips for each main transport mode for all trip purposes combined, for the scenario and time period selected in the Control sheet.

3.35 Each matrix is used to produce a summary of the total trips arriving and departing from each main development area; calculated in Sheet '**Summary**'.

3.36 The Sheet '**Parking Constraints**' presents an estimate of the daily maximum parking accumulation across the West Cambridge site, based on the demand for parking output from the model. This calculation uses the net gain in vehicles during the 7-10am time period, plus an extrapolation to account for the post-10am accumulation, using the trip rates' day profiles.

3.37 For each scenario, when the desired maximum parking accumulation is compared with the forecast overall parking provision, then the 2021 and 2031 Do-Something scenarios show a demand for parking that exceeds the provision and parking constraints are required. For each of these scenarios there is a separate file of parking constrained matrices for the AM and PM peaks - file '**Parking Constrained Results – 2021/31 DS.xlsx**'.

3.38 Processing the academic research and the commercial (and other) parking separately, the factor by which the demand for parking exceeds the parking provision is used to reduce the car-driver matrices and the excess drivers in that time period are added to the matrices for the other modes (pro rata according to mode share).

Output

3.39 The Summary Results tables of all West Cambridge site arrivals and departures for all modes and scenarios, for AM and PM peaks, including constrained results (where required), is presented in the file '**Results from Model 300316.xlsx**'.

4. Post Processing of Trip Matrices

4.1 The vehicle (car driver) matrices of development trips, output from the spreadsheet model for each scenario, are imported into OmniTrans and assigned to the appropriate network.

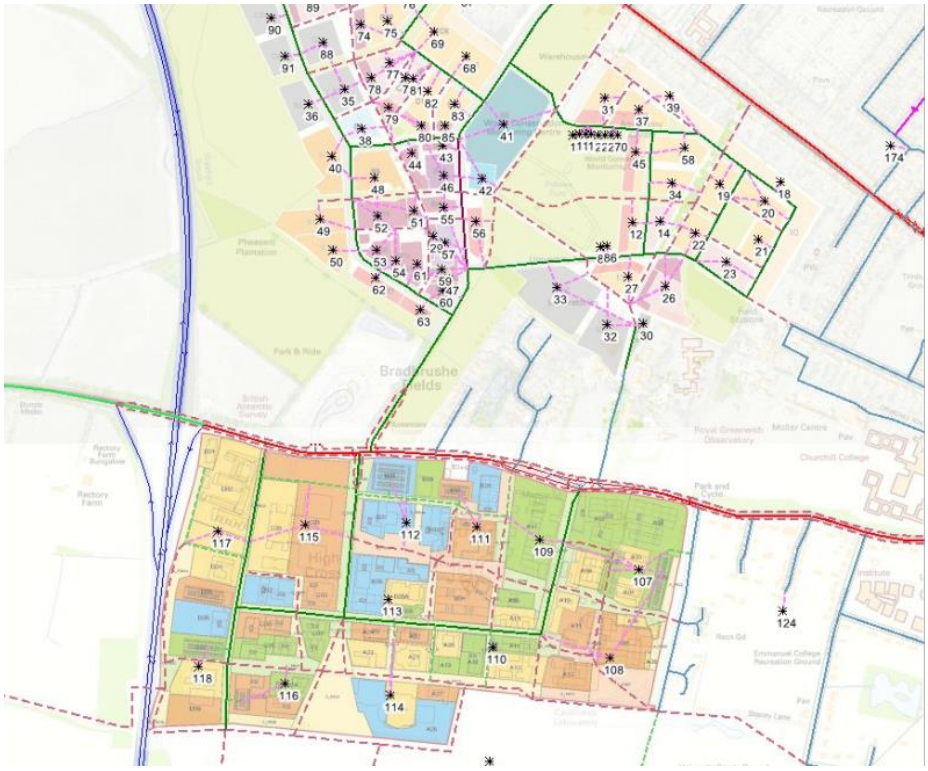
4.2 OmniTrans is able to display the loads on links and vehicle numbers making junction movements, by way of bandwidth plots or cordon matrices for more complex junctions. An example is shown in Appendix 2.

4.3 For any given set of links and junctions that require this information, vehicle numbers are transferred into a spreadsheet where the Year 2015 flows can be subtracted from each of the future year scenario's flows.

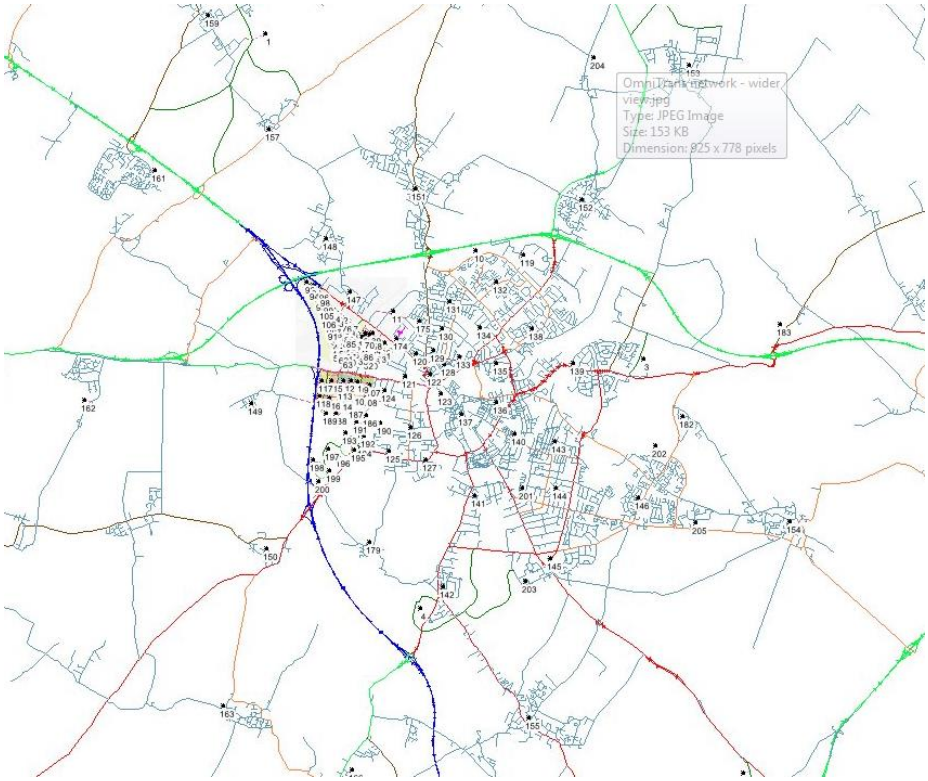
4.4 This net gain in vehicles for each future scenario above 2015 can be added to the 2015 Base (observed) flows to provide the total flows. These are then used in the detailed impact assessment – including link and junction modelling, and providing the flows to advise the Acoustics and Air Quality Assessments.

Appendix 1 – OmniTRANS Network

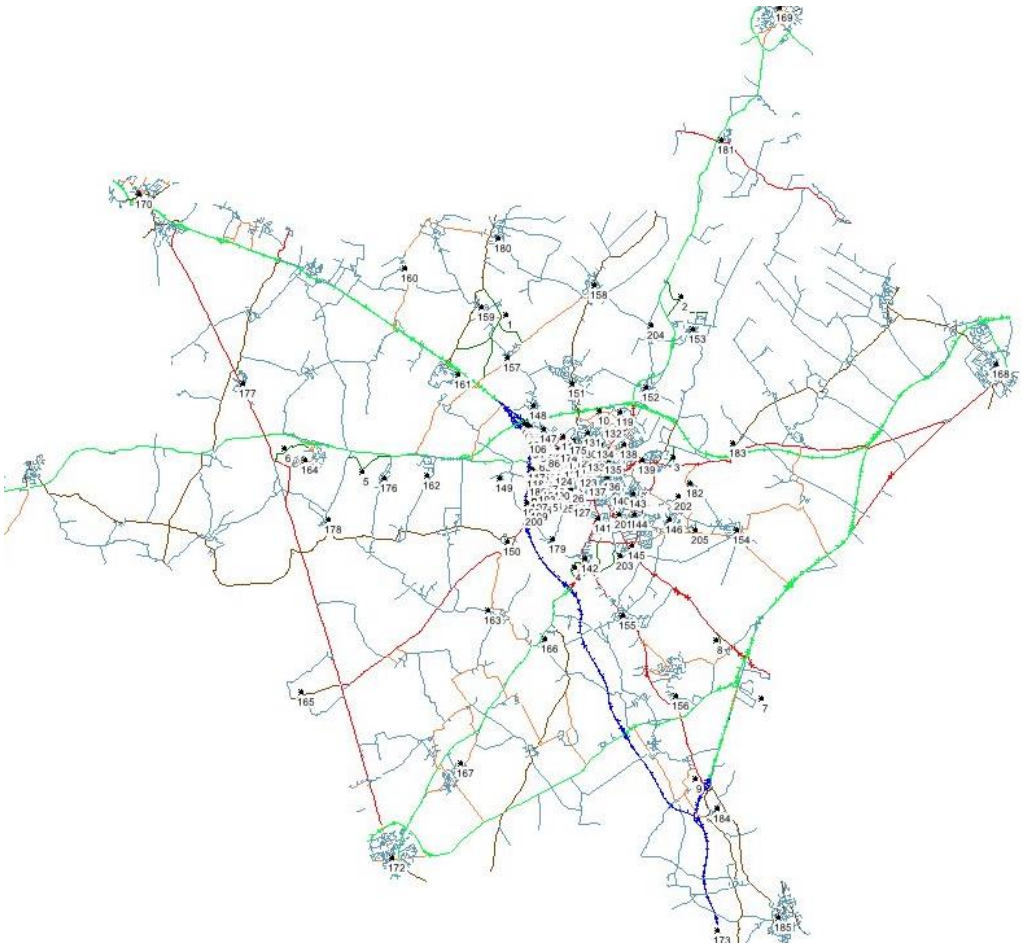
Local Area



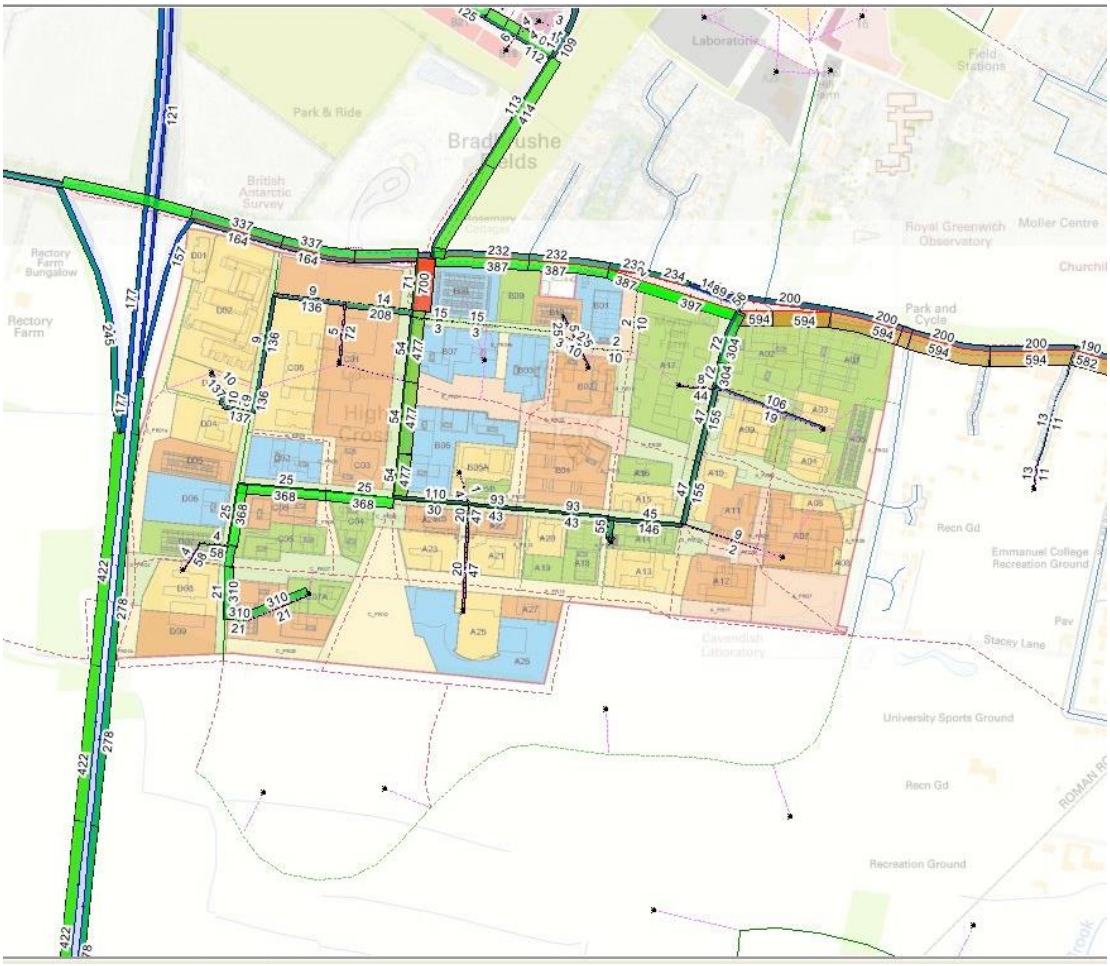
Cambridge Area



Model Area



Appendix 2 – Example of OmniTRANS Output



Appendix 13.1 – Network flows – 2021 Do Minimum

No.	Link	2021 Do Minimum	
		AM	PM
1.0	M11 - J12 - J13 - Nbd	3,667	3,735
1.0	M11 - J12 - J13 - Sbd	3,686	3,738
1.1	M11 J13 -J14 - Nbd	2,322	2,977
1.1	M11 J13 -J14 - Sbd	2,722	2,509
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Nbd	1,560	2,206
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Sbd	2,201	1,634
1.3	M11 J13 off-slip - Nbd	1,102	790
1.3	M11 J13 on-slip - Sbd	465	994
2.0	A14 West of J30 (Bar Hill) - Ebd	3,821	3,441
2.0	A14 West of J30 (Bar Hill) - Wbd	3,159	4,368
2.1	A14 North West of M11 J14 - Ebd	3,973	3,660
2.1	A14 North West M11 J14 - Wbd	3,324	4,257
2.2	A14 West of J32 Interchange - Ebd	3,811	3,772
2.2	A14 West of J32 Interchange - Wbd	3,768	3,818
2.3	A428 -West of M11 J14 - Ebd	1,600	753
2.3	A428 - West of M11 J14 - Wbd	786	1,233
3.0	A1303 East of Madingley Mulch R'bout Ebd	563	582
3.0	A1303 East of Madingley Mulch R'bout Wbd	568	1,284
3.1	Madingley Rd - East of Cambridge Rd Crossroads Wbd	538	1,192
3.1	Madingley Rd - East of Cambridge Rd Crossroads Ebd	739	564
3.2	Madingley Rd on Over Bridge M11 Ebd	1,355	618
3.2	Madingley Rd on Over Bridge M11 Wbd	200	705
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Ebd	1,338	600
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Wbd	429	1,357
3.4	Madingley Rd - West of P&R Access Wbd	429	1,357

No.	Link	2021 Do Minimum	
		AM	PM
3.4	Madingley Rd - West of P&R Access Ebd	1,338	600
3.5	Madingley Rd - East of P&R Access Wbd	476	1,165
3.5	Madingley Rd - East of P&R Access Ebd	1,197	644
3.6	Madingley Rd - East of Proposed High Cross Access Ebd	1,008	677
3.6	Madingley Rd - East of Proposed High Cross Access Wbd	667	925
3.7	Madingley Rd - East of JJ Thomson Ave Ebd	1,002	1,000
3.7	Madingley Rd - East of JJ Thomson Ave Wbd	957	937
3.8	Madingley Rd - East of Clerk Maxwell Rd Ebd	914	1,036
3.8	Madingley Rd - East of Clerk Maxwell Rd Wbd	999	867
3.9	Madingley Rd - East of Storey's Way Ebd	847	931
3.9	Madingley Rd - East of Storey's Way Wbd	1,033	803
3.10	Madingley Rd - East of Grange Road Ebd	836	921
3.10	Madingley Rd - East of Grange Road Wbd	1,024	791
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Ebd	935	781
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Wbd	794	875
3.12	Northampton St - West of Pound Hill Ebd	531	838
3.12	Northampton St - West of Pound Hill Wbd	729	665
4.0	Huntingdon Rd - West of Proposed NWC HRW Access NWbd	465	976
4.0	Huntingdon Rd - West of Proposed NWC HRW Access SEbd	666	484
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College NWbd	396	722
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College SEbd	395	398
4.2	Huntingdon Rd - East of NWC HRW Access NWbd	591	1,182
4.2	Huntingdon Rd - East of NWC HRW Access SEbd	816	723
4.3	Huntingdon Rd - East of Darwin Green Access NWbd	592	1,255
4.3	Huntingdon Rd - East of Darwin Green Access SEbd	1,130	740
4.4	Huntingdon Rd - East of Storey's Way NWbd	572	1,137
4.4	Huntingdon Rd - East of Storey's Way SEbd	1,006	737

No.	Link	2021 Do Minimum	
		AM	PM
5.0	Barton Rd - West of Grantchester Rd Ebd	1,129	509
5.0	Barton Rd - West of Grantchester Rd Wbd	313	978
5.1	Barton Rd - East of Grantchester Rd Ebd	632	457
5.1	Barton Rd - East of Grantchester Rd Wbd	292	936
6.0	Queen's Rd - North of West Rd Nbd	552	784
6.0	Queen's Rd - North of West Rd Sbd	895	624
7.0	Histon Road - South of A14 Nbd	1,088	1,827
7.0	Histon Road - South of A14 Sbd	2,011	1,384
8.0	Grange Rd - South of Madingley Rd Nbd	208	217
8.0	Grange Rd - South of Madingley Rd Sbd	335	165
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Ebd	210	70
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Wbd	86	202
10.0	Girton Rd - North of Huntingdon Rd Nbd	153	378
10.0	Girton Rd - North of Huntingdon Rd Sbd	384	227
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Nbd	14	105
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Sbd	107	33
11.1	Proposed Madingley Rd West Access to NWC Nbd	149	634
11.1	Proposed Madingley Rd West Access to NWC Sbd	589	240
11.2	Proposed Huntingdon Rd West Access to NWC Nbd	69	254
11.2	Proposed Huntingdon Rd West Access to NWC Sbd	271	86
11.3	Proposed Huntingdon Rd East Access to NWC Sbd	197	257
11.3	Proposed Huntingdon Rd East Access to NWC Nbd	193	276
12.0	Western Access to Madingley Rd Nbd	0	0
12.0	Western Access to Madingley Rd Sbd	0	0
12.1	High Cross Access to Madingley Rd Nbd	143	789
12.1	High Cross Access to Madingley Rd Sbd	970	144
12.2	JJ Thomson Ave Access to Madingley Rd Nbd	114	335

No.	Link	2021 Do Minimum	
		AM	PM
12.2	JJ Thomson Ave Access to Madingley Rd Sbd	327	98
12.3	Clerk Maxwell Rd Nbd – South of Car Park Access	14	34
12.3	Clerk Maxwell Rd Sbd – South of Car Park Access	38	12
12.4	Clerk Maxwell Rd Sbd – North of Car Park Access	119	20
12.4	Clerk Maxwell Rd Nbd – North of Car Park Access	24	103

Appendix 13.2 – Network Flows 2021 Do Something

No.	Link	2021 Do Something	
		AM	PM
1.0	M11 - J12 - J13 - Nbd	3,665	3,729
1.0	M11 - J12 - J13 - Sbd	3,679	3,736
1.1	M11 J13 -J14 - Nbd	2,317	2,974
1.1	M11 J13 -J14 - Sbd	2,719	2,503
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Nbd	1,556	2,203
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Sbd	2,198	1,630
1.3	M11 J13 off-slip - Nbd	1,105	787
1.3	M11 J13 on-slip - Sbd	461	996
2.0	A14 West of J30 (Bar Hill) - Ebd	3,828	3,439
2.0	A14 West of J30 (Bar Hill) - Wbd	3,157	4,379
2.1	A14 North West of M11 J14 - Ebd	3,973	3,649
2.1	A14 North West M11 J14 - Wbd	3,312	4,263
2.2	A14 West of J32 Interchange - Ebd	3,808	3,767
2.2	A14 West of J32 Interchange - Wbd	3,762	3,815
2.3	A428 -West of M11 J14 - Ebd	1,599	752
2.3	A428 - West of M11 J14 - Wbd	785	1,233
3.0	A1303 East of Madingley Mulch R'bout Ebd	562	580
3.0	A1303 East of Madingley Mulch R'bout Wbd	566	1,286
3.1	Madingley Rd - East of Cambridge Rd Crossroads Wbd	535	1,187
3.1	Madingley Rd - East of Cambridge Rd Crossroads Ebd	730	561
3.2	Madingley Rd on Over Bridge M11 Ebd	1,349	612
3.2	Madingley Rd on Over Bridge M11 Wbd	197	701
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Ebd	1,334	595
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Wbd	424	1,356
3.4	Madingley Rd - West of P&R Access Wbd	478	1,384

No.	Link	2021 Do Something	
		AM	PM
3.4	Madingley Rd - West of P&R Access Ebd	1,374	608
3.5	Madingley Rd - East of P&R Access Wbd	498	1,198
3.5	Madingley Rd - East of P&R Access Ebd	1,241	664
3.6	Madingley Rd - East of Proposed High Cross Access Ebd	1,176	685
3.6	Madingley Rd - East of Proposed High Cross Access Wbd	578	1,053
3.7	Madingley Rd - East of JJ Thomson Ave Ebd	996	797
3.7	Madingley Rd - East of JJ Thomson Ave Wbd	688	898
3.8	Madingley Rd - East of Clerk Maxwell Rd Ebd	882	934
3.8	Madingley Rd - East of Clerk Maxwell Rd Wbd	868	833
3.9	Madingley Rd - East of Storey's Way Ebd	815	830
3.9	Madingley Rd - East of Storey's Way Wbd	904	769
3.10	Madingley Rd - East of Grange Road Ebd	806	824
3.10	Madingley Rd - East of Grange Road Wbd	899	758
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Ebd	909	698
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Wbd	697	849
3.12	Northampton St - West of Pound Hill Ebd	513	768
3.12	Northampton St - West of Pound Hill Wbd	659	650
4.0	Huntingdon Rd - West of Proposed NWC HRW Access NWbd	461	985
4.0	Huntingdon Rd - West of Proposed NWC HRW Access SEbd	671	481
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College NWbd	393	721
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College SEbd	394	396
4.2	Huntingdon Rd - East of NWC HRW Access NWbd	557	1,174
4.2	Huntingdon Rd - East of NWC HRW Access SEbd	807	695
4.3	Huntingdon Rd - East of Darwin Green Access NWbd	571	1,247
4.3	Huntingdon Rd - East of Darwin Green Access SEbd	1,120	722
4.4	Huntingdon Rd - East of Storey's Way NWbd	565	1,131
4.4	Huntingdon Rd - East of Storey's Way SEbd	999	732

No.	Link	2021 Do Something	
		AM	PM
5.0	Barton Rd - West of Grantchester Rd Ebd	1,128	505
5.0	Barton Rd - West of Grantchester Rd Wbd	312	977
5.1	Barton Rd - East of Grantchester Rd Ebd	631	453
5.1	Barton Rd - East of Grantchester Rd Wbd	292	935
6.0	Queen's Rd - North of West Rd Nbd	522	771
6.0	Queen's Rd - North of West Rd Sbd	883	609
7.0	Histon Road - South of A14 Nbd	1,085	1,837
7.0	Histon Road - South of A14 Sbd	2,019	1,381
8.0	Grange Rd - South of Madingley Rd Nbd	203	215
8.0	Grange Rd - South of Madingley Rd Sbd	333	161
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Ebd	209	70
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Wbd	86	201
10.0	Girton Rd - North of Huntingdon Rd Nbd	150	365
10.0	Girton Rd - North of Huntingdon Rd Sbd	368	224
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Nbd	12	93
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Sbd	92	32
11.1	Proposed Madingley Rd West Access to NWC Nbd	139	576
11.1	Proposed Madingley Rd West Access to NWC Sbd	514	230
11.2	Proposed Huntingdon Rd West Access to NWC Nbd	68	264
11.2	Proposed Huntingdon Rd West Access to NWC Sbd	276	85
11.3	Proposed Huntingdon Rd East Access to NWC Sbd	149	247
11.3	Proposed Huntingdon Rd East Access to NWC Nbd	181	237
12.0	Western Access to Madingley Rd Nbd	0	0
12.0	Western Access to Madingley Rd Sbd	0	0
12.1	High Cross Access to Madingley Rd Nbd	109	620
12.1	High Cross Access to Madingley Rd Sbd	656	113
12.2	JJ Thomson Ave Access to Madingley Rd Nbd	77	233

No.	Link	2021 Do Something	
		AM	PM
12.2	JJ Thomson Ave Access to Madingley Rd Sbd	288	50
12.3	Clerk Maxwell Rd Nbd – South of Car Park Access	10	4
12.3	Clerk Maxwell Rd Sbd – South of Car Park Access	3	8
12.4	Clerk Maxwell Rd Sbd – North of Car Park Access	253	34
12.4	Clerk Maxwell Rd Nbd – North of Car Park Access	42	217

Appendix 13.3 – Network flows – 2031 Do Minimum

No.	Link	2031 Do Minimum	
		AM	PM
1.0	M11 - J12 - J13 - Nbd	3,705	3,924
1.0	M11 - J12 - J13 - Sbd	3,882	3,826
1.1	M11 J13 -J14 - Nbd	2,350	3,100
1.1	M11 J13 -J14 - Sbd	2,850	2,564
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Nbd	1,588	2,316
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Sbd	2,309	1,686
1.3	M11 J13 off-slip - Nbd	1,112	855
1.3	M11 J13 on-slip - Sbd	534	1,026
2.0	A14 West of J30 (Bar Hill) - Ebd	3,868	3,479
2.0	A14 West of J30 (Bar Hill) - Wbd	3,190	4,421
2.1	A14 North West of M11 J14 - Ebd	4,200	3,843
2.1	A14 North West M11 J14 - Wbd	3,446	4,501
2.2	A14 West of J32 Interchange - Ebd	3,915	3,910
2.2	A14 West of J32 Interchange - Wbd	3,890	3,922
2.3	A428 -West of M11 J14 - Ebd	1,638	814
2.3	A428 - West of M11 J14 - Wbd	846	1,268
3.0	A1303 East of Madingley Mulch R'bout Ebd	621	636
3.0	A1303 East of Madingley Mulch R'bout Wbd	612	1,341
3.1	Madingley Rd - East of Cambridge Rd Crossroads Wbd	582	1,249
3.1	Madingley Rd - East of Cambridge Rd Crossroads Ebd	795	617
3.2	Madingley Rd on Over Bridge M11 Ebd	1,409	710
3.2	Madingley Rd on Over Bridge M11 Wbd	232	736
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Ebd	1,361	674
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Wbd	498	1,402
3.4	Madingley Rd - West of P&R Access Wbd	920	1,318

No.	Link	2031 Do Minimum	
		AM	PM
3.4	Madingley Rd - West of P&R Access Ebd	1,161	977
3.5	Madingley Rd - East of P&R Access Wbd	967	1,126
3.5	Madingley Rd - East of P&R Access Ebd	1,020	1,021
3.6	Madingley Rd - East of Proposed High Cross Access Ebd	1,069	687
3.6	Madingley Rd - East of Proposed High Cross Access Wbd	670	1,002
3.7	Madingley Rd - East of JJ Thomson Ave Ebd	1,042	1,015
3.7	Madingley Rd - East of JJ Thomson Ave Wbd	965	985
3.8	Madingley Rd - East of Clerk Maxwell Rd Ebd	953	1,051
3.8	Madingley Rd - East of Clerk Maxwell Rd Wbd	1,007	914
3.9	Madingley Rd - East of Storey's Way Ebd	886	946
3.9	Madingley Rd - East of Storey's Way Wbd	1,040	850
3.10	Madingley Rd - East of Grange Road Ebd	873	938
3.10	Madingley Rd - East of Grange Road Wbd	1,036	834
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Ebd	973	797
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Wbd	811	918
3.12	Northampton St - West of Pound Hill Ebd	539	896
3.12	Northampton St - West of Pound Hill Wbd	784	684
4.0	Huntingdon Rd - West of Proposed NWC HRW Access NWbd	516	1,042
4.0	Huntingdon Rd - West of Proposed NWC HRW Access SEbd	719	551
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College NWbd	448	781
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College SEbd	447	464
4.2	Huntingdon Rd - East of NWC HRW Access NWbd	668	1,299
4.2	Huntingdon Rd - East of NWC HRW Access SEbd	934	821
4.3	Huntingdon Rd - East of Darwin Green Access NWbd	617	1,402
4.3	Huntingdon Rd - East of Darwin Green Access SEbd	1,290	793
4.4	Huntingdon Rd - East of Storey's Way NWbd	595	1,278
4.4	Huntingdon Rd - East of Storey's Way SEbd	1,162	787

No.	Link	2031 Do Minimum	
		AM	PM
5.0	Barton Rd - West of Grantchester Rd Ebd	1,142	515
5.0	Barton Rd - West of Grantchester Rd Wbd	317	990
5.1	Barton Rd - East of Grantchester Rd Ebd	645	464
5.1	Barton Rd - East of Grantchester Rd Wbd	296	948
6.0	Queen's Rd - North of West Rd Nbd	574	881
6.0	Queen's Rd - North of West Rd Sbd	985	657
7.0	Histon Road - South of A14 Nbd	1,156	1,873
7.0	Histon Road - South of A14 Sbd	2,045	1,455
8.0	Grange Rd - South of Madingley Rd Nbd	208	225
8.0	Grange Rd - South of Madingley Rd Sbd	342	167
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Ebd	211	70
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Wbd	87	203
10.0	Girton Rd - North of Huntingdon Rd Nbd	157	382
10.0	Girton Rd - North of Huntingdon Rd Sbd	387	230
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Nbd	31	215
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Sbd	219	69
11.1	Proposed Madingley Rd West Access to NWC Nbd	164	759
11.1	Proposed Madingley Rd West Access to NWC Sbd	702	272
11.2	Proposed Huntingdon Rd West Access to NWC Nbd	69	261
11.2	Proposed Huntingdon Rd West Access to NWC Sbd	272	87
11.3	Proposed Huntingdon Rd East Access to NWC Sbd	248	349
11.3	Proposed Huntingdon Rd East Access to NWC Nbd	284	341
12.0	Western Access to Madingley Rd Nbd	75	469
12.0	Western Access to Madingley Rd Sbd	696	81
12.1	High Cross Access to Madingley Rd Nbd	70	320
12.1	High Cross Access to Madingley Rd Sbd	268	65
12.2	JJ Thomson Ave Access to Madingley Rd Nbd	111	328

No.	Link	2031 Do Minimum	
		AM	PM
12.2	JJ Thomson Ave Access to Madingley Rd Sbd	323	96
12.3	Clerk Maxwell Rd Nbd – South of Car Park Access	14	34
12.3	Clerk Maxwell Rd Sbd – South of Car Park Access	38	12
12.4	Clerk Maxwell Rd Sbd – North of Car Park Access	119	20
12.4	Clerk Maxwell Rd Nbd – North of Car Park Access	24	103

Appendix 13.4 – Network Flows 2031 Do Something

No.	Link	2031 Do Something	
		AM	PM
1.0	M11 - J12 - J13 - Nbd	3,891	3,926
1.0	M11 - J12 - J13 - Sbd	3,885	4,001
1.1	M11 J13 -J14 - Nbd	2,343	3,093
1.1	M11 J13 -J14 - Sbd	2,841	2,557
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Nbd	1,583	2,309
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Sbd	2,302	1,681
1.3	M11 J13 off-slip - Nbd	1,305	865
1.3	M11 J13 on-slip - Sbd	545	1,208
2.0	A14 West of J30 (Bar Hill) - Ebd	4,095	3,491
2.0	A14 West of J30 (Bar Hill) - Wbd	3,206	4,613
2.1	A14 North West of M11 J14 - Ebd	4,453	3,847
2.1	A14 North West M11 J14 - Wbd	3,453	4,717
2.2	A14 West of J32 Interchange - Ebd	3,907	3,901
2.2	A14 West of J32 Interchange - Wbd	3,880	3,915
2.3	A428 -West of M11 J14 - Ebd	1,636	811
2.3	A428 - West of M11 J14 - Wbd	843	1,266
3.0	A1303 East of Madingley Mulch R'bout Ebd	695	638
3.0	A1303 East of Madingley Mulch R'bout Wbd	615	1,409
3.1	Madingley Rd - East of Cambridge Rd Crossroads Wbd	584	1,317
3.1	Madingley Rd - East of Cambridge Rd Crossroads Ebd	871	619
3.2	Madingley Rd on Over Bridge M11 Ebd	1,679	723
3.2	Madingley Rd on Over Bridge M11 Wbd	235	806
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Ebd	1,633	689
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Wbd	515	1,656
3.4	Madingley Rd - West of P&R Access Wbd	503	1,101

No.	Link	2031 Do Something	
		AM	PM
3.4	Madingley Rd - West of P&R Access Ebd	1,113	611
3.5	Madingley Rd - East of P&R Access Wbd	523	915
3.5	Madingley Rd - East of P&R Access Ebd	980	667
3.6	Madingley Rd - East of Proposed High Cross Access Ebd	1,178	788
3.6	Madingley Rd - East of Proposed High Cross Access Wbd	582	1,220
3.7	Madingley Rd - East of JJ Thomson Ave Ebd	1,030	1,096
3.7	Madingley Rd - East of JJ Thomson Ave Wbd	968	1,022
3.8	Madingley Rd - East of Clerk Maxwell Rd Ebd	978	1,233
3.8	Madingley Rd - East of Clerk Maxwell Rd Wbd	1,215	929
3.9	Madingley Rd - East of Storey's Way Ebd	911	1,128
3.9	Madingley Rd - East of Storey's Way Wbd	1,249	865
3.10	Madingley Rd - East of Grange Road Ebd	898	1,117
3.10	Madingley Rd - East of Grange Road Wbd	1,241	849
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Ebd	956	881
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Wbd	899	896
3.12	Northampton St - West of Pound Hill Ebd	539	943
3.12	Northampton St - West of Pound Hill Wbd	800	678
4.0	Huntingdon Rd - West of Proposed NWC HRW Access NWbd	535	1,267
4.0	Huntingdon Rd - West of Proposed NWC HRW Access SEbd	984	565
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College NWbd	436	777
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College SEbd	443	454
4.2	Huntingdon Rd - East of NWC HRW Access NWbd	662	1,271
4.2	Huntingdon Rd - East of NWC HRW Access SEbd	893	814
4.3	Huntingdon Rd - East of Darwin Green Access NWbd	615	1,358
4.3	Huntingdon Rd - East of Darwin Green Access SEbd	1,231	788
4.4	Huntingdon Rd - East of Storey's Way NWbd	591	1,237
4.4	Huntingdon Rd - East of Storey's Way SEbd	1,105	782

No.	Link	2031 Do Something	
		AM	PM
5.0	Barton Rd - West of Grantchester Rd Ebd	1,140	519
5.0	Barton Rd - West of Grantchester Rd Wbd	316	989
5.1	Barton Rd - East of Grantchester Rd Ebd	644	468
5.1	Barton Rd - East of Grantchester Rd Wbd	296	947
6.0	Queen's Rd - North of West Rd Nbd	630	856
6.0	Queen's Rd - North of West Rd Sbd	952	683
7.0	Histon Road - South of A14 Nbd	1,179	1,958
7.0	Histon Road - South of A14 Sbd	2,138	1,475
8.0	Grange Rd - South of Madingley Rd Nbd	210	224
8.0	Grange Rd - South of Madingley Rd Sbd	341	169
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Ebd	211	70
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Wbd	87	203
10.0	Girton Rd - North of Huntingdon Rd Nbd	156	383
10.0	Girton Rd - North of Huntingdon Rd Sbd	389	229
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Nbd	30	196
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Sbd	196	67
11.1	Proposed Madingley Rd West Access to NWC Nbd	203	959
11.1	Proposed Madingley Rd West Access to NWC Sbd	942	304
11.2	Proposed Huntingdon Rd West Access to NWC Nbd	99	490
11.2	Proposed Huntingdon Rd West Access to NWC Sbd	541	111
11.3	Proposed Huntingdon Rd East Access to NWC Sbd	249	318
11.3	Proposed Huntingdon Rd East Access to NWC Nbd	240	340
12.0	Western Access to Madingley Rd Nbd	69	600
12.0	Western Access to Madingley Rd Sbd	582	94
12.1	High Cross Access to Madingley Rd Nbd	145	574
12.1	High Cross Access to Madingley Rd Sbd	758	124
12.2	JJ Thomson Ave Access to Madingley Rd Nbd	136	478

No.	Link	2031 Do Something	
		AM	PM
12.2	JJ Thomson Ave Access to Madingley Rd Sbd	560	96
12.3	Clerk Maxwell Rd Nbd – South of Car Park Access	10	4
12.3	Clerk Maxwell Rd Sbd – South of Car Park Access	3	8
12.4	Clerk Maxwell Rd Sbd – North of Car Park Access	262	35
12.4	Clerk Maxwell Rd Nbd – North of Car Park Access	43	225

Appendix 14.1 - Summary and comparisons of 2016, 2021 Do Minimum and 2021 Do Something flows

Table 14.1: Comparison of the 2016 and 2021 Do Minimum flows

No.	Link	2016 Base		2021 TA Do Minimum		Percentage difference	
		AM	PM	AM	PM	AM	PM
1.0	M11 - J12 - J13 - Nbd	3,392	3,503	3,667	3,735	8%	7%
1.0	M11 - J12 - J13 - Sbd	3,503	3,392	3,686	3,738	5%	10%
1.1	M11 J13 -J14 - Nbd	2,199	2,902	2,322	2,977	6%	3%
1.1	M11 J13 -J14 - Sbd	2,651	2,368	2,722	2,509	3%	6%
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Nbd	1,464	2,144	1,560	2,206	7%	3%
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Sbd	2,144	1,534	2,201	1,634	3%	7%
1.3	M11 J13 off-slip - Nbd	950	633	1,102	790	16%	25%
1.3	M11 J13 on-slip – Sbd	353	788	465	994	32%	26%
2.0	A14 West of J30 (Bar Hill) - Ebd	3,685	3,342	3,821	3,441	4%	3%
2.0	A14 West of J30 (Bar Hill) - Wbd	3,081	4,224	3,159	4,368	3%	3%
2.1	A14 North West of M11 J14 - Ebd	3,697	3,309	3,973	3,660	7%	11%
2.1	A14 North West M11 J14 - Wbd	2,994	3,989	3,324	4,257	11%	7%
2.2	A14 West of J32 Interchange - Ebd	3,711	3,619	3,811	3,772	3%	4%
2.2	A14 West of J32 Interchange - Wbd	3,619	3,711	3,768	3,818	4%	3%
2.3	A428 -West of M11 J14 - Ebd	1,567	721	1,600	753	2%	4%
2.3	A428 - West of M11 J14 - Wbd	756	1,203	786	1,233	4%	2%
3.0	A1303 East of Madingley Mulch R'bout Ebd	474	513	563	582	19%	13%
3.0	A1303 East of Madingley Mulch R'bout Wbd	516	1,190	568	1,284	10%	8%
3.1	Madingley Rd - East of Cambridge Rd Crossroads Wbd	499	1,199	538	1,192	8%	-1%
3.1	Madingley Rd - East of Cambridge Rd Crossroads Ebd	722	494	739	564	2%	14%
3.2	Madingley Rd on Over Bridge M11 Ebd	1,205	416	1,355	618	12%	48%
3.2	Madingley Rd on Over Bridge M11 Wbd	180	738	200	705	11%	-4%
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West	1,212	424	1,338	600	10%	41%

No.	Link	2016 Base		2021 TA Do Minimum		Percentage difference	
		AM	PM	AM	PM	AM	PM
	Access Ebd						
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Wbd	321	1,210	429	1,357	34%	12%
3.4	Madingley Rd - West of P&R Access Wbd	321	1,210	429	1,357	34%	12%
3.4	Madingley Rd - West of P&R Access Ebd	1,212	424	1,338	600	10%	41%
3.5	Madingley Rd - East of P&R Access Wbd	368	1,018	476	1,165	29%	14%
3.5	Madingley Rd - East of P&R Access Ebd	1,071	468	1,197	644	12%	38%
3.6	Madingley Rd - East of Proposed High Cross Access Ebd	885	469	1,008	677	14%	44%
3.6	Madingley Rd - East of Proposed High Cross Access Wbd	414	786	667	925	61%	18%
3.7	Madingley Rd - East of JJ Thomson Ave Ebd	837	637	1,002	1,000	20%	57%
3.7	Madingley Rd - East of JJ Thomson Ave Wbd	591	737	957	937	62%	27%
3.8	Madingley Rd - East of Clerk Maxwell Rd Ebd	755	684	914	1,036	21%	51%
3.8	Madingley Rd - East of Clerk Maxwell Rd Wbd	643	674	999	867	55%	29%
3.9	Madingley Rd - East of Storey's Way Ebd	685	566	847	931	24%	65%
3.9	Madingley Rd - East of Storey's Way Wbd	628	599	1,033	803	64%	34%
3.10	Madingley Rd - East of Grange Road Ebd	685	566	836	921	22%	63%
3.10	Madingley Rd - East of Grange Road Wbd	628	599	1,024	791	63%	32%
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Ebd	807	573	935	781	16%	36%
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Wbd	588	708	794	875	35%	24%
3.12	Northampton St - West of Pound Hill Ebd	463	652	531	838	15%	29%
3.12	Northampton St - West of Pound Hill Wbd	558	575	729	665	31%	16%
4.0	Huntingdon Rd - West of Proposed NWC HRW Access NWbd	326	689	465	976	43%	42%
4.0	Huntingdon Rd - West of Proposed NWC HRW Access SEbd	400	332	666	484	67%	46%
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College NWbd	326	689	396	722	22%	5%
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College SEbd	400	332	395	398	-1%	20%
4.2	Huntingdon Rd - East of NWC HRW Access NWbd	389	944	591	1,182	52%	25%

No.	Link	2016 Base		2021 TA Do Minimum		Percentage difference	
		AM	PM	AM	PM	AM	PM
4.2	Huntingdon Rd - East of NWC HRW Access SEbd	668	452	816	723	22%	60%
4.3	Huntingdon Rd - East of Darwin Green Access NWbd	443	995	592	1,255	34%	26%
4.3	Huntingdon Rd - East of Darwin Green Access SEbd	942	518	1,130	740	20%	43%
4.4	Huntingdon Rd - East of Storey's Way NWbd	462	889	572	1,137	24%	28%
4.4	Huntingdon Rd - East of Storey's Way SEbd	792	548	1,006	737	27%	35%
5.0	Barton Rd - West of Grantchester Rd Ebd	1,115	489	1,129	509	1%	4%
5.0	Barton Rd - West of Grantchester Rd Wbd	303	968	313	978	3%	1%
5.1	Barton Rd - East of Grantchester Rd Ebd	618	437	632	457	2%	5%
5.1	Barton Rd - East of Grantchester Rd Wbd	282	926	292	936	3%	1%
6.0	Queen's Rd - North of West Rd Nbd	463	654	552	784	19%	20%
6.0	Queen's Rd - North of West Rd Sbd	781	550	895	624	15%	14%
7.0	Histon Road - South of A14 Nbd	946	1,619	1,088	1,827	15%	13%
7.0	Histon Road - South of A14 Sbd	1,825	1,217	2,011	1,384	10%	14%
8.0	Grange Rd - South of Madingley Rd Nbd	195	201	208	217	6%	8%
8.0	Grange Rd - South of Madingley Rd Sbd	321	151	335	165	4%	9%
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Ebd	260	82	210	70	-19%	-15%
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Wbd	91	217	86	202	-5%	-7%
10.0	Girton Rd - North of Huntingdon Rd Nbd	137	335	153	378	12%	13%
10.0	Girton Rd - North of Huntingdon Rd Sbd	342	202	384	227	12%	12%
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Nbd	0	0	14	105	N/A	N/A
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Sbd	0	0	107	33	N/A	N/A
11.1	Proposed Madingley Rd West Access to NWC Nbd	0	0	149	634	N/A	N/A
11.1	Proposed Madingley Rd West Access to NWC Sbd	0	0	589	240	N/A	N/A
11.2	Proposed Huntingdon Rd West Access to NWC Nbd	0	0	69	254	N/A	N/A
11.2	Proposed Huntingdon Rd West Access to NWC Sbd	0	0	271	86	N/A	N/A
11.3	Proposed Huntingdon Rd East Access to NWC Sbd	0	0	197	257	N/A	N/A

No.	Link	2016 Base		2021 TA Do Minimum		Percentage difference	
		AM	PM	AM	PM	AM	PM
11.3	Proposed Huntingdon Rd East Access to NWC Nbd	0	0	193	276	N/A	N/A
12.0	Western Access to Madingley Rd Nbd	0	0	0	0	N/A	N/A
12.0	Western Access to Madingley Rd Sbd	0	0	0	0	N/A	N/A
12.1	High Cross Access to Madingley Rd Nbd	36	257	143	789	296%	207%
12.1	High Cross Access to Madingley Rd Sbd	275	46	970	144	253%	213%
12.2	JJ Thomson Ave Access to Madingley Rd Nbd	90	227	114	335	27%	48%
12.2	JJ Thomson Ave Access to Madingley Rd Sbd	238	77	327	98	38%	28%
12.3	Clerk Maxwell Rd Nbd – South of Car Park Access	10	32	14	34	40%	6%
12.3	Clerk Maxwell Rd Sbd – South of Car Park Access	38	9	38	12	0%	33%
12.4	Clerk Maxwell Rd Sbd – North of Car Park Access	119	9	119	20	0%	0%
12.4	Clerk Maxwell Rd Nbd – North of Car Park Access	4	103	24	103	0%	0%

Table 14.2: Comparison of the 2021 TA Do Minimum and 2021 Do Something flows

No.	Link	2021 TA Do Minimum		2021 Do Something		Percentage difference	
		AM	PM	AM	PM	AM	PM
1.0	M11 - J12 - J13 - Nbd	3,667	3,735	3,665	3,729	0%	0%
1.0	M11 - J12 - J13 - Sbd	3,686	3,738	3,679	3,736	0%	0%
1.1	M11 J13 -J14 - Nbd	2,322	2,977	2,317	2,974	0%	0%
1.1	M11 J13 -J14 - Sbd	2,722	2,509	2,719	2,503	0%	0%
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Nbd	1,560	2,206	1,556	2,203	0%	0%
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Sbd	2,201	1,634	2,198	1,630	0%	0%
1.3	M11 J13 off-slip - Nbd	1,102	790	1,105	787	0%	0%
1.3	M11 J13 on-slip - Sbd	465	994	461	996	-1%	0%
2.0	A14 West of J30 (Bar Hill) - Ebd	3,821	3,441	3,828	3,439	0%	0%
2.0	A14 West of J30 (Bar Hill) - Wbd	3,159	4,368	3,157	4,379	0%	0%
2.1	A14 North West of M11 J14 - Ebd	3,973	3,660	3,973	3,649	0%	0%
2.1	A14 North West M11 J14 - Wbd	3,324	4,257	3,312	4,263	0%	0%
2.2	A14 West of J32 Interchange - Ebd	3,811	3,772	3,808	3,767	0%	0%
2.2	A14 West of J32 Interchange - Wbd	3,768	3,818	3,762	3,815	0%	0%
2.3	A428 -West of M11 J14 - Ebd	1,600	753	1,599	752	0%	0%
2.3	A428 - West of M11 J14 - Wbd	786	1,233	785	1,233	0%	0%
3.0	A1303 East of Madingley Mulch R'bout Ebd	563	582	562	580	0%	0%
3.0	A1303 East of Madingley Mulch R'bout Wbd	568	1,284	566	1,286	0%	0%
3.1	Madingley Rd - East of Cambridge Rd Crossroads Wbd	538	1,192	535	1,187	-1%	0%
3.1	Madingley Rd - East of Cambridge Rd Crossroads Ebd	739	564	730	561	-1%	-1%
3.2	Madingley Rd on Over Bridge M11 Ebd	1,355	618	1,349	612	0%	-1%
3.2	Madingley Rd on Over Bridge M11 Wbd	200	705	197	701	-1%	-1%
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Ebd	1,338	600	1,334	595	0%	-1%
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Wbd	429	1,357	424	1,356	-1%	0%
3.4	Madingley Rd - West of P&R Access Wbd	483	1,357	478	1,384	-1%	2%

No.	Link	2021 TA Do Minimum		2021 Do Something		Percentage difference	
		AM	PM	AM	PM	AM	PM
3.4	Madingley Rd - West of P&R Access Ebd	1,338	600	1,374	608	3%	1%
3.5	Madingley Rd - East of P&R Access Wbd	476	1,165	498	1,198	5%	3%
3.5	Madingley Rd - East of P&R Access Ebd	1,197	644	1,241	664	4%	3%
3.6	Madingley Rd - East of Proposed High Cross Access Ebd	1,008	677	1,176	685	17%	1%
3.6	Madingley Rd - East of Proposed High Cross Access Wbd	667	925	578	1,053	-13%	14%
3.7	Madingley Rd - East of JJ Thomson Ave Ebd	1,002	1,000	996	797	-1%	-20%
3.7	Madingley Rd - East of JJ Thomson Ave Wbd	957	937	688	898	-28%	-4%
3.8	Madingley Rd - East of Clerk Maxwell Rd Ebd	914	1,036	882	934	-4%	-10%
3.8	Madingley Rd - East of Clerk Maxwell Rd Wbd	999	867	868	833	-13%	-4%
3.9	Madingley Rd - East of Storey's Way Ebd	847	931	815	830	-4%	-11%
3.9	Madingley Rd - East of Storey's Way Wbd	1,033	803	904	769	-13%	-4%
3.10	Madingley Rd - East of Grange Road Ebd	836	921	806	824	-4%	-11%
3.10	Madingley Rd - East of Grange Road Wbd	1,024	791	899	758	-12%	-4%
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Ebd	935	781	909	698	-3%	-11%
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Wbd	794	875	697	849	-12%	-3%
3.12	Northampton St - West of Pound Hill Ebd	531	838	513	768	-3%	-8%
3.12	Northampton St - West of Pound Hill Wbd	729	665	659	650	-10%	-2%
4.0	Huntingdon Rd - West of Proposed NWC HRW Access NWbd	465	976	461	985	-1%	1%
4.0	Huntingdon Rd - West of Proposed NWC HRW Access SEbd	666	484	671	481	1%	-1%
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College NWbd	396	722	393	721	-1%	0%
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College SEbd	395	398	394	396	0%	-1%
4.2	Huntingdon Rd - East of NWC HRW Access NWbd	591	1,182	557	1,174	-6%	-1%
4.2	Huntingdon Rd - East of NWC HRW Access SEbd	816	723	807	695	-1%	-4%
4.3	Huntingdon Rd - East of Darwin Green Access NWbd	592	1,255	571	1,247	-4%	-1%
4.3	Huntingdon Rd - East of Darwin Green Access SEbd	1,130	740	1,120	722	-1%	-2%
4.4	Huntingdon Rd - East of Storey's Way NWbd	572	1,137	565	1,131	-1%	-1%

No.	Link	2021 TA Do Minimum		2021 Do Something		Percentage difference	
		AM	PM	AM	PM	AM	PM
4.4	Huntingdon Rd - East of Storey's Way SEbd	1,006	737	999	732	-1%	-1%
5.0	Barton Rd - West of Grantchester Rd Ebd	1,129	509	1,128	505	0%	-1%
5.0	Barton Rd - West of Grantchester Rd Wbd	313	978	312	977	0%	0%
5.1	Barton Rd - East of Grantchester Rd Ebd	632	457	631	453	0%	-1%
5.1	Barton Rd - East of Grantchester Rd Wbd	292	936	292	935	0%	0%
6.0	Queen's Rd - North of West Rd Nbd	552	784	522	771	-5%	-2%
6.0	Queen's Rd - North of West Rd Sbd	895	624	883	609	-1%	-2%
7.0	Histon Road - South of A14 Nbd	1,088	1,827	1,085	1,837	0%	1%
7.0	Histon Road - South of A14 Sbd	2,011	1,384	2,019	1,381	0%	0%
8.0	Grange Rd - South of Madingley Rd Nbd	208	217	203	215	-2%	-1%
8.0	Grange Rd - South of Madingley Rd Sbd	335	165	333	161	-1%	-2%
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Ebd	210	70	209	70	0%	0%
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Wbd	86	202	86	201	0%	-1%
10.0	Girton Rd - North of Huntingdon Rd Nbd	153	378	150	365	-2%	-3%
10.0	Girton Rd - North of Huntingdon Rd Sbd	384	227	368	224	-4%	-1%
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Nbd	14	105	12	93	-12%	-12%
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Sbd	107	33	92	32	-14%	-5%
11.1	Proposed Madingley Rd West Access to NWC Nbd	149	634	139	576	-7%	-9%
11.1	Proposed Madingley Rd West Access to NWC Sbd	589	240	514	230	-13%	-4%
11.2	Proposed Huntingdon Rd West Access to NWC Nbd	69	254	68	264	-1%	4%
11.2	Proposed Huntingdon Rd West Access to NWC Sbd	271	86	276	85	2%	-1%
11.3	Proposed Huntingdon Rd East Access to NWC Sbd	197	257	149	247	-24%	-4%
11.3	Proposed Huntingdon Rd East Access to NWC Nbd	193	276	181	237	-6%	-14%
12.0	Western Access to Madingley Rd Nbd	0	0	0	0	#DIV/0!	#DIV/0!
12.0	Western Access to Madingley Rd Sbd	0	0	0	0	#DIV/0!	#DIV/0!
12.1	High Cross Access to Madingley Rd Nbd	143	789	109	620	-24%	-21%

No.	Link	2021 TA Do Minimum		2021 Do Something		Percentage difference	
		AM	PM	AM	PM	AM	PM
12.1	High Cross Access to Madingley Rd Sbd	970	144	656	113	-32%	-21%
12.2	JJ Thomson Ave Access to Madingley Rd Nbd	114	335	77	233	-32%	-30%
12.2	JJ Thomson Ave Access to Madingley Rd Sbd	327	98	288	50	-12%	-49%
12.3	Clerk Maxwell Rd Nbd – South of Car Park Access	14	34	10	4	-29%	-750%
12.3	Clerk Maxwell Rd Sbd – South of Car Park Access	38	12	3	8	-92%	-33%
12.4	Clerk Maxwell Rd Sbd – North of Car Park Access	119	20	253	34	113%	70%
12.4	Clerk Maxwell Rd Nbd – North of Car Park Access	24	103	42	217	75%	111%

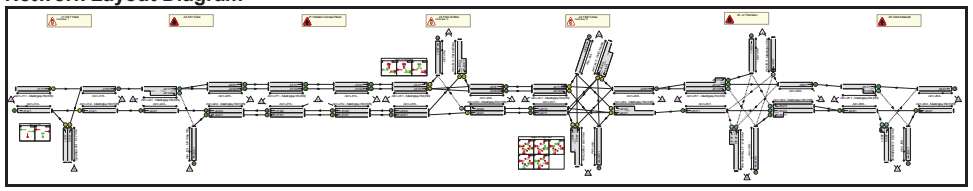
Appendix 14.2 - 2021 Madingley Road Corridor Junction Capacity Assessment

Full Input Data And Results

User and Project Details

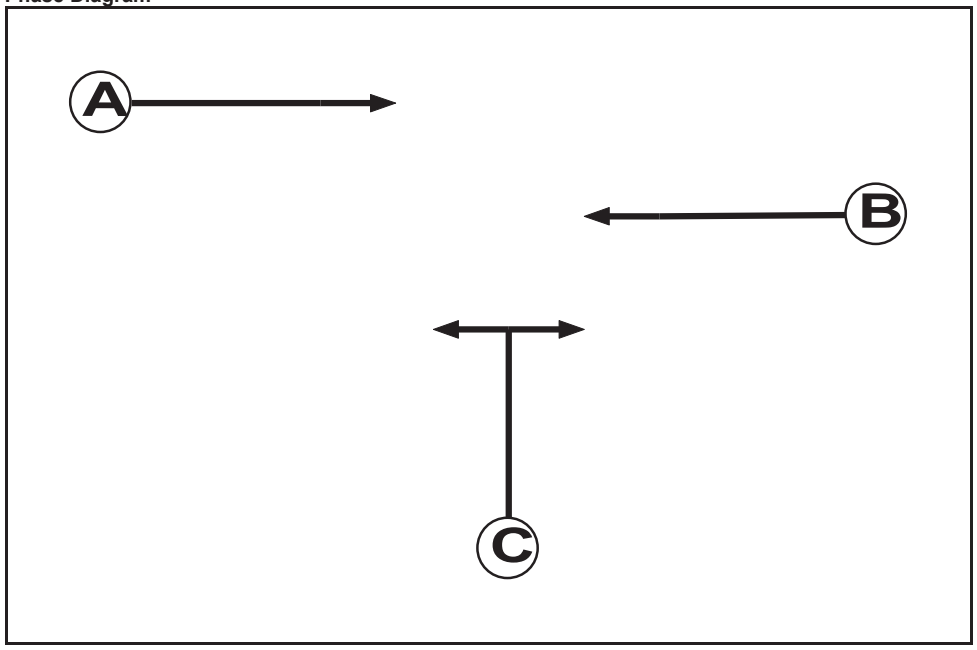
Project:	
Title:	
Location:	
File name:	170601 West Cambridge 2021 DM & DS Existing Layout.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



C1 - M11 West

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

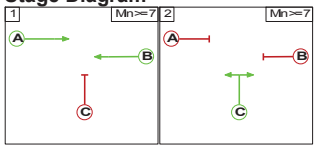
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C
A		-	5
B	-		5
C	5	5	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C

Stage Diagram



Phase Delays

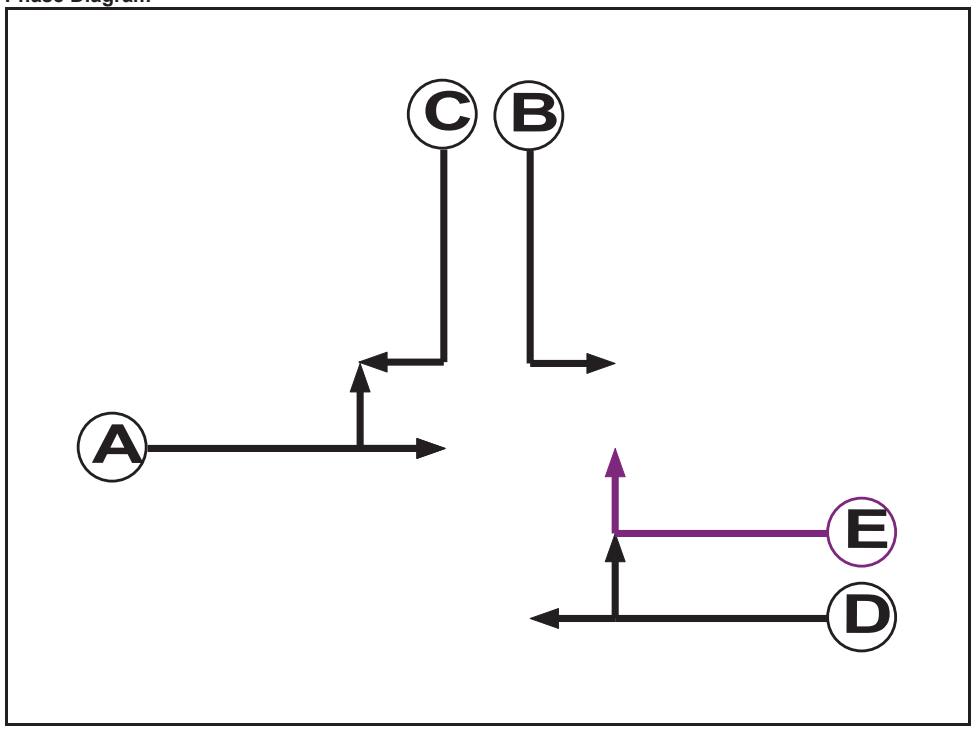
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2
1		5
2	5	

C2 - Park && Ride

Phase Diagram



Phase Input Data

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

Full Input Data And Results

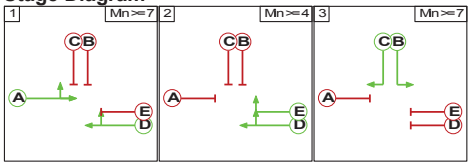
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

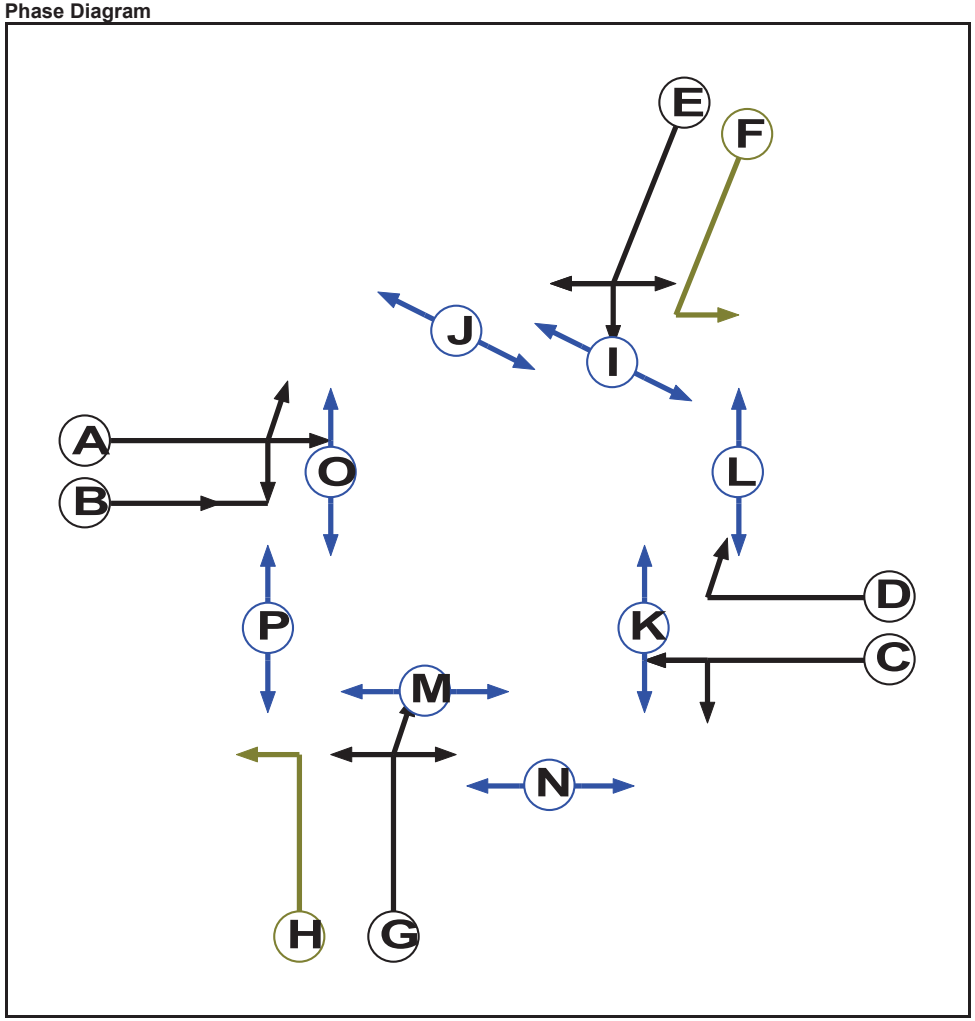
Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	B	Gaining absolute	5	5

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		5	5
	2	5		5
	3	5	5	

C3 - High Cross

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Filter	E	4	4
G	Traffic		7	7
H	Filter	G	4	0
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5
N	Pedestrian		5	5
O	Pedestrian		5	5
P	Pedestrian		5	5

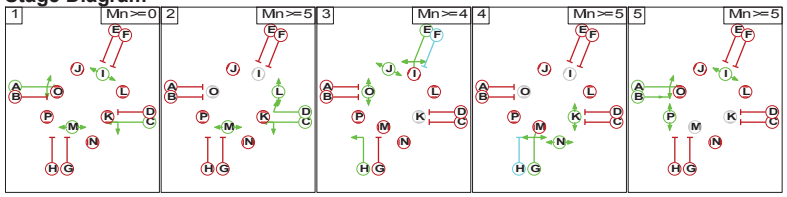
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A		-	-	5	8	8	5	-	-	10	-	12	-	-	6	-
B	-		7	-	5	-	5	5	-	-	-	-	-	9	5	-
C	-	5		-	5	-	8	8	-	-	6	-	-	9	-	12
D	5	-	-		5	-	5	-	-	11	6	-	-	-	-	-
E	5	5	7	6		-	7	-	6	-	-	9	-	12	-	13
F	5	-	-	-	-		5	-	6	-	-	9	-	-	-	-
G	5	5	5	5	8	8		-	-	11	-	12	6	-	-	8
H	-	-	5	-	-	-	-		-	-	-	-	6	-	-	8
I	-	-	-	-	10	10	-	-		-	-	-	-	-	-	-
J	7	-	-	7	-	-	7	-	-		-	-	-	-	-	-
K	-	-	8	8	-	-	-	-	-	-		-	-	-	-	-
L	9	-	-	-	9	9	9	-	-	-	-		-	-	-	-
M	-	-	-	-	-	-	10	10	-	-	-	-		-	-	-
N	-	7	7	-	7	-	-	-	-	-	-	-	-		-	-
O	8	8	-	-	-	-	-	-	-	-	-	-	-	-		-
P	-	-	8	-	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	4	4
5	1	B	Losing	1	1

Full Input Data And Results

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		12	10	10	12
2	9		12	10	12
3	X	X		12	X
4	8	12	11		8
5	8	12	10	9	

Give-Way Lane Input Data

Junction: J1: M11 West

There are no Opposed Lanes in this Junction

Junction: J2: M11 East

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)
J2:1/2 (Madingley Rd (EB))	J2:3/1 (Right)	850	0	J2:2/2	0.35	All	-	-	-	-	-
				J2:2/1	0.35	All					

Junction: J3: Park && Ride

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)
J3:2/2 (Madingley Rd (WB))	J3:4/1 (Right)	1440	0	J3:1/1	1.09	All	2.00	-	0.50	2	2.00
				J3:1/2	1.09	All					

Junction: J4: High Cross

There are no Opposed Lanes in this Junction

Junction: J5: JJ Thomson

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)
J5:1/3 (Madingley Rd (EB))	J5:6/1 (Right)	850	0	J5:2/2	0.35	All	-	-	-	-	-
				J5:2/1	0.35	All					
J5:2/3 (Madingley Rd (WB))	J5:5/1 (Right)	850	0	J5:1/1	0.35	All	-	-	-	-	-
				J5:1/2	0.35	All					
J5:3/1 (Madingley Rise)	J5:6/1 (Ahead)	600	0	J5:1/1	0.22	All	-	-	-	-	-
				J5:1/2	0.22	All					
				J5:1/3	0.22	All					
				J5:2/1	0.19	All					
				J5:2/2	0.19	All					
				J5:2/3	0.19	All					
	J5:7/1 (Right)	600	0	J5:1/2	0.22	All					
				J5:2/2	0.19	All					
				J5:2/1	0.19	All					
				J5:2/3	0.19	All					
				J5:1/1	0.22	All					
				J5:1/3	0.22	All					
				J5:4/1	0.19	All					
				J5:4/2	0.19	All					
	J5:8/1 (Left)	715	0	J5:1/2	0.22	All					
J5:4/1 (JJ Thomson Ave)	J5:7/1 (Left)	715	0	J5:2/2	0.22	All	-	-	-	-	-
J5:4/2 (JJ Thomson Ave)	J5:5/1 (Ahead)	600	0	J5:2/1	0.22	All	-	-	-	-	-
				J5:2/3	0.22	All					
				J5:1/1	0.19	All					

				J5:1/2	0.19	All						
				J5:1/3	0.19	All						
				J5:2/2	0.22	All						
				J5:2/2	0.22	All						
				J5:2/1	0.22	All						
				J5:2/3	0.22	All						
	J5:8/1 (Right)	600	0	J5:1/1	0.19	All						
				J5:1/2	0.19	All						
				J5:1/3	0.19	All						
				J5:3/1	0.19	All						

Junction: J6: Clerk Maxwell

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)
J6:1/2 (Madingley Rd (EB))	J6:5/1 (Right)	850	0	J6:2/1	0.35	All	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	J6:6/1 (Left)	1439	0	J6:2/1	1.09	All	-	-	-	-	-
J6:3/2 (Clerk Maxwell)	J6:4/1 (Right)	600	0	J6:1/1	0.19	All	-	-	-	-	-
				J6:1/2	0.19	All					
				J6:2/1	0.22	To J6:6/1 (Ahead)					

Junction: J7: Western Access Road

There are no Opposed Lanes in this Junction

Lane Input Data

Junction: J1: M11 West

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 (Madingley Rd (EB))	U	A	2	3	87.0	Geom	-	3.00	0.00	N	Arm J1:5 Ahead	Inf
J1:2/1 (Madingley Rd (WB))	U	B	2	3	31.3	Geom	-	3.00	0.00	Y	Arm J1:4 Ahead	Inf
J1:3/1 (M11 Slip NB)	U	C	2	3	34.8	Geom	-	3.00	0.00	Y	Arm J1:4 Left	20.00
J1:3/2 (M11 Slip NB)	U	C	2	3	87.0	Geom	-	3.00	0.00	Y	Arm J1:5 Right	15.00
J1:4/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J1:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J2: M11 East

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 (Madingley Rd (EB))	U		2	3	33.0	User	2000	-	-	-	-	-
J2:1/2 (Madingley Rd (EB))	O		2	3	10.4	Inf	-	-	-	-	-	-
J2:2/1 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:2/2 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:3/1 (M11 Slip SB)	U		2	3	87.0	Inf	-	-	-	-	-	-
J2:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J3: Park && Ride

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)
J3:1/1 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:4 Left	15.00
J3:1/2 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:6 Ahead	Inf
J3:2/1 (Madingley Rd (WB))	U	D E	2	3	13.9	Geom	-	3.50	0.00	N	Arm J3:5 Ahead	Inf
J3:2/2 (Madingley Rd (WB))	O	D E	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J3:4 Right	25.00
J3:3/1 (Park & Ride)	U	B	2	3	5.2	Geom	-	3.00	0.00	Y	Arm J3:6 Left	15.00
J3:3/2 (Park & Ride)	U	C	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:5 Right	20.00
J3:4/1	U		2	3	17.4	Inf	-	-	-	-	-	-
J3:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J4: High Cross

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)
J4:1/1 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J4:5 Left	30.00
											Arm J4:8 Ahead	Inf
J4:1/2 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J4:6 Right	Inf
J4:2/1 (Madingley Rd (WB))	U	C	2	3	88.7	Geom	-	3.50	0.00	Y	Arm J4:6 Left	20.00
											Arm J4:7 Ahead	Inf
J4:2/2 (Madingley Rd (WB))	U	D	2	3	7.0	Geom	-	3.50	0.00	Y	Arm J4:5 Right	20.00
J4:3/1 (NWC Access)	U	E F	2	3	8.7	Geom	-	3.25	0.00	Y	Arm J4:8 Left	10.00
J4:3/2 (NWC Access)	U	E	2	3	87.0	Geom	-	3.25	0.00	Y	Arm J4:6 Ahead	Inf
											Arm J4:7 Right	45.00
J4:4/1 (High Cross)	U	G H	2	3	8.3	Geom	-	4.00	0.00	N	Arm J4:7 Left	25.00
J4:4/2 (High Cross)	U	G	2	3	60.0	Geom	-	4.00	0.00	N	Arm J4:5 Ahead	Inf
											Arm J4:8 Right	Inf
J4:5/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J4:6/1	U		2	3	8.7	Inf	-	-	-	-	-	-
J4:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:7/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J5: JJ Thomson

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)
J5:1/1 (Madingley Rd (EB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:5 Left	15.00
J5:1/2 (Madingley Rd (EB))	U		2	3	90.4	Geom	-	3.00	0.00	Y	Arm J5:8 Ahead	Inf
J5:1/3 (Madingley Rd (EB))	O		2	3	15.7	Geom	-	3.00	0.00	Y	Arm J5:6 Right	15.00
J5:2/1 (Madingley Rd (WB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:6 Left	15.00
J5:2/2 (Madingley Rd (WB))	U		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:7 Ahead	Inf
J5:2/3 (Madingley Rd (WB))	O		2	3	7.1	User	850	-	-	-	-	-
J5:3/1 (Madingley Rise)	O		2	3	34.8	Geom	-	3.00	0.00	Y	Arm J5:6 Ahead	Inf
											Arm J5:7 Right	Inf
											Arm J5:8 Left	Inf
J5:4/1 (JJ Thomson Ave)	O		2	3	4.9	Geom	-	3.00	0.00	Y	Arm J5:7 Left	Inf
J5:4/2 (JJ Thomson Ave)	O		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:5 Ahead	Inf
											Arm J5:8 Right	Inf
J5:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J5:6/1	U		2	3	59.1	Inf	-	-	-	-	-	-
J5:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J5:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J6: Clerk Maxwell

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)
J6:1/1 (Madingley Rd (EB))	U		2	3	48.7	User	1800	-	-	-	-	-
J6:1/2 (Madingley Rd (EB))	O		2	3	4.3	Inf	-	-	-	-	-	-
J6:2/1 (Madingley Rd (WB))	U		2	3	60.9	User	1800	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	O		2	3	1.4	Geom	-	3.25	0.00	Y	Arm J6:6 Left	Inf
J6:3/2 (Clerk Maxwell)	O		2	3	60.0	User	600	-	-	-	-	-
J6:4/1	U		2	3	60.9	Inf	-	-	-	-	-	-
J6:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J6:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J7: Western Access 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)
J7:1/1 (Madingley Rd (EB))	U		2	3	26.1	Inf	-	-	-	-	-	-
J7:1/2 (Madingley Rd (EB))	U		2	3	26.1	Inf	-	-	-	-	-	-
J7:2/1 (Madingley Rd (WB))	U		2	3	17.4	Inf	-	-	-	-	-	-
J7:2/2 (Madingley Rd (WB))	U		2	3	17.4	Inf	-	-	-	-	-	-
J7:3/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:3/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2021 DM AM Peak'	08:00	09:00	01:00	
2: '2021 DM PM Peak'	17:00	18:00	01:00	
3: '2021 DS AM Peak'	08:00	09:00	01:00	
4: '2021 DS PM Peak'	17:00	18:00	01:00	

Scenario 1: '2021 DM AM Peak' (FG1: '2021 DM AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																							
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Tot
Origin	A	0	0	609	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	609
	B	348	0	782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113
	C	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210
	D	0	0	0	0	223	1168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	210	268	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	478
	G	0	0	0	0	0	0	0	0	1168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116
	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	I	0	0	0	0	0	0	478	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	478
	J	0	0	0	0	0	0	0	0	0	0	156	1223	0	0	0	0	0	0	0	0	0	0	0	137
	K	0	0	0	0	0	0	0	0	0	17	0	23	0	0	0	0	0	0	0	0	0	0	0	40
	L	0	0	0	0	0	0	0	0	0	466	37	0	0	0	0	0	0	0	0	0	0	0	0	503
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	288	922	48	0	0	0	0	0	0	0	125
	N	0	0	0	0	0	0	0	0	0	0	0	0	49	0	34	66	0	0	0	0	0	0	0	149
	O	0	0	0	0	0	0	0	0	0	0	0	0	350	304	0	35	0	0	0	0	0	0	0	689
	P	0	0	0	0	0	0	0	0	0	0	0	0	102	393	94	0	0	0	0	0	0	0	0	589
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	953	46	0	0	0	106
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87	36	0	0	0	123
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	679	270	0	36	0	0	0	985
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	9	0	0	0	0	17
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	964	1031
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	986	52	0	1038
	Tot.	558	0	1391	210	491	1168	478	0	1168	483	193	1246	501	985	1050	149	685	336	1049	118	988	119	966	1432

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2021 DM AM Peak
Junction: J1: M11 West	
J1:1/1	609
J1:2/1	210
J1:3/1	348
J1:3/2	782
J1:4/1	558
J1:5/1	1391
Junction: J2: M11 East	
J2:1/1 (with short)	1391(In) 1168(Out)
J2:1/2 (short)	223
J2:2/1	268
J2:2/2	210
J2:3/1	491
J2:4/1	210
J2:5/1	584
J2:5/2	584
Junction: J3: Park && Ride	
J3:1/1	156
J3:1/2	1223
J3:2/1	466
J3:2/2	37
J3:3/1 (short)	23
J3:3/2 (with short)	40(In) 17(Out)
J3:4/1	193
J3:5/1	466
J3:5/2	17
J3:6/1	635
J3:6/2	611
Junction: J4: High Cross	
J4:1/1	970
J4:1/2	288
J4:2/1 (with short)	689(In) 654(Out)
J4:2/2 (short)	35
J4:3/1 (short)	94
J4:3/2 (with short)	589(In) 495(Out)
J4:4/1 (short)	49

J4:4/2 (with short)	149(In) 100(Out)
J4:5/1	149
J4:6/1	985
J4:7/1	275
J4:7/2	226
J4:8/1	1050
Junction: J5: JJ Thomson	
J5:1/1 (short)	46
J5:1/2 (with short)	999(In) 953(Out)
J5:1/3	64
J5:2/1 (short)	270
J5:2/2 (with short)	949(In) 679(Out)
J5:2/3	36
J5:3/1	17
J5:4/1 (short)	0
J5:4/2 (with short)	123(In) 123(Out)
J5:5/1	118
J5:6/1	336
J5:7/1	685
J5:8/1	1049
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	1031(In) 964(Out)
J6:1/2 (short)	67
J6:2/1	1038
J6:3/1 (short)	2
J6:3/2 (with short)	4(In) 2(Out)
J6:4/1	966
J6:5/1	119
J6:6/1	988
Junction: J7: Western Access Road	
J7:1/1	584
J7:1/2	584
J7:2/1	239
J7:2/2	239
J7:3/1	239
J7:3/2	239
J7:4/1	584
J7:4/2	584

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	4.9 %	1960	1960
				Arm J4:8 Ahead	Inf	95.1 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:6 Right	Inf	100.0 %	1965	1965
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	46.5 %	1899	1899
				Arm J4:7 Ahead	Inf	53.5 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	79.4 %	1927	1927
				Arm J4:7 Right	45.00	20.6 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	66.0 %	2155	2155
				Arm J4:8 Right	Inf	34.0 %		
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	11.8 %	1915	1915
				Arm J5:7 Right	Inf	35.3 %		
				Arm J5:8 Left	Inf	52.9 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	0.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	29.3 %	1915	1915
				Arm J5:8 Right	Inf	70.7 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:2/1 (Madingley Rd (WB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:2/2 (Madingley Rd (WB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2021 DM PM Peak' (FG2: '2021 DM PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Tot.
Origin	A	0	0	308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	308
	B	487	0	322	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	809
	C	729	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	729
	D	0	0	0	0	310	322	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	632
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	729	698	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1427
	G	0	0	0	0	0	0	0	0	613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	613
	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	I	0	0	0	0	0	0	1427	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1427
	J	0	0	0	0	0	0	0	0	0	0	14	599	0	0	0	0	0	0	0	0	0	0	0	613
	K	0	0	0	0	0	0	0	0	0	216	0	69	0	0	0	0	0	0	0	0	0	0	0	285
	L	0	0	0	0	0	0	0	0	0	1169	29	0	0	0	0	0	0	0	0	0	0	0	0	1198
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	58	447	158	0	0	0	0	0	0	0	663
	N	0	0	0	0	0	0	0	0	0	0	0	0	278	0	193	324	0	0	0	0	0	0	0	795
	O	0	0	0	0	0	0	0	0	0	0	0	0	773	28	0	152	0	0	0	0	0	0	0	953
	P	0	0	0	0	0	0	0	0	0	0	0	0	122	60	59	0	0	0	0	0	0	0	0	241
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	696	2	0	0	0	707
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	304	7	0	0	0	344
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	862	90	0	7	0	0	0	959
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	3	30	0	0	0	0	67
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1031	1033
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	0	46	103
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	899	7	0	906
	Tot.	1216	0	630	729	1008	322	1427	0	613	1385	43	668	1173	146	699	634	929	102	1030	16	956	9	1077	14812

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2021 DM PM Peak
Junction: J1: M11 West	
J1:1/1	308
J1:2/1	729
J1:3/1	487
J1:3/2	322
J1:4/1	1216
J1:5/1	630
Junction: J2: M11 East	
J2:1/1 (with short)	632(In) 322(Out)
J2:1/2 (short)	310
J2:2/1	698
J2:2/2	729
J2:3/1	1008
J2:4/1	729
J2:5/1	161
J2:5/2	161
Junction: J3: Park && Ride	
J3:1/1	14
J3:1/2	599
J3:2/1	1169
J3:2/2	29
J3:3/1 (short)	69
J3:3/2 (with short)	285(In) 216(Out)
J3:4/1	43
J3:5/1	1169
J3:5/2	216
J3:6/1	369
J3:6/2	299
Junction: J4: High Cross	
J4:1/1	605
J4:1/2	58
J4:2/1 (with short)	953(In) 801(Out)
J4:2/2 (short)	152
J4:3/1 (short)	59
J4:3/2 (with short)	241(In) 182(Out)
J4:4/1 (short)	278

J4:4/2 (with short)	795(In) 517(Out)
J4:5/1	634
J4:6/1	146
J4:7/1	726
J4:7/2	447
J4:8/1	699
Junction: J5: JJ Thomson	
J5:1/1 (short)	2
J5:1/2 (with short)	698(In) 696(Out)
J5:1/3	9
J5:2/1 (short)	90
J5:2/2 (with short)	952(In) 862(Out)
J5:2/3	7
J5:3/1	67
J5:4/1 (short)	33
J5:4/2 (with short)	344(In) 311(Out)
J5:5/1	16
J5:6/1	102
J5:7/1	929
J5:8/1	1030
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	1033(In) 1031(Out)
J6:1/2 (short)	2
J6:2/1	906
J6:3/1 (short)	57
J6:3/2 (with short)	103(In) 46(Out)
J6:4/1	1077
J6:5/1	9
J6:6/1	956
Junction: J7: Western Access Road	
J7:1/1	306
J7:1/2	307
J7:2/1	714
J7:2/2	713
J7:3/1	714
J7:3/2	713
J7:4/1	306
J7:4/2	307

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	26.1 %	1940	1940
				Arm J4:8 Ahead	Inf	73.9 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:6 Right	Inf	100.0 %	1965	1965
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	3.5 %	1960	1960
				Arm J4:7 Ahead	Inf	96.5 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	33.0 %	1898	1898
				Arm J4:7 Right	45.00	67.0 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	62.7 %	2155	2155
				Arm J4:8 Right	Inf	37.3 %		
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	4.5 %	1915	1915
				Arm J5:7 Right	Inf	50.7 %		
				Arm J5:8 Left	Inf	44.8 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	2.3 %	1915	1915
				Arm J5:8 Right	Inf	97.7 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:2/1 (Madingley Rd (WB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:2/2 (Madingley Rd (WB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf

Scenario 3: '2021 DS AM Peak' (FG3: '2021 DS AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Tot.
Origin	A	0	0	600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600
	B	347	0	786	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1133
	C	207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	207
	D	0	0	0	0	222	1163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1385
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	207	265	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	472
	G	0	0	0	0	0	0	0	0	1163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1163
	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	I	0	0	0	0	0	0	473	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	473
	J	0	0	0	0	0	0	0	0	0	0	156	1218	0	0	0	0	0	0	0	0	0	0	0	1374
	K	0	0	0	0	0	0	0	0	0	17	0	23	0	0	0	0	0	0	0	0	0	0	0	40
	L	0	0	0	0	0	0	0	0	0	461	37	0	0	0	0	0	0	0	0	0	0	0	0	498
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	297	924	47	0	0	0	0	0	0	0	1268
	N	0	0	0	0	0	0	0	0	0	0	0	0	28	0	42	39	0	0	0	0	0	0	0	109
	O	0	0	0	0	0	0	0	0	0	0	0	0	370	154	0	53	0	0	0	0	0	0	0	577
	P	0	0	0	0	0	0	0	0	0	0	0	0	99	204	210	0	0	0	0	0	0	0	0	513
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176	967	46	0	0	0	1189
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21	36	0	0	0	78
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	543	110	0	36	0	0	0	689
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	9	0	0	0	0	17
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77	901	978
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	34	49
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	676	176	0	852
	Tot.	554	0	1386	207	487	1163	473	0	1163	478	193	1241	497	655	1176	139	570	288	997	118	691	253	935	13664

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2021 DS AM Peak
Junction: J1: M11 West	
J1:1/1	600
J1:2/1	207
J1:3/1	347
J1:3/2	786
J1:4/1	554
J1:5/1	1386
Junction: J2: M11 East	
J2:1/1 (with short)	1385(In) 1163(Out)
J2:1/2 (short)	222
J2:2/1	265
J2:2/2	207
J2:3/1	487
J2:4/1	207
J2:5/1	581
J2:5/2	582
Junction: J3: Park && Ride	
J3:1/1	156
J3:1/2	1218
J3:2/1	461
J3:2/2	37
J3:3/1 (short)	23
J3:3/2 (with short)	40(In) 17(Out)
J3:4/1	193
J3:5/1	461
J3:5/2	17
J3:6/1	632
J3:6/2	609
Junction: J4: High Cross	
J4:1/1	971
J4:1/2	297
J4:2/1 (with short)	577(In) 524(Out)
J4:2/2 (short)	53
J4:3/1 (short)	210
J4:3/2 (with short)	513(In) 303(Out)
J4:4/1 (short)	28

J4:4/2 (with short)	109(In) 81(Out)
J4:5/1	139
J4:6/1	655
J4:7/1	262
J4:7/2	235
J4:8/1	1176
Junction: J5: JJ Thomson	
J5:1/1 (short)	46
J5:1/2 (with short)	1013(In) 967(Out)
J5:1/3	176
J5:2/1 (short)	110
J5:2/2 (with short)	653(In) 543(Out)
J5:2/3	36
J5:3/1	17
J5:4/1 (short)	21
J5:4/2 (with short)	78(In) 57(Out)
J5:5/1	118
J5:6/1	288
J5:7/1	570
J5:8/1	997
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	978(In) 901(Out)
J6:1/2 (short)	77
J6:2/1	852
J6:3/1 (short)	15
J6:3/2 (with short)	49(In) 34(Out)
J6:4/1	935
J6:5/1	253
J6:6/1	691
Junction: J7: Western Access Road	
J7:1/1	581
J7:1/2	582
J7:2/1	237
J7:2/2	236
J7:3/1	237
J7:3/2	236
J7:4/1	581
J7:4/2	582

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	4.8 %	1960	1960
				Arm J4:8 Ahead	Inf	95.2 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:6 Right	Inf	100.0 %	1965	1965
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	29.4 %	1923	1923
				Arm J4:7 Ahead	Inf	70.6 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	67.3 %	1919	1919
				Arm J4:7 Right	45.00	32.7 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	48.1 %	2155	2155
				Arm J4:8 Right	Inf	51.9 %		
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	11.8 %	1915	1915
				Arm J5:7 Right	Inf	35.3 %		
				Arm J5:8 Left	Inf	52.9 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	63.2 %	1915	1915
				Arm J5:8 Right	Inf	36.8 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:2/1 (Madingley Rd (WB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:2/2 (Madingley Rd (WB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf

Scenario 4: '2021 DS PM Peak' (FG4: '2021 DS PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																							
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Tot.
Origin	A	0	0	305	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	305
	B	486	0	320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	806
	C	725	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	725
	D	0	0	0	0	309	317	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	626
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	725	701	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1426
	G	0	0	0	0	0	0	0	0	608	0	0	0	0	0	0	0	0	0	0	0	0	0	0	608
	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	I	0	0	0	0	0	0	1426	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1426
	J	0	0	0	0	0	0	0	0	0	0	14	594	0	0	0	0	0	0	0	0	0	0	0	608
	K	0	0	0	0	0	0	0	0	0	216	0	69	0	0	0	0	0	0	0	0	0	0	0	285
	L	0	0	0	0	0	0	0	0	0	1168	29	0	0	0	0	0	0	0	0	0	0	0	0	1197
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	50	454	156	0	0	0	0	0	0	0	660
	N	0	0	0	0	0	0	0	0	0	0	0	0	249	0	165	206	0	0	0	0	0	0	0	620
	O	0	0	0	0	0	0	0	0	0	0	0	0	818	21	0	214	0	0	0	0	0	0	0	1053
	P	0	0	0	0	0	0	0	0	0	0	0	0	121	41	67	0	0	0	0	0	0	0	0	229
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	678	2	0	0	0	695
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137	0	89	7	0	0	0	233
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	858	33	0	7	0	0	0	898
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	3	30	0	0	0	0	67
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	788	800
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	0	137	203
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	829	39	0	868
	Tot.	1211	0	625	725	1010	317	1426	0	608	1384	43	663	1188	112	686	576	1029	51	797	16	895	51	925	14338

Traffic Lane Flows

Lane	Scenario 4: 2021 DS PM Peak
Junction: J1: M11 West	
J1:1/1	305
J1:2/1	725
J1:3/1	486
J1:3/2	320
J1:4/1	1211
J1:5/1	625
Junction: J2: M11 East	
J2:1/1 (with short)	626(In) 317(Out)
J2:1/2 (short)	309
J2:2/1	701
J2:2/2	725
J2:3/1	1010
J2:4/1	725
J2:5/1	158
J2:5/2	159
Junction: J3: Park && Ride	
J3:1/1	14
J3:1/2	594
J3:2/1	1168
J3:2/2	29
J3:3/1 (short)	69
J3:3/2 (with short)	285(In) 216(Out)
J3:4/1	43
J3:5/1	1168
J3:5/2	216
J3:6/1	366
J3:6/2	297
Junction: J4: High Cross	
J4:1/1	610
J4:1/2	50
J4:2/1 (with short)	1053(In) 839(Out)
J4:2/2 (short)	214
J4:3/1 (short)	67
J4:3/2 (with short)	229(In) 162(Out)
J4:4/1 (short)	249

J4:4/2 (with short)	620(In) 371(Out)
J4:5/1	576
J4:6/1	112
J4:7/1	718
J4:7/2	470
J4:8/1	686
Junction: J5: JJ Thomson	
J5:1/1 (short)	2
J5:1/2 (with short)	680(In) 678(Out)
J5:1/3	15
J5:2/1 (short)	33
J5:2/2 (with short)	891(In) 858(Out)
J5:2/3	7
J5:3/1	67
J5:4/1 (short)	137
J5:4/2 (with short)	233(In) 96(Out)
J5:5/1	16
J5:6/1	51
J5:7/1	1029
J5:8/1	797
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	800(In) 788(Out)
J6:1/2 (short)	12
J6:2/1	868
J6:3/1 (short)	66
J6:3/2 (with short)	203(In) 137(Out)
J6:4/1	925
J6:5/1	51
J6:6/1	895
Junction: J7: Western Access Road	
J7:1/1	304
J7:1/2	304
J7:2/1	713
J7:2/2	713
J7:3/1	713
J7:3/2	713
J7:4/1	304
J7:4/2	304

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	25.6 %	1940	1940
				Arm J4:8 Ahead	Inf	74.4 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:6 Right	Inf	100.0 %	1965	1965
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	2.5 %	1961	1961
				Arm J4:7 Ahead	Inf	97.5 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	25.3 %	1893	1893
				Arm J4:7 Right	45.00	74.7 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	55.5 %	2155	2155
				Arm J4:8 Right	Inf	44.5 %		
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

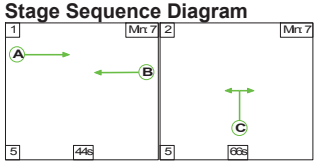
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	4.5 %	1915	1915
				Arm J5:7 Right	Inf	50.7 %		
				Arm J5:8 Left	Inf	44.8 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	7.3 %	1915	1915
				Arm J5:8 Right	Inf	92.7 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:2/1 (Madingley Rd (WB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:2/2 (Madingley Rd (WB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf

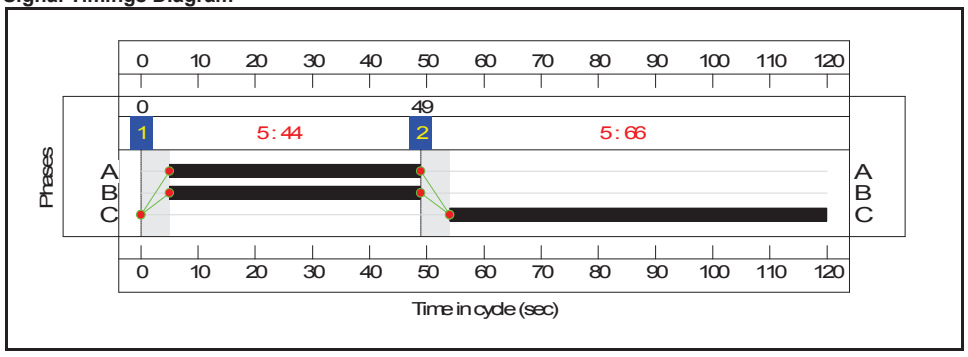
Scenario 1: '2021 DM AM Peak' (FG1: '2021 DM AM Peak', Plan 1: 'Network Control Plan 1')
C1 - M11 West
Stage Sequence Diagram



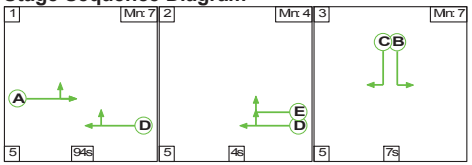
Stage Timings

Stage	1	2
Duration	44	66
Change Point	0	49

Signal Timings Diagram



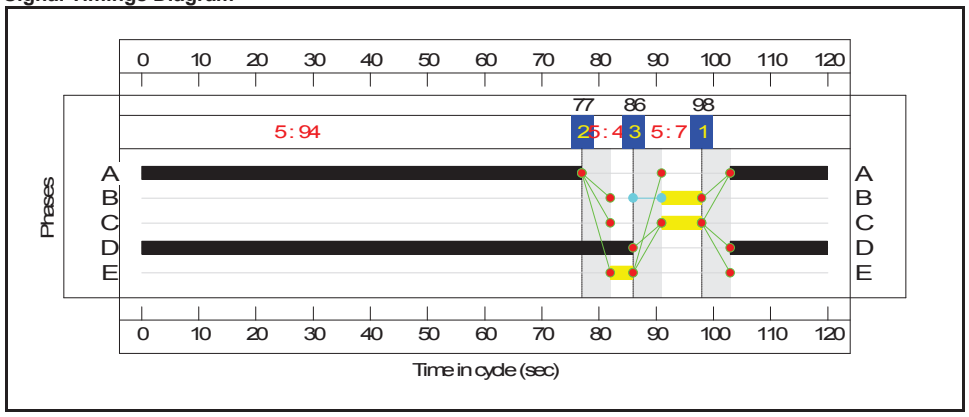
C2 - Park && Ride
Stage Sequence Diagram



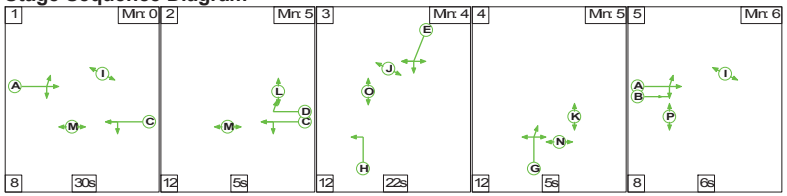
Stage Timings

Stage	1	2	3
Duration	94	4	7
Change Point	98	77	86

Signal Timings Diagram



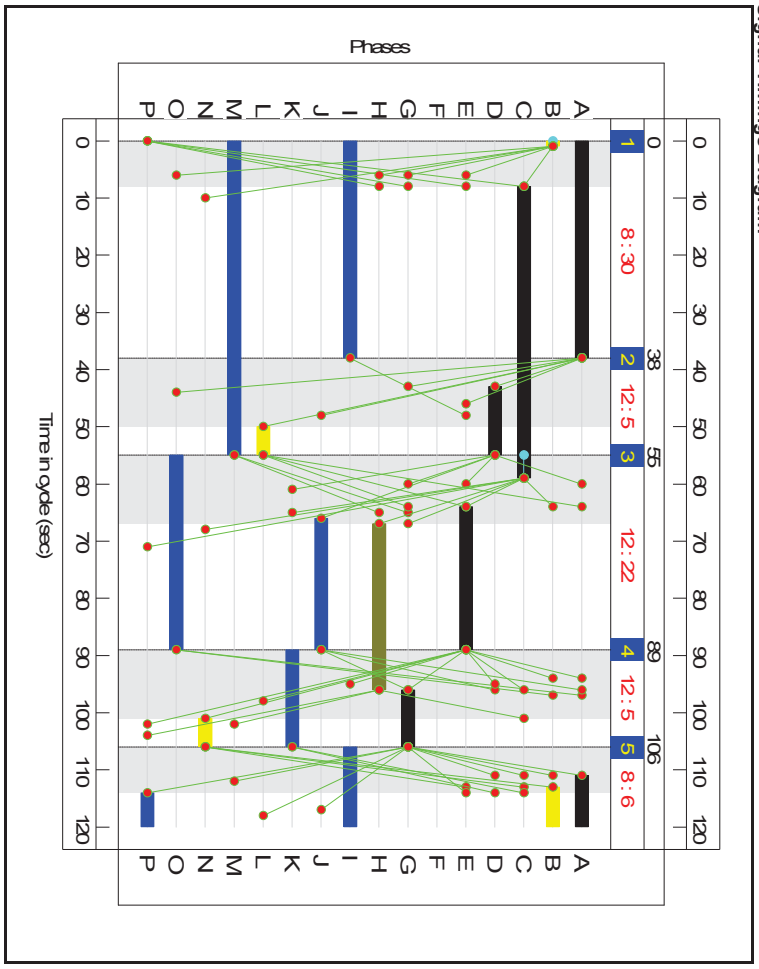
C3 - High Cross
Stage Sequence Diagram



Stage Timings

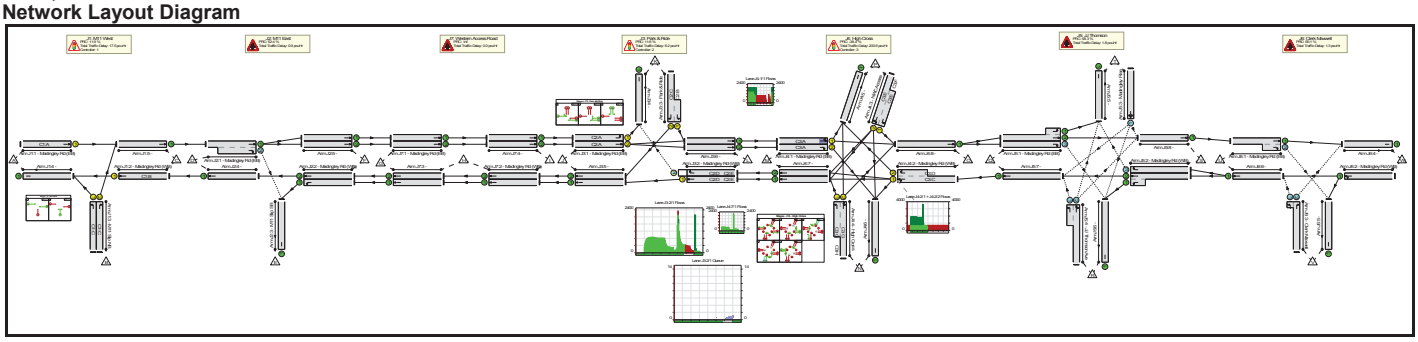
Stage	1	2	3	4	5
Duration	30	5	22	5	6
Change Point	0	38	55	89	106

Signal Timings Diagram



Full Input Data And Results

Network Layout 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**	-	-		-	-	-	-	-	-	**124.5%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.4%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	44	-	609	2055	771	79.0%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	44	-	210	1915	718	29.2%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	66	-	348	1781	994	35.0%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	66	-	782	1741	972	80.4%
4/1		U	N/A	N/A	-		-	-	-	558	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1391	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**59.0%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	1391	2000: Inf	1978+378	59.0 : 59.0%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	268	1800	1800	14.9%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	210	1800	1800	11.7%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	491	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	210	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.7%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	94	-	156	1741	1378	11.3%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	94	-	1223	1915	1516	80.7%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	103	4	466	2105	1824	24.6%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	103	4	37	1854	170	20.8%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	7	-	40	1781:1741	86+116	19.8 : 19.8%
4/1		U	N/A	N/A	-		-	-	-	193	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	466	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	635	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	611	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**124.5%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	47	-	970	1960	784	123.7%
1/2	Madingley Rd (EB) Right	U	N/A	N/A	C3:A		1	47	-	288	1965	786	36.6%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	51:12	-	689	1899:1828	795+43	82.3 : 82.3%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	25	0	589	1927:1687	397+75	124.5 : 124.5%
4/2+4/1	High Cross Ahead Left Right	U	N/A	N/A	C3:G	C3:H	1	10:39	29	149	2155:2033	198+97	50.6 : 50.6%
5/1		U	N/A	N/A	-		-	-	-	149	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	985	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	275	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	226	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1050	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**56.9%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	999	1915:1741	1818+88	42.7 : 42.7%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	64	1741	518	10.1%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	949	1915:1741	1332+530	51.0 : 51.0%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	36	850	565	6.4%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	17	1915	291	5.8%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	123	1915:1915	216+0	56.9 : 0.0%
5/1		U	N/A	N/A	-		-	-	-	118	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	336	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	685	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1049	Inf	Inf	0.0%
J6: Clerk Maxwell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**57.7%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	1031	1800: Inf	1785+124	54.0 : 54.0%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	1038	1800	1800	57.7%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	4	600:1940	187+187	1.1 : 1.1%
4/1		U	N/A	N/A	-		-	-	-	966	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	119	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	988	Inf	Inf	0.0%
J7: Western Access Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**0.0%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
3/1	Ahead	U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	584	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	584	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	-	-	**651**	**32**	**1**	**58.1**	**169.7**	**0.4**	**228.3**	-	-	-	-
J1: M11 West	-	-	**0**	**0**	**0**	**13.2**	**4.3**	**0.0**	**17.5**	-	-	-	-
1/1	609	609	-	-	-	5.6	1.8	-	7.5	44.2	17.9	1.8	19.8
2/1	210	210	-	-	-	1.5	0.2	-	1.7	29.9	4.9	0.2	5.1
3/1	348	348	-	-	-	1.4	0.3	-	1.7	17.3	6.3	0.3	6.6
3/2	782	782	-	-	-	4.6	2.0	-	6.6	30.5	20.9	2.0	22.9
4/1	558	558	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1391	1391	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	-	-	**223**	**0**	**0**	**0.0**	**0.9**	**0.0**	**0.9**	-	-	-	-
1/1+1/2	1391	1391	223	0	0	0.0	0.7	-	0.7	1.9	0.0	0.7	0.7
2/1	268	268	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
2/2	210	210	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
3/1	491	491	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	210	210	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	-	-	**2**	**32**	**1**	**3.2**	**2.5**	**0.4**	**6.2**	-	-	-	-
1/1	156	156	-	-	-	0.1	0.1	-	0.1	3.4	1.0	0.1	1.1
1/2	1223	1223	-	-	-	2.4	2.1	-	4.5	13.3	23.4	2.1	25.5
2/1	449	449	-	-	-	0.1	0.2	-	0.3	2.2	1.2	0.2	1.4
2/2	35	35	2	32	1	0.0	0.1	0.4	0.6	56.4	0.2	0.1	0.3
3/2+3/1	40	40	-	-	-	0.6	0.1	-	0.7	64.0	0.7	0.1	0.8
4/1	191	191	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	449	449	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	635	635	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	611	611	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	-	-	**0**	**0**	**0**	**41.5**	**159.0**	**0.0**	**200.6**	-	-	-	-
1/1	970	784	-	-	-	19.4	95.5	-	114.9	426.5	38.5	95.5	134.1
1/2	288	288	-	-	-	1.6	0.3	-	1.9	24.2	4.9	0.3	5.2
2/1+2/2	689	689	-	-	-	5.9	2.3	-	8.1	42.4	19.7	2.3	22.0
3/2+3/1	589	473	-	-	-	12.8	60.5	-	73.3	448.0	23.0	60.5	83.4
4/2+4/1	149	149	-	-	-	1.8	0.5	-	2.3	56.1	3.2	0.5	3.7
5/1	140	140	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	908	908	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	265	265	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	216	216	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	855	855	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	-	-	**351**	**0**	**0**	**0.1**	**1.7**	**0.0**	**1.8**	-	-	-	-
1/2+1/1	813	813	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4
1/3	52	52	52	0	0	0.0	0.1	-	0.1	3.9	0.0	0.1	0.1
2/2+2/1	949	949	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
2/3	36	36	36	0	0	0.0	0.0	-	0.0	3.4	0.0	0.0	0.0
3/1	17	17	17	0	0	0.0	0.0	-	0.0	6.6	0.0	0.0	0.0
4/2+4/1	123	123	246	0	0	0.1	0.6	-	0.8	23.2	1.9	0.6	2.6
5/1	109	109	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	324	324	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	685	685	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	872	872	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	-	-	**75**	**0**	**0**	**0.0**	**1.3**	**0.0**	**1.3**	-	-	-	-
1/1+1/2	1031	1031	67	0	0	0.0	0.6	-	0.6	2.0	0.0	0.6	0.6
2/1	1038	1038	-	-	-	0.0	0.7	-	0.7	2.4	0.0	0.7	0.7
3/2+3/1	4	4	8	0	0	0.0	0.0	-	0.0	4.9	0.0	0.0	0.0

Full Input Data And Results

4/1	966	966	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	119	119	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	988	988	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
1/1	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West
C2 - Park && Ride
C3 - High Cross

PRC for Signalled Lanes (%): 11.9
PRC for Signalled Lanes (%): 11.6
PRC for Signalled Lanes (%): -38.4
PRC Over All Lanes (%): -38.4

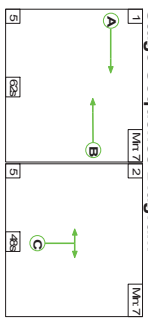
Total Delay for Signalled Lanes (pcuHr): 17.53
Total Delay for Signalled Lanes (pcuHr): 6.19
Total Delay for Signalled Lanes (pcuHr): 200.59
Total Delay Over All Lanes(pcuHr): 228.26

Cycle Time (s): 120
Cycle Time (s): 120
Cycle Time (s): 120

Scenario 2: '2021 DM PM Peak' (FG2: '2021 DM PM Peak', Plan 1: 'Network Control Plan 1')

C1 - M11 West

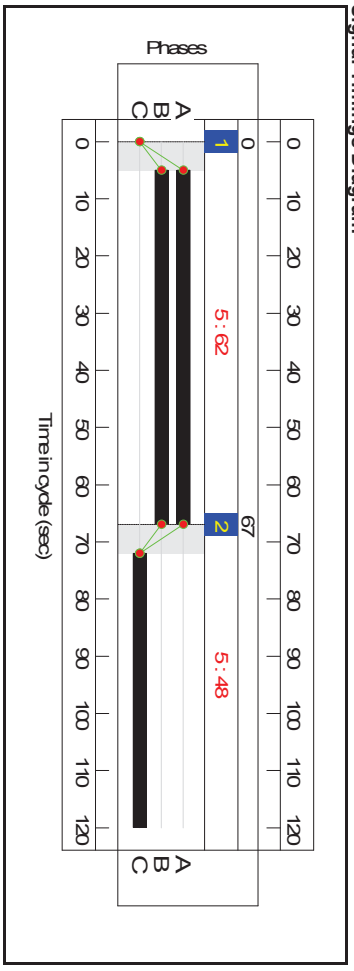
Stage Sequence Diagram



Stage Timings

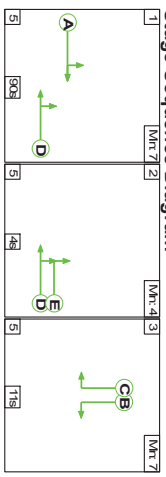
Stage	1	2
Duration	62	48
Change Point	0	67

Signal Timings Diagram



C2 - Park && Ride

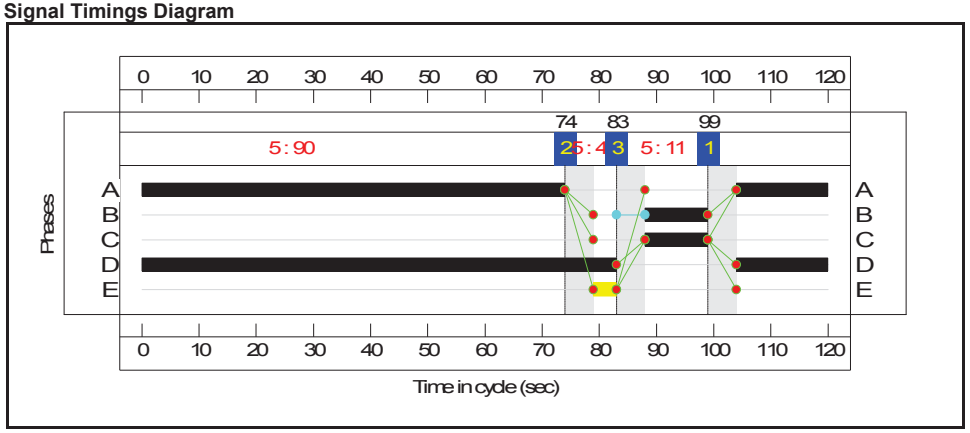
Stage Sequence Diagram



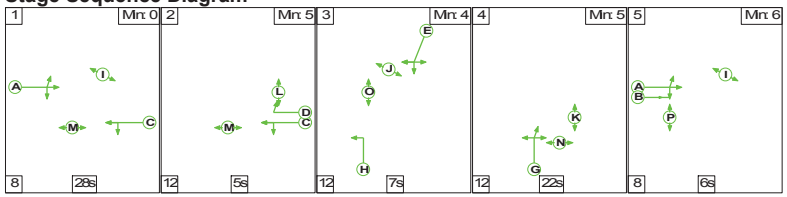
Stage Timings

Stage	1	2	3
Duration	90	4	11
Change Point	99	74	83

Signal Timings Diagram



C3 - High Cross
Stage Sequence Diagram

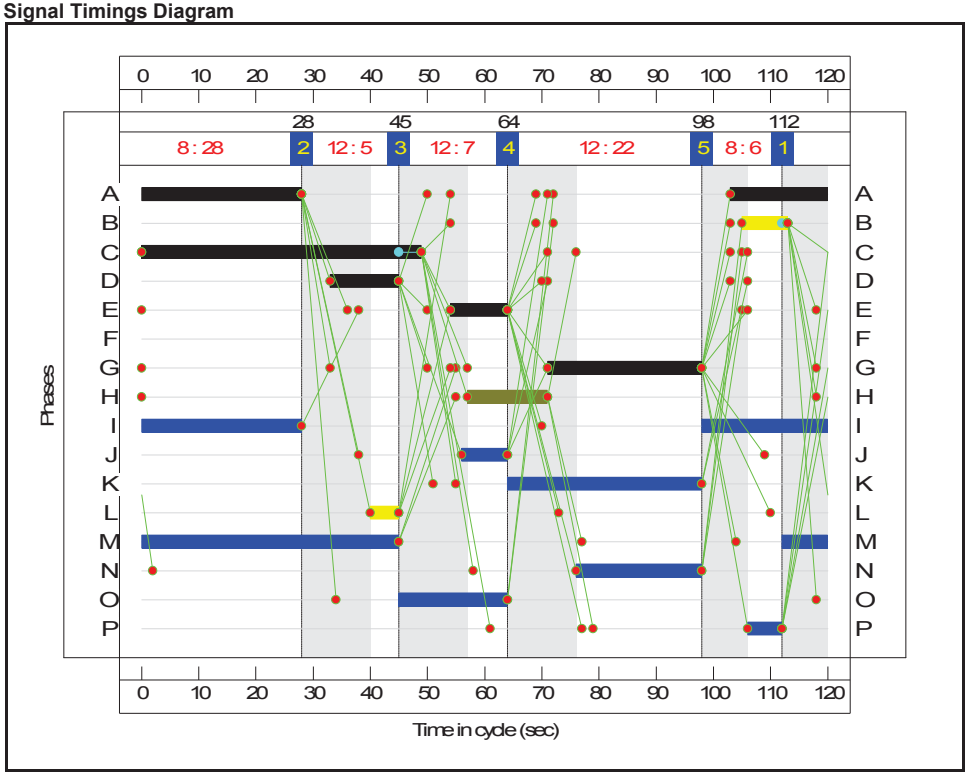


Stage Timings

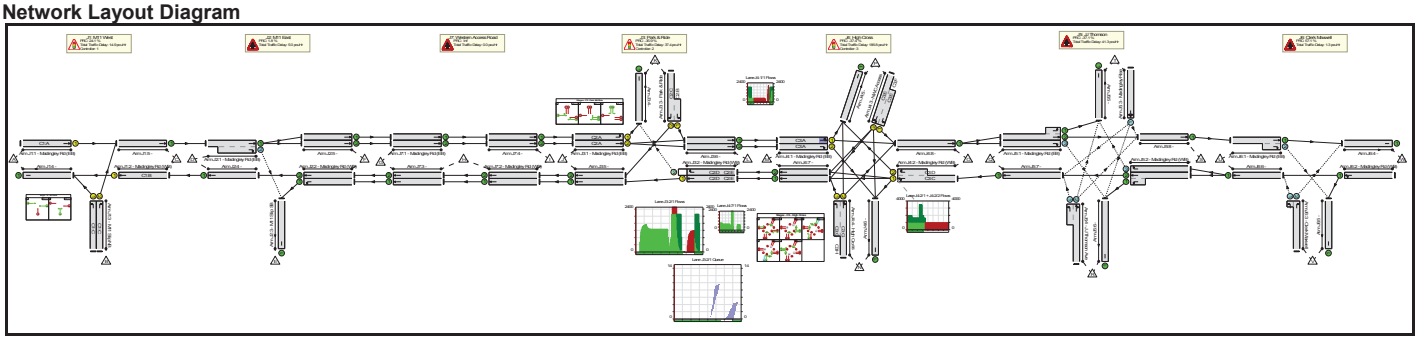
Stage	1	2	3	4	5
Duration	28	5	7	22	6
Change Point	112	28	45	64	98

Full Input Data And Results

Signal Timings Diagram



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	-	-	**N/A**	-	-		-	-	-	-	-	-	**123.6%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**72.5%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	62	-	308	2055	1079	28.5%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	62	-	729	1915	1005	72.5%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	48	-	487	1781	727	67.0%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	48	-	322	1741	711	45.3%
4/1		U	N/A	N/A	-		-	-	-	1216	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	630	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.4%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	632	2000: Inf	364+351	88.4 : 88.4%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	698	1800	1800	38.8%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	729	1800	1800	40.5%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	1008	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	729	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	161	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	161	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**122.3%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	90	-	14	1741	1320	1.1%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	90	-	599	1915	1452	41.2%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	99	4	1169	2105	1754	57.6%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	99	4	29	1854	667	3.9%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	11	-	285	1781:1741	177+56	122.3 : 122.3%
4/1		U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1169	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	216	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	369	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	299	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**123.6%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	45	-	605	1940	744	78.6%
1/2	Madingley Rd (EB) Right	U	N/A	N/A	C3:A		1	45	-	58	1965	753	7.7%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	49:12	-	953	1960:1828	712+135	112.0 : 112.0%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	10	0	241	1898:1687	174+56	104.6 : 104.6%
4/2+4/1	High Cross Ahead Left Right	U	N/A	N/A	C3:G	C3:H	1	27:41	14	795	2155:2033	418+225	123.6 : 123.6%
5/1		U	N/A	N/A	-		-	-	-	634	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	146	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	726	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	447	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	699	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**123.4%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	698	1915:1741	1909+5	33.7 : 33.7%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	9	1741	517	1.6%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	952	1915:1741	1718+179	50.2 : 50.2%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	7	850	624	1.1%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	67	1915	306	21.9%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	344	1915:1915	252+27	123.4 : 123.4%
5/1		U	N/A	N/A	-		-	-	-	16	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	102	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	929	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1030	Inf	Inf	0.0%
J6: Clerk Maxwell	-	-	**N/A**	-	-		-	-	-	-	-	-	**57.3%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	1033	1800: Inf	1800+3	57.3 : 57.3%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	906	1800	1800	50.3%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	103	600:1940	206+255	22.4 : 22.4%
4/1		U	N/A	N/A	-		-	-	-	1077	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	9	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	956	Inf	Inf	0.0%
J7: Western Access Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	306	Inf	Inf	0.0%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	307	Inf	Inf	0.0%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	714	Inf	Inf	0.0%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
3/1	Ahead	U	N/A	N/A	-		-	-	-	714	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	306	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	307	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	**-**	**-**	**1185**	**3**	**1**	**66.3**	**220.4**	**0.0**	**286.7**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**12.0**	**2.9**	**0.0**	**14.9**	**-**	**-**	**-**	**-**
1/1	308	308	-	-	-	1.4	0.2	-	1.6	18.3	5.7	0.2	5.9
2/1	729	729	-	-	-	4.4	1.3	-	5.7	28.3	18.6	1.3	19.9
3/1	487	487	-	-	-	3.9	1.0	-	4.9	36.3	13.1	1.0	14.1
3/2	322	322	-	-	-	2.3	0.4	-	2.7	30.4	7.8	0.4	8.2
4/1	1216	1216	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	630	630	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**310**	**0**	**0**	**0.8**	**4.2**	**0.0**	**5.0**	**-**	**-**	**-**	**-**
1/1+1/2	632	632	310	0	0	0.8	3.5	-	4.3	24.6	9.4	3.5	12.9
2/1	698	698	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
2/2	729	729	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
3/1	1008	1008	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	729	729	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	161	161	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	161	161	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**22**	**3**	**1**	**7.8**	**29.5**	**0.0**	**37.4**	**-**	**-**	**-**	**-**
1/1	14	14	-	-	-	0.0	0.0	-	0.0	3.1	0.1	0.0	0.1
1/2	599	599	-	-	-	0.8	0.4	-	1.2	7.2	7.0	0.4	7.3
2/1	1010	1010	-	-	-	0.6	0.7	-	1.3	4.6	9.6	0.7	10.2
2/2	26	26	22	3	1	0.0	0.0	0.0	0.1	10.2	0.2	0.0	0.3
3/2+3/1	285	233	-	-	-	6.3	28.5	-	34.8	439.6	10.0	28.5	38.5
4/1	40	40	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1010	1010	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	177	177	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	356	356	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	299	299	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**40.5**	**146.4**	**0.0**	**186.8**	**-**	**-**	**-**	**-**
1/1	584	584	-	-	-	4.4	1.8	-	6.2	37.9	17.6	1.8	19.4
1/2	58	58	-	-	-	0.3	0.0	-	0.4	23.9	0.8	0.0	0.9
2/1+2/2	949	847	-	-	-	15.9	55.2	-	71.1	269.6	35.3	55.2	90.4
3/2+3/1	241	233	-	-	-	4.0	10.9	-	14.9	221.9	6.3	10.9	17.2
4/2+4/1	795	643	-	-	-	15.8	78.6	-	94.4	427.4	28.2	78.6	106.8
5/1	550	550	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	140	140	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	627	627	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	401	401	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	647	647	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**645**	**0**	**0**	**5.3**	**36.0**	**0.0**	**41.3**	**-**	**-**	**-**	**-**
1/2+1/1	646	646	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
1/3	8	8	8	0	0	0.0	0.0	-	0.0	3.5	0.0	0.0	0.0
2/2+2/1	952	952	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
2/3	7	7	7	0	0	0.0	0.0	-	0.0	2.9	0.0	0.0	0.0
3/1	67	67	67	0	0	0.0	0.1	-	0.1	7.5	0.0	0.1	0.1
4/2+4/1	344	281	562	0	0	5.3	35.1	-	40.4	422.3	29.5	35.1	64.6
5/1	15	15	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	101	101	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	925	925	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	920	920	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**208**	**0**	**0**	**0.0**	**1.3**	**0.0**	**1.3**	**-**	**-**	**-**	**-**
1/1+1/2	1033	1033	2	0	0	0.0	0.7	-	0.7	2.3	0.0	0.7	0.7
2/1	906	906	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
3/2+3/1	103	103	206	0	0	0.0	0.1	-	0.1	5.0	0.0	0.1	0.1

Full Input Data And Results

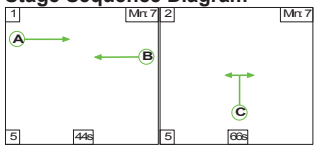
4/1	1077	1077	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	9	9	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	956	956	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
1/1	306	306	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	307	307	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	306	306	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	307	307	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West	PRC for Signalled Lanes (%):	24.1	Total Delay for Signalled Lanes (pcuHr):	14.93	Cycle Time (s):	120
C2 - Park && Ride	PRC for Signalled Lanes (%):	-35.9	Total Delay for Signalled Lanes (pcuHr):	37.37	Cycle Time (s):	120
C3 - High Cross	PRC for Signalled Lanes (%):	-37.4	Total Delay for Signalled Lanes (pcuHr):	186.85	Cycle Time (s):	120
	PRC Over All Lanes (%):	-37.4	Total Delay Over All Lanes(pcuHr):	286.71		

Scenario 3: '2021 DS AM Peak' (FG3: '2021 DS AM Peak', Plan 1: 'Network Control Plan 1')

C1 - M11 West

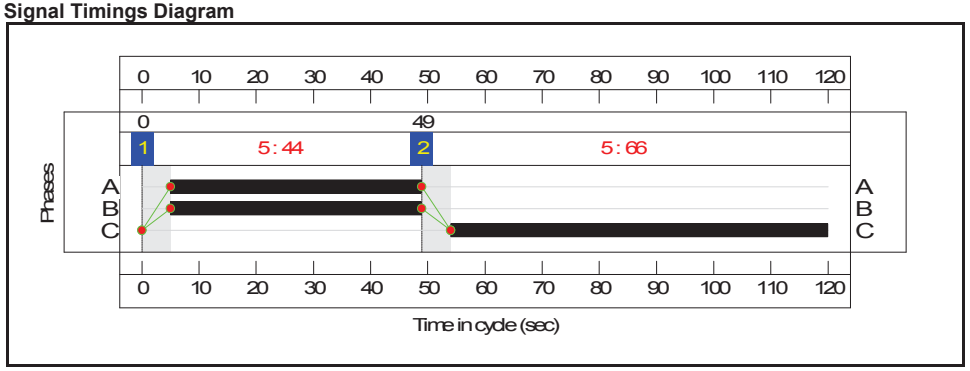
Stage Sequence Diagram



Stage Timings

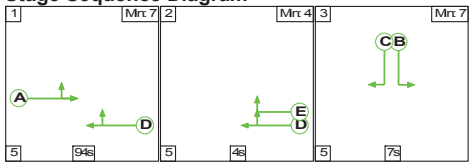
Stage	1	2
Duration	44	66
Change Point	0	49

Signal Timings Diagram



C2 - Park && Ride

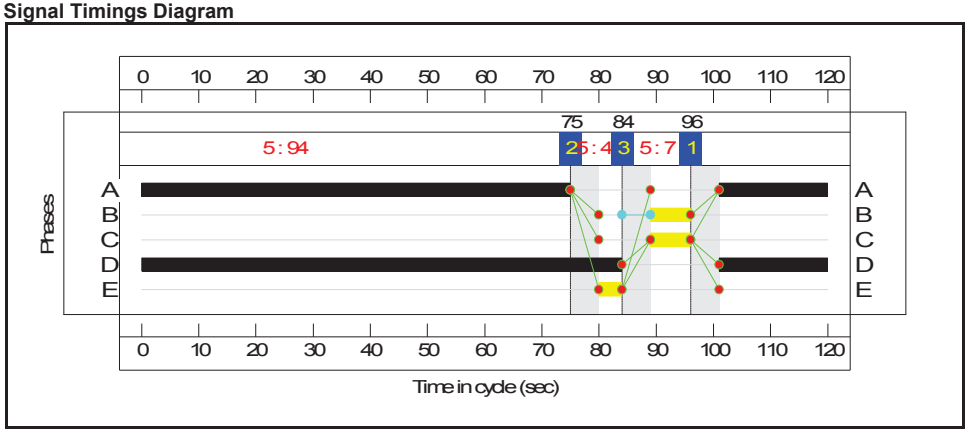
Stage Sequence Diagram



Stage Timings

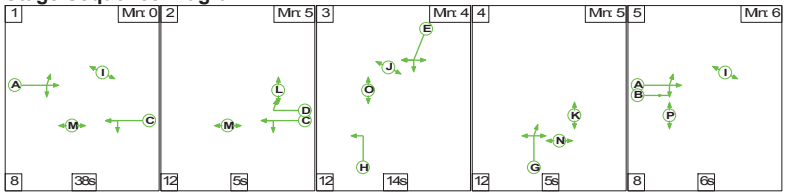
Stage	1	2	3
Duration	94	4	7
Change Point	96	75	84

Signal Timings Diagram



C3 - High Cross

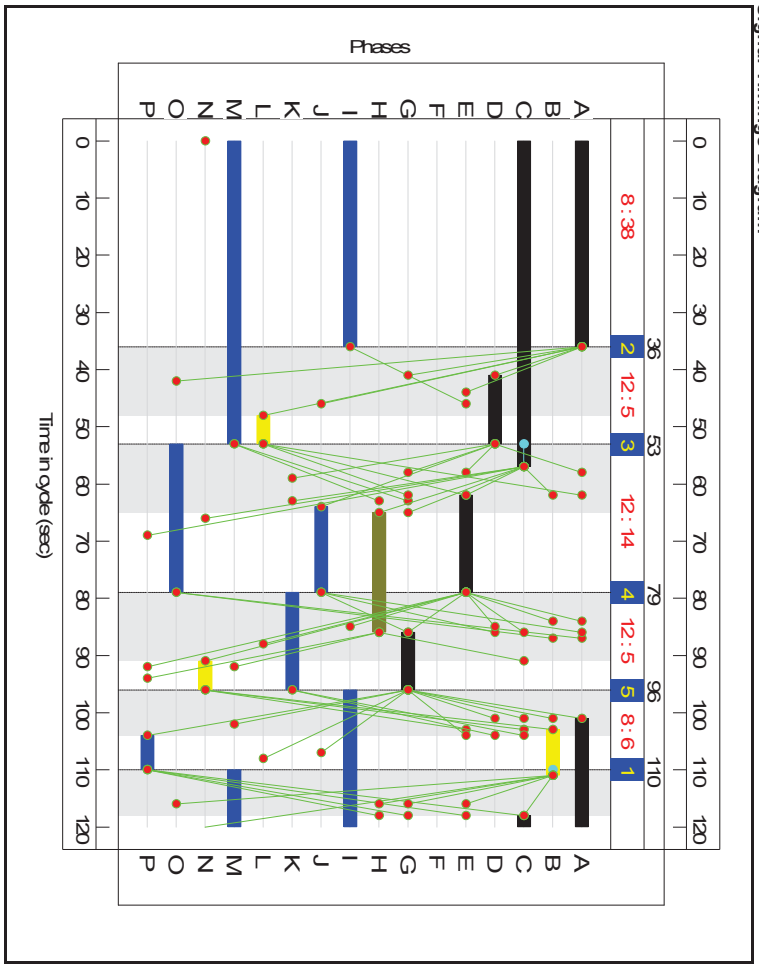
Stage Sequence Diagram



Stage Timings

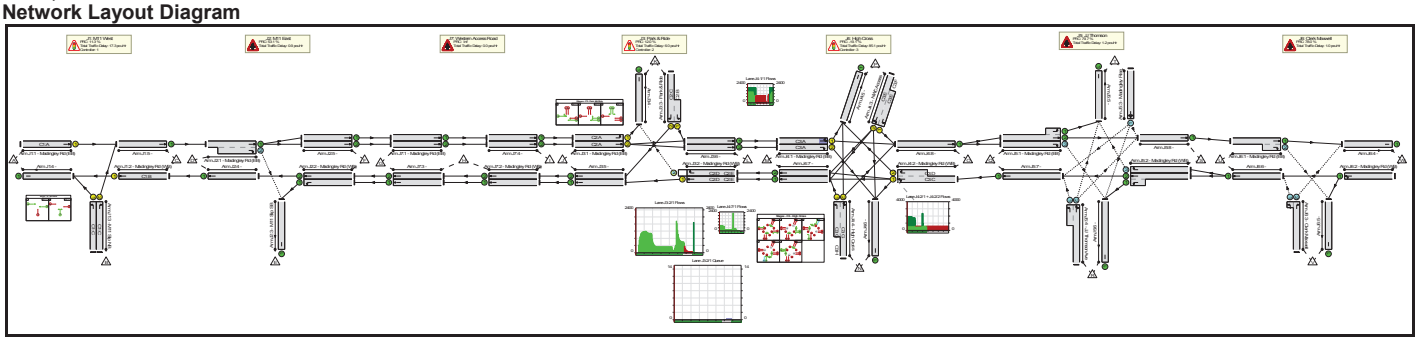
Stage	1	2	3	4	5
Duration	38	5	14	5	6
Change Point	110	36	53	79	96

Signal Timings Diagram



Full Input Data And Results

Network Layout 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**	-	-		-	-	-	-	-	-	**107.2%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.9%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	44	-	600	2055	771	77.9%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	44	-	207	1915	718	28.8%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	66	-	347	1781	994	34.9%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	66	-	786	1741	972	80.9%
4/1		U	N/A	N/A	-		-	-	-	554	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1386	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**58.8%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	1385	2000: Inf	1978+378	58.8 : 58.8%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	265	1800	1800	14.7%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	207	1800	1800	11.5%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	487	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	207	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	582	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.3%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	94	-	156	1741	1378	11.3%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	94	-	1218	1915	1516	80.3%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	103	4	461	2105	1824	25.0%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	103	4	37	1854	171	21.4%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	7	-	40	1781:1741	86+116	19.8 : 19.8%
4/1		U	N/A	N/A	-		-	-	-	193	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	461	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	632	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	609	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**107.2%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	55	-	971	1960	915	106.2%
1/2	Madingley Rd (EB) Right	U	N/A	N/A	C3:A		1	55	-	297	1965	917	32.4%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	59:12	-	577	1923:1828	891+90	58.8 : 58.8%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	17	0	513	1919:1687	283+196	107.2 : 107.2%
4/2+4/1	High Cross Ahead Left Right	U	N/A	N/A	C3:G	C3:H	1	10:31	21	109	2155:2033	198+68	41.0 : 41.0%
5/1		U	N/A	N/A	-		-	-	-	139	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	655	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	262	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	235	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1176	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**50.1%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	1013	1915:1741	1820+87	50.1 : 50.1%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	176	1741	621	26.7%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	653	1915:1741	1566+317	34.7 : 34.7%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	36	850	516	7.0%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	17	1915	300	5.7%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	78	1915:1915	234+86	24.4 : 24.4%
5/1		U	N/A	N/A	-		-	-	-	118	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	288	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	570	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	997	Inf	Inf	0.0%
J6: Clerk Maxwell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**50.6%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	978	1800: Inf	1782+152	50.6 : 50.6%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	852	1800	1800	47.3%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	49	600:1940	265+117	12.8 : 12.8%
4/1		U	N/A	N/A	-		-	-	-	935	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	253	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
J7: Western Access Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**0.0%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	582	Inf	Inf	0.0%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	237	Inf	Inf	0.0%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	236	Inf	Inf	0.0%
3/1	Ahead	U	N/A	N/A	-		-	-	-	237	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	236	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	582	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	**-**	**-**	**774**	**33**	**1**	**42.2**	**69.0**	**0.4**	**111.6**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**13.1**	**4.3**	**0.0**	**17.3**	**-**	**-**	**-**	**-**
1/1	600	600	-	-	-	5.5	1.7	-	7.2	43.4	17.5	1.7	19.2
2/1	207	207	-	-	-	1.5	0.2	-	1.7	29.8	4.8	0.2	5.0
3/1	347	347	-	-	-	1.4	0.3	-	1.7	17.3	6.3	0.3	6.5
3/2	786	786	-	-	-	4.7	2.1	-	6.7	30.8	21.0	2.1	23.0
4/1	554	554	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1386	1386	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**222**	**0**	**0**	**0.0**	**0.9**	**0.0**	**0.9**	**-**	**-**	**-**	**-**
1/1+1/2	1385	1385	222	0	0	0.0	0.7	-	0.7	1.9	0.0	0.7	0.7
2/1	265	265	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
2/2	207	207	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
3/1	487	487	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	207	207	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**3**	**33**	**1**	**3.1**	**2.5**	**0.4**	**6.0**	**-**	**-**	**-**	**-**
1/1	156	156	-	-	-	0.1	0.1	-	0.1	3.2	0.9	0.1	1.0
1/2	1218	1218	-	-	-	2.4	2.0	-	4.4	13.1	23.0	2.0	25.0
2/1	455	455	-	-	-	0.0	0.2	-	0.2	1.7	0.5	0.2	0.6
2/2	36	36	3	33	1	0.0	0.1	0.4	0.5	53.9	0.1	0.1	0.3
3/2+3/1	40	40	-	-	-	0.6	0.1	-	0.7	64.0	0.7	0.1	0.8
4/1	192	192	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	455	455	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	632	632	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	609	609	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**26.0**	**59.1**	**0.0**	**85.1**	**-**	**-**	**-**	**-**
1/1	971	915	-	-	-	10.4	35.1	-	45.5	168.5	34.2	35.1	69.3
1/2	297	297	-	-	-	1.4	0.2	-	1.6	19.9	3.9	0.2	4.1
2/1+2/2	577	577	-	-	-	3.7	0.7	-	4.5	27.8	12.6	0.7	13.3
3/2+3/1	513	479	-	-	-	9.0	22.8	-	31.8	223.2	13.1	22.8	35.8
4/2+4/1	109	109	-	-	-	1.4	0.3	-	1.8	58.1	2.5	0.3	2.9
5/1	136	136	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	641	641	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	259	259	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	232	232	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1108	1108	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**375**	**0**	**0**	**0.0**	**1.2**	**0.0**	**1.2**	**-**	**-**	**-**	**-**
1/2+1/1	955	955	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
1/3	166	166	166	0	0	0.0	0.2	-	0.2	3.9	0.0	0.2	0.2
2/2+2/1	653	653	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
2/3	36	36	36	0	0	0.0	0.0	-	0.0	3.8	0.0	0.0	0.0
3/1	17	17	17	0	0	0.0	0.0	-	0.0	6.4	0.0	0.0	0.0
4/2+4/1	78	78	156	0	0	0.0	0.2	-	0.2	7.4	0.0	0.2	0.2
5/1	115	115	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	278	278	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	570	570	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	941	941	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**175**	**0**	**0**	**0.0**	**1.0**	**0.0**	**1.0**	**-**	**-**	**-**	**-**
1/1+1/2	978	978	77	0	0	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
2/1	852	852	-	-	-	0.0	0.4	-	0.4	1.9	0.0	0.4	0.4
3/2+3/1	49	49	98	0	0	0.0	0.1	-	0.1	5.4	0.0	0.1	0.1

Full Input Data And Results

4/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	253	253	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
1/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	237	237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	236	236	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	237	237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	236	236	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West
C2 - Park && Ride
C3 - High Cross

PRC for Signalled Lanes (%): 11.3
PRC for Signalled Lanes (%): 12.0
PRC for Signalled Lanes (%): -19.1
PRC Over All Lanes (%): -19.1

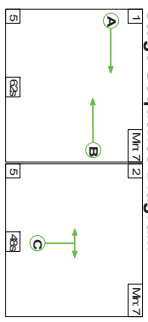
Total Delay for Signalled Lanes (pcuHr): 17.35
Total Delay for Signalled Lanes (pcuHr): 6.05
Total Delay for Signalled Lanes (pcuHr): 85.12
Total Delay Over All Lanes(pcuHr): 111.59

Cycle Time (s): 120
Cycle Time (s): 120
Cycle Time (s): 120

Scenario 4: '2021 DS PM Peak' (FG4: '2021 DS PM Peak', Plan 1: 'Network Control Plan 1')

C1 - M11 West

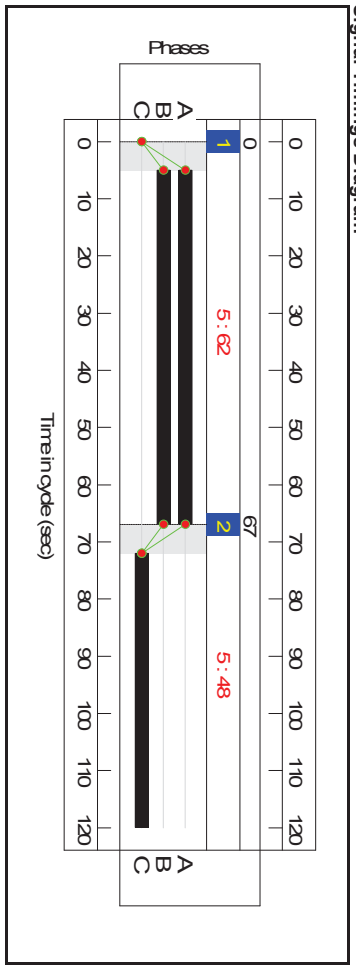
Stage Sequence Diagram



Stage Timings

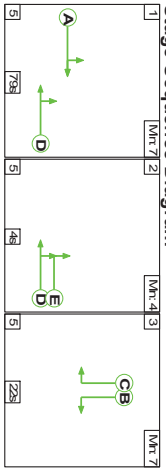
Stage	1	2
Duration	62	48
Change Point	0	67

Signal Timings Diagram



C2 - Park && Ride

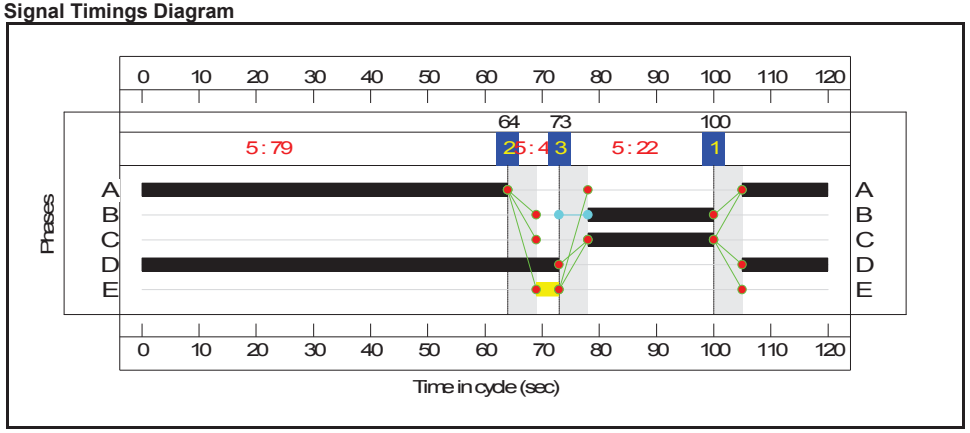
Stage Sequence Diagram



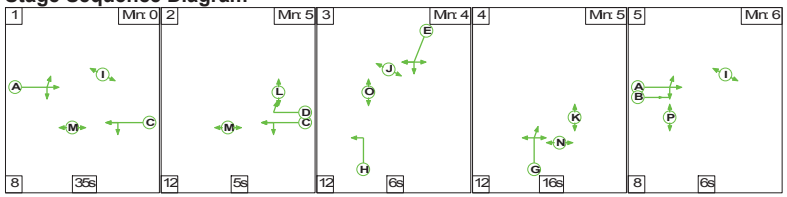
Stage Timings

Stage	1	2	3
Duration	79	4	22
Change Point	100	64	73

Signal Timings Diagram



C3 - High Cross
Stage Sequence Diagram

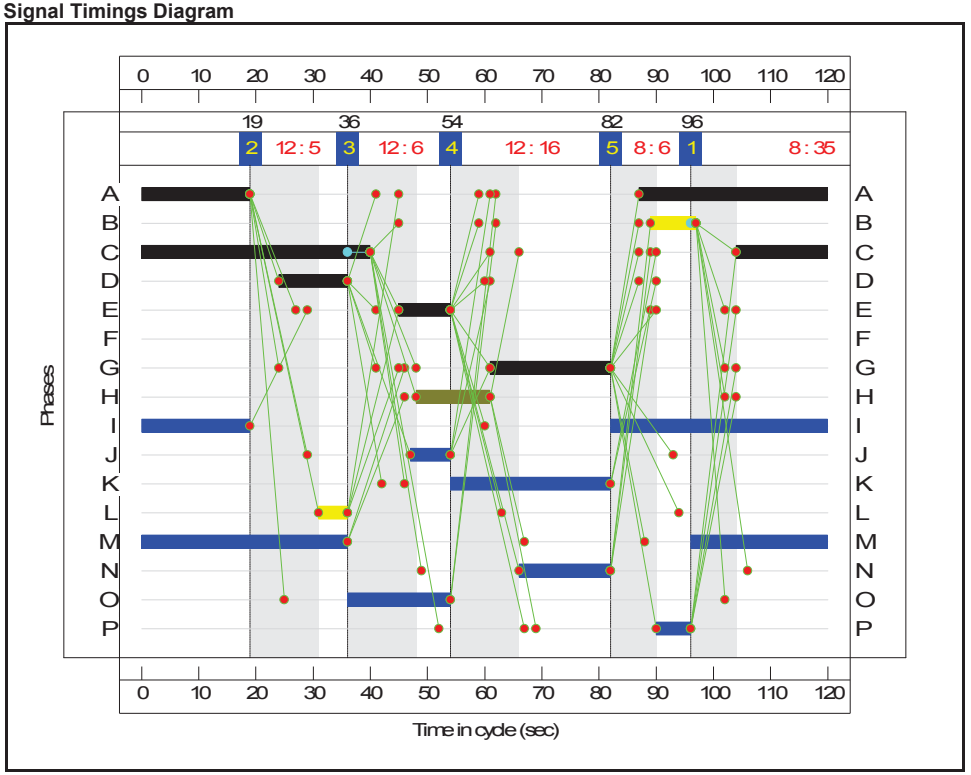


Stage Timings

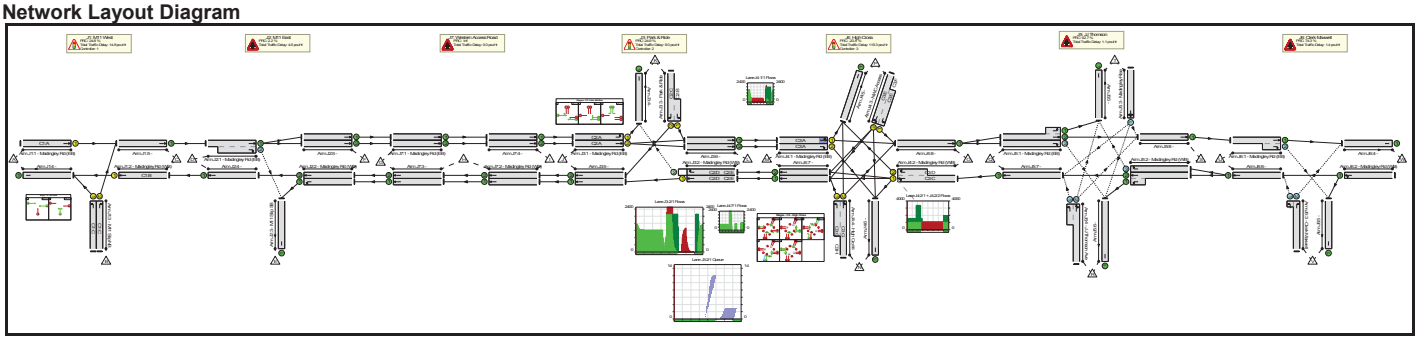
Stage	1	2	3	4	5
Duration	35	5	6	16	6
Change Point	96	19	36	54	82

Full Input Data And Results

Signal Timings Diagram



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	-	-	**N/A**	-	-		-	-	-	-	-	-	**108.7%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**72.1%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	62	-	305	2055	1079	28.3%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	62	-	725	1915	1005	72.1%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	48	-	486	1781	727	66.8%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	48	-	320	1741	711	45.0%
4/1		U	N/A	N/A	-		-	-	-	1211	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	625	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.1%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	626	2000: Inf	360+351	88.1 : 88.1%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	701	1800	1800	38.9%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	725	1800	1800	40.3%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	1010	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	725	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	158	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	159	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**72.1%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	79	-	14	1741	1161	1.2%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	79	-	594	1915	1277	46.5%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	88	4	1168	2105	1561	69.3%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	88	4	29	1854	570	4.7%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	22	-	285	1781:1741	300+96	72.1 : 72.1%
4/1		U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1168	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	216	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	366	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	297	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**108.7%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	52	-	610	1940	857	71.2%
1/2	Madingley Rd (EB) Right	U	N/A	N/A	C3:A		1	52	-	50	1965	868	5.8%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	56:12	-	1053	1961:1828	775+198	108.3 : 108.3%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	9	0	229	1893:1687	158+65	102.7 : 102.7%
4/2+4/1	High Cross Ahead Left Right	U	N/A	N/A	C3:G	C3:H	1	21:34	13	620	2155:2033	341+229	108.7 : 108.7%
5/1		U	N/A	N/A	-		-	-	-	576	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	112	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	718	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	686	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**46.7%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	680	1915:1741	1909+6	34.8 : 34.8%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	15	1741	538	2.7%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	891	1915:1741	1837+71	46.7 : 46.7%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	7	850	617	1.1%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	67	1915	320	21.0%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	233	1915:1915	261+372	36.8 : 36.8%
5/1		U	N/A	N/A	-		-	-	-	16	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	51	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	1029	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	797	Inf	Inf	0.0%
J6: Clerk Maxwell	-	-	**N/A**	-	-		-	-	-	-	-	-	**51.6%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	800	1800: Inf	1797+27	43.9 : 43.9%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	868	1800	1800	48.2%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	203	600:1940	265+128	51.6 : 51.6%
4/1		U	N/A	N/A	-		-	-	-	925	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	51	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	895	Inf	Inf	0.0%
J7: Western Access Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	304	Inf	Inf	0.0%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	304	Inf	Inf	0.0%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
3/1	Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	304	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	304	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	**-**	**-**	**1305**	**3**	**1**	**51.5**	**98.9**	**0.0**	**150.4**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**11.9**	**2.9**	**0.0**	**14.8**	**-**	**-**	**-**	**-**
1/1	305	305	-	-	-	1.3	0.2	-	1.5	18.2	5.6	0.2	5.8
2/1	725	725	-	-	-	4.4	1.3	-	5.7	28.1	18.3	1.3	19.6
3/1	486	486	-	-	-	3.9	1.0	-	4.9	36.3	13.1	1.0	14.1
3/2	320	320	-	-	-	2.3	0.4	-	2.7	30.3	7.6	0.4	8.1
4/1	1211	1211	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	625	625	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**309**	**0**	**0**	**0.8**	**4.1**	**0.0**	**4.9**	**-**	**-**	**-**	**-**
1/1+1/2	626	626	309	0	0	0.8	3.4	-	4.2	24.2	9.3	3.4	12.7
2/1	701	701	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
2/2	725	725	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
3/1	1010	1010	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	725	725	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	158	158	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	159	159	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**24**	**3**	**1**	**6.1**	**2.9**	**0.0**	**9.0**	**-**	**-**	**-**	**-**
1/1	14	14	-	-	-	0.0	0.0	-	0.0	4.9	0.1	0.0	0.1
1/2	594	594	-	-	-	1.6	0.4	-	2.0	12.3	9.4	0.4	9.8
2/1	1082	1082	-	-	-	0.9	1.1	-	2.1	6.9	12.1	1.1	13.2
2/2	27	27	24	3	1	0.0	0.0	0.0	0.1	15.8	0.3	0.0	0.3
3/2+3/1	285	285	-	-	-	3.5	1.3	-	4.7	60.0	7.1	1.3	8.4
4/1	41	41	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1082	1082	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	216	216	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	366	366	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	297	297	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**32.7**	**86.6**	**0.0**	**119.3**	**-**	**-**	**-**	**-**
1/1	610	610	-	-	-	3.3	1.2	-	4.5	26.5	10.9	1.2	12.1
1/2	50	50	-	-	-	0.3	0.0	-	0.3	20.2	0.7	0.0	0.7
2/1+2/2	1053	972	-	-	-	15.5	46.1	-	61.6	210.7	37.8	46.1	83.9
3/2+3/1	229	225	-	-	-	3.7	9.2	-	12.9	202.7	5.5	9.2	14.8
4/2+4/1	620	570	-	-	-	10.0	30.0	-	39.9	231.9	17.6	30.0	47.6
5/1	543	543	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	109	109	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	665	665	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	437	437	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	673	673	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**555**	**0**	**0**	**0.0**	**1.1**	**0.0**	**1.1**	**-**	**-**	**-**	**-**
1/2+1/1	667	667	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
1/3	15	15	15	0	0	0.0	0.0	-	0.0	3.4	0.0	0.0	0.0
2/2+2/1	891	891	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
2/3	7	7	7	0	0	0.0	0.0	-	0.0	3.0	0.0	0.0	0.0
3/1	67	67	67	0	0	0.0	0.1	-	0.1	7.1	0.0	0.1	0.1
4/2+4/1	233	233	466	0	0	0.0	0.3	-	0.3	4.5	0.0	0.3	0.3
5/1	16	16	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	51	51	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1029	1029	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	784	784	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**418**	**0**	**0**	**0.0**	**1.4**	**0.0**	**1.4**	**-**	**-**	**-**	**-**
1/1+1/2	800	800	12	0	0	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
2/1	868	868	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
3/2+3/1	203	203	406	0	0	0.0	0.5	-	0.5	9.4	0.0	0.5	0.5

Full Input Data And Results

4/1	925	925	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	51	51	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	895	895	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
1/1	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

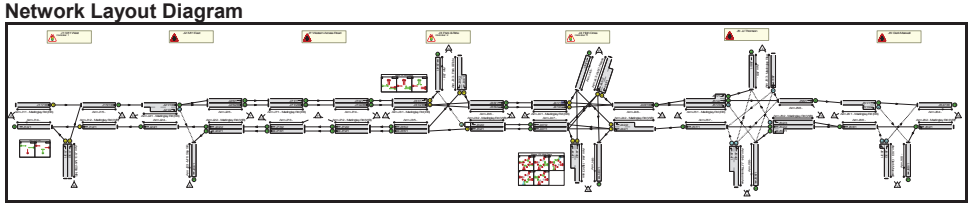
C1 - M11 West	PRC for Signalled Lanes (%):	24.8	Total Delay for Signalled Lanes (pcuHr):	14.81	Cycle Time (s):	120
C2 - Park && Ride	PRC for Signalled Lanes (%):	24.9	Total Delay for Signalled Lanes (pcuHr):	8.98	Cycle Time (s):	120
C3 - High Cross	PRC for Signalled Lanes (%):	-20.8	Total Delay for Signalled Lanes (pcuHr):	119.25	Cycle Time (s):	120
	PRC Over All Lanes (%):	-20.8	Total Delay Over All Lanes(pcuHr):	150.43		

Full Input Data And Results

User and Project Details

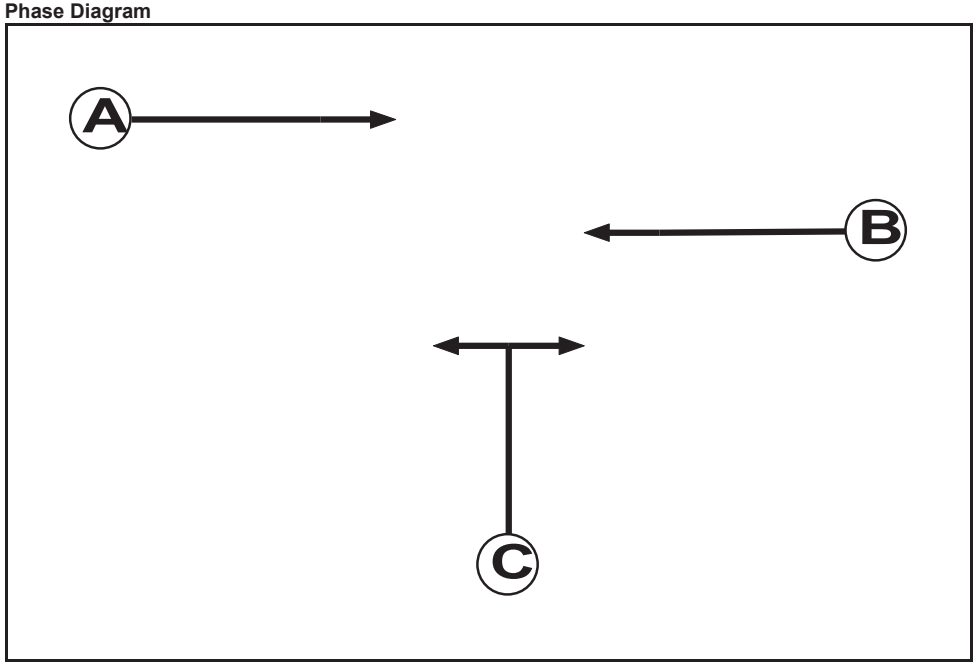
Project:	
Title:	
Location:	
File name:	170601 West Cambridge 2021 DS Existing Layout - HX Right Turn + Straight Mitigation.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



C1 - M11 West

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

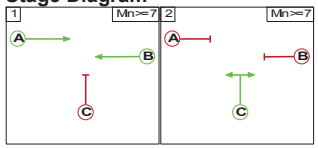
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C
A		-	5
B	-		5
C	5	5	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C

Stage Diagram



Phase Delays

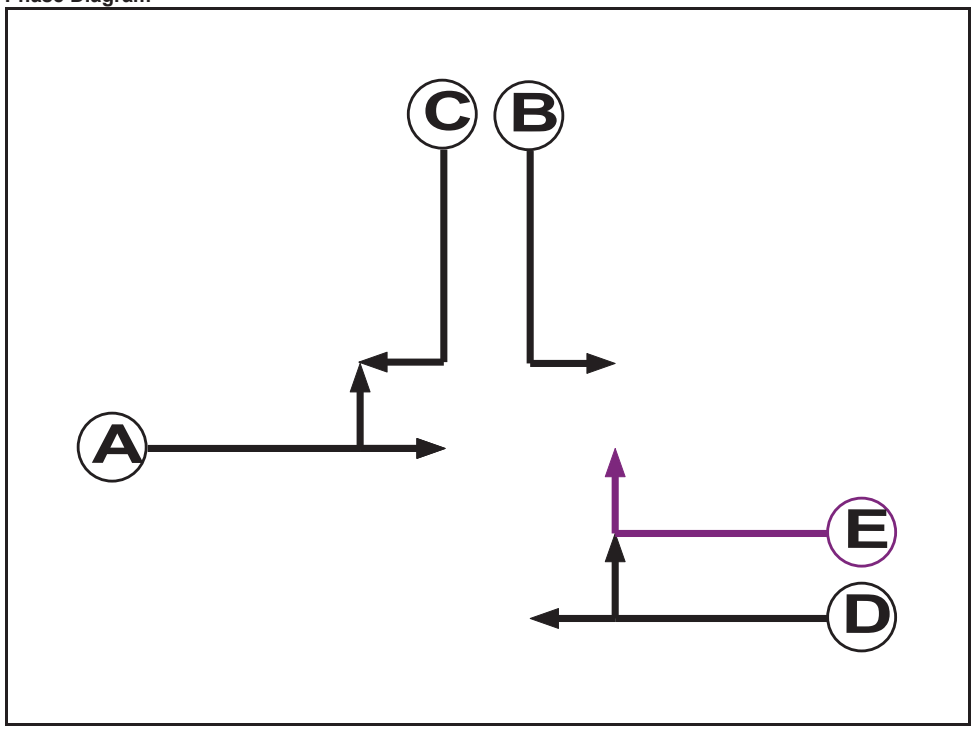
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2
1		5
2	5	

C2 - Park && Ride

Phase Diagram



Phase Input Data

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

Full Input Data And Results

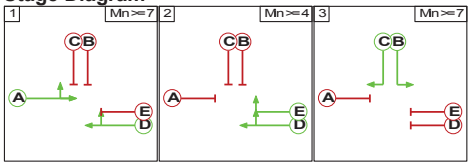
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



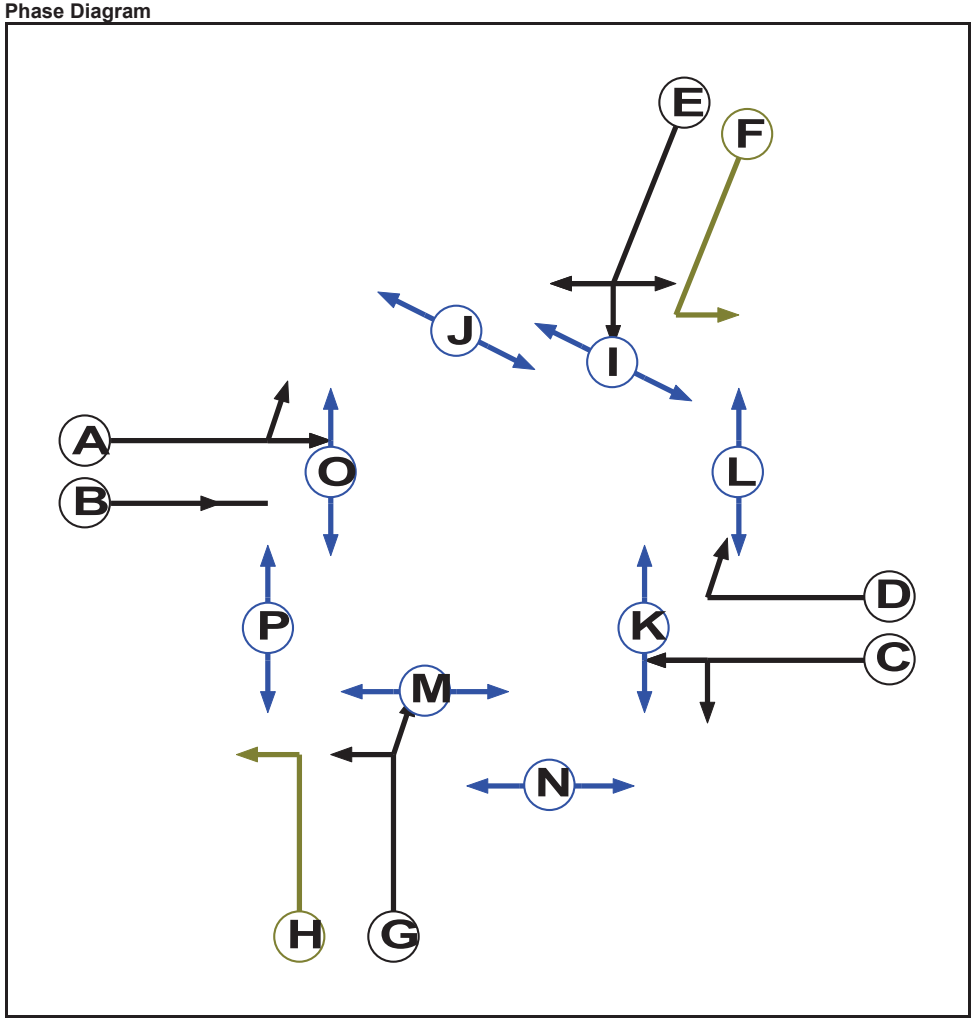
Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	B	Gaining absolute	5	5

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		5	5
	2	5		5
	3	5	5	

C3 - High Cross
Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Filter	E	4	4
G	Traffic		7	7
H	Filter	G	4	0
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5
N	Pedestrian		5	5
O	Pedestrian		5	5
P	Pedestrian		5	5

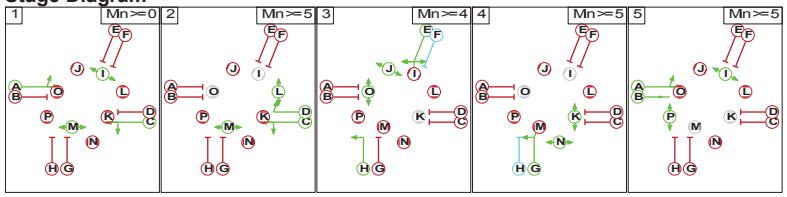
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A		-	-	5	8	8	5	-	-	10	-	12	-	-	6	-
B	-		7	-	5	-	5	5	-	-	-	-	-	9	5	-
C	-	5		-	5	-	8	8	-	-	6	-	-	9	-	12
D	5	-	-		5	-	5	-	-	11	6	-	-	-	-	-
E	5	5	7	6		-	7	-	6	-	-	9	-	12	-	13
F	5	-	-	-	-		5	-	6	-	-	9	-	-	-	-
G	5	5	5	5	8	8		-	-	11	-	12	6	-	-	8
H	-	-	5	-	-	-	-		-	-	-	-	6	-	-	8
I	-	-	-	-	10	10	-	-		-	-	-	-	-	-	-
J	7	-	-	7	-	-	7	-	-		-	-	-	-	-	-
K	-	-	8	8	-	-	-	-	-	-		-	-	-	-	-
L	9	-	-	-	9	9	9	-	-	-	-		-	-	-	-
M	-	-	-	-	-	-	10	10	-	-	-	-		-	-	-
N	-	7	7	-	7	-	-	-	-	-	-	-	-		-	-
O	8	8	-	-	-	-	-	-	-	-	-	-	-	-		-
P	-	-	8	-	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	4	4
5	1	B	Losing	1	1

Full Input Data And Results

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		12	10	10	12
2	9		12	10	12
3	X	X		12	X
4	8	12	11		8
5	8	12	10	9	

Give-Way Lane Input Data

Junction: J1: M11 West

There are no Opposed Lanes in this Junction

Junction: J2: M11 East

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)
J2:1/2 (Madingley Rd (EB))	J2:3/1 (Right)	850	0	J2:2/2	0.35	All	-	-	-	-	-
				J2:2/1	0.35	All					

Junction: J3: Park && Ride

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)
J3:2/2 (Madingley Rd (WB))	J3:4/1 (Right)	1440	0	J3:1/1	1.09	All	2.00	-	0.50	2	2.00
				J3:1/2	1.09	All					

Junction: J4: High Cross

There are no Opposed Lanes in this Junction

Junction: J5: JJ Thomson

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)
J5:1/3 (Madingley Rd (EB))	J5:6/1 (Right)	850	0	J5:2/2	0.35	All	-	-	-	-	-
				J5:2/1	0.35	All					
J5:2/3 (Madingley Rd (WB))	J5:5/1 (Right)	850	0	J5:1/1	0.35	All	-	-	-	-	-
				J5:1/2	0.35	All					
J5:3/1 (Madingley Rise)	J5:6/1 (Ahead)	600	0	J5:1/1	0.22	All	-	-	-	-	-
				J5:1/2	0.22	All					
				J5:1/3	0.22	All					
				J5:2/1	0.19	All					
				J5:2/2	0.19	All					
				J5:2/3	0.19	All					
	J5:7/1 (Right)	600	0	J5:1/2	0.22	All					
				J5:2/2	0.19	All					
				J5:2/1	0.19	All					
				J5:2/3	0.19	All					
				J5:1/1	0.22	All					
				J5:1/3	0.22	All					
				J5:4/1	0.19	All					
				J5:4/2	0.19	All					
	J5:8/1 (Left)	715	0	J5:1/2	0.22	All					
J5:4/1 (JJ Thomson Ave)	J5:7/1 (Left)	715	0	J5:2/2	0.22	All	-	-	-	-	-
J5:4/2 (JJ Thomson Ave)	J5:5/1 (Ahead)	600	0	J5:2/1	0.22	All	-	-	-	-	-
				J5:2/3	0.22	All					
				J5:1/1	0.19	All					

				J5:1/2	0.19	All						
				J5:1/3	0.19	All						
				J5:2/2	0.22	All						
				J5:2/2	0.22	All						
				J5:2/1	0.22	All						
				J5:2/3	0.22	All						
	J5:8/1 (Right)	600	0	J5:1/1	0.19	All						
				J5:1/2	0.19	All						
				J5:1/3	0.19	All						
				J5:3/1	0.19	All						

Junction: J6: Clerk Maxwell

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)
J6:1/2 (Madingley Rd (EB))	J6:5/1 (Right)	850	0	J6:2/1	0.35	All	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	J6:6/1 (Left)	1439	0	J6:2/1	1.09	All	-	-	-	-	-
J6:3/2 (Clerk Maxwell)	J6:4/1 (Right)	600	0	J6:1/1	0.19	All	-	-	-	-	-
				J6:1/2	0.19	All					
				J6:2/1	0.22	To J6:6/1 (Ahead)					

Junction: J7: Western Access Road

There are no Opposed Lanes in this Junction

Lane Input Data

Junction: J1: M11 West

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 (Madingley Rd (EB))	U	A	2	3	87.0	Geom	-	3.00	0.00	N	Arm J1:5 Ahead	Inf
J1:2/1 (Madingley Rd (WB))	U	B	2	3	31.3	Geom	-	3.00	0.00	Y	Arm J1:4 Ahead	Inf
J1:3/1 (M11 Slip NB)	U	C	2	3	34.8	Geom	-	3.00	0.00	Y	Arm J1:4 Left	20.00
J1:3/2 (M11 Slip NB)	U	C	2	3	87.0	Geom	-	3.00	0.00	Y	Arm J1:5 Right	15.00
J1:4/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J1:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J2: M11 East

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 (Madingley Rd (EB))	U		2	3	33.0	User	2000	-	-	-	-	-
J2:1/2 (Madingley Rd (EB))	O		2	3	10.4	Inf	-	-	-	-	-	-
J2:2/1 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:2/2 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:3/1 (M11 Slip SB)	U		2	3	87.0	Inf	-	-	-	-	-	-
J2:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J3: Park && Ride

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)
J3:1/1 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:4 Left	15.00
J3:1/2 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:6 Ahead	Inf
J3:2/1 (Madingley Rd (WB))	U	D E	2	3	13.9	Geom	-	3.50	0.00	N	Arm J3:5 Ahead	Inf
J3:2/2 (Madingley Rd (WB))	O	D E	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J3:4 Right	25.00
J3:3/1 (Park & Ride)	U	B	2	3	5.2	Geom	-	3.00	0.00	Y	Arm J3:6 Left	15.00
J3:3/2 (Park & Ride)	U	C	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:5 Right	20.00
J3:4/1	U		2	3	17.4	Inf	-	-	-	-	-	-
J3:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J4: High Cross

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)
J4:1/1 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J4:5 Left	30.00
											Arm J4:8 Ahead	Inf
J4:1/2 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	N	Arm J4:8 Ahead	Inf
J4:2/1 (Madingley Rd (WB))	U	C	2	3	88.7	Geom	-	3.50	0.00	Y	Arm J4:6 Left	20.00
											Arm J4:7 Ahead	Inf
J4:2/2 (Madingley Rd (WB))	U	D	2	3	7.0	Geom	-	3.50	0.00	Y	Arm J4:5 Right	20.00
J4:3/1 (NWC Access)	U	E F	2	3	8.7	Geom	-	3.25	0.00	Y	Arm J4:8 Left	10.00
J4:3/2 (NWC Access)	U	E	2	3	87.0	Geom	-	3.25	0.00	Y	Arm J4:6 Ahead	Inf
											Arm J4:7 Right	45.00
J4:4/1 (High Cross)	U	G H	2	3	8.3	Geom	-	4.00	0.00	N	Arm J4:7 Left	25.00
J4:4/2 (High Cross)	U	G	2	3	60.0	Geom	-	4.00	0.00	N	Arm J4:5 Ahead	Inf
J4:5/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J4:6/1	U		2	3	8.7	Inf	-	-	-	-	-	-
J4:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:7/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J5: JJ Thomson

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)
J5:1/1 (Madingley Rd (EB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:5 Left	15.00
J5:1/2 (Madingley Rd (EB))	U		2	3	90.4	Geom	-	3.00	0.00	Y	Arm J5:8 Ahead	Inf
J5:1/3 (Madingley Rd (EB))	O		2	3	15.7	Geom	-	3.00	0.00	Y	Arm J5:6 Right	15.00
J5:2/1 (Madingley Rd (WB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:6 Left	15.00
J5:2/2 (Madingley Rd (WB))	U		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:7 Ahead	Inf
J5:2/3 (Madingley Rd (WB))	O		2	3	7.1	User	850	-	-	-	-	-
J5:3/1 (Madingley Rise)	O		2	3	34.8	Geom	-	3.00	0.00	Y	Arm J5:6 Ahead	Inf
											Arm J5:7 Right	Inf
											Arm J5:8 Left	Inf
J5:4/1 (JJ Thomson Ave)	O		2	3	8.7	Geom	-	3.00	0.00	Y	Arm J5:7 Left	Inf
J5:4/2 (JJ Thomson Ave)	O		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:5 Ahead	Inf
											Arm J5:8 Right	Inf
J5:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J5:6/1	U		2	3	59.1	Inf	-	-	-	-	-	-
J5:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J5:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J6: Clerk Maxwell

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)
J6:1/1 (Madingley Rd (EB))	U		2	3	48.7	User	1800	-	-	-	-	-
J6:1/2 (Madingley Rd (EB))	O		2	3	4.3	Inf	-	-	-	-	-	-
J6:2/1 (Madingley Rd (WB))	U		2	3	60.9	User	1800	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	O		2	3	1.4	Geom	-	3.25	0.00	Y	Arm J6:6 Left	Inf
J6:3/2 (Clerk Maxwell)	O		2	3	60.0	User	600	-	-	-	-	-
J6:4/1	U		2	3	60.9	Inf	-	-	-	-	-	-
J6:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J6:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J7: Western Access 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)
J7:1/1 (Madingley Rd (EB))	U		2	3	26.1	Inf	-	-	-	-	-	-
J7:1/2 (Madingley Rd (EB))	U		2	3	26.1	Inf	-	-	-	-	-	-
J7:2/1 (Madingley Rd (WB))	U		2	3	17.4	Inf	-	-	-	-	-	-
J7:2/2 (Madingley Rd (WB))	U		2	3	17.4	Inf	-	-	-	-	-	-
J7:3/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:3/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2021 DS AM Peak HX Mitigation'	08:00	09:00	01:00	
2: '2021 DS PM Peak HX Mitigation'	17:00	18:00	01:00	

Scenario 1: '2021 DS AM Peak' (FG1: '2021 DS AM Peak HX Mitigation', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																							
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Tot.
Origin	A	0	0	600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600
	B	347	0	786	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1133
	C	207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	207
	D	0	0	0	0	222	1163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1385
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	207	265	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	472
	G	0	0	0	0	0	0	0	0	1163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1163
	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	I	0	0	0	0	0	0	473	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	473
	J	0	0	0	0	0	0	0	0	0	0	156	1218	0	0	0	0	0	0	0	0	0	0	0	1374
	K	0	0	0	0	0	0	0	0	0	17	0	23	0	0	0	0	0	0	0	0	0	0	0	40
	L	0	0	0	0	0	0	0	0	0	461	37	0	0	0	0	0	0	0	0	0	0	0	0	498
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1221	47	0	0	0	0	0	0	0	1268
	N	0	0	0	0	0	0	0	0	0	0	0	0	28	0	0	39	0	0	0	0	0	0	0	67
	O	0	0	0	0	0	0	0	0	0	0	0	0	370	154	0	53	0	0	0	0	0	0	0	577
	P	0	0	0	0	0	0	0	0	0	0	0	0	99	204	210	0	0	0	0	0	0	0	0	513
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	473	925	46	0	0	0	1444
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	62	36	0	0	0	119
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	543	110	0	36	0	0	0	689
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	9	0	0	0	0	17
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77	901	978
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	34	49
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	676	176	0	852
	Tot.	554	0	1386	207	487	1163	473	0	1163	478	193	1241	497	358	1431	139	570	585	996	118	691	253	935	13918

Traffic Lane Flows

Lane	Scenario 1: 2021 DS AM Peak
Junction: J1: M11 West	
J1:1/1	600
J1:2/1	207
J1:3/1	347
J1:3/2	786
J1:4/1	554
J1:5/1	1386
Junction: J2: M11 East	
J2:1/1 (with short)	1385(In) 1163(Out)
J2:1/2 (short)	222
J2:2/1	265
J2:2/2	207
J2:3/1	487
J2:4/1	207
J2:5/1	581
J2:5/2	582
Junction: J3: Park && Ride	
J3:1/1	156
J3:1/2	1218
J3:2/1	461
J3:2/2	37
J3:3/1 (short)	23
J3:3/2 (with short)	40(In) 17(Out)
J3:4/1	193
J3:5/1	461
J3:5/2	17
J3:6/1	632
J3:6/2	609
Junction: J4: High Cross	
J4:1/1	606
J4:1/2	662
J4:2/1 (with short)	577(In) 524(Out)
J4:2/2 (short)	53
J4:3/1 (short)	210
J4:3/2 (with short)	513(In) 303(Out)
J4:4/1 (short)	28

J4:4/2 (with short)	67(In) 39(Out)
J4:5/1	139
J4:6/1	358
J4:7/1	262
J4:7/2	235
J4:8/1	1431
Junction: J5: JJ Thomson	
J5:1/1 (short)	46
J5:1/2 (with short)	971(In) 925(Out)
J5:1/3	473
J5:2/1 (short)	110
J5:2/2 (with short)	653(In) 543(Out)
J5:2/3	36
J5:3/1	17
J5:4/1 (short)	21
J5:4/2 (with short)	119(In) 98(Out)
J5:5/1	118
J5:6/1	585
J5:7/1	570
J5:8/1	996
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	978(In) 901(Out)
J6:1/2 (short)	77
J6:2/1	852
J6:3/1 (short)	15
J6:3/2 (with short)	49(In) 34(Out)
J6:4/1	935
J6:5/1	253
J6:6/1	691
Junction: J7: Western Access Road	
J7:1/1	581
J7:1/2	582
J7:2/1	237
J7:2/2	236
J7:3/1	237
J7:3/2	236
J7:4/1	581
J7:4/2	582

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	7.8 %	1957	1957
				Arm J4:8 Ahead	Inf	92.2 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	N	Arm J4:8 Ahead	Inf	100.0 %	2105	2105
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	29.4 %	1923	1923
				Arm J4:7 Ahead	Inf	70.6 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	67.3 %	1919	1919
				Arm J4:7 Right	45.00	32.7 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	100.0 %	2155	2155
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	11.8 %	1915	1915
				Arm J5:7 Right	Inf	35.3 %		
				Arm J5:8 Left	Inf	52.9 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	36.7 %	1915	1915
				Arm J5:8 Right	Inf	63.3 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:2/1 (Madingley Rd (WB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:2/2 (Madingley Rd (WB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2021 DS PM Peak' (FG2: '2021 DS PM Peak HX Mitigation', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																							
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Tot.
Origin	A	0	0	305	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	305
	B	486	0	320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	806
	C	725	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	725
	D	0	0	0	0	309	317	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	626
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	725	701	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1426
	G	0	0	0	0	0	0	0	0	608	0	0	0	0	0	0	0	0	0	0	0	0	0	0	608
	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	I	0	0	0	0	0	0	1426	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1426
	J	0	0	0	0	0	0	0	0	0	0	14	594	0	0	0	0	0	0	0	0	0	0	0	608
	K	0	0	0	0	0	0	0	0	0	216	0	69	0	0	0	0	0	0	0	0	0	0	0	285
	L	0	0	0	0	0	0	0	0	0	1168	29	0	0	0	0	0	0	0	0	0	0	0	0	1197
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	504	156	0	0	0	0	0	0	0	660
	N	0	0	0	0	0	0	0	0	0	0	0	0	249	0	0	206	0	0	0	0	0	0	0	455
	O	0	0	0	0	0	0	0	0	0	0	0	0	818	21	0	214	0	0	0	0	0	0	0	1053
	P	0	0	0	0	0	0	0	0	0	0	0	0	121	41	67	0	0	0	0	0	0	0	0	229
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	513	2	0	0	0	580
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137	0	253	7	0	0	0	397
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	858	33	0	7	0	0	0	898
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	3	30	0	0	0	0	67
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	788	800
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	0	137	203
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	829	39	0	868
	Tot.	1211	0	625	725	1010	317	1426	0	608	1384	43	663	1188	62	571	576	1029	101	796	16	895	51	925	14222

Traffic Lane Flows

Lane	Scenario 2: 2021 DS PM Peak
Junction: J1: M11 West	
J1:1/1	305
J1:2/1	725
J1:3/1	486
J1:3/2	320
J1:4/1	1211
J1:5/1	625
Junction: J2: M11 East	
J2:1/1 (with short)	626(In) 317(Out)
J2:1/2 (short)	309
J2:2/1	701
J2:2/2	725
J2:3/1	1010
J2:4/1	725
J2:5/1	158
J2:5/2	159
Junction: J3: Park && Ride	
J3:1/1	14
J3:1/2	594
J3:2/1	1168
J3:2/2	29
J3:3/1 (short)	69
J3:3/2 (with short)	285(In) 216(Out)
J3:4/1	43
J3:5/1	1168
J3:5/2	216
J3:6/1	366
J3:6/2	297
Junction: J4: High Cross	
J4:1/1	223
J4:1/2	437
J4:2/1 (with short)	1053(In) 839(Out)
J4:2/2 (short)	214
J4:3/1 (short)	67
J4:3/2 (with short)	229(In) 162(Out)
J4:4/1 (short)	249

J4:4/2 (with short)	455(In) 206(Out)
J4:5/1	576
J4:6/1	62
J4:7/1	718
J4:7/2	470
J4:8/1	571
Junction: J5: JJ Thomson	
J5:1/1 (short)	2
J5:1/2 (with short)	515(In) 513(Out)
J5:1/3	65
J5:2/1 (short)	33
J5:2/2 (with short)	891(In) 858(Out)
J5:2/3	7
J5:3/1	67
J5:4/1 (short)	137
J5:4/2 (with short)	397(In) 260(Out)
J5:5/1	16
J5:6/1	101
J5:7/1	1029
J5:8/1	796
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	800(In) 788(Out)
J6:1/2 (short)	12
J6:2/1	868
J6:3/1 (short)	66
J6:3/2 (with short)	203(In) 137(Out)
J6:4/1	925
J6:5/1	51
J6:6/1	895
Junction: J7: Western Access Road	
J7:1/1	304
J7:1/2	304
J7:2/1	713
J7:2/2	713
J7:3/1	713
J7:3/2	713
J7:4/1	304
J7:4/2	304

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	70.0 %	1899	1899
				Arm J4:8 Ahead	Inf	30.0 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	N	Arm J4:8 Ahead	Inf	100.0 %	2105	2105
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	2.5 %	1961	1961
				Arm J4:7 Ahead	Inf	97.5 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	25.3 %	1893	1893
				Arm J4:7 Right	45.00	74.7 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	100.0 %	2155	2155
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

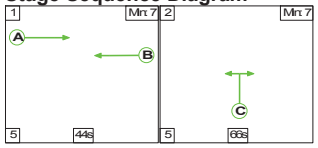
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	4.5 %	1915	1915
				Arm J5:7 Right	Inf	50.7 %		
				Arm J5:8 Left	Inf	44.8 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	2.7 %	1915	1915
				Arm J5:8 Right	Inf	97.3 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:2/1 (Madingley Rd (WB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:2/2 (Madingley Rd (WB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf

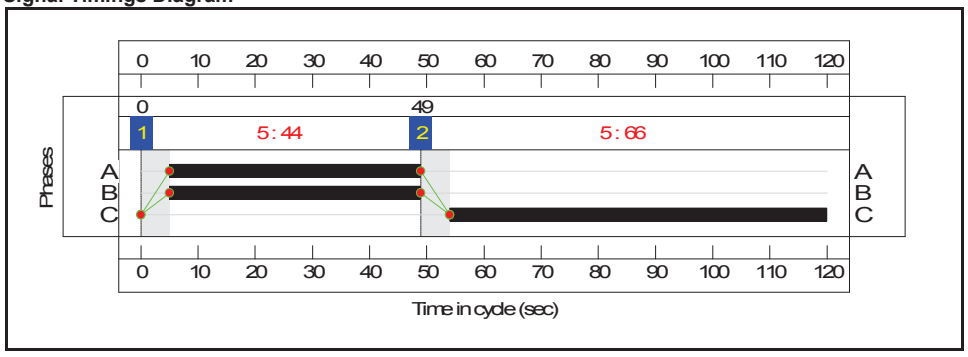
Scenario 1: '2021 DS AM Peak' (FG1: '2021 DS AM Peak HX Mitigation', Plan 1: 'Network Control Plan 1')
C1 - M11 West
Stage Sequence Diagram



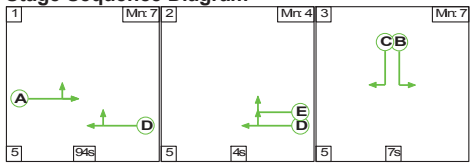
Stage Timings

Stage	1	2
Duration	44	66
Change Point	0	49

Signal Timings Diagram



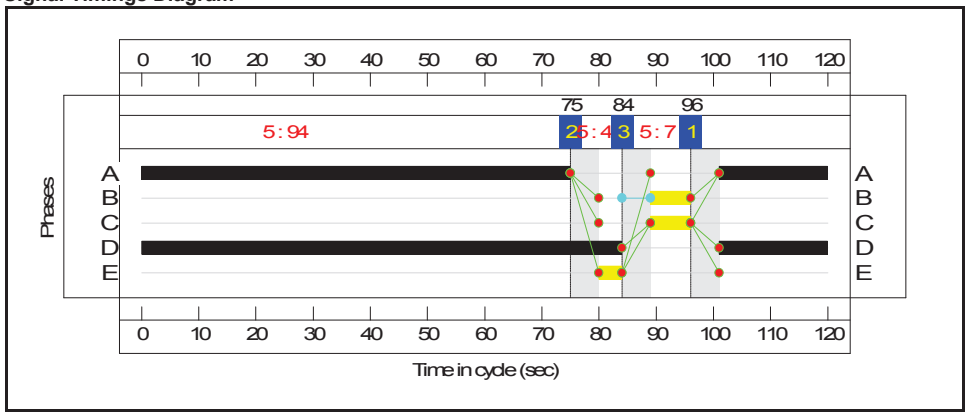
C2 - Park && Ride
Stage Sequence Diagram



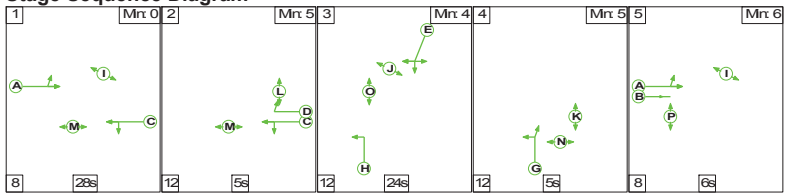
Stage Timings

Stage	1	2	3
Duration	94	4	7
Change Point	96	75	84

Signal Timings Diagram



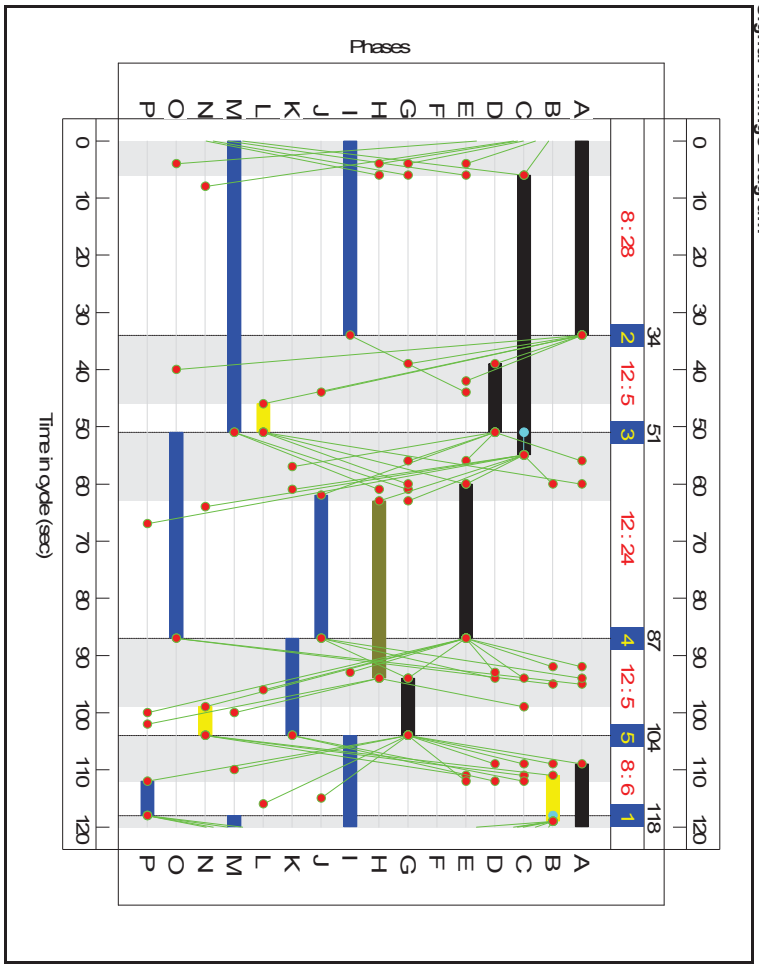
C3 - High Cross
Stage Sequence Diagram



Stage Timings

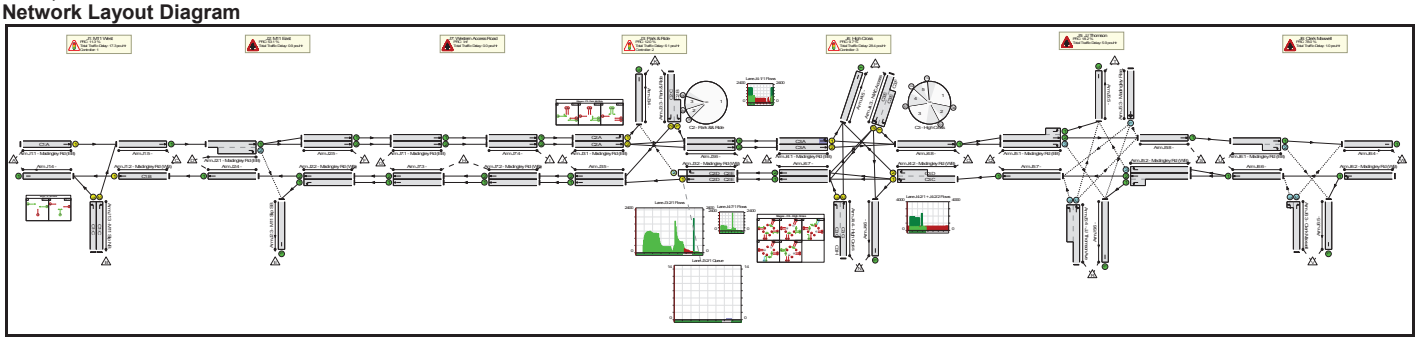
Stage	1	2	3	4	5
Duration	28	5	24	5	6
Change Point	118	34	51	87	104

Signal Timings Diagram



Full Input Data And Results

Network Layout 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**	-	-		-	-	-	-	-	-	**82.0%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.9%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	44	-	600	2055	771	77.9%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	44	-	207	1915	718	28.8%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	66	-	347	1781	994	34.9%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	66	-	786	1741	972	80.9%
4/1		U	N/A	N/A	-		-	-	-	554	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1386	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**58.8%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	1385	2000: Inf	1978+378	58.8 : 58.8%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	265	1800	1800	14.7%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	207	1800	1800	11.5%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	487	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	207	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	582	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**80.3%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	94	-	156	1741	1378	11.3%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	94	-	1218	1915	1516	80.3%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	103	4	461	2105	1824	25.3%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	103	4	37	1854	171	21.7%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	7	-	40	1781:1741	86+116	19.8 : 19.8%
4/1		U	N/A	N/A	-		-	-	-	193	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	461	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	632	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	609	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.0%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	45	-	606	1957	750	80.8%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C3:A		1	45	-	662	2105	807	82.0%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	49:12	-	577	1923:1828	746+75	70.3 : 70.3%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	27	0	513	1919:1687	372+258	81.4 : 81.4%
4/2+4/1	High Cross Ahead Left	U	N/A	N/A	C3:G	C3:H	1	10:41	31	67	2155:2033	198+142	19.7 : 19.7%
5/1		U	N/A	N/A	-		-	-	-	139	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	358	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	262	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	235	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1431	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**76.1%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	971	1915:1741	1816+90	50.9 : 50.9%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	473	1741	621	76.1%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	653	1915:1741	1566+317	34.7 : 34.7%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	36	850	510	7.1%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	17	1915	235	7.2%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	119	1915:1915	183+39	53.6 : 53.6%
5/1		U	N/A	N/A	-		-	-	-	118	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	585	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	570	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	996	Inf	Inf	0.0%
J6: Clerk Maxwell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**50.6%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	978	1800: Inf	1782+152	50.6 : 50.6%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	852	1800	1800	47.3%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	49	600:1940	265+117	12.8 : 12.8%
4/1		U	N/A	N/A	-		-	-	-	935	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	253	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	691	Inf	Inf	0.0%
J7: Western Access Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**0.0%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	582	Inf	Inf	0.0%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	237	Inf	Inf	0.0%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	236	Inf	Inf	0.0%
3/1	Ahead	U	N/A	N/A	-		-	-	-	237	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	236	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	581	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	582	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	**-**	**-**	**1164**	**34**	**1**	**39.9**	**19.3**	**0.4**	**59.7**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**13.1**	**4.3**	**0.0**	**17.3**	**-**	**-**	**-**	**-**
1/1	600	600	-	-	-	5.5	1.7	-	7.2	43.4	17.5	1.7	19.2
2/1	207	207	-	-	-	1.5	0.2	-	1.7	29.8	4.8	0.2	5.0
3/1	347	347	-	-	-	1.4	0.3	-	1.7	17.3	6.3	0.3	6.5
3/2	786	786	-	-	-	4.7	2.1	-	6.7	30.8	21.0	2.1	23.0
4/1	554	554	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1386	1386	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**222**	**0**	**0**	**0.0**	**0.9**	**0.0**	**0.9**	**-**	**-**	**-**	**-**
1/1+1/2	1385	1385	222	0	0	0.0	0.7	-	0.7	1.9	0.0	0.7	0.7
2/1	265	265	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
2/2	207	207	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
3/1	487	487	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	207	207	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**3**	**34**	**1**	**3.1**	**2.5**	**0.4**	**6.1**	**-**	**-**	**-**	**-**
1/1	156	156	-	-	-	0.1	0.1	-	0.1	3.2	0.9	0.1	1.0
1/2	1218	1218	-	-	-	2.4	2.0	-	4.4	13.1	23.0	2.0	25.0
2/1	461	461	-	-	-	0.0	0.2	-	0.2	1.7	0.5	0.2	0.7
2/2	37	37	3	34	1	0.0	0.1	0.4	0.6	53.8	0.2	0.1	0.3
3/2+3/1	40	40	-	-	-	0.6	0.1	-	0.7	64.0	0.7	0.1	0.8
4/1	193	193	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	461	461	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	632	632	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	609	609	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**20.8**	**7.7**	**0.0**	**28.4**	**-**	**-**	**-**	**-**
1/1	606	606	-	-	-	4.4	2.0	-	6.5	38.5	16.2	2.0	18.3
1/2	662	662	-	-	-	4.9	2.2	-	7.1	38.5	17.8	2.2	20.0
2/1+2/2	577	577	-	-	-	4.8	1.2	-	6.0	37.4	15.0	1.2	16.2
3/2+3/1	513	513	-	-	-	5.9	2.1	-	8.0	56.1	9.6	2.1	11.7
4/2+4/1	67	67	-	-	-	0.7	0.1	-	0.9	46.7	1.2	0.1	1.3
5/1	139	139	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	358	358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	262	262	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	235	235	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1431	1431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**764**	**0**	**0**	**2.9**	**3.0**	**0.0**	**5.9**	**-**	**-**	**-**	**-**
1/2+1/1	971	971	-	-	-	0.5	0.5	-	1.0	3.6	24.7	0.5	25.3
1/3	473	473	473	0	0	2.1	1.6	-	3.6	27.6	15.4	1.6	16.9
2/2+2/1	653	653	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
2/3	36	36	36	0	0	0.0	0.0	-	0.0	3.8	0.0	0.0	0.0
3/1	17	17	17	0	0	0.0	0.0	-	0.1	17.7	0.2	0.0	0.3
4/2+4/1	119	119	238	0	0	0.4	0.6	-	0.9	28.2	1.9	0.6	2.4
5/1	118	118	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	585	585	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	570	570	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	996	996	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**175**	**0**	**0**	**0.0**	**1.0**	**0.0**	**1.0**	**-**	**-**	**-**	**-**
1/1+1/2	978	978	77	0	0	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
2/1	852	852	-	-	-	0.0	0.4	-	0.4	1.9	0.0	0.4	0.4
3/2+3/1	49	49	98	0	0	0.0	0.1	-	0.1	5.4	0.0	0.1	0.1

Full Input Data And Results

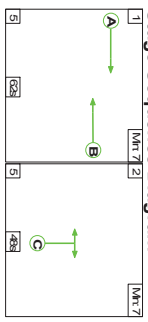
4/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	253	253	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
1/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	237	237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	236	236	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	237	237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	236	236	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	581	581	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West	PRC for Signalled Lanes (%):	11.3	Total Delay for Signalled Lanes (pcuHr):	17.35	Cycle Time (s):	120
C2 - Park && Ride	PRC for Signalled Lanes (%):	12.0	Total Delay for Signalled Lanes (pcuHr):	6.06	Cycle Time (s):	120
C3 - High Cross	PRC for Signalled Lanes (%):	9.7	Total Delay for Signalled Lanes (pcuHr):	28.43	Cycle Time (s):	120
	PRC Over All Lanes (%):	9.7	Total Delay Over All Lanes(pcuHr):	59.65		

Scenario 2: '2021 DS PM Peak' (FG2: '2021 DS PM Peak HX Mitigation', Plan 1: 'Network Control Plan 1')

C1 - M11 West

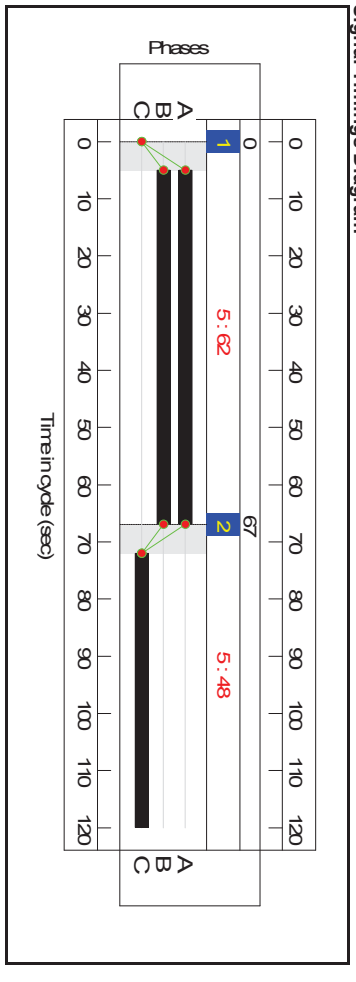
Stage Sequence Diagram



Stage Timings

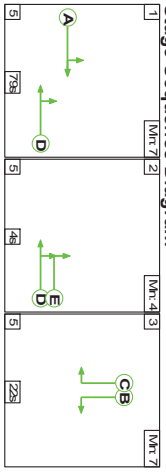
Stage	1	2
Duration	62	48
Change Point	0	67

Signal Timings Diagram



C2 - Park && Ride

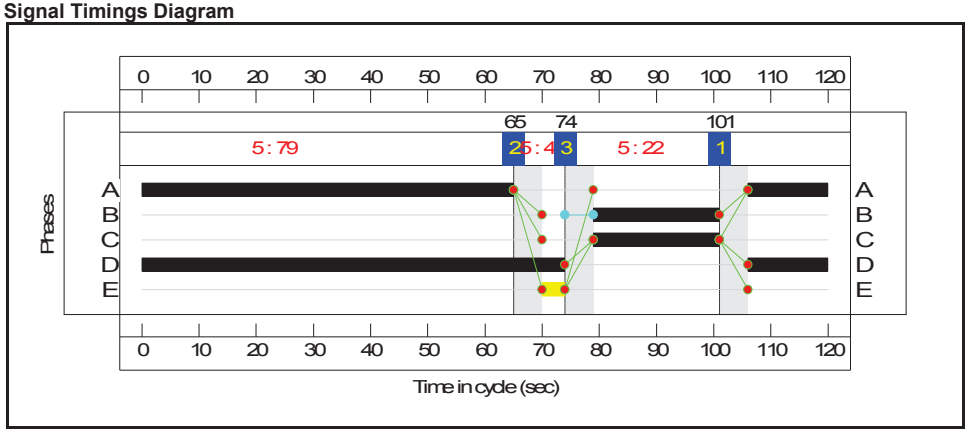
Stage Sequence Diagram



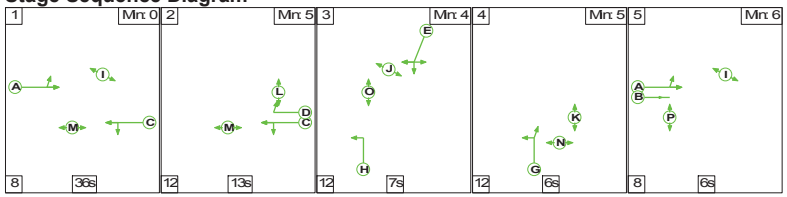
Stage Timings

Stage	1	2	3
Duration	79	4	22
Change Point	101	65	74

Signal Timings Diagram



C3 - High Cross
Stage Sequence Diagram

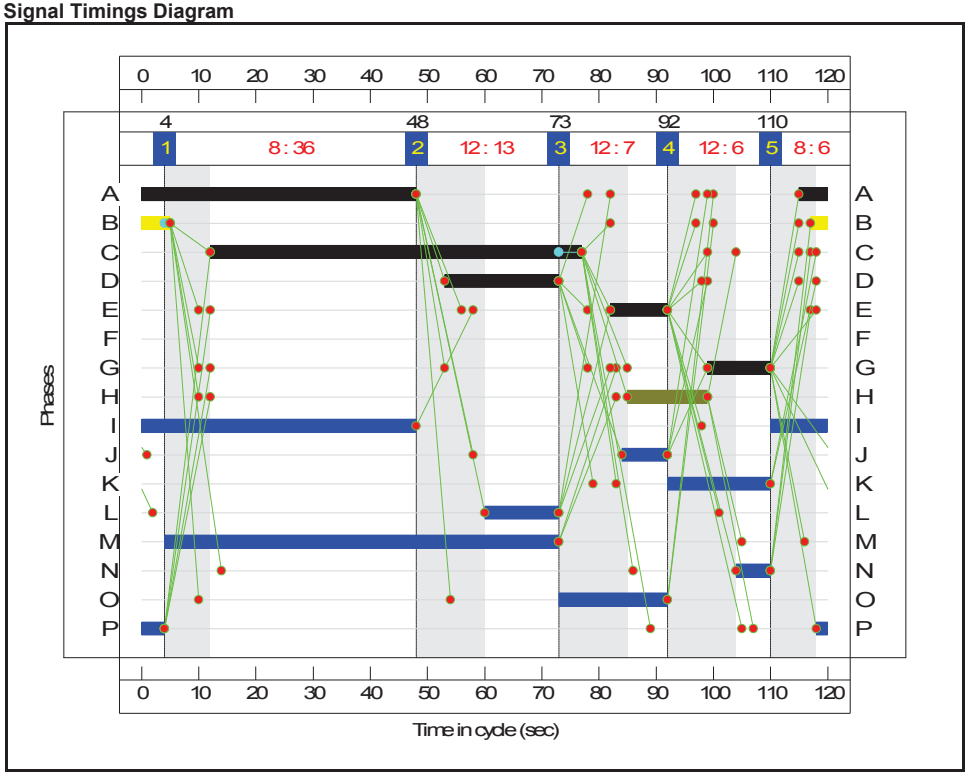


Stage Timings

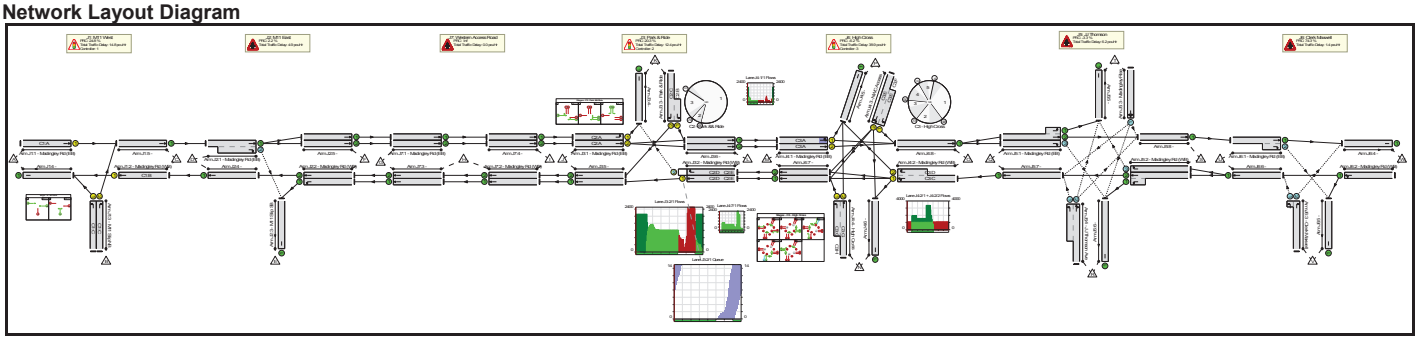
Stage	1	2	3	4	5
Duration	36	13	7	6	6
Change Point	4	48	73	92	110

Full Input Data And Results

Signal Timings Diagram



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	-	-	**N/A**	-	-		-	-	-	-	-	-	**95.6%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**72.1%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	62	-	305	2055	1079	28.3%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	62	-	725	1915	1005	72.1%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	48	-	486	1781	727	66.8%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	48	-	320	1741	711	45.0%
4/1		U	N/A	N/A	-		-	-	-	1211	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	625	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.1%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	626	2000: Inf	360+351	88.1 : 88.1%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	701	1800	1800	38.9%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	725	1800	1800	40.3%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	1010	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	725	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	158	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	159	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**74.8%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	79	-	14	1741	1161	1.2%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	79	-	594	1915	1277	46.5%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	88	4	1168	2105	1561	74.8%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	88	4	29	1854	570	5.1%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	22	-	285	1781:1741	300+96	72.1 : 72.1%
4/1		U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1168	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	216	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	366	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	297	Inf	Inf	0.0%
J4: High Cross	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**95.6%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	53	-	223	1899	855	26.1%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C3:A		1	53	-	437	2105	947	46.1%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	65:20	-	1053	1961:1828	889+227	94.4 : 94.4%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	10	0	229	1893:1687	174+72	93.4 : 93.4%
4/2+4/1	High Cross Ahead Left	U	N/A	N/A	C3:G	C3:H	1	11:25	14	455	2155:2033	215+260	95.6 : 95.6%
5/1		U	N/A	N/A	-		-	-	-	576	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	62	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	718	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	470	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	571	Inf	Inf	0.0%
J5: JJ Thomson	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.0%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	515	1915:1741	1907+7	26.9 : 26.9%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	65	1741	538	12.1%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	891	1915:1741	1837+71	46.7 : 46.7%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	7	850	670	1.0%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	67	1915	314	21.3%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	397	1915:1915	280+147	93.0 : 93.0%
5/1		U	N/A	N/A	-		-	-	-	16	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	101	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	1029	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	796	Inf	Inf	0.0%
J6: Clerk Maxwell	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**51.6%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	800	1800: Inf	1797+27	43.9 : 43.9%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	868	1800	1800	48.2%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	203	600:1940	265+128	51.6 : 51.6%
4/1		U	N/A	N/A	-		-	-	-	925	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	51	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	895	Inf	Inf	0.0%
J7: Western Access Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**0.0%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	304	Inf	Inf	0.0%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	304	Inf	Inf	0.0%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
3/1	Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	713	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	304	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	304	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	**-**	**-**	**1686**	**2**	**1**	**42.5**	**36.0**	**0.1**	**78.5**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**11.9**	**2.9**	**0.0**	**14.8**	**-**	**-**	**-**	**-**
1/1	305	305	-	-	-	1.3	0.2	-	1.5	18.2	5.6	0.2	5.8
2/1	725	725	-	-	-	4.4	1.3	-	5.7	28.1	18.3	1.3	19.6
3/1	486	486	-	-	-	3.9	1.0	-	4.9	36.3	13.1	1.0	14.1
3/2	320	320	-	-	-	2.3	0.4	-	2.7	30.3	7.6	0.4	8.1
4/1	1211	1211	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	625	625	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**309**	**0**	**0**	**0.8**	**4.1**	**0.0**	**4.9**	**-**	**-**	**-**	**-**
1/1+1/2	626	626	309	0	0	0.8	3.4	-	4.2	24.2	9.3	3.4	12.7
2/1	701	701	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
2/2	725	725	-	-	-	0.0	0.3	-	0.3	1.7	0.0	0.3	0.3
3/1	1010	1010	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	725	725	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	158	158	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	159	159	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**26**	**2**	**1**	**9.1**	**3.2**	**0.1**	**12.4**	**-**	**-**	**-**	**-**
1/1	14	14	-	-	-	0.0	0.0	-	0.0	4.9	0.1	0.0	0.1
1/2	594	594	-	-	-	1.6	0.4	-	2.0	12.3	9.4	0.4	9.8
2/1	1168	1168	-	-	-	4.0	1.5	-	5.5	16.8	18.9	1.5	20.4
2/2	29	29	26	2	1	0.1	0.0	0.1	0.2	19.2	0.4	0.0	0.4
3/2+3/1	285	285	-	-	-	3.5	1.3	-	4.7	60.0	7.1	1.3	8.4
4/1	43	43	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1168	1168	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	216	216	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	366	366	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	297	297	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**20.2**	**18.6**	**0.0**	**38.9**	**-**	**-**	**-**	**-**
1/1	223	223	-	-	-	0.9	0.2	-	1.1	17.8	4.1	0.2	4.3
1/2	437	437	-	-	-	1.6	0.4	-	2.0	16.8	10.0	0.4	10.4
2/1+2/2	1053	1053	-	-	-	8.3	6.9	-	15.2	51.9	30.7	6.9	37.6
3/2+3/1	229	229	-	-	-	3.4	4.5	-	7.9	124.5	5.4	4.5	9.9
4/2+4/1	455	455	-	-	-	6.0	6.6	-	12.6	99.8	7.4	6.6	14.0
5/1	576	576	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	62	62	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	718	718	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	470	470	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	571	571	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**933**	**0**	**0**	**0.4**	**5.8**	**0.0**	**6.2**	**-**	**-**	**-**	**-**
1/2+1/1	515	515	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
1/3	65	65	65	0	0	0.0	0.1	-	0.1	3.8	0.0	0.1	0.1
2/2+2/1	891	891	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
2/3	7	7	7	0	0	0.0	0.0	-	0.0	2.7	0.0	0.0	0.0
3/1	67	67	67	0	0	0.0	0.1	-	0.1	7.5	0.2	0.1	0.3
4/2+4/1	397	397	794	0	0	0.4	5.0	-	5.4	48.9	5.8	5.0	10.8
5/1	16	16	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	101	101	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1029	1029	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	796	796	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**418**	**0**	**0**	**0.0**	**1.4**	**0.0**	**1.4**	**-**	**-**	**-**	**-**
1/1+1/2	800	800	12	0	0	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
2/1	868	868	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
3/2+3/1	203	203	406	0	0	0.0	0.5	-	0.5	9.4	0.0	0.5	0.5

Full Input Data And Results

4/1	925	925	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	51	51	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	895	895	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
1/1	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	713	713	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West	PRC for Signalled Lanes (%):	24.8	Total Delay for Signalled Lanes (pcuHr):	14.81	Cycle Time (s):	120
C2 - Park && Ride	PRC for Signalled Lanes (%):	20.3	Total Delay for Signalled Lanes (pcuHr):	12.41	Cycle Time (s):	120
C3 - High Cross	PRC for Signalled Lanes (%):	-6.2	Total Delay for Signalled Lanes (pcuHr):	38.86	Cycle Time (s):	120
	PRC Over All Lanes (%):	-6.2	Total Delay Over All Lanes(pcuHr):	78.54		

Appendix 14.3 - 2021 Madingley Mulch Junction Capacity Assessments

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 2021 DM Madingley Mulch Rbout - Arm E Adjusted - St Neots Rd Adjusted.j9
Path: J:\31500 West Cambridge\Junctions 9\2017 Work\Madingley Mulch Roundabout - Revised\2021 DM
Report generation date: 30/05/2017 14:44:32

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	2021 DM Adj									
Arm 1	0.1	2.94	0.08	A	4.85	0.1	2.83	0.07	A	7.71
Arm 2	0.6	3.30	0.36	A		3.8	9.55	0.79	A	
Arm 3	0.1	2.78	0.07	A		0.1	3.64	0.09	A	
Arm 5	1.5	6.65	0.58	A		0.9	5.01	0.47	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/05/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\pcullen
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Generated on 30/05/2017 14:45:16 using Junctions 9 (9.0.1.4646)

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75		✓		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 DM Adj	AM	ONE HOUR	08:00	09:30	15	✓
D2	2021 DM Adj	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2021 DM Adj, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	4.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Church Ln	
2	Madingley Rd	
3	St Neots Rd	
4	A428 On-slip	
5	A428 Off-slip	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.00	8.00	13.0	24.5	76.0	10.0	
2	4.00	8.00	10.0	27.0	76.0	10.0	
3	3.50	6.00	34.0	25.0	76.0	20.0	
4							✓
5	3.65	4.50	7.0	25.0	76.0	5.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.503	1713
2	0.530	1887
3	0.500	1748
4		
5	0.462	1416

The slope and intercept shown above include any corrections and adjustments.

Generated on 30/05/2017 14:45:16 using Junctions 9 (9.0.1.4646)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 DM Adj	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	95	100.000
2		ONE HOUR	✓	608	100.000
3		ONE HOUR	✓	89	100.000
4					
5		ONE HOUR	✓	729	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	23	43	29	0
	2	17	1	80	510	0
	3	59	0	4	26	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	145	584	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	5	5	4	0
	2	6	0	6	8	0
	3	2	10	33	4	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	1	7	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.08	2.94	0.1	A	87	131	6.09	2.80	0.07	6.09	2.80
2	0.36	3.30	0.6	A	558	837	42.29	3.03	0.47	42.29	3.03
3	0.07	2.78	0.1	A	82	123	5.42	2.65	0.06	5.42	2.65
4											
5	0.58	6.65	1.5	A	669	1003	92.41	5.53	1.03	92.42	5.53

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	72	18	441	1491	0.048	71	166	0.0	0.1	2.655	A
2	458	114	57	1856	0.247	456	455	0.0	0.4	2.766	A
3	67	17	418	1539	0.044	67	95	0.0	0.0	2.534	A
4			61				424				
5	549	137	61	1388	0.395	546	0	0.0	0.7	4.508	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	529	1447	0.059	85	198	0.1	0.1	2.767	A
2	547	137	68	1851	0.295	546	546	0.4	0.4	2.971	A
3	80	20	500	1498	0.053	80	114	0.0	0.1	2.631	A
4			73				508				
5	655	164	73	1382	0.474	654	0	0.7	0.9	5.221	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	105	26	647	1387	0.075	105	243	0.1	0.1	2.937	A
2	669	167	84	1842	0.363	669	668	0.4	0.6	3.300	A
3	98	24	613	1442	0.068	98	140	0.1	0.1	2.777	A
4			89				621				
5	803	201	89	1375	0.584	801	0	0.9	1.5	6.605	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	105	26	648	1387	0.075	105	243	0.1	0.1	2.939	A
2	669	167	84	1842	0.363	669	669	0.6	0.6	3.303	A
3	98	24	613	1441	0.068	98	140	0.1	0.1	2.777	A
4			89				622				
5	803	201	89	1375	0.584	803	0	1.5	1.5	6.652	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	531	1446	0.059	85	199	0.1	0.1	2.770	A
2	547	137	68	1850	0.295	547	548	0.6	0.5	2.977	A
3	80	20	501	1497	0.053	80	114	0.1	0.1	2.632	A
4			73				509				
5	655	164	73	1382	0.474	657	0	1.5	1.0	5.267	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	72	18	444	1489	0.048	72	167	0.1	0.1	2.660	A
2	458	114	57	1856	0.247	458	459	0.5	0.4	2.772	A
3	67	17	420	1538	0.044	67	96	0.1	0.0	2.536	A
4			61				426				
5	549	137	61	1388	0.395	550	0	1.0	0.7	4.550	A

Queueing Delay Results for each time segment

08:00 - 08:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.78	0.05	2.655	A	A
2	5.17	0.34	2.766	A	A
3	0.70	0.05	2.534	A	A
4					
5	9.98	0.67	4.508	A	A

08:15 - 08:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.97	0.06	2.767	A	A
2	6.65	0.44	2.971	A	A
3	0.87	0.06	2.631	A	A
4					
5	13.78	0.92	5.221	A	A

08:30 - 08:45

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.26	0.08	2.937	A	A
2	9.01	0.60	3.300	A	A
3	1.12	0.07	2.777	A	A
4					
5	21.05	1.40	6.605	A	A

08:45 - 09:00

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.28	0.09	2.939	A	A
2	9.18	0.61	3.303	A	A
3	1.13	0.08	2.777	A	A
4					
5	21.99	1.47	6.652	A	A

09:00 - 09:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.00	0.07	2.770	A	A
2	6.91	0.46	2.977	A	A
3	0.89	0.06	2.632	A	A
4					
5	14.91	0.99	5.267	A	A

09:15 - 09:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.80	0.05	2.660	A	A
2	5.38	0.36	2.772	A	A
3	0.72	0.05	2.536	A	A
4					
5	10.71	0.71	4.550	A	A

Generated on 30/05/2017 14:45:16 using Junctions 9 (9.0.1.4646)

2021 DM Adj, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	7.71	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 DM Adj	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	94	100.000
2		ONE HOUR	✓	1320	100.000
3		ONE HOUR	✓	87	100.000
4					
5		ONE HOUR	✓	599	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	1	10	30	53	0
	2	16	0	191	1113	0
	3	31	0	0	56	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	12	587	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	0	0	2	0
	2	7	0	4	2	0
	3	0	3	0	2	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	0	2	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.07	2.83	0.1	A	86	129	5.81	2.70	0.06	5.81	2.70
2	0.79	9.55	3.8	A	1211	1817	198.29	6.55	2.20	198.31	6.55
3	0.09	3.64	0.1	A	80	120	6.57	3.29	0.07	6.57	3.29
4											
5	0.47	5.01	0.9	A	550	824	60.70	4.42	0.67	60.71	4.42

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	71	18	440	1491	0.047	71	45	0.0	0.1	2.561	A
2	994	248	63	1853	0.536	989	448	0.0	1.2	4.241	A
3	65	16	887	1305	0.050	65	166	0.0	0.1	2.942	A
4			36				916				
5	451	113	36	1399	0.322	449	0	0.0	0.5	3.854	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	527	1448	0.058	84	54	0.1	0.1	2.670	A
2	1187	297	75	1847	0.643	1184	536	1.2	1.8	5.539	A
3	78	20	1061	1217	0.064	78	198	0.1	0.1	3.200	A
4			43				1096				
5	538	135	43	1396	0.386	538	0	0.5	0.6	4.274	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	103	26	645	1388	0.075	103	66	0.1	0.1	2.832	A
2	1453	363	92	1838	0.791	1446	656	1.8	3.7	9.225	A
3	96	24	1296	1100	0.087	96	242	0.1	0.1	3.631	A
4			53				1339				
5	660	165	53	1392	0.474	658	0	0.6	0.9	4.998	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	103	26	646	1388	0.075	103	66	0.1	0.1	2.834	A
2	1453	363	92	1838	0.791	1453	657	3.7	3.8	9.553	A
3	96	24	1302	1096	0.087	96	243	0.1	0.1	3.642	A
4			53				1345				
5	660	165	53	1392	0.474	659	0	0.9	0.9	5.012	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	529	1447	0.058	85	54	0.1	0.1	2.671	A
2	1187	297	76	1847	0.643	1194	538	3.8	1.9	5.711	A
3	78	20	1070	1213	0.065	78	200	0.1	0.1	3.213	A
4			43				1105				
5	538	135	43	1396	0.386	540	0	0.9	0.6	4.292	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	71	18	443	1490	0.047	71	45	0.1	0.1	2.564	A
2	994	248	63	1853	0.536	996	450	1.9	1.2	4.315	A
3	65	16	893	1301	0.050	66	167	0.1	0.1	2.952	A
4			36				922				
5	451	113	36	1399	0.322	452	0	0.6	0.5	3.875	A

Queueing Delay Results for each time segment

17:00 - 17:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.74	0.05	2.561	A	A
2	16.96	1.13	4.241	A	A
3	0.79	0.05	2.942	A	A
4					
5	7.05	0.47	3.854	A	A

17:15 - 17:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.93	0.06	2.670	A	A
2	26.14	1.74	5.539	A	A
3	1.03	0.07	3.200	A	A
4					
5	9.34	0.62	4.274	A	A

17:30 - 17:45

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.20	0.08	2.832	A	A
2	51.11	3.41	9.225	A	A
3	1.42	0.09	3.631	A	A
4					
5	13.28	0.89	4.998	A	A

17:45 - 18:00

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.22	0.08	2.834	A	A
2	56.16	3.74	9.553	A	A
3	1.45	0.10	3.642	A	A
4					
5	13.68	0.91	5.012	A	A

18:00 - 18:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.95	0.06	2.671	A	A
2	29.44	1.96	5.711	A	A
3	1.07	0.07	3.213	A	A
4					
5	9.90	0.66	4.292	A	A

18:15 - 18:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.77	0.05	2.564	A	A
2	18.47	1.23	4.315	A	A
3	0.82	0.05	2.952	A	A
4					
5	7.45	0.50	3.875	A	A

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 2021 DS Madingley Mulch Rbout - Arm E Adjusted - St Neots Rd Adjusted.j9
Path: J:\31500 West Cambridge\Junctions 9\2017 Work\Madingley Mulch Roundabout - Revised\2021 DS
Report generation date: 30/05/2017 14:42:22

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	2021 DS Adj									
Arm 1	0.1	2.94	0.08	A	4.85	0.1	2.83	0.07	A	7.77
Arm 2	0.6	3.30	0.36	A		3.8	9.64	0.79	A	
Arm 3	0.1	2.78	0.07	A		0.1	3.65	0.09	A	
Arm 5	1.5	6.64	0.58	A		0.9	5.00	0.47	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/05/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\pcullen
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Generated on 30/05/2017 14:42:46 using Junctions 9 (9.0.1.4646)

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75		✓		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 DS Adj	AM	ONE HOUR	08:00	09:30	15	✓
D2	2021 DS Adj	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2021 DS Adj, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	4.85	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Church Ln	
2	Madingley Rd	
3	St Neots Rd	
4	A428 On-slip	
5	A428 Off-slip	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.00	8.00	13.0	24.5	76.0	10.0	
2	4.00	8.00	10.0	27.0	76.0	10.0	
3	3.50	6.00	34.0	25.0	76.0	20.0	
4							✓
5	3.65	4.50	7.0	25.0	76.0	5.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.503	1713
2	0.530	1887
3	0.500	1748
4		
5	0.462	1416

The slope and intercept shown above include any corrections and adjustments.

Generated on 30/05/2017 14:42:46 using Junctions 9 (9.0.1.4646)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 DS Adj	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	95	100.000
2		ONE HOUR	✓	606	100.000
3		ONE HOUR	✓	89	100.000
4					
5		ONE HOUR	✓	728	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	23	43	29	0
	2	17	1	79	509	0
	3	59	0	4	26	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	145	583	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	5	5	4	0
	2	6	0	6	8	0
	3	2	10	33	4	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	1	7	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.08	2.94	0.1	A	87	131	6.09	2.79	0.07	6.09	2.79
2	0.36	3.30	0.6	A	556	834	42.09	3.03	0.47	42.09	3.03
3	0.07	2.78	0.1	A	82	123	5.42	2.65	0.06	5.42	2.65
4											
5	0.58	6.64	1.5	A	668	1002	92.15	5.52	1.02	92.16	5.52

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	72	18	440	1491	0.048	71	166	0.0	0.1	2.654	A
2	456	114	57	1856	0.246	455	455	0.0	0.3	2.763	A
3	67	17	417	1539	0.044	67	95	0.0	0.0	2.534	A
4			61				423				
5	548	137	61	1388	0.395	545	0	0.0	0.7	4.503	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	528	1447	0.059	85	198	0.1	0.1	2.766	A
2	545	136	68	1851	0.294	544	545	0.3	0.4	2.967	A
3	80	20	499	1498	0.053	80	113	0.0	0.1	2.631	A
4			73				507				
5	654	164	73	1382	0.473	653	0	0.7	0.9	5.214	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	105	26	646	1388	0.075	105	243	0.1	0.1	2.936	A
2	667	167	84	1842	0.362	667	667	0.4	0.6	3.294	A
3	98	24	612	1442	0.068	98	139	0.1	0.1	2.776	A
4			89				620				
5	802	200	89	1375	0.583	799	0	0.9	1.5	6.592	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	105	26	647	1387	0.075	105	243	0.1	0.1	2.938	A
2	667	167	84	1842	0.362	667	668	0.6	0.6	3.297	A
3	98	24	612	1442	0.068	98	139	0.1	0.1	2.776	A
4			89				621				
5	802	200	89	1375	0.583	801	0	1.5	1.5	6.639	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	530	1446	0.059	85	199	0.1	0.1	2.769	A
2	545	136	68	1850	0.294	545	547	0.6	0.5	2.970	A
3	80	20	500	1498	0.053	80	113	0.1	0.1	2.632	A
4			73				508				
5	654	164	73	1382	0.473	656	0	1.5	1.0	5.258	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	72	18	444	1490	0.048	72	167	0.1	0.1	2.657	A
2	456	114	57	1856	0.246	457	458	0.5	0.4	2.769	A
3	67	17	419	1539	0.044	67	95	0.1	0.0	2.537	A
4			61				425				
5	548	137	61	1388	0.395	549	0	1.0	0.7	4.546	A

Queueing Delay Results for each time segment

08:00 - 08:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.78	0.05	2.654	A	A
2	5.15	0.34	2.763	A	A
3	0.70	0.05	2.534	A	A
4					
5	9.95	0.66	4.503	A	A

08:15 - 08:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.97	0.06	2.766	A	A
2	6.62	0.44	2.967	A	A
3	0.87	0.06	2.631	A	A
4					
5	13.75	0.92	5.214	A	A

08:30 - 08:45

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.26	0.08	2.936	A	A
2	8.97	0.60	3.294	A	A
3	1.12	0.07	2.776	A	A
4					
5	20.98	1.40	6.592	A	A

08:45 - 09:00

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.28	0.09	2.938	A	A
2	9.13	0.61	3.297	A	A
3	1.13	0.08	2.776	A	A
4					
5	21.91	1.46	6.639	A	A

09:00 - 09:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.00	0.07	2.769	A	A
2	6.87	0.46	2.970	A	A
3	0.89	0.06	2.632	A	A
4					
5	14.87	0.99	5.258	A	A

09:15 - 09:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.80	0.05	2.657	A	A
2	5.35	0.36	2.769	A	A
3	0.72	0.05	2.537	A	A
4					
5	10.68	0.71	4.546	A	A

Generated on 30/05/2017 14:42:46 using Junctions 9 (9.0.1.4646)

2021 DS Adj, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	7.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 DS Adj	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	94	100.000
2		ONE HOUR	✓	1323	100.000
3		ONE HOUR	✓	87	100.000
4					
5		ONE HOUR	✓	597	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	1	10	30	53	0
	2	16	0	189	1118	0
	3	31	0	0	56	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	12	585	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	0	0	2	0
	2	7	0	4	2	0
	3	0	3	0	2	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	0	2	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.07	2.83	0.1	A	86	129	5.81	2.69	0.06	5.81	2.69
2	0.79	9.64	3.8	A	1214	1821	199.88	6.59	2.22	199.90	6.59
3	0.09	3.65	0.1	A	80	120	6.58	3.30	0.07	6.58	3.30
4											
5	0.47	5.00	0.9	A	548	822	60.36	4.41	0.67	60.36	4.41

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	71	18	439	1492	0.047	71	45	0.0	0.1	2.560	A
2	996	249	63	1853	0.537	991	446	0.0	1.2	4.252	A
3	65	16	890	1303	0.050	65	164	0.0	0.1	2.946	A
4			36				920				
5	449	112	36	1399	0.321	448	0	0.0	0.5	3.848	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	525	1448	0.058	84	54	0.1	0.1	2.668	A
2	1189	297	75	1847	0.644	1187	534	1.2	1.8	5.560	A
3	78	20	1066	1215	0.064	78	196	0.1	0.1	3.207	A
4			43				1101				
5	537	134	43	1396	0.384	536	0	0.5	0.6	4.265	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	103	26	643	1389	0.075	103	66	0.1	0.1	2.830	A
2	1457	364	92	1838	0.793	1449	654	1.8	3.7	9.297	A
3	96	24	1301	1097	0.087	96	240	0.1	0.1	3.641	A
4			53				1344				
5	657	164	53	1392	0.472	656	0	0.6	0.9	4.983	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	103	26	644	1389	0.075	103	66	0.1	0.1	2.831	A
2	1457	364	92	1838	0.793	1456	655	3.7	3.8	9.636	A
3	96	24	1308	1094	0.088	96	241	0.1	0.1	3.652	A
4			53				1351				
5	657	164	53	1392	0.472	657	0	0.9	0.9	4.997	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	527	1448	0.058	85	54	0.1	0.1	2.670	A
2	1189	297	76	1847	0.644	1197	536	3.8	1.9	5.739	A
3	78	20	1075	1210	0.065	78	198	0.1	0.1	3.220	A
4			43				1110				
5	537	134	43	1396	0.384	538	0	0.9	0.6	4.281	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	71	18	441	1491	0.047	71	45	0.1	0.1	2.563	A
2	996	249	63	1853	0.537	999	449	1.9	1.2	4.327	A
3	65	16	897	1299	0.050	66	165	0.1	0.1	2.956	A
4			36				926				
5	449	112	36	1399	0.321	450	0	0.6	0.5	3.868	A

Queueing Delay Results for each time segment

17:00 - 17:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.74	0.05	2.560	A	A
2	17.04	1.14	4.252	A	A
3	0.79	0.05	2.946	A	A
4					
5	7.01	0.47	3.848	A	A

17:15 - 17:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.93	0.06	2.668	A	A
2	26.30	1.75	5.560	A	A
3	1.03	0.07	3.207	A	A
4					
5	9.29	0.62	4.265	A	A

17:30 - 17:45

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.20	0.08	2.830	A	A
2	51.59	3.44	9.297	A	A
3	1.43	0.10	3.641	A	A
4					
5	13.20	0.88	4.983	A	A

17:45 - 18:00

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.22	0.08	2.831	A	A
2	56.74	3.78	9.636	A	A
3	1.45	0.10	3.652	A	A
4					
5	13.59	0.91	4.997	A	A

18:00 - 18:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.95	0.06	2.670	A	A
2	29.65	1.98	5.739	A	A
3	1.07	0.07	3.220	A	A
4					
5	9.85	0.66	4.281	A	A

18:15 - 18:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.77	0.05	2.563	A	A
2	18.57	1.24	4.327	A	A
3	0.82	0.05	2.956	A	A
4					
5	7.42	0.49	3.868	A	A

Appendix 15.1 - Summary and comparisons of 2016, 2031 Do Minimum and 2031 Do Something flows

Table 15.1: Comparison of the 2016 and 2031 Do Minimum flows

No.	Link	2016 Base		2031 TA Do Minimum		Percentage difference	
		AM	PM	AM	PM	AM	PM
1.0	M11 - J12 - J13 - Nbd	3,392	3,503	3,705	3,924	9%	12%
1.0	M11 - J12 - J13 - Sbd	3,503	3,392	3,882	3,826	11%	13%
1.1	M11 J13 -J14 - Nbd	2,199	2,902	2,350	3,100	7%	7%
1.1	M11 J13 -J14 - Sbd	2,651	2,368	2,850	2,564	8%	8%
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Nbd	1,464	2,144	1,588	2,316	8%	8%
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Sbd	2,144	1,534	2,309	1,686	8%	10%
1.3	M11 J13 off-slip - Nbd	950	633	1,112	855	17%	35%
1.3	M11 J13 on-slip - Sbd	353	788	534	1,026	51%	30%
2.0	A14 West of J30 (Bar Hill) - Ebd	3,685	3,342	3,868	3,479	5%	4%
2.0	A14 West of J30 (Bar Hill) - Wbd	3,081	4,224	3,190	4,421	4%	5%
2.1	A14 North West of M11 J14 - Ebd	3,697	3,309	4,200	3,843	14%	16%
2.1	A14 North West M11 J14 - Wbd	2,994	3,989	3,446	4,501	15%	13%
2.2	A14 West of J32 Interchange - Ebd	3,711	3,619	3,915	3,910	5%	8%
2.2	A14 West of J32 Interchange - Wbd	3,619	3,711	3,890	3,922	7%	6%
2.3	A428 -West of M11 J14 - Ebd	1,567	721	1,638	814	5%	13%
2.3	A428 - West of M11 J14 - Wbd	756	1,203	846	1,268	12%	5%
3.0	A1303 East of Madingley Mulch R'bout Ebd	474	513	621	636	31%	24%
3.0	A1303 East of Madingley Mulch R'bout Wbd	516	1,190	612	1,341	19%	13%
3.1	Madingley Rd - East of Cambridge Rd Crossroads Wbd	499	1,199	582	1,249	17%	4%
3.1	Madingley Rd - East of Cambridge Rd Crossroads Ebd	722	494	795	617	10%	25%
3.2	Madingley Rd on Over Bridge M11 Ebd	1,205	416	1,409	710	17%	71%
3.2	Madingley Rd on Over Bridge M11 Wbd	180	738	232	736	29%	0%
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West	1,212	424	1,361	674	12%	59%

No.	Link	2016 Base		2031 TA Do Minimum		Percentage difference	
		AM	PM	AM	PM	AM	PM
	Access Ebd						
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Wbd	321	1,210	498	1,402	55%	16%
3.4	Madingley Rd - West of P&R Access Wbd	321	1,210	920	1,318	187%	9%
3.4	Madingley Rd - West of P&R Access Ebd	1,212	424	1,161	977	-4%	130%
3.5	Madingley Rd - East of P&R Access Wbd	368	1,018	967	1,126	163%	11%
3.5	Madingley Rd - East of P&R Access Ebd	1,071	468	1,020	1,021	-5%	118%
3.6	Madingley Rd - East of Proposed High Cross Access Ebd	885	469	1,069	687	21%	46%
3.6	Madingley Rd - East of Proposed High Cross Access Wbd	414	786	670	1,002	62%	27%
3.7	Madingley Rd - East of JJ Thomson Ave Ebd	837	637	1,042	1,015	24%	59%
3.7	Madingley Rd - East of JJ Thomson Ave Wbd	591	737	965	985	63%	34%
3.8	Madingley Rd - East of Clerk Maxwell Rd Ebd	755	684	953	1,051	26%	54%
3.8	Madingley Rd - East of Clerk Maxwell Rd Wbd	643	674	1,007	914	57%	36%
3.9	Madingley Rd - East of Storey's Way Ebd	685	566	886	946	29%	67%
3.9	Madingley Rd - East of Storey's Way Wbd	628	599	1,040	850	66%	42%
3.10	Madingley Rd - East of Grange Road Ebd	685	566	873	938	27%	66%
3.10	Madingley Rd - East of Grange Road Wbd	628	599	1,036	834	65%	39%
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Ebd	807	573	973	797	21%	39%
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Wbd	588	708	811	918	38%	30%
3.12	Northampton St - West of Pound Hill Ebd	463	652	539	896	16%	37%
3.12	Northampton St - West of Pound Hill Wbd	558	575	784	684	41%	19%
4.0	Huntingdon Rd - West of Proposed NWC HRW Access NWbd	326	689	516	1,042	58%	51%
4.0	Huntingdon Rd - West of Proposed NWC HRW Access SEbd	400	332	719	551	80%	66%
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College NWbd	326	689	448	781	38%	13%
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College SEbd	400	332	447	464	12%	40%
4.2	Huntingdon Rd - East of NWC HRW Access NWbd	389	944	668	1,299	72%	38%

No.	Link	2016 Base		2031 TA Do Minimum		Percentage difference	
		AM	PM	AM	PM	AM	PM
4.2	Huntingdon Rd - East of NWC HRW Access SEbd	668	452	934	821	40%	82%
4.3	Huntingdon Rd - East of Darwin Green Access NWbd	443	995	617	1,402	39%	41%
4.3	Huntingdon Rd - East of Darwin Green Access SEbd	942	518	1,290	793	37%	53%
4.4	Huntingdon Rd - East of Storey's Way NWbd	462	889	595	1,278	29%	44%
4.4	Huntingdon Rd - East of Storey's Way SEbd	792	548	1,162	787	47%	44%
5.0	Barton Rd - West of Grantchester Rd Ebd	1,115	489	1,142	515	2%	5%
5.0	Barton Rd - West of Grantchester Rd Wbd	303	968	317	990	5%	2%
5.1	Barton Rd - East of Grantchester Rd Ebd	618	437	645	464	4%	6%
5.1	Barton Rd - East of Grantchester Rd Wbd	282	926	296	948	5%	2%
6.0	Queen's Rd - North of West Rd Nbd	463	654	574	881	24%	35%
6.0	Queen's Rd - North of West Rd Sbd	781	550	985	657	26%	20%
7.0	Histon Road - South of A14 Nbd	946	1,619	1,156	1,873	22%	16%
7.0	Histon Road - South of A14 Sbd	1,825	1,217	2,045	1,455	12%	20%
8.0	Grange Rd - South of Madingley Rd Nbd	195	201	208	225	6%	12%
8.0	Grange Rd - South of Madingley Rd Sbd	321	151	342	167	7%	11%
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Ebd	260	82	211	70	-19%	-15%
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Wbd	91	217	87	203	-4%	-6%
10.0	Girton Rd - North of Huntingdon Rd Nbd	137	335	157	382	15%	14%
10.0	Girton Rd - North of Huntingdon Rd Sbd	342	202	387	230	13%	14%
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Nbd	0	0	31	215	N/A	N/A
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Sbd	0	0	219	69	N/A	N/A
11.1	Proposed Madingley Rd West Access to NWC Nbd	0	0	164	759	N/A	N/A
11.1	Proposed Madingley Rd West Access to NWC Sbd	0	0	702	272	N/A	N/A
11.2	Proposed Huntingdon Rd West Access to NWC Nbd	0	0	69	261	N/A	N/A
11.2	Proposed Huntingdon Rd West Access to NWC Sbd	0	0	272	87	N/A	N/A
11.3	Proposed Huntingdon Rd East Access to NWC Sbd	0	0	248	349	N/A	N/A

No.	Link	2016 Base		2031 TA Do Minimum		Percentage difference	
		AM	PM	AM	PM	AM	PM
11.3	Proposed Huntingdon Rd East Access to NWC Nbd	0	0	284	341	N/A	N/A
12.0	Western Access to Madingley Rd Nbd	0	0	75	469	N/A	N/A
12.0	Western Access to Madingley Rd Sbd	0	0	696	81	N/A	N/A
12.1	High Cross Access to Madingley Rd Nbd	36	257	70	320	94%	25%
12.1	High Cross Access to Madingley Rd Sbd	275	46	268	65	-3%	41%
12.2	JJ Thomson Ave Access to Madingley Rd Nbd	90	227	111	328	23%	44%
12.2	JJ Thomson Ave Access to Madingley Rd Sbd	238	77	323	96	36%	25%
12.3	Clerk Maxwell Rd Nbd – South of Car Park Access	10	32	14	34	40%	6%
12.3	Clerk Maxwell Rd Sbd – South of Car Park Access	38	9	38	12	0%	33%
12.4	Clerk Maxwell Rd Sbd – North of Car Park Access	119	9	119	20	0%	N/A
12.4	Clerk Maxwell Rd Nbd – North of Car Park Access	4	103	24	103	N/A	0%

Table 15.2: Comparison of the 2031 TA Do Minimum and 2031 Do Something flows

No.	Link	2031 TA Do Minimum		2031 Do Something		Percentage difference	
		AM	PM	AM	PM	AM	PM
1.0	M11 - J12 - J13 - Nbd	3,705	3,924	3,891	3,926	5%	0%
1.0	M11 - J12 - J13 - Sbd	3,882	3,826	3,885	4,001	0%	5%
1.1	M11 J13 -J14 - Nbd	2,350	3,100	2,343	3,093	0%	0%
1.1	M11 J13 -J14 - Sbd	2,850	2,564	2,841	2,557	0%	0%
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Nbd	1,588	2,316	1,583	2,309	0%	0%
1.2	M11 between A14 Ebd on-slip / Huntingdon Rd on slip - Sbd	2,309	1,686	2,302	1,681	0%	0%
1.3	M11 J13 off-slip - Nbd	1,112	855	1,305	865	17%	1%
1.3	M11 J13 on-slip - Sbd	534	1,026	545	1,208	2%	18%
2.0	A14 West of J30 (Bar Hill) - Ebd	3,868	3,479	4,095	3,491	6%	0%
2.0	A14 West of J30 (Bar Hill) - Wbd	3,190	4,421	3,206	4,613	1%	4%
2.1	A14 North West of M11 J14 - Ebd	4,200	3,843	4,453	3,847	6%	0%
2.1	A14 North West M11 J14 - Wbd	3,446	4,501	3,453	4,717	0%	5%
2.2	A14 West of J32 Interchange - Ebd	3,915	3,910	3,907	3,901	0%	0%
2.2	A14 West of J32 Interchange - Wbd	3,890	3,922	3,880	3,915	0%	0%
2.3	A428 -West of M11 J14 - Ebd	1,638	814	1,636	811	0%	0%
2.3	A428 - West of M11 J14 - Wbd	846	1,268	843	1,266	0%	0%
3.0	A1303 East of Madingley Mulch R'bout Ebd	621	636	695	638	12%	0%
3.0	A1303 East of Madingley Mulch R'bout Wbd	612	1,341	615	1,409	0%	5%
3.1	Madingley Rd - East of Cambridge Rd Crossroads Wbd	582	1,249	584	1,317	0%	5%
3.1	Madingley Rd - East of Cambridge Rd Crossroads Ebd	795	617	871	619	10%	0%
3.2	Madingley Rd on Over Bridge M11 Ebd	1,409	710	1,679	723	19%	2%
3.2	Madingley Rd on Over Bridge M11 Wbd	232	736	235	806	1%	10%
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Ebd	1,361	674	1,633	689	20%	2%
3.3	Madingley Rd between M11 Sbd On Slip - Proposed Madingley Rd West Access Wbd	498	1,402	515	1,656	3%	18%
3.4	Madingley Rd - West of P&R Access Wbd	920	1,318	503	1,101	-45%	-16%

No.	Link	2031 TA Do Minimum		2031 Do Something		Percentage difference	
		AM	PM	AM	PM	AM	PM
3.4	Madingley Rd - West of P&R Access Ebd	1,161	977	1,113	611	-4%	-37%
3.5	Madingley Rd - East of P&R Access Wbd	967	1,126	523	915	-46%	-19%
3.5	Madingley Rd - East of P&R Access Ebd	1,020	1,021	980	667	-4%	-35%
3.6	Madingley Rd - East of Proposed High Cross Access Ebd	1,069	687	1,178	788	10%	15%
3.6	Madingley Rd - East of Proposed High Cross Access Wbd	670	1,002	582	1,220	-13%	22%
3.7	Madingley Rd - East of JJ Thomson Ave Ebd	1,042	1,015	1,030	1,096	-1%	8%
3.7	Madingley Rd - East of JJ Thomson Ave Wbd	965	985	968	1,022	0%	4%
3.8	Madingley Rd - East of Clerk Maxwell Rd Ebd	953	1,051	978	1,233	3%	17%
3.8	Madingley Rd - East of Clerk Maxwell Rd Wbd	1,007	914	1,215	929	21%	2%
3.9	Madingley Rd - East of Storey's Way Ebd	886	946	911	1,128	3%	19%
3.9	Madingley Rd - East of Storey's Way Wbd	1,040	850	1,249	865	20%	2%
3.10	Madingley Rd - East of Grange Road Ebd	873	938	898	1,117	3%	19%
3.10	Madingley Rd - East of Grange Road Wbd	1,036	834	1,241	849	20%	2%
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Ebd	973	797	956	881	-2%	11%
3.11	Madingley Rd - West of Queen's Rd / Northampton St R'bout Wbd	811	918	899	896	11%	-2%
3.12	Northampton St - West of Pound Hill Ebd	539	896	539	943	0%	5%
3.12	Northampton St - West of Pound Hill Wbd	784	684	800	678	2%	-1%
4.0	Huntingdon Rd - West of Proposed NWC HRW Access NWbd	516	1,042	535	1,267	4%	22%
4.0	Huntingdon Rd - West of Proposed NWC HRW Access SEbd	719	551	984	565	37%	3%
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College NWbd	448	781	436	777	-3%	-1%
4.1	Huntingdon Rd - South East of Grange Drive opposite Girton College SEbd	447	464	443	454	-1%	-2%
4.2	Huntingdon Rd - East of NWC HRW Access NWbd	668	1,299	662	1,271	-1%	-2%
4.2	Huntingdon Rd - East of NWC HRW Access SEbd	934	821	893	814	-4%	-1%
4.3	Huntingdon Rd - East of Darwin Green Access NWbd	617	1,402	615	1,358	0%	-3%
4.3	Huntingdon Rd - East of Darwin Green Access SEbd	1,290	793	1,231	788	-5%	-1%
4.4	Huntingdon Rd - East of Storey's Way NWbd	595	1,278	591	1,237	-1%	-3%

No.	Link	2031 TA Do Minimum		2031 Do Something		Percentage difference	
		AM	PM	AM	PM	AM	PM
4.4	Huntingdon Rd - East of Storey's Way SEbd	1,162	787	1,105	782	-5%	-1%
5.0	Barton Rd - West of Grantchester Rd Ebd	1,142	515	1,140	519	0%	1%
5.0	Barton Rd - West of Grantchester Rd Wbd	317	990	316	989	0%	0%
5.1	Barton Rd - East of Grantchester Rd Ebd	645	464	644	468	0%	1%
5.1	Barton Rd - East of Grantchester Rd Wbd	296	948	296	947	0%	0%
6.0	Queen's Rd - North of West Rd Nbd	574	881	630	856	10%	-3%
6.0	Queen's Rd - North of West Rd Sbd	985	657	952	683	-3%	4%
7.0	Histon Road - South of A14 Nbd	1,156	1,873	1,179	1,958	2%	5%
7.0	Histon Road - South of A14 Sbd	2,045	1,455	2,138	1,475	5%	1%
8.0	Grange Rd - South of Madingley Rd Nbd	208	225	210	224	1%	0%
8.0	Grange Rd - South of Madingley Rd Sbd	342	167	341	169	0%	1%
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Ebd	211	70	211	70	0%	0%
9.0	Storey's Way - between Madingley Rd and Huntingdon Rd Wbd	87	203	87	203	0%	0%
10.0	Girton Rd - North of Huntingdon Rd Nbd	157	382	156	383	-1%	0%
10.0	Girton Rd - North of Huntingdon Rd Sbd	387	230	389	229	1%	0%
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Nbd	31	215	30	196	-3%	-9%
11.0	Proposed Darwin Green Access - between Huntingdon Rd and Histon Rd Sbd	219	69	196	67	-11%	-3%
11.1	Proposed Madingley Rd West Access to NWC Nbd	164	759	203	959	24%	26%
11.1	Proposed Madingley Rd West Access to NWC Sbd	702	272	942	304	34%	12%
11.2	Proposed Huntingdon Rd West Access to NWC Nbd	69	261	99	490	43%	88%
11.2	Proposed Huntingdon Rd West Access to NWC Sbd	272	87	541	111	99%	28%
11.3	Proposed Huntingdon Rd East Access to NWC Sbd	248	349	249	318	0%	-9%
11.3	Proposed Huntingdon Rd East Access to NWC Nbd	284	341	240	340	-15%	0%
12.0	Western Access to Madingley Rd Nbd	75	469	69	600	-8%	28%
12.0	Western Access to Madingley Rd Sbd	696	81	582	94	-16%	16%
12.1	High Cross Access to Madingley Rd Nbd	70	320	145	574	107%	79%

No.	Link	2031 TA Do Minimum		2031 Do Something		Percentage difference	
		AM	PM	AM	PM	AM	PM
12.1	High Cross Access to Madingley Rd Sbd	268	65	758	124	183%	91%
12.2	JJ Thomson Ave Access to Madingley Rd Nbd	111	328	136	478	23%	46%
12.2	JJ Thomson Ave Access to Madingley Rd Sbd	323	96	560	96	73%	0%
12.3	Clerk Maxwell Rd Nbd – South of Car Park Access	14	34	10	4	-29%	-88%
12.3	Clerk Maxwell Rd Sbd – South of Car Park Access	38	12	3	8	-92%	-33%
12.4	Clerk Maxwell Rd Sbd – North of Car Park Access	119	20	262	35	120%	75%
12.4	Clerk Maxwell Rd Nbd – North of Car Park Access	24	103	43	225	79%	118%

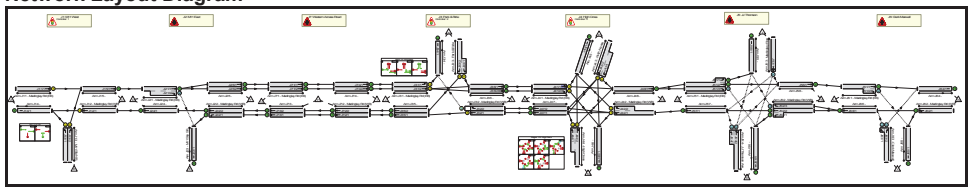
Appendix 15.2 - 2031 Madingley Road Corridor Junction Capacity Assessment

Full Input Data And Results

User and Project Details

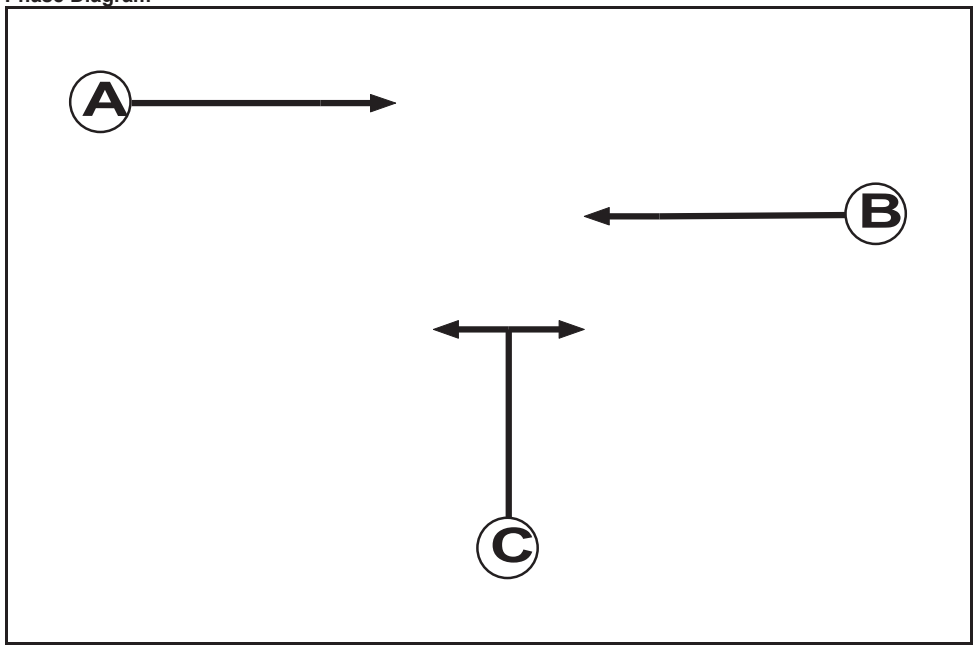
Project:	
Title:	
Location:	
File name:	170601 West Cambridge 2031 DM Existing Layout.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



C1 - M11 West

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

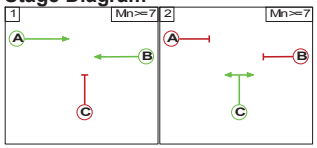
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C
A		-	5
B	-		5
C	5	5	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C

Stage Diagram



Phase Delays

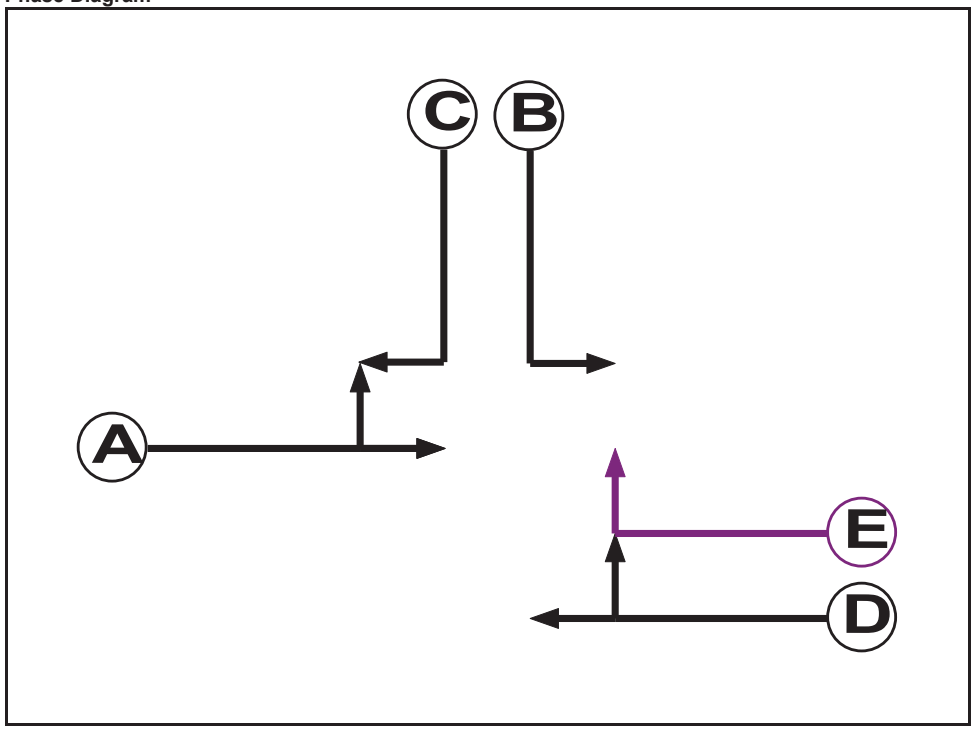
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2
1		5
2	5	

C2 - Park && Ride

Phase Diagram



Phase Input Data

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

Full Input Data And Results

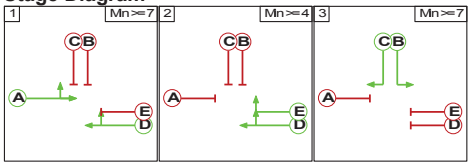
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

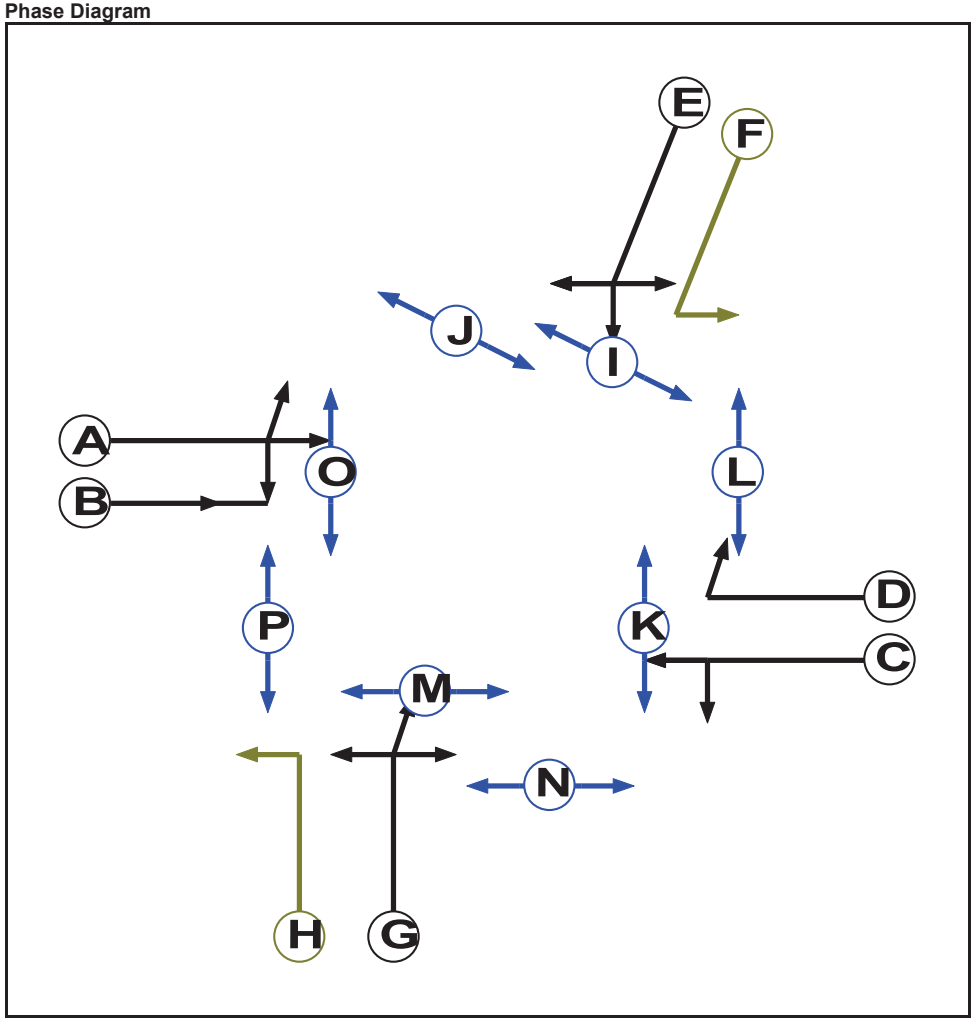
Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	B	Gaining absolute	5	5

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		5	5
	2	5		5
	3	5	5	

C3 - High Cross

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Filter	E	4	4
G	Traffic		7	7
H	Filter	G	4	0
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5
N	Pedestrian		5	5
O	Pedestrian		5	5
P	Pedestrian		5	5

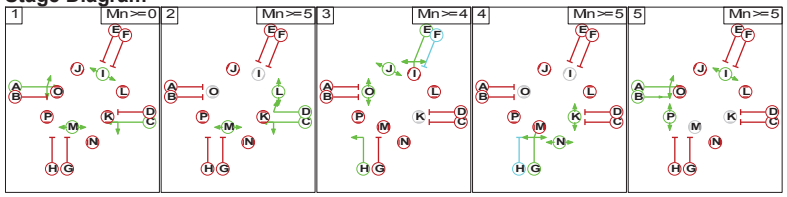
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A		-	-	5	8	8	5	-	-	10	-	12	-	-	6	-
B	-		7	-	5	-	5	5	-	-	-	-	-	9	5	-
C	-	5		-	5	-	8	8	-	-	6	-	-	9	-	12
D	5	-	-		5	-	5	-	-	11	6	-	-	-	-	-
E	5	5	7	6		-	7	-	6	-	-	9	-	12	-	13
F	5	-	-	-	-		5	-	6	-	-	9	-	-	-	-
G	5	5	5	5	8	8		-	-	11	-	12	6	-	-	8
H	-	-	5	-	-	-	-		-	-	-	-	6	-	-	8
I	-	-	-	-	10	10	-	-		-	-	-	-	-	-	-
J	7	-	-	7	-	-	7	-	-		-	-	-	-	-	-
K	-	-	8	8	-	-	-	-	-	-		-	-	-	-	-
L	9	-	-	-	9	9	9	-	-	-	-		-	-	-	-
M	-	-	-	-	-	-	10	10	-	-	-	-		-	-	-
N	-	7	7	-	7	-	-	-	-	-	-	-	-		-	-
O	8	8	-	-	-	-	-	-	-	-	-	-	-	-		-
P	-	-	8	-	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	4	4
5	1	B	Losing	1	1

Full Input Data And Results

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		12	10	10	12
2	9		12	10	12
3	X	X		12	X
4	8	12	11		8
5	8	12	10	9	

Give-Way Lane Input Data

Junction: J1: M11 West

There are no Opposed Lanes in this Junction

Junction: J2: M11 East

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)
J2:1/2 (Madingley Rd (EB))	J2:3/1 (Right)	850	0	J2:2/2	0.35	All	-	-	-	-	-
				J2:2/1	0.35	All					

Junction: J3: Park && Ride

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)
J3:2/2 (Madingley Rd (WB))	J3:4/1 (Right)	1440	0	J3:1/1	1.09	All	2.00	-	0.50	2	2.00
				J3:1/2	1.09	All					

Junction: J4: High Cross

There are no Opposed Lanes in this Junction

Junction: J5: JJ Thomson

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)
J5:1/3 (Madingley Rd (EB))	J5:6/1 (Right)	850	0	J5:2/2	0.35	All	-	-	-	-	-
				J5:2/1	0.35	All					
J5:2/3 (Madingley Rd (WB))	J5:5/1 (Right)	850	0	J5:1/1	0.35	All	-	-	-	-	-
				J5:1/2	0.35	All					
J5:3/1 (Madingley Rise)	J5:6/1 (Ahead)	600	0	J5:1/1	0.22	All	-	-	-	-	-
				J5:1/2	0.22	All					
				J5:1/3	0.22	All					
				J5:2/1	0.19	All					
				J5:2/2	0.19	All					
				J5:2/3	0.19	All					
	J5:7/1 (Right)	600	0	J5:1/2	0.22	All					
				J5:2/2	0.19	All					
				J5:2/1	0.19	All					
				J5:2/3	0.19	All					
				J5:1/1	0.22	All					
				J5:1/3	0.22	All					
				J5:4/1	0.19	All					
				J5:4/2	0.19	All					
	J5:8/1 (Left)	715	0	J5:1/2	0.22	All					
J5:4/1 (JJ Thomson Ave)	J5:7/1 (Left)	715	0	J5:2/2	0.22	All	-	-	-	-	-
J5:4/2 (JJ Thomson Ave)	J5:5/1 (Ahead)	600	0	J5:2/1	0.22	All	-	-	-	-	-
				J5:2/3	0.22	All					
				J5:1/1	0.19	All					

				J5:1/2	0.19	All						
				J5:1/3	0.19	All						
				J5:2/2	0.22	All						
				J5:2/2	0.22	All						
				J5:2/1	0.22	All						
				J5:2/3	0.22	All						
	J5:8/1 (Right)	600	0	J5:1/1	0.19	All						
				J5:1/2	0.19	All						
				J5:1/3	0.19	All						
				J5:3/1	0.19	All						

Junction: J6: Clerk Maxwell

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)
J6:1/2 (Madingley Rd (EB))	J6:5/1 (Right)	850	0	J6:2/1	0.35	All	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	J6:6/1 (Left)	1439	0	J6:2/1	1.09	All	-	-	-	-	-
J6:3/2 (Clerk Maxwell)	J6:4/1 (Right)	600	0	J6:1/1	0.19	All	-	-	-	-	-
				J6:1/2	0.19	All					
				J6:2/1	0.22	To J6:6/1 (Ahead)					

Junction: J7: Western Access Road

There are no Opposed Lanes in this Junction

Lane Input Data

Junction: J1: M11 West

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 (Madingley Rd (EB))	U	A	2	3	87.0	Geom	-	3.00	0.00	N	Arm J1:5 Ahead	Inf
J1:2/1 (Madingley Rd (WB))	U	B	2	3	31.3	Geom	-	3.00	0.00	Y	Arm J1:4 Ahead	Inf
J1:3/1 (M11 Slip NB)	U	C	2	3	34.8	Geom	-	3.00	0.00	Y	Arm J1:4 Left	20.00
J1:3/2 (M11 Slip NB)	U	C	2	3	87.0	Geom	-	3.00	0.00	Y	Arm J1:5 Right	15.00
J1:4/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J1:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J2: M11 East

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 (Madingley Rd (EB))	U		2	3	33.0	User	2000	-	-	-	-	-
J2:1/2 (Madingley Rd (EB))	O		2	3	10.4	Inf	-	-	-	-	-	-
J2:2/1 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:2/2 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:3/1 (M11 Slip SB)	U		2	3	87.0	Inf	-	-	-	-	-	-
J2:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J3: Park && Ride

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)
J3:1/1 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:4 Left	15.00
J3:1/2 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:6 Ahead	Inf
J3:2/1 (Madingley Rd (WB))	U	D E	2	3	13.9	Geom	-	3.50	0.00	N	Arm J3:5 Ahead	Inf
J3:2/2 (Madingley Rd (WB))	O	D E	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J3:4 Right	25.00
J3:3/1 (Park & Ride)	U	B	2	3	5.2	Geom	-	3.00	0.00	Y	Arm J3:6 Left	15.00
J3:3/2 (Park & Ride)	U	C	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:5 Right	20.00
J3:4/1	U		2	3	17.4	Inf	-	-	-	-	-	-
J3:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J4: High Cross

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)
J4:1/1 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J4:5 Left	30.00
											Arm J4:8 Ahead	Inf
J4:1/2 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J4:6 Right	Inf
J4:2/1 (Madingley Rd (WB))	U	C	2	3	88.7	Geom	-	3.50	0.00	Y	Arm J4:6 Left	20.00
											Arm J4:7 Ahead	Inf
J4:2/2 (Madingley Rd (WB))	U	D	2	3	7.0	Geom	-	3.50	0.00	Y	Arm J4:5 Right	20.00
J4:3/1 (NWC Access)	U	E F	2	3	8.7	Geom	-	3.25	0.00	Y	Arm J4:8 Left	10.00
J4:3/2 (NWC Access)	U	E	2	3	87.0	Geom	-	3.25	0.00	Y	Arm J4:6 Ahead	Inf
											Arm J4:7 Right	45.00
J4:4/1 (High Cross)	U	G H	2	3	8.3	Geom	-	4.00	0.00	N	Arm J4:7 Left	25.00
J4:4/2 (High Cross)	U	G	2	3	60.0	Geom	-	4.00	0.00	N	Arm J4:5 Ahead	Inf
											Arm J4:8 Right	Inf
J4:5/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J4:6/1	U		2	3	8.7	Inf	-	-	-	-	-	-
J4:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:7/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J5: JJ Thomson

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)
J5:1/1 (Madingley Rd (EB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:5 Left	15.00
J5:1/2 (Madingley Rd (EB))	U		2	3	90.4	Geom	-	3.00	0.00	Y	Arm J5:8 Ahead	Inf
J5:1/3 (Madingley Rd (EB))	O		2	3	15.7	Geom	-	3.00	0.00	Y	Arm J5:6 Right	15.00
J5:2/1 (Madingley Rd (WB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:6 Left	15.00
J5:2/2 (Madingley Rd (WB))	U		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:7 Ahead	Inf
J5:2/3 (Madingley Rd (WB))	O		2	3	7.1	User	850	-	-	-	-	-
J5:3/1 (Madingley Rise)	O		2	3	34.8	Geom	-	3.00	0.00	Y	Arm J5:6 Ahead	Inf
											Arm J5:7 Right	Inf
											Arm J5:8 Left	Inf
J5:4/1 (JJ Thomson Ave)	O		2	3	4.9	Geom	-	3.00	0.00	Y	Arm J5:7 Left	Inf
J5:4/2 (JJ Thomson Ave)	O		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:5 Ahead	Inf
											Arm J5:8 Right	Inf
J5:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J5:6/1	U		2	3	59.1	Inf	-	-	-	-	-	-
J5:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J5:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J6: Clerk Maxwell

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)
J6:1/1 (Madingley Rd (EB))	U		2	3	48.7	User	1800	-	-	-	-	-
J6:1/2 (Madingley Rd (EB))	O		2	3	4.3	Inf	-	-	-	-	-	-
J6:2/1 (Madingley Rd (WB))	U		2	3	60.9	User	1800	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	O		2	3	1.4	Geom	-	3.25	0.00	Y	Arm J6:6 Left	Inf
J6:3/2 (Clerk Maxwell)	O		2	3	60.0	User	600	-	-	-	-	-
J6:4/1	U		2	3	60.9	Inf	-	-	-	-	-	-
J6:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J6:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J7: Western Access 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)
J7:1/1 (Madingley Rd (EB))	U		2	3	26.1	Inf	-	-	-	-	-	-
J7:1/2 (Madingley Rd (EB))	U		2	3	26.1	Inf	-	-	-	-	-	-
J7:2/1 (Madingley Rd (WB))	U		2	3	17.4	Inf	-	-	-	-	-	-
J7:2/2 (Madingley Rd (WB))	U		2	3	17.4	Inf	-	-	-	-	-	-
J7:3/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:3/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 DM AM Peak'	08:00	09:00	01:00	
2: '2031 DM PM Peak'	17:00	18:00	01:00	

Scenario 1: '2031 DM AM Peak' (FG1: '2031 DM AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
Origin	A	0	0	665	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	B	361	0	782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	267	1447	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	270	329	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	G	0	0	0	0	0	0	0	0	1041	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	I	0	0	0	0	0	0	527	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	J	0	0	0	0	0	0	0	0	0	0	156	1151	0	0	0	0	0	0	0	0	0	0	0
	K	0	0	0	0	0	0	0	0	0	17	0	23	0	0	0	0	0	0	0	0	0	0	0
	L	0	0	0	0	0	0	0	0	0	957	37	0	0	0	0	0	0	0	0	0	0	0	0
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	276	984	77	0	0	0	0	0	0	0
	N	0	0	0	0	0	0	0	0	0	0	0	0	47	0	28	48	0	0	0	0	0	0	0
	O	0	0	0	0	0	0	0	0	0	0	0	0	621	253	0	40	0	0	0	0	0	0	0
	P	0	0	0	0	0	0	0	0	0	0	0	0	345	231	126	0	0	0	0	0	0	0	0
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	1022	65	0	0	0
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110	37	0	0	0
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	901	483	0	50	0	0	0
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	2	11	0	0	0	0
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	1058
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1434	52	0
	Tot.	603	0	1447	270	596	1447	527	0	1041	974	193	1174	1013	760	1138	165	909	550	1143	152	1436	119	1060

Traffic Lane Flows

Lane	Scenario 1: 2031 DM AM Peak
Junction: J1: M11 West	
J1:1/1	665
J1:2/1	242
J1:3/1	361
J1:3/2	782
J1:4/1	603
J1:5/1	1447
Junction: J2: M11 East	
J2:1/1 (with short)	1714(In) 1447(Out)
J2:1/2 (short)	267
J2:2/1	329
J2:2/2	270
J2:3/1	596
J2:4/1	270
J2:5/1	723
J2:5/2	724
Junction: J3: Park && Ride	
J3:1/1	156
J3:1/2	1151
J3:2/1	957
J3:2/2	37
J3:3/1 (short)	23
J3:3/2 (with short)	40(In) 17(Out)
J3:4/1	193
J3:5/1	957
J3:5/2	17
J3:6/1	599
J3:6/2	575
Junction: J4: High Cross	
J4:1/1	1061
J4:1/2	276
J4:2/1 (with short)	914(In) 874(Out)
J4:2/2 (short)	40
J4:3/1 (short)	126
J4:3/2 (with short)	702(In) 576(Out)
J4:4/1 (short)	47

J4:4/2 (with short)	123(In) 76(Out)
J4:5/1	165
J4:6/1	760
J4:7/1	530
J4:7/2	483
J4:8/1	1138
Junction: J5: JJ Thomson	
J5:1/1 (short)	65
J5:1/2 (with short)	1087(In) 1022(Out)
J5:1/3	65
J5:2/1 (short)	483
J5:2/2 (with short)	1384(In) 901(Out)
J5:2/3	50
J5:3/1	21
J5:4/1 (short)	0
J5:4/2 (with short)	147(In) 147(Out)
J5:5/1	152
J5:6/1	550
J5:7/1	909
J5:8/1	1143
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	1125(In) 1058(Out)
J6:1/2 (short)	67
J6:2/1	1486
J6:3/1 (short)	2
J6:3/2 (with short)	4(In) 2(Out)
J6:4/1	1060
J6:5/1	119
J6:6/1	1436
Junction: J7: Western Access Road	
J7:1/1	520
J7:1/2	521
J7:2/1	264
J7:2/2	263
J7:3/1	264
J7:3/2	263
J7:4/1	520
J7:4/2	521

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	7.3 %	1958	1958
				Arm J4:8 Ahead	Inf	92.7 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:6 Right	Inf	100.0 %	1965	1965
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	28.9 %	1923	1923
				Arm J4:7 Ahead	Inf	71.1 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	40.1 %	1902	1902
				Arm J4:7 Right	45.00	59.9 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	63.2 %	2155	2155
				Arm J4:8 Right	Inf	36.8 %		
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	9.5 %	1915	1915
				Arm J5:7 Right	Inf	38.1 %		
				Arm J5:8 Left	Inf	52.4 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	0.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	25.2 %	1915	1915
				Arm J5:8 Right	Inf	74.8 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:2/1 (Madingley Rd (WB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:2/2 (Madingley Rd (WB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2031 DM PM Peak' (FG2: '2031 DM PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	To
Origin	A	0	0	361	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
	B	513	0	361	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87
	C	760	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	76
	D	0	0	0	0	340	440	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	934	834	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	176
	G	0	0	0	0	0	0	0	0	673	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	I	0	0	0	0	0	0	1344	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
	J	0	0	0	0	0	0	0	0	0	0	14	1000	0	0	0	0	0	0	0	0	0	0	0	101
	K	0	0	0	0	0	0	0	0	0	216	0	69	0	0	0	0	0	0	0	0	0	0	0	28
	L	0	0	0	0	0	0	0	0	0	1130	29	0	0	0	0	0	0	0	0	0	0	0	0	115
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	57	658	365	0	0	0	0	0	0	0	108
	N	0	0	0	0	0	0	0	0	0	0	0	0	267	0	157	200	0	0	0	0	0	0	0	62
	O	0	0	0	0	0	0	0	0	0	0	0	0	833	23	0	194	0	0	0	0	0	0	0	105
	P	0	0	0	0	0	0	0	0	0	0	0	0	161	48	64	0	0	0	0	0	0	0	0	27
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	872	5	0	0	0	88
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	466	7	0	0	0	50
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	932	109	0	9	0	0	0	105
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	4	48	0	0	0	0	11
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1386	138
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	0	46	10
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	990	7	0	99
	Tot.	1273	0	722	934	1174	440	1344	0	673	1346	43	1069	1261	128	879	759	1026	122	1386	21	1047	9	1432	170

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2031 DM PM Peak
Junction: J1: M11 West	
J1:1/1	361
J1:2/1	760
J1:3/1	513
J1:3/2	361
J1:4/1	1273
J1:5/1	722
Junction: J2: M11 East	
J2:1/1 (with short)	780(In) 440(Out)
J2:1/2 (short)	340
J2:2/1	834
J2:2/2	934
J2:3/1	1174
J2:4/1	934
J2:5/1	220
J2:5/2	220
Junction: J3: Park && Ride	
J3:1/1	14
J3:1/2	1000
J3:2/1	1130
J3:2/2	29
J3:3/1 (short)	69
J3:3/2 (with short)	285(In) 216(Out)
J3:4/1	43
J3:5/1	1130
J3:5/2	216
J3:6/1	569
J3:6/2	500
Junction: J4: High Cross	
J4:1/1	1023
J4:1/2	57
J4:2/1 (with short)	1050(In) 856(Out)
J4:2/2 (short)	194
J4:3/1 (short)	64
J4:3/2 (with short)	273(In) 209(Out)
J4:4/1 (short)	267

J4:4/2 (with short)	624(In) 357(Out)
J4:5/1	759
J4:6/1	128
J4:7/1	764
J4:7/2	497
J4:8/1	879
Junction: J5: JJ Thomson	
J5:1/1 (short)	5
J5:1/2 (with short)	877(In) 872(Out)
J5:1/3	9
J5:2/1 (short)	109
J5:2/2 (with short)	1041(In) 932(Out)
J5:2/3	9
J5:3/1	112
J5:4/1 (short)	34
J5:4/2 (with short)	507(In) 473(Out)
J5:5/1	21
J5:6/1	122
J5:7/1	1026
J5:8/1	1386
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	1388(In) 1386(Out)
J6:1/2 (short)	2
J6:2/1	997
J6:3/1 (short)	57
J6:3/2 (with short)	103(In) 46(Out)
J6:4/1	1432
J6:5/1	9
J6:6/1	1047
Junction: J7: Western Access Road	
J7:1/1	336
J7:1/2	337
J7:2/1	672
J7:2/2	672
J7:3/1	672
J7:3/2	672
J7:4/1	336
J7:4/2	337

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	35.7 %	1931	1931
				Arm J4:8 Ahead	Inf	64.3 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:6 Right	Inf	100.0 %	1965	1965
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	2.7 %	1961	1961
				Arm J4:7 Ahead	Inf	97.3 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	23.0 %	1891	1891
				Arm J4:7 Right	45.00	77.0 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	56.0 %	2155	2155
				Arm J4:8 Right	Inf	44.0 %		
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

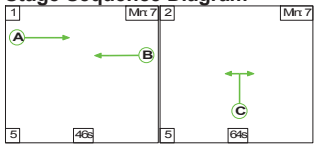
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	3.6 %	1915	1915
				Arm J5:7 Right	Inf	53.6 %		
				Arm J5:8 Left	Inf	42.9 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	1.5 %	1915	1915
				Arm J5:8 Right	Inf	98.5 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:2/1 (Madingley Rd (WB) Lane 1)	Infinite Saturation Flow						Inf	Inf
J7:2/2 (Madingley Rd (WB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf

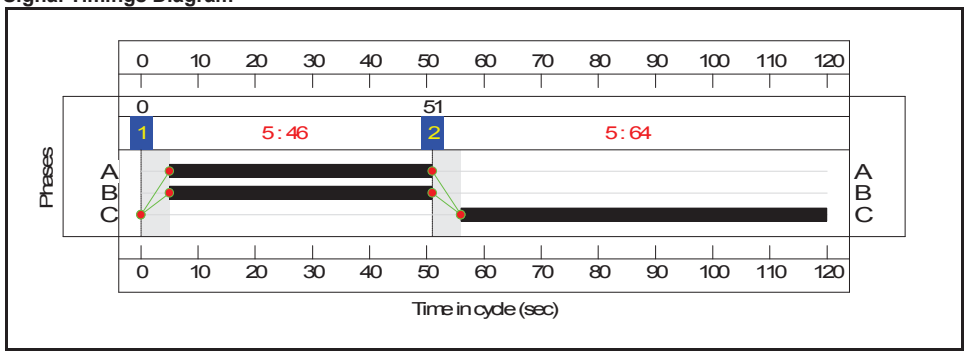
Scenario 1: '2031 DM AM Peak' (FG1: '2031 DM AM Peak', Plan 1: 'Network Control Plan 1')
C1 - M11 West
Stage Sequence Diagram



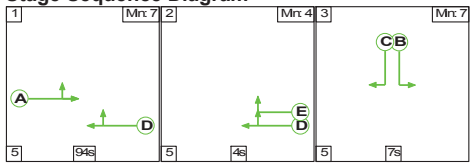
Stage Timings

Stage	1	2
Duration	46	64
Change Point	0	51

Signal Timings Diagram



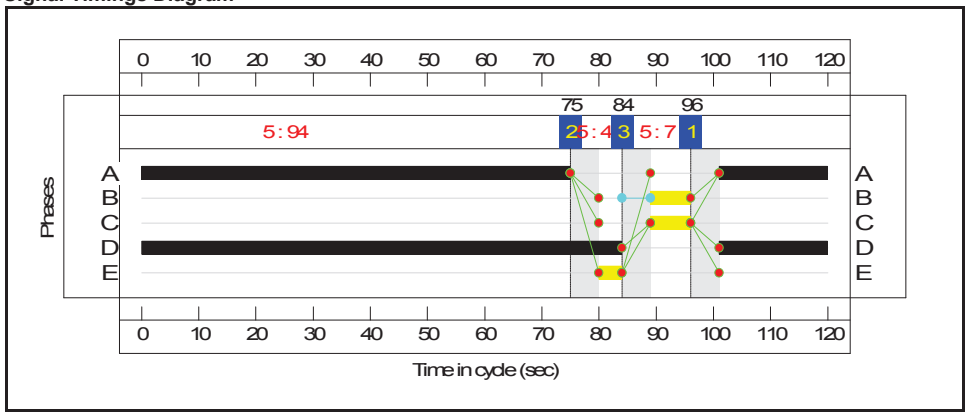
C2 - Park && Ride
Stage Sequence Diagram



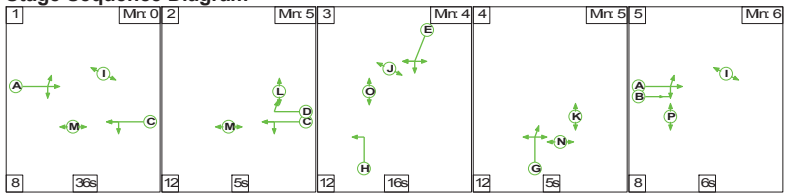
Stage Timings

Stage	1	2	3
Duration	94	4	7
Change Point	96	75	84

Signal Timings Diagram



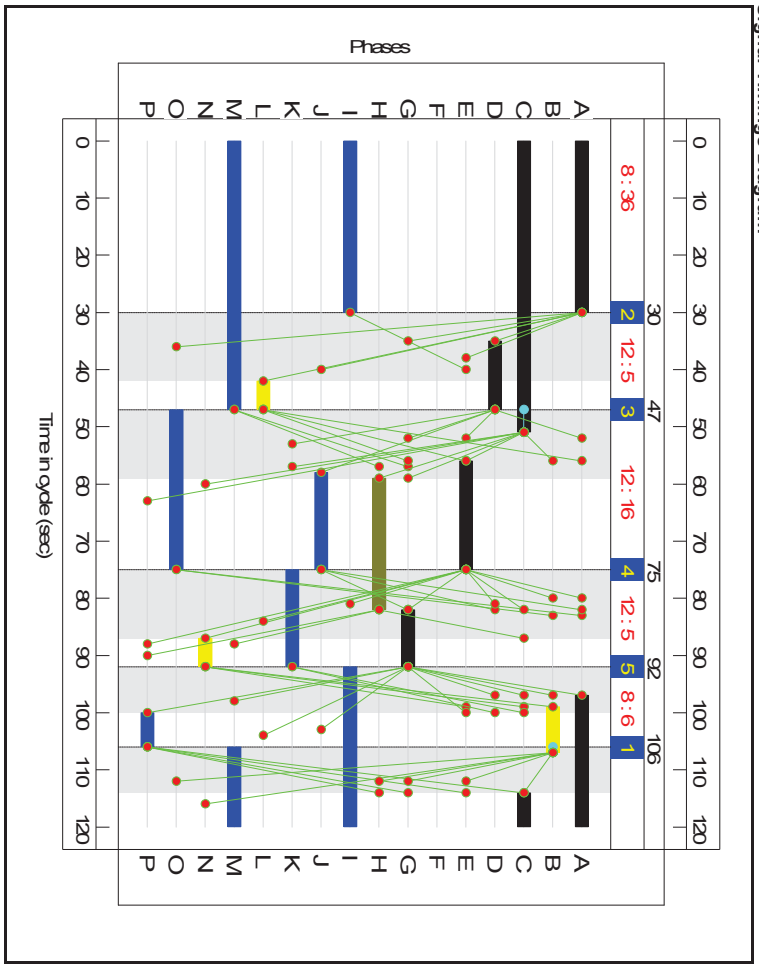
C3 - High Cross
Stage Sequence Diagram



Stage Timings

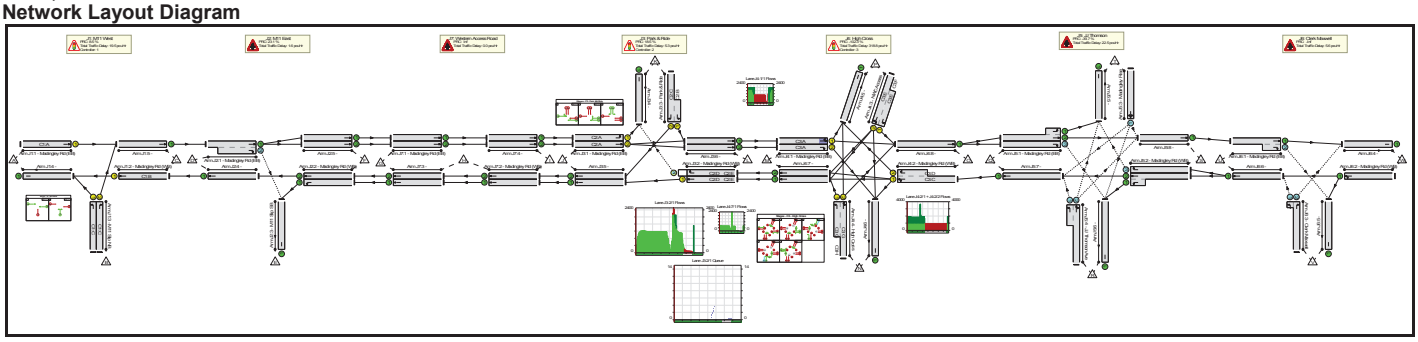
Stage	1	2	3	4	5
Duration	36	5	16	5	6
Change Point	106	30	47	75	92

Signal Timings Diagram



Full Input Data And Results

Network Layout 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**	-	-		-	-	-	-	-	-	**Inf %**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.9%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	46	-	665	2055	805	82.6%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	46	-	242	1915	750	32.3%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	64	-	361	1781	965	37.4%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	64	-	782	1741	943	82.9%
4/1		U	N/A	N/A	-		-	-	-	603	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1447	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**73.1%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	1714	2000: Inf	1979+365	73.1 : 73.1%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	329	1800	1800	18.3%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	270	1800	1800	15.0%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	596	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	270	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	723	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	724	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.9%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	94	-	156	1741	1378	11.3%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	94	-	1151	1915	1516	75.9%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	103	4	957	2105	1824	44.7%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	103	4	37	1854	184	16.9%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	7	-	40	1781:1741	86+116	19.8 : 19.8%
4/1		U	N/A	N/A	-		-	-	-	193	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	957	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	599	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	575	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**182.1%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	53	-	1061	1958	881	120.4%
1/2	Madingley Rd (EB) Right	U	N/A	N/A	C3:A		1	53	-	276	1965	884	31.2%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	57:12	-	914	1923:1828	898+41	97.2 : 97.2%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	19	0	702	1902:1687	316+69	182.1 : 182.1%
4/2+4/1	High Cross Ahead Left Right	U	N/A	N/A	C3:G	C3:H	1	10:33	23	123	2155:2033	198+122	38.5 : 38.5%
5/1		U	N/A	N/A	-		-	-	-	165	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	760	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	530	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	483	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1138	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**125.7%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	1087	1915:1741	1790+114	45.9 : 45.9%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	65	1741	366	14.3%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	1384	1915:1741	1205+646	74.7 : 74.7%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	50	850	544	9.2%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	21	1915	186	11.3%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	147	1915:1915	117+0	125.7 : 0.0%
5/1		U	N/A	N/A	-		-	-	-	152	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	550	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	909	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1143	Inf	Inf	0.0%
J6: Clerk Maxwell	-	-	**N/A**	-	-		-	-	-	-	-	-	**Inf %**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	1125	1800: Inf	1787+113	59.2 : 59.2%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	1486	1800	1800	82.6%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	4	600:1940	0+0	Inf : Inf %
4/1		U	N/A	N/A	-		-	-	-	1060	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	119	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	1436	Inf	Inf	0.0%
J7: Western Access Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	520	Inf	Inf	0.0%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	521	Inf	Inf	0.0%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	264	Inf	Inf	0.0%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	263	Inf	Inf	0.0%
3/1	Ahead	U	N/A	N/A	-		-	-	-	264	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	263	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	520	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	521	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	**-**	**-**	**711**	**15**	**1**	**76.8**	**296.3**	**0.2**	**373.3**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**14.3**	**5.2**	**0.0**	**19.5**	**-**	**-**	**-**	**-**
1/1	665	665	-	-	-	6.1	2.3	-	8.4	45.3	19.8	2.3	22.1
2/1	242	242	-	-	-	1.7	0.2	-	1.9	29.0	5.6	0.2	5.8
3/1	361	361	-	-	-	1.6	0.3	-	1.9	18.8	6.8	0.3	7.1
3/2	782	782	-	-	-	5.0	2.4	-	7.3	33.7	21.5	2.4	23.9
4/1	603	603	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1447	1447	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**267**	**0**	**0**	**0.1**	**1.6**	**0.0**	**1.6**	**-**	**-**	**-**	**-**
1/1+1/2	1714	1714	267	0	0	0.1	1.4	-	1.4	3.0	30.2	1.4	31.5
2/1	329	329	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
2/2	270	270	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
3/1	596	596	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	270	270	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	723	723	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	724	724	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**15**	**15**	**1**	**2.8**	**2.3**	**0.2**	**5.3**	**-**	**-**	**-**	**-**
1/1	156	156	-	-	-	0.1	0.1	-	0.1	3.3	0.9	0.1	0.9
1/2	1151	1151	-	-	-	2.1	1.6	-	3.7	11.4	19.8	1.6	21.4
2/1	816	816	-	-	-	0.0	0.4	-	0.5	2.0	3.6	0.4	4.0
2/2	31	31	15	15	1	0.0	0.1	0.2	0.3	36.7	0.2	0.1	0.3
3/2+3/1	40	40	-	-	-	0.6	0.1	-	0.7	64.0	0.7	0.1	0.8
4/1	187	187	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	816	816	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	599	599	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	575	575	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**56.2**	**262.6**	**0.0**	**318.8**	**-**	**-**	**-**	**-**
1/1	1061	881	-	-	-	19.5	92.8	-	112.3	381.2	41.4	92.8	134.2
1/2	276	276	-	-	-	1.4	0.2	-	1.7	21.8	4.0	0.2	4.2
2/1+2/2	913	913	-	-	-	7.8	9.9	-	17.7	69.8	29.1	9.9	39.0
3/2+3/1	702	385	-	-	-	25.9	159.4	-	185.3	950.1	34.4	159.4	193.8
4/2+4/1	123	123	-	-	-	1.5	0.3	-	1.8	52.9	2.4	0.3	2.7
5/1	152	152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	655	655	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	452	452	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	405	405	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	914	914	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**357**	**0**	**0**	**3.2**	**19.3**	**0.0**	**22.5**	**-**	**-**	**-**	**-**
1/2+1/1	873	873	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
1/3	52	52	52	0	0	0.0	0.1	-	0.1	5.7	0.0	0.1	0.1
2/2+2/1	1382	1382	-	-	-	0.0	1.5	-	1.5	3.8	0.0	1.5	1.5
2/3	50	50	50	0	0	0.0	0.1	-	0.1	3.6	0.0	0.1	0.1
3/1	21	21	21	0	0	0.1	0.1	-	0.1	19.5	0.3	0.1	0.3
4/2+4/1	147	117	234	0	0	3.2	17.2	-	20.3	498.1	14.0	17.2	31.2
5/1	132	132	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	537	537	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	908	908	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	920	920	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**71**	**0**	**0**	**0.2**	**5.5**	**0.0**	**5.6**	**-**	**-**	**-**	**-**
1/1+1/2	1125	1125	67	0	0	0.0	0.7	-	0.7	2.3	0.0	0.7	0.7
2/1	1486	1486	-	-	-	0.0	2.3	-	2.3	5.6	0.0	2.3	2.3
3/2+3/1	4	2	4	0	0	0.2	2.4	-	2.6	2320.5	0.2	2.4	2.6

Full Input Data And Results

4/1	1060	1060	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	119	119	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1434	1434	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
1/1	520	520	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	521	521	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	264	264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	263	263	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	264	264	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	263	263	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	520	520	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	521	521	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West
C2 - Park && Ride
C3 - High Cross

PRC for Signalled Lanes (%): 8.5
PRC for Signalled Lanes (%): 18.5
PRC for Signalled Lanes (%): -102.3
PRC Over All Lanes (%): -Inf

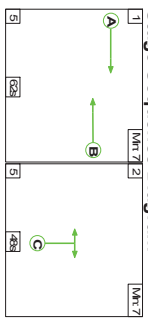
Total Delay for Signalled Lanes (pcuHr): 19.53
Total Delay for Signalled Lanes (pcuHr): 5.27
Total Delay for Signalled Lanes (pcuHr): 318.80
Total Delay Over All Lanes(pcuHr): 373.35

Cycle Time (s): 120
Cycle Time (s): 120
Cycle Time (s): 120

Scenario 2: '2031 DM PM Peak' (FG2: '2031 DM PM Peak', Plan 1: 'Network Control Plan 1')

C1 - M11 West

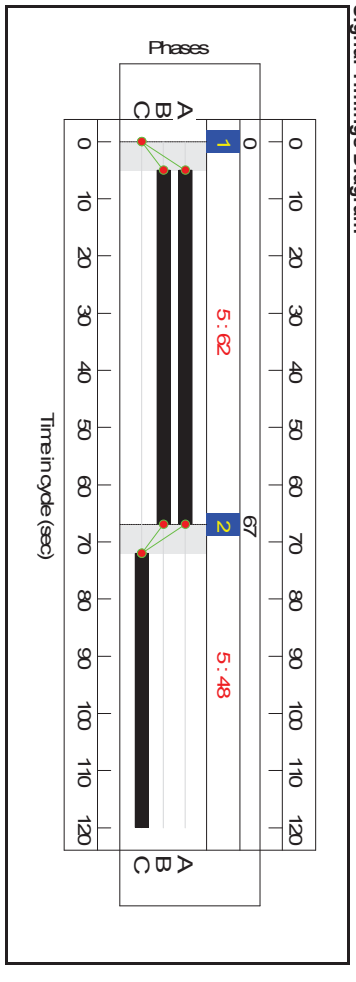
Stage Sequence Diagram



Stage Timings

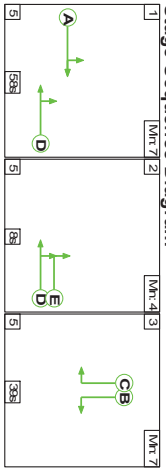
Stage	1	2
Duration	62	48
Change Point	0	67

Signal Timings Diagram



C2 - Park && Ride

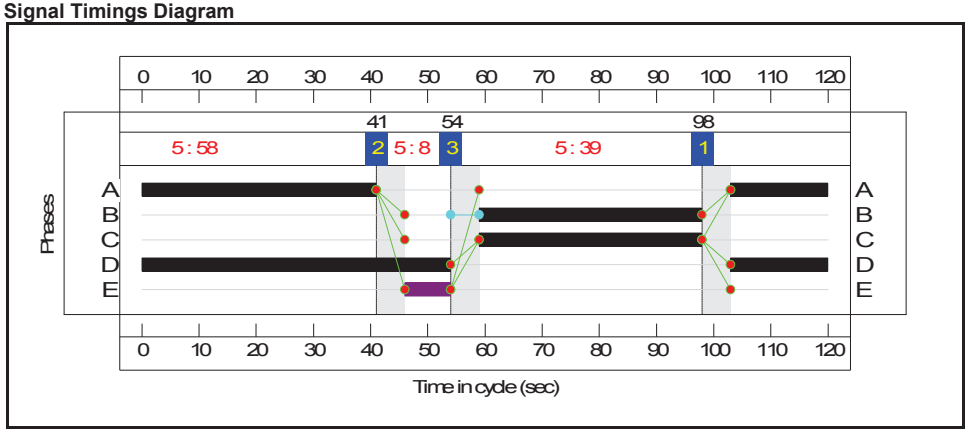
Stage Sequence Diagram



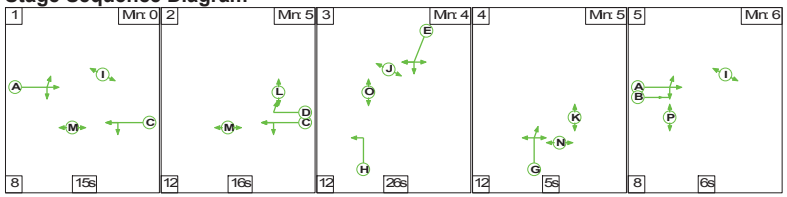
Stage Timings

Stage	1	2	3
Duration	58	8	39
Change Point	98	41	54

Signal Timings Diagram



C3 - High Cross
Stage Sequence Diagram

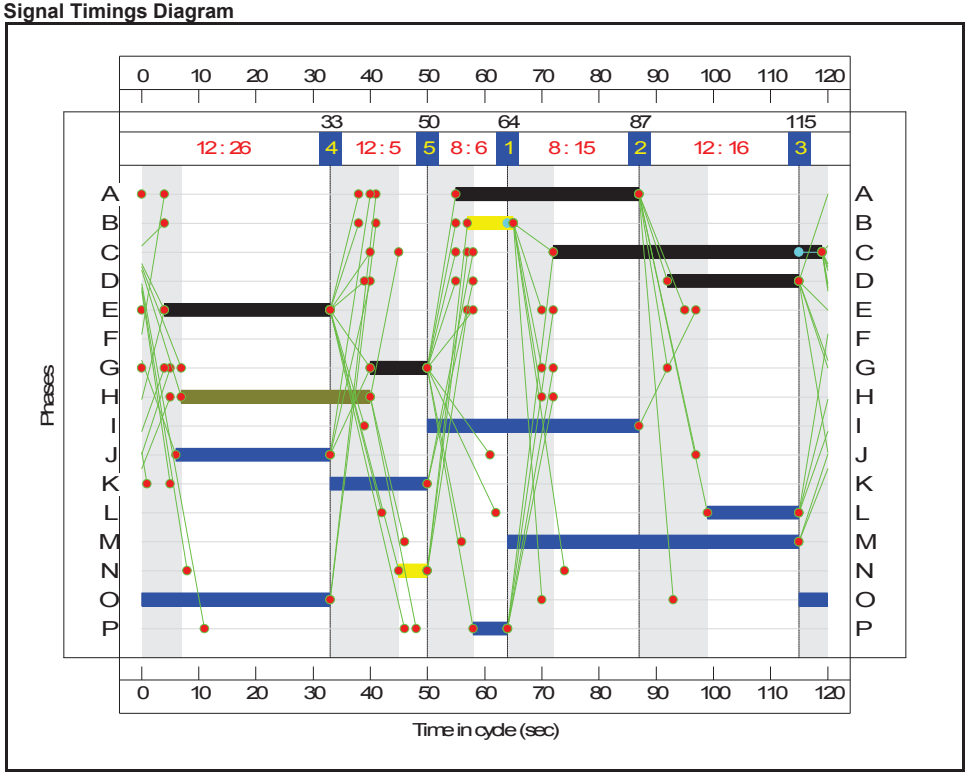


Stage Timings

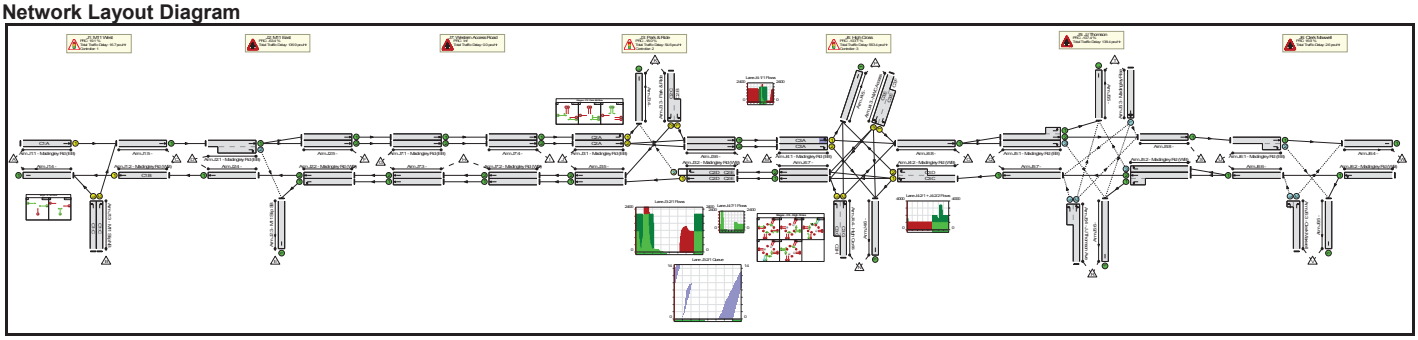
Stage	1	2	3	4	5
Duration	15	16	26	5	6
Change Point	64	87	115	33	50

Full Input Data And Results

Signal Timings Diagram



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	-	-	**N/A**	-	-		-	-	-	-	-	-	**186.6%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.6%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	62	-	361	2055	1079	33.5%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	62	-	760	1915	1005	75.6%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	48	-	513	1781	727	70.5%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	48	-	361	1741	711	50.8%
4/1		U	N/A	N/A	-		-	-	-	1273	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	722	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**147.1%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	780	2000: Inf	299+231	147.1 : 147.1%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	834	1800	1800	46.3%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	934	1800	1800	51.9%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	1174	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	934	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	220	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	220	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**106.2%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	58	-	14	1741	856	1.4%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	58	-	1000	1915	942	106.2%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	71	8	1130	2105	1263	64.9%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	71	8	29	1854	199	11.9%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	39	-	285	1781:1741	490+156	44.1 : 44.1%
4/1		U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1130	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	216	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	569	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	500	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**182.8%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	32	-	1023	1931	531	182.8%
1/2	Madingley Rd (EB) Right	U	N/A	N/A	C3:A		1	32	-	57	1965	540	9.9%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	47:23	-	1050	1961:1828	670+152	125.8 : 125.8%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	29	0	273	1891:1687	430+132	48.7 : 48.7%
4/2+4/1	High Cross Ahead Left Right	U	N/A	N/A	C3:G	C3:H	1	10:43	33	624	2155:2033	198+148	180.7 : 180.7%
5/1		U	N/A	N/A	-		-	-	-	759	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	128	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	764	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	497	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	879	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**186.6%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	877	1915:1741	1903+11	25.7 : 25.7%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	9	1741	486	1.0%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	1041	1915:1741	1697+198	54.9 : 54.9%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	9	850	678	1.3%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	112	1915	325	34.5%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	507	1915:1915	253+18	186.6 : 186.6%
5/1		U	N/A	N/A	-		-	-	-	21	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	122	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	1026	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1386	Inf	Inf	0.0%
J6: Clerk Maxwell	-	-	**N/A**	-	-		-	-	-	-	-	-	**77.0%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	1388	1800: Inf	1800+3	77.0 : 77.0%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	997	1800	1800	55.4%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	103	600:1940	118+147	38.9 : 38.9%
4/1		U	N/A	N/A	-		-	-	-	1432	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	9	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	1047	Inf	Inf	0.0%
J7: Western Access Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	336	Inf	Inf	0.0%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	-		-	-	-	337	Inf	Inf	0.0%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	672	Inf	Inf	0.0%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	672	Inf	Inf	0.0%
3/1	Ahead	U	N/A	N/A	-		-	-	-	672	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	672	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	336	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	337	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	**-**	**-**	**1109**	**23**	**1**	**151.5**	**760.9**	**0.2**	**912.6**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**13.2**	**3.5**	**0.0**	**16.7**	**-**	**-**	**-**	**-**
1/1	361	361	-	-	-	1.6	0.3	-	1.9	18.9	6.9	0.3	7.2
2/1	760	760	-	-	-	4.7	1.5	-	6.3	29.7	19.8	1.5	21.4
3/1	513	513	-	-	-	4.2	1.2	-	5.4	37.8	14.1	1.2	15.3
3/2	361	361	-	-	-	2.7	0.5	-	3.2	31.6	8.9	0.5	9.4
4/1	1273	1273	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	722	722	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**231**	**0**	**0**	**9.5**	**127.4**	**0.0**	**136.9**	**-**	**-**	**-**	**-**
1/1+1/2	780	614	231	0	0	9.5	126.4	-	135.9	627.2	31.7	126.4	158.1
2/1	834	834	-	-	-	0.0	0.4	-	0.4	1.9	0.0	0.4	0.4
2/2	934	934	-	-	-	0.0	0.5	-	0.5	2.1	0.0	0.5	0.5
3/1	1065	1065	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	934	934	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	192	192	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	192	192	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**0**	**23**	**1**	**16.9**	**37.5**	**0.2**	**54.6**	**-**	**-**	**-**	**-**
1/1	12	12	-	-	-	0.1	0.0	-	0.1	22.0	0.2	0.0	0.2
1/2	1000	942	-	-	-	12.1	36.1	-	48.3	173.8	35.3	36.1	71.4
2/1	820	820	-	-	-	2.3	0.9	-	3.2	14.0	16.1	0.9	17.1
2/2	24	24	0	23	1	0.0	0.1	0.2	0.3	42.9	0.1	0.1	0.2
3/2+3/1	285	285	-	-	-	2.4	0.4	-	2.7	34.7	5.5	0.4	5.9
4/1	36	36	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	820	820	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	216	216	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	540	540	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	471	471	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**93.3**	**470.1**	**0.0**	**563.4**	**-**	**-**	**-**	**-**
1/1	970	531	-	-	-	43.3	220.8	-	264.1	979.7	57.1	220.8	277.9
1/2	54	54	-	-	-	0.6	0.1	-	0.6	41.1	1.8	0.1	1.8
2/1+2/2	1034	822	-	-	-	25.0	108.3	-	133.3	464.3	45.3	108.3	153.6
3/2+3/1	273	273	-	-	-	2.8	0.5	-	3.3	43.5	5.9	0.5	6.3
4/2+4/1	624	345	-	-	-	21.6	140.5	-	162.1	935.2	24.7	140.5	165.2
5/1	452	452	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	120	120	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	554	554	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	407	407	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	492	492	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**669**	**0**	**0**	**18.6**	**119.8**	**0.0**	**138.4**	**-**	**-**	**-**	**-**
1/2+1/1	491	491	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
1/3	5	5	5	0	0	0.0	0.0	-	0.0	3.7	0.0	0.0	0.0
2/2+2/1	1041	1041	-	-	-	0.0	0.6	-	0.6	2.1	0.0	0.6	0.6
2/3	9	9	9	0	0	0.0	0.0	-	0.0	2.7	0.0	0.0	0.0
3/1	112	112	112	0	0	0.0	0.3	-	0.3	8.4	0.0	0.3	0.3
4/2+4/1	507	272	543	0	0	18.6	118.7	-	137.3	975.1	42.4	118.7	161.1
5/1	16	16	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	118	118	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1010	1010	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	786	786	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**208**	**0**	**0**	**0.0**	**2.6**	**0.0**	**2.6**	**-**	**-**	**-**	**-**
1/1+1/2	1388	1388	2	0	0	0.0	1.7	-	1.7	4.3	0.0	1.7	1.7
2/1	997	997	-	-	-	0.0	0.6	-	0.6	2.2	0.0	0.6	0.6
3/2+3/1	103	103	206	0	0	0.0	0.3	-	0.3	11.1	0.0	0.3	0.3

Full Input Data And Results

4/1	1432	1432	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	9	9	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1047	1047	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
1/1	292	292	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	337	337	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	672	672	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	672	672	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	672	672	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	672	672	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	292	292	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	337	337	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West
C2 - Park && Ride
C3 - High Cross

PRC for Signalled Lanes (%): 19.1
PRC for Signalled Lanes (%): -18.0
PRC for Signalled Lanes (%): -103.1
PRC Over All Lanes (%): -107.4

Total Delay for Signalled Lanes (pcuHr): 16.73
Total Delay for Signalled Lanes (pcuHr): 54.58
Total Delay for Signalled Lanes (pcuHr): 563.44
Total Delay Over All Lanes(pcuHr): 912.59

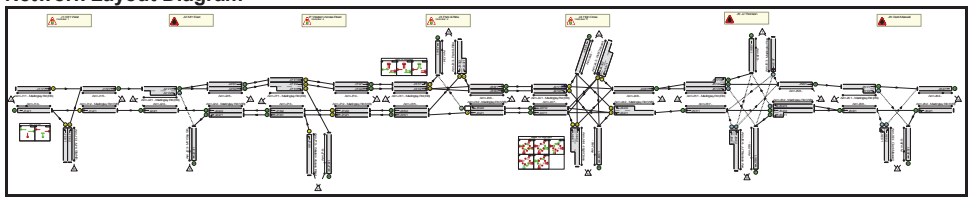
Cycle Time (s): 120
Cycle Time (s): 120
Cycle Time (s): 120

Full Input Data And Results

User and Project Details

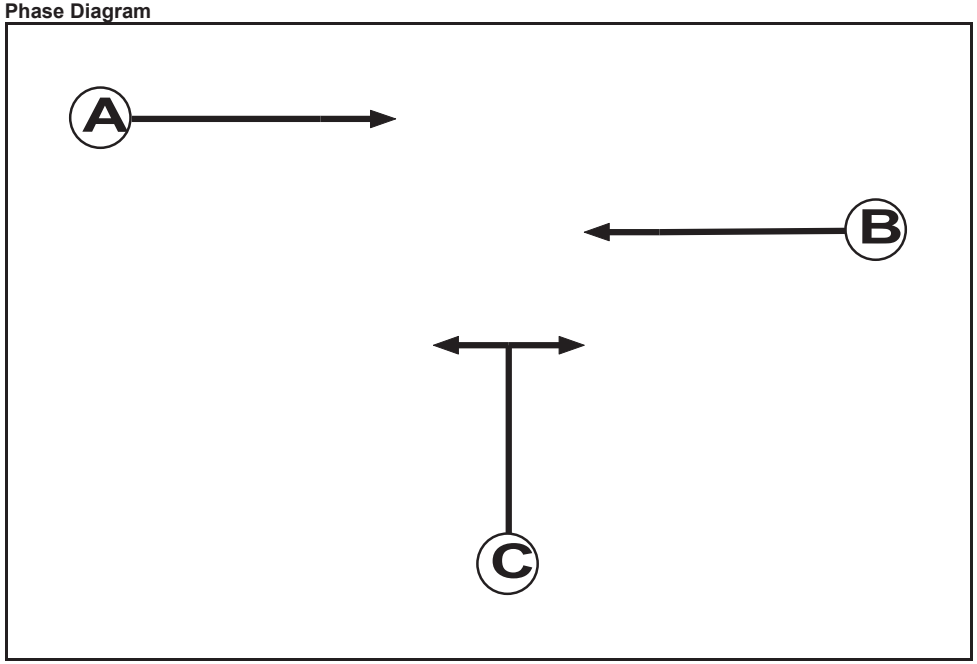
Project:	
Title:	
Location:	
File name:	170601 West Cambridge 2031 DS Existing Layout + WAR.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



C1 - M11 West

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

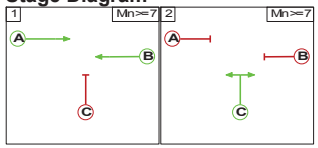
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C
A		-	5
B	-		5
C	5	5	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C

Stage Diagram



Phase Delays

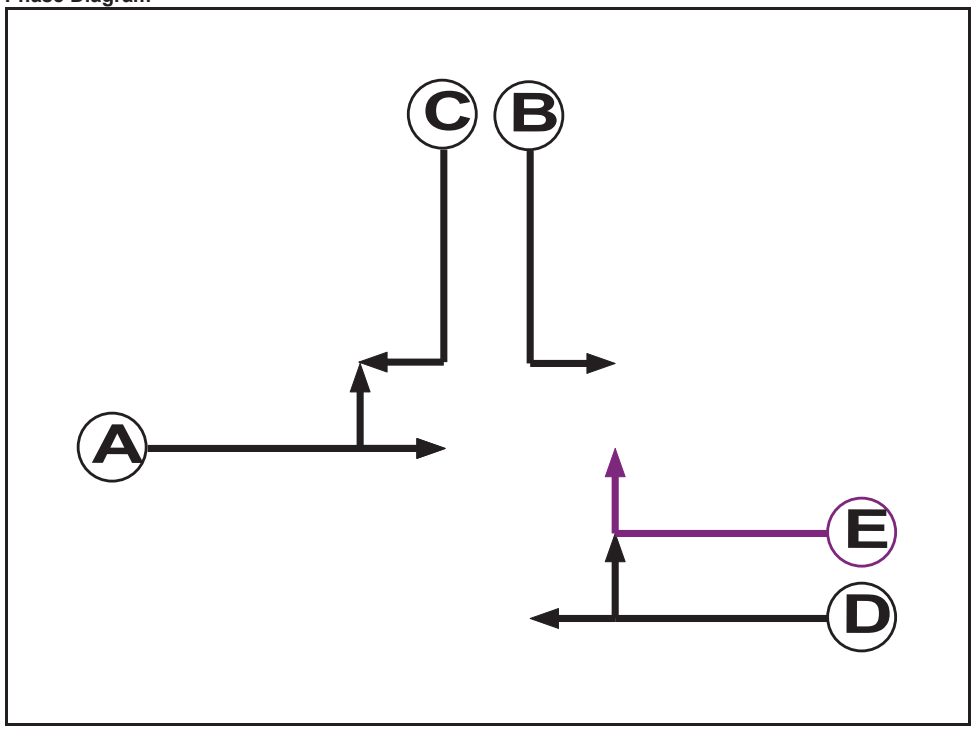
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2
1		5
2	5	

C2 - Park && Ride

Phase Diagram



Phase Input Data

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

Full Input Data And Results

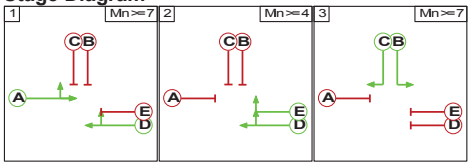
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

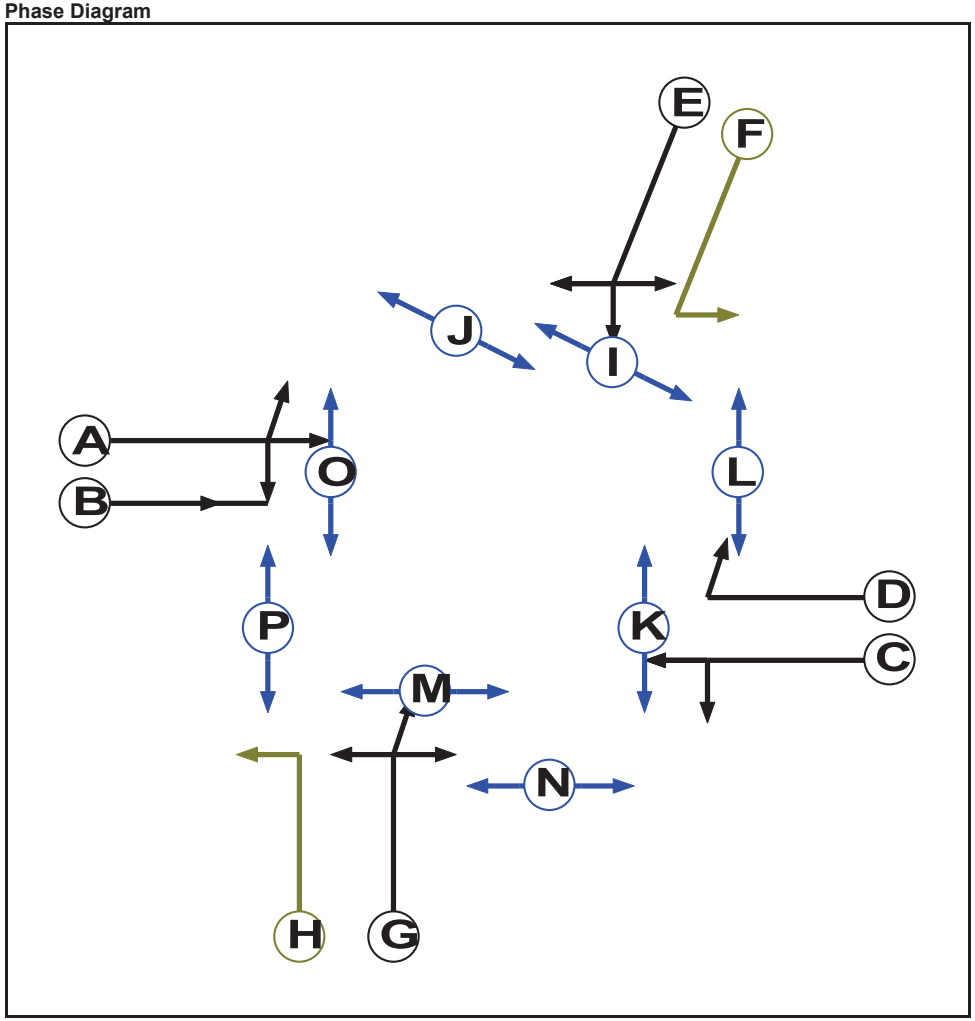
Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	B	Gaining absolute	5	5

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		5	5
	2	5		5
	3	5	5	

C3 - High Cross

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Filter	E	4	4
G	Traffic		7	7
H	Filter	G	4	0
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5
N	Pedestrian		5	5
O	Pedestrian		5	5
P	Pedestrian		5	5

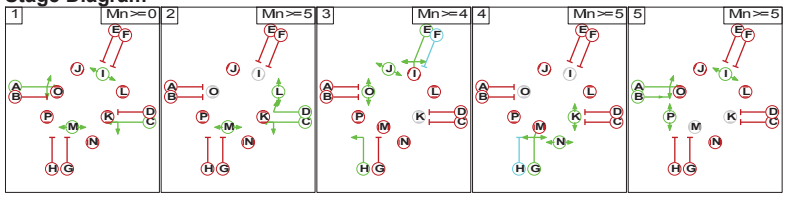
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A		-	-	5	8	8	5	-	-	10	-	12	-	-	6	-
B	-		7	-	5	-	5	5	-	-	-	-	-	9	5	-
C	-	5		-	5	-	8	8	-	-	6	-	-	9	-	12
D	5	-	-		5	-	5	-	-	11	6	-	-	-	-	-
E	5	5	7	6		-	7	-	6	-	-	9	-	12	-	13
F	5	-	-	-	-		5	-	6	-	-	9	-	-	-	-
G	5	5	5	5	8	8		-	-	11	-	12	6	-	-	8
H	-	-	5	-	-	-	-		-	-	-	-	6	-	-	8
I	-	-	-	-	10	10	-	-		-	-	-	-	-	-	-
J	7	-	-	7	-	-	7	-	-		-	-	-	-	-	-
K	-	-	8	8	-	-	-	-	-	-		-	-	-	-	-
L	9	-	-	-	9	9	9	-	-	-	-		-	-	-	-
M	-	-	-	-	-	-	10	10	-	-	-	-		-	-	-
N	-	7	7	-	7	-	-	-	-	-	-	-	-		-	-
O	8	8	-	-	-	-	-	-	-	-	-	-	-	-		-
P	-	-	8	-	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



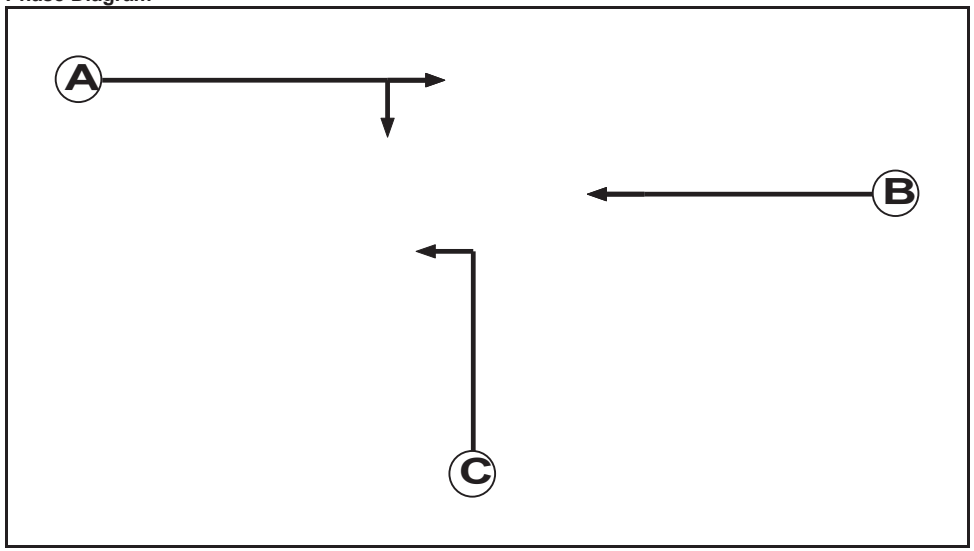
Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	4	4
5	1	B	Losing	1	1

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		12	10	10	12
2	9		12	10	12
3	X	X		12	X
4	8	12	11		8
5	8	12	10	9	

C4 - Western Access Road
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

Full Input Data And Results

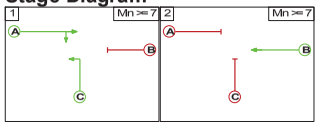
Phase Intergreens Matrix

		Starting Phase		
		A	B	C
Terminating Phase	A		5	-
	B	5		5
	C	-	5	

Phases in Stage

Stage No.	Phases in Stage
1	A C
2	B

Stage Diagram



Phase Delays

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

Prohibited Stage Change

		To Stage	
		1	2
From Stage	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: M11 West

There are no Opposed Lanes in this Junction

Junction: J2: M11 East

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)
J2:1/2 (Madingley Rd (EB))	J2:3/1 (Right)	850	0	J2:2/2	0.35	All	-	-	-	-	-
				J2:2/1	0.35	All					

Junction: J3: Park && Ride

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)
J3:2/2 (Madingley Rd (WB))	J3:4/1 (Right)	1440	0	J3:1/1	1.09	All	2.00	-	0.50	2	2.00
				J3:1/2	1.09	All					

Junction: J4: High Cross

There are no Opposed Lanes in this Junction

Junction: J5: JJ Thomson

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)
J5:1/3 (Madingley Rd (EB))	J5:6/1 (Right)	850	0	J5:2/2	0.35	All	-	-	-	-	-
				J5:2/1	0.35	All					
J5:2/3 (Madingley Rd (WB))	J5:5/1 (Right)	850	0	J5:1/1	0.35	All	-	-	-	-	-
				J5:1/2	0.35	All					
J5:3/1 (Madingley Rise)	J5:6/1 (Ahead)	600	0	J5:1/1	0.22	All	-	-	-	-	-
				J5:1/2	0.22	All					
				J5:1/3	0.22	All					
				J5:2/1	0.19	All					
				J5:2/2	0.19	All					
				J5:2/3	0.19	All					
	J5:7/1 (Right)	600	0	J5:1/2	0.22	All					
				J5:2/2	0.19	All					
				J5:2/1	0.19	All					
				J5:2/3	0.19	All					
				J5:1/1	0.22	All					
				J5:1/3	0.22	All					
				J5:4/1	0.19	All					
				J5:4/2	0.19	All					
	J5:8/1 (Left)	715	0	J5:1/2	0.22	All					
J5:4/1 (JJ Thomson Ave)	J5:7/1 (Left)	715	0	J5:2/2	0.22	All	-	-	-	-	-
J5:4/2 (JJ Thomson Ave)	J5:5/1 (Ahead)	600	0	J5:2/1	0.22	All	-	-	-	-	-
				J5:2/3	0.22	All					
				J5:1/1	0.19	All					

Full Input Data And Results

				J5:1/2	0.19	All					
				J5:1/3	0.19	All					
				J5:2/2	0.22	All					
	J5:8/1 (Right)	600	0	J5:2/2	0.22	All					
				J5:2/1	0.22	All					
				J5:2/3	0.22	All					
				J5:1/1	0.19	All					
				J5:1/2	0.19	All					
				J5:1/3	0.19	All					
				J5:3/1	0.19	All					

Junction: J6: Clerk Maxwell

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)
J6:1/2 (Madingley Rd (EB))	J6:5/1 (Right)	850	0	J6:2/1	0.35	All	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	J6:6/1 (Left)	1439	0	J6:2/1	1.09	All	-	-	-	-	-
J6:3/2 (Clerk Maxwell)	J6:4/1 (Right)	600	0	J6:1/1	0.19	All	-	-	-	-	-
				J6:1/2	0.19	All					
				J6:2/1	0.22	To J6:6/1 (Ahead)					

Junction: J7: Western Access Road

There are no Opposed Lanes in this Junction

Lane Input Data

Junction: J1: M11 West

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 (Madingley Rd (EB))	U	A	2	3	87.0	Geom	-	3.00	0.00	N	Arm J1:5 Ahead	Inf
J1:2/1 (Madingley Rd (WB))	U	B	2	3	31.3	Geom	-	3.00	0.00	Y	Arm J1:4 Ahead	Inf
J1:3/1 (M11 Slip NB)	U	C	2	3	34.8	Geom	-	3.00	0.00	Y	Arm J1:4 Left	20.00
J1:3/2 (M11 Slip NB)	U	C	2	3	87.0	Geom	-	3.00	0.00	Y	Arm J1:5 Right	15.00
J1:4/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J1:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J2: M11 East

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 (Madingley Rd (EB))	U		2	3	33.0	User	2000	-	-	-	-	-
J2:1/2 (Madingley Rd (EB))	O		2	3	10.4	Inf	-	-	-	-	-	-
J2:2/1 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:2/2 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:3/1 (M11 Slip SB)	U		2	3	87.0	Inf	-	-	-	-	-	-
J2:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J3: Park && Ride

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)
J3:1/1 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:4 Left	15.00
J3:1/2 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:6 Ahead	Inf
J3:2/1 (Madingley Rd (WB))	U	D E	2	3	13.9	Geom	-	3.50	0.00	N	Arm J3:5 Ahead	Inf
J3:2/2 (Madingley Rd (WB))	O	D E	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J3:4 Right	25.00
J3:3/1 (Park & Ride)	U	B	2	3	5.2	Geom	-	3.00	0.00	Y	Arm J3:6 Left	15.00
J3:3/2 (Park & Ride)	U	C	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:5 Right	20.00
J3:4/1	U		2	3	17.4	Inf	-	-	-	-	-	-
J3:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J4: High Cross

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)
J4:1/1 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J4:5 Left	30.00
											Arm J4:8 Ahead	Inf
J4:1/2 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J4:6 Right	Inf
J4:2/1 (Madingley Rd (WB))	U	C	2	3	88.7	Geom	-	3.50	0.00	Y	Arm J4:6 Left	20.00
											Arm J4:7 Ahead	Inf
J4:2/2 (Madingley Rd (WB))	U	D	2	3	7.0	Geom	-	3.50	0.00	Y	Arm J4:5 Right	20.00
J4:3/1 (NWC Access)	U	E F	2	3	8.7	Geom	-	3.25	0.00	Y	Arm J4:8 Left	10.00
J4:3/2 (NWC Access)	U	E	2	3	87.0	Geom	-	3.25	0.00	Y	Arm J4:6 Ahead	Inf
											Arm J4:7 Right	45.00
J4:4/1 (High Cross)	U	G H	2	3	8.3	Geom	-	4.00	0.00	N	Arm J4:7 Left	25.00
J4:4/2 (High Cross)	U	G	2	3	60.0	Geom	-	4.00	0.00	N	Arm J4:5 Ahead	Inf
											Arm J4:8 Right	Inf
J4:5/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J4:6/1	U		2	3	8.7	Inf	-	-	-	-	-	-
J4:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:7/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J5: JJ Thomson

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)
J5:1/1 (Madingley Rd (EB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:5 Left	15.00
J5:1/2 (Madingley Rd (EB))	U		2	3	90.4	Geom	-	3.00	0.00	Y	Arm J5:8 Ahead	Inf
J5:1/3 (Madingley Rd (EB))	O		2	3	15.7	Geom	-	3.00	0.00	Y	Arm J5:6 Right	15.00
J5:2/1 (Madingley Rd (WB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:6 Left	15.00
J5:2/2 (Madingley Rd (WB))	U		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:7 Ahead	Inf
J5:2/3 (Madingley Rd (WB))	O		2	3	7.1	User	850	-	-	-	-	-
J5:3/1 (Madingley Rise)	O		2	3	34.8	Geom	-	3.00	0.00	Y	Arm J5:6 Ahead	Inf
											Arm J5:7 Right	Inf
											Arm J5:8 Left	Inf
J5:4/1 (JJ Thomson Ave)	O		2	3	4.9	Geom	-	3.00	0.00	Y	Arm J5:7 Left	Inf
J5:4/2 (JJ Thomson Ave)	O		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:5 Ahead	Inf
											Arm J5:8 Right	Inf
J5:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J5:6/1	U		2	3	59.1	Inf	-	-	-	-	-	-
J5:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J5:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J6: Clerk Maxwell

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)
J6:1/1 (Madingley Rd (EB))	U		2	3	48.7	User	1800	-	-	-	-	-
J6:1/2 (Madingley Rd (EB))	O		2	3	4.3	Inf	-	-	-	-	-	-
J6:2/1 (Madingley Rd (WB))	U		2	3	60.9	User	1800	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	O		2	3	1.4	Geom	-	3.25	0.00	Y	Arm J6:6 Left	Inf
J6:3/2 (Clerk Maxwell)	O		2	3	60.0	User	600	-	-	-	-	-
J6:4/1	U		2	3	60.9	Inf	-	-	-	-	-	-
J6:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J6:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J7: Western Access 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)
J7:1/1 (Madingley Rd (EB))	U	A	2	3	26.1	Geom	-	3.00	0.00	Y	Arm J7:4 Ahead	Inf
J7:1/2 (Madingley Rd (EB))	U	A	2	3	26.1	Geom	-	3.00	0.00	N	Arm J7:4 Ahead	Inf
J7:1/3 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.00	0.00	N	Arm J7:6 Right	Inf
J7:2/1 (Madingley Rd (WB))	U	B	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J7:3 Ahead	Inf
J7:2/2 (Madingley Rd (WB))	U	B	2	3	17.4	Geom	-	3.00	0.00	N	Arm J7:3 Ahead	Inf
J7:3/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:3/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:5/1 (Western Access Road)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J7:3 Left	Inf
J7:6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 DS AM Peak'	08:00	09:00	01:00	
2: '2031 DS PM Peak'	17:00	18:00	01:00	

Scenario 1: '2031 DS AM Peak' (FG1: '2031 DS AM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																								
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	To
Origin	A	0	0	741	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74
	B	359	0	980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
	C	245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
	D	0	0	0	0	252	1469	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	245	319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
	G	0	0	0	0	0	0	0	582	902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	H	0	0	0	0	0	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	I	0	0	0	0	0	0	497	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
	J	0	0	0	0	0	0	0	0	0	0	156	957	0	0	0	0	0	0	0	0	0	0	0	11
	K	0	0	0	0	0	0	0	0	0	17	0	23	0	0	0	0	0	0	0	0	0	0	0	4
	L	0	0	0	0	0	0	0	0	0	486	37	0	0	0	0	0	0	0	0	0	0	0	0	52
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	96	802	94	0	0	0	0	0	0	0	99
	N	0	0	0	0	0	0	0	0	0	0	0	0	12	0	115	17	0	0	0	0	0	0	0	14
	O	0	0	0	0	0	0	0	0	0	0	0	0	44	446	0	92	0	0	0	0	0	0	0	58
	P	0	0	0	0	0	0	0	0	0	0	0	0	466	216	261	0	0	0	0	0	0	0	0	94
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175	952	64	0	0	0	11
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	67	37	0	0	0	13
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	535	383	0	50	0	0	0	96
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	3	11	0	0	0	0	2
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1002	10
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	32	5
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	947	252	0	11
	Tot.	604	0	1721	245	571	1469	566	582	902	503	193	980	522	758	1178	203	576	561	1030	151	971	262	1034	15

Traffic Lane Flows

Lane	Scenario 1: 2031 DS AM Peak
Junction: J1: M11 West	
J1:1/1	741
J1:2/1	245
J1:3/1	359
J1:3/2	980
J1:4/1	604
J1:5/1	1721
Junction: J2: M11 East	
J2:1/1 (with short)	1721(In) 1469(Out)
J2:1/2 (short)	252
J2:2/1	319
J2:2/2	245
J2:3/1	571
J2:4/1	245
J2:5/1	734
J2:5/2	735
Junction: J3: Park && Ride	
J3:1/1	156
J3:1/2	957
J3:2/1	486
J3:2/2	37
J3:3/1 (short)	23
J3:3/2 (with short)	40(In) 17(Out)
J3:4/1	193
J3:5/1	486
J3:5/2	17
J3:6/1	502
J3:6/2	478
Junction: J4: High Cross	
J4:1/1	896
J4:1/2	96
J4:2/1 (with short)	582(In) 490(Out)
J4:2/2 (short)	92
J4:3/1 (short)	261
J4:3/2 (with short)	943(In) 682(Out)
J4:4/1 (short)	12

Full Input Data And Results

J4:4/2 (with short)	144(In) 132(Out)
J4:5/1	203
J4:6/1	758
J4:7/1	267
J4:7/2	255
J4:8/1	1178
Junction: J5: JJ Thomson	
J5:1/1 (short)	64
J5:1/2 (with short)	1016(In) 952(Out)
J5:1/3	175
J5:2/1 (short)	383
J5:2/2 (with short)	918(In) 535(Out)
J5:2/3	50
J5:3/1	22
J5:4/1 (short)	33
J5:4/2 (with short)	137(In) 104(Out)
J5:5/1	151
J5:6/1	561
J5:7/1	576
J5:8/1	1030
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	1012(In) 1002(Out)
J6:1/2 (short)	10
J6:2/1	1199
J6:3/1 (short)	24
J6:3/2 (with short)	56(In) 32(Out)
J6:4/1	1034
J6:5/1	262
J6:6/1	971
Junction: J7: Western Access Road	
J7:1/1	460
J7:1/2 (with short)	1024(In) 442(Out)
J7:1/3 (short)	582
J7:2/1	235
J7:2/2	262
J7:3/1	304
J7:3/2	262

J7:4/1	460
J7:4/2	442
J7:5/1	69
J7:6/1	582

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	10.5 %	1955	1955
				Arm J4:8 Ahead	Inf	89.5 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:6 Right	Inf	100.0 %	1965	1965
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	91.0 %	1839	1839
				Arm J4:7 Ahead	Inf	9.0 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	31.7 %	1897	1897
				Arm J4:7 Right	45.00	68.3 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	12.9 %	2155	2155
				Arm J4:8 Right	Inf	87.1 %		
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	13.6 %	1915	1915
				Arm J5:7 Right	Inf	36.4 %		
				Arm J5:8 Left	Inf	50.0 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	35.6 %	1915	1915
				Arm J5:8 Right	Inf	64.4 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J7: Western Access Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J7:4 Ahead	Inf	100.0 %	1915	1915
J7:1/2 (Madingley Rd (EB))	3.00	0.00	N	Arm J7:4 Ahead	Inf	100.0 %	2055	2055
J7:1/3 (Madingley Rd (EB))	3.00	0.00	N	Arm J7:6 Right	Inf	100.0 %	2055	2055
J7:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J7:3 Ahead	Inf	100.0 %	1915	1915
J7:2/2 (Madingley Rd (WB))	3.00	0.00	N	Arm J7:3 Ahead	Inf	100.0 %	2055	2055
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf
J7:5/1 (Western Access Road)	3.00	0.00	Y	Arm J7:3 Left	Inf	100.0 %	1915	1915
J7:6/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2031 DS PM Peak' (FG2: '2031 DS PM Peak', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Tot
Origin	A	0	0	363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	363
	B	511	0	373	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	884
	C	830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	830
	D	0	0	0	0	326	412	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	738
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	830	896	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172
	G	0	0	0	0	0	0	0	94	610	0	0	0	0	0	0	0	0	0	0	0	0	0	0	704
	H	0	0	0	0	0	0	600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600
	I	0	0	0	0	0	0	1144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114
	J	0	0	0	0	0	0	0	0	0	0	94	610	0	0	0	0	0	0	0	0	0	0	0	704
	K	0	0	0	0	0	0	0	0	0	216	0	69	0	0	0	0	0	0	0	0	0	0	0	285
	L	0	0	0	0	0	0	0	0	0	885	29	0	0	0	0	0	0	0	0	0	0	0	0	914
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	5	197	460	0	0	0	0	0	0	0	662
	N	0	0	0	0	0	0	0	0	0	0	0	0	39	0	500	35	0	0	0	0	0	0	0	574
	O	0	0	0	0	0	0	0	0	0	0	0	0	663	79	0	478	0	0	0	0	0	0	0	122
	P	0	0	0	0	0	0	0	0	0	0	0	0	173	40	91	0	0	0	0	0	0	0	0	304
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	769	5	0	0	0	800
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191	0	279	8	0	0	0	478
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	947	66	0	9	0	0	0	102
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	4	47	0	0	0	0	110
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1095	109
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216	0	227	443
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	917	47	0	964
	Tot.	1341	0	736	830	1222	412	1744	94	610	1101	123	679	875	124	788	973	1197	96	1095	22	1133	51	1322	1656

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2031 DS PM Peak
Junction: J1: M11 West	
J1:1/1	363
J1:2/1	830
J1:3/1	511
J1:3/2	373
J1:4/1	1341
J1:5/1	736
Junction: J2: M11 East	
J2:1/1 (with short)	738(In) 412(Out)
J2:1/2 (short)	326
J2:2/1	896
J2:2/2	830
J2:3/1	1222
J2:4/1	830
J2:5/1	206
J2:5/2	206
Junction: J3: Park && Ride	
J3:1/1	94
J3:1/2	610
J3:2/1	885
J3:2/2	29
J3:3/1 (short)	69
J3:3/2 (with short)	285(In) 216(Out)
J3:4/1	123
J3:5/1	885
J3:5/2	216
J3:6/1	374
J3:6/2	305
Junction: J4: High Cross	
J4:1/1	657
J4:1/2	5
J4:2/1 (with short)	1220(In) 742(Out)
J4:2/2 (short)	478
J4:3/1 (short)	91
J4:3/2 (with short)	304(In) 213(Out)
J4:4/1 (short)	39

J4:4/2 (with short)	574(In) 535(Out)
J4:5/1	973
J4:6/1	124
J4:7/1	457
J4:7/2	418
J4:8/1	788
Junction: J5: JJ Thomson	
J5:1/1 (short)	5
J5:1/2 (with short)	774(In) 769(Out)
J5:1/3	26
J5:2/1 (short)	66
J5:2/2 (with short)	1013(In) 947(Out)
J5:2/3	9
J5:3/1	110
J5:4/1 (short)	191
J5:4/2 (with short)	478(In) 287(Out)
J5:5/1	22
J5:6/1	96
J5:7/1	1197
J5:8/1	1095
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	1099(In) 1095(Out)
J6:1/2 (short)	4
J6:2/1	964
J6:3/1 (short)	216
J6:3/2 (with short)	443(In) 227(Out)
J6:4/1	1322
J6:5/1	51
J6:6/1	1133
Junction: J7: Western Access Road	
J7:1/1	62
J7:1/2 (with short)	642(In) 548(Out)
J7:1/3 (short)	94
J7:2/1	552
J7:2/2	592
J7:3/1	1152
J7:3/2	592

Full Input Data And Results

J7:4/1	62
J7:4/2	548
J7:5/1	600
J7:6/1	94

Lane Saturation Flows

Junction: J1: M11 West								
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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East								
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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	100.0 %	1741	1741
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	70.0 %	1899	1899
				Arm J4:8 Ahead	Inf	30.0 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:6 Right	Inf	100.0 %	1965	1965
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	10.6 %	1949	1949
				Arm J4:7 Ahead	Inf	89.4 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	18.8 %	1889	1889
				Arm J4:7 Right	45.00	81.2 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	6.5 %	2155	2155
				Arm J4:8 Right	Inf	93.5 %		
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	3.6 %	1915	1915
				Arm J5:7 Right	Inf	53.6 %		
				Arm J5:8 Left	Inf	42.7 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	2.8 %	1915	1915
				Arm J5:8 Right	Inf	97.2 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

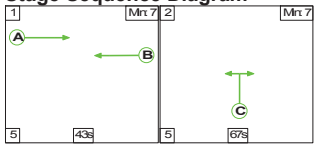
Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J7:4 Ahead	Inf	100.0 %	1915	1915
J7:1/2 (Madingley Rd (EB))	3.00	0.00	N	Arm J7:4 Ahead	Inf	100.0 %	2055	2055
J7:1/3 (Madingley Rd (EB))	3.00	0.00	N	Arm J7:6 Right	Inf	100.0 %	2055	2055
J7:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J7:3 Ahead	Inf	100.0 %	1915	1915
J7:2/2 (Madingley Rd (WB))	3.00	0.00	N	Arm J7:3 Ahead	Inf	100.0 %	2055	2055
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf
J7:5/1 (Western Access Road)	3.00	0.00	Y	Arm J7:3 Left	Inf	100.0 %	1915	1915
J7:6/1	Infinite Saturation Flow						Inf	Inf

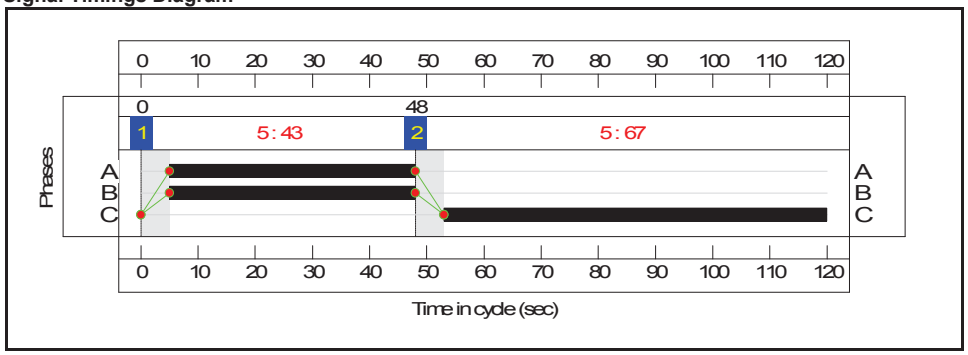
Scenario 1: '2031 DS AM Peak' (FG1: '2031 DS AM Peak', Plan 1: 'Network Control Plan 1')
C1 - M11 West
Stage Sequence Diagram



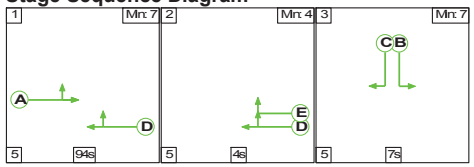
Stage Timings

Stage	1	2
Duration	43	67
Change Point	0	48

Signal Timings Diagram



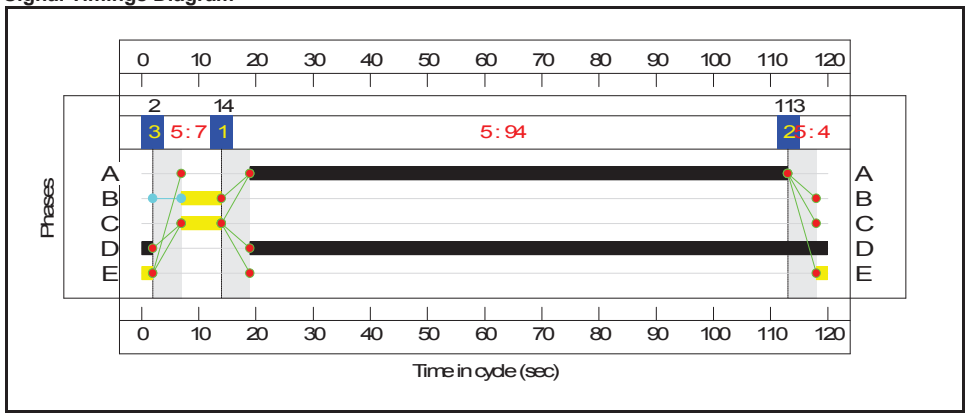
C2 - Park && Ride
Stage Sequence Diagram



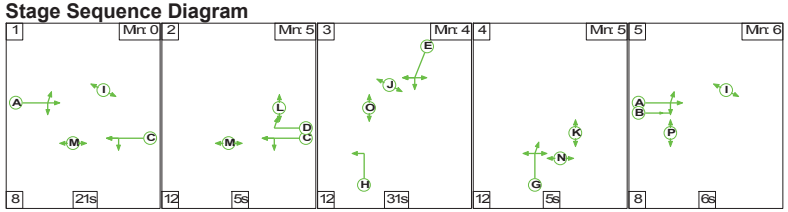
Stage Timings

Stage	1	2	3
Duration	94	4	7
Change Point	14	113	2

Signal Timings Diagram



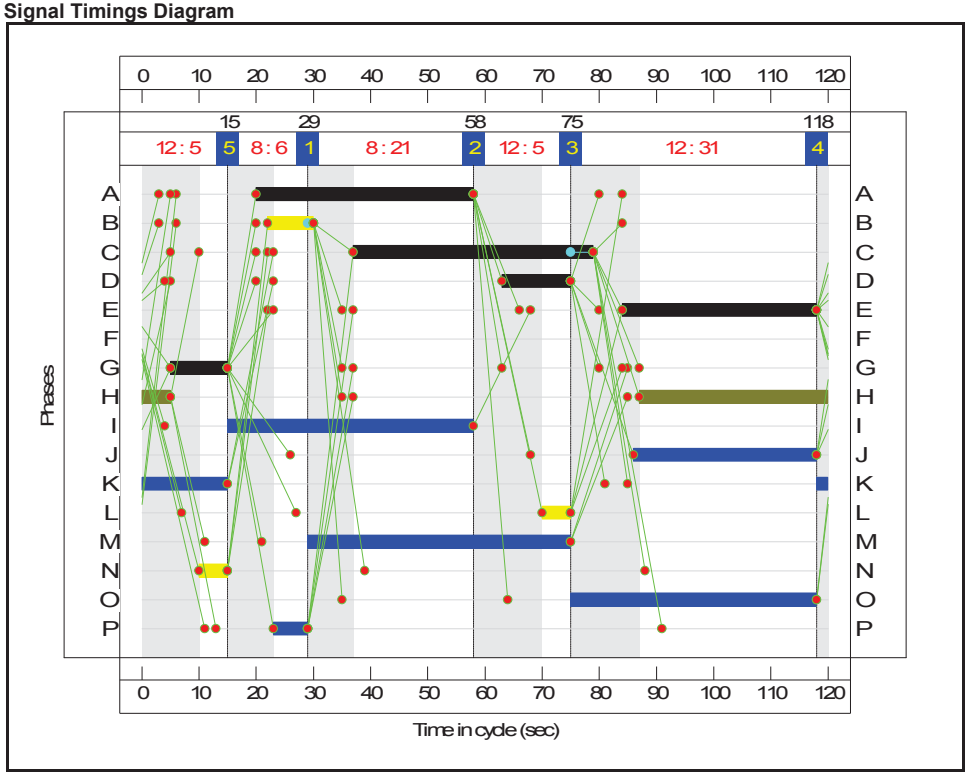
C3 - High Cross
Stage Sequence Diagram



Stage Timings

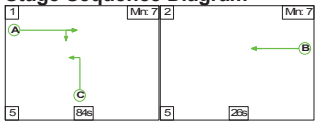
Stage	1	2	3	4	5
Duration	21	5	31	5	6
Change Point	29	58	75	118	15

Signal Timings Diagram



C4 - Western Access Road

Stage Sequence Diagram

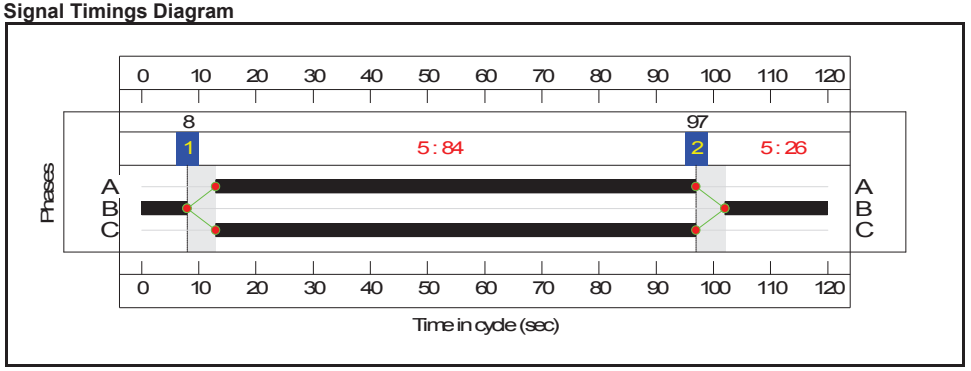


Stage Timings

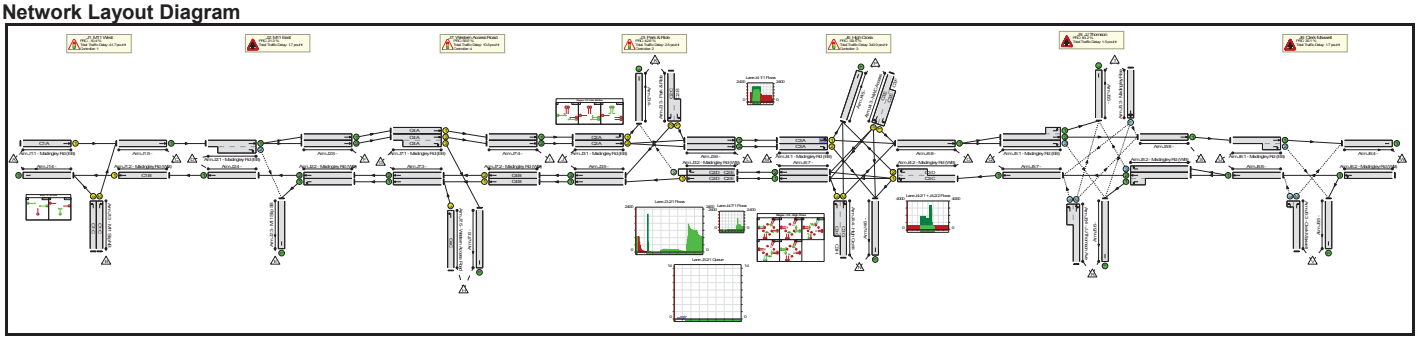
Stage	1	2
Duration	84	26
Change Point	8	97

Full Input Data And Results

Signal Timings Diagram



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	-	-	**N/A**	-	-		-	-	-	-	-	-	**143.5%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.3%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	43	-	741	2055	753	98.3%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	43	-	245	1915	702	34.9%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	67	-	359	1781	1009	35.6%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	67	-	980	1741	987	99.3%
4/1		U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1721	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**74.2%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	1721	2000: Inf	1980+340	74.2 : 74.2%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	319	1800	1800	17.7%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	245	1800	1800	13.6%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	571	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	245	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	734	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	735	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**63.1%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	94	-	156	1741	1378	11.3%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	94	-	957	1915	1516	63.1%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	103	4	486	2105	1824	19.6%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	103	4	37	1854	362	7.4%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	7	-	40	1781:1741	86+116	19.8 : 19.8%
4/1		U	N/A	N/A	-		-	-	-	193	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	486	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	502	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	478	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**143.5%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	38	-	896	1955	635	141.0%
1/2	Madingley Rd (EB) Right	U	N/A	N/A	C3:A		1	38	-	96	1965	639	15.0%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	42:12	-	582	1839:1828	584+110	83.9 : 83.9%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	34	0	943	1897:1687	475+182	143.5 : 143.5%
4/2+4/1	High Cross Ahead Left Right	U	N/A	N/A	C3:G	C3:H	1	10:48	38	144	2155:2033	198+18	66.8 : 66.8%
5/1		U	N/A	N/A	-		-	-	-	203	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	758	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	267	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	255	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1178	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**49.9%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	1016	1915:1741	1783+120	39.2 : 39.2%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	175	1741	529	24.3%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	918	1915:1741	1071+767	49.9 : 49.9%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	50	850	589	8.5%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	22	1915	293	7.5%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	137	1915:1915	218+69	47.7 : 47.7%
5/1		U	N/A	N/A	-		-	-	-	151	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	561	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	576	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1030	Inf	Inf	0.0%
J6: Clerk Maxwell	-	-	**N/A**	-	-		-	-	-	-	-	-	**66.6%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	1012	1800: Inf	1798+18	55.7 : 55.7%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	1199	1800	1800	66.6%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	56	600:1940	179+132	17.9 : 18.2%
4/1		U	N/A	N/A	-		-	-	-	1034	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	262	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	971	Inf	Inf	0.0%
J7: Western Access Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**57.5%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C4:A		1	84	-	460	1915	1356	33.9%
1/2+1/3	Madingley Rd (EB) Ahead Right	U	N/A	N/A	C4:A		1	84	-	1024	2055:2055	769+1012	57.5 : 57.5%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C4:B		1	26	-	235	1915	431	54.5%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	C4:B		1	26	-	262	2055	462	56.7%
3/1	Ahead	U	N/A	N/A	-		-	-	-	304	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	262	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	460	Inf	Inf	0.0%

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4/2	Ahead	U	N/A	N/A	-		-	-	-	442	Inf	Inf	0.0%
5/1	Western Access Road Left	U	N/A	N/A	C4:C		1	84	-	69	1915	1356	5.1%
6/1		U	N/A	N/A	-		-	-	-	582	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	**-**	**-**	**875**	**0**	**0**	**87.0**	**313.9**	**0.2**	**401.1**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**16.2**	**25.5**	**0.0**	**41.7**	**-**	**-**	**-**	**-**
1/1	741	741	-	-	-	7.7	10.8	-	18.6	90.3	24.3	10.8	35.1
2/1	245	245	-	-	-	0.0	0.3	-	0.3	4.1	0.1	0.3	0.4
3/1	359	359	-	-	-	1.4	0.3	-	1.7	16.9	6.5	0.3	6.8
3/2	980	980	-	-	-	7.0	14.1	-	21.1	77.6	32.1	14.1	46.2
4/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1721	1721	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**252**	**0**	**0**	**0.1**	**1.6**	**0.0**	**1.7**	**-**	**-**	**-**	**-**
1/1+1/2	1721	1721	252	0	0	0.1	1.4	-	1.5	3.2	1.4	1.4	2.9
2/1	319	319	-	-	-	0.0	0.1	-	0.1	1.2	3.0	0.1	3.1
2/2	245	245	-	-	-	0.0	0.1	-	0.1	1.2	1.5	0.1	1.6
3/1	571	571	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	245	245	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	734	734	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	735	735	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**26**	**0**	**0**	**1.4**	**1.2**	**0.2**	**2.8**	**-**	**-**	**-**	**-**
1/1	156	156	-	-	-	0.0	0.1	-	0.1	1.5	0.0	0.1	0.1
1/2	957	957	-	-	-	0.7	0.9	-	1.6	5.9	17.1	0.9	18.0
2/1	357	357	-	-	-	0.1	0.1	-	0.2	2.1	0.7	0.1	0.9
2/2	27	27	26	0	0	0.0	0.0	0.2	0.2	32.1	0.2	0.0	0.2
3/2+3/1	40	40	-	-	-	0.6	0.1	-	0.7	64.0	0.7	0.1	0.8
4/1	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	357	357	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	502	502	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	478	478	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**60.7**	**280.2**	**0.0**	**340.9**	**-**	**-**	**-**	**-**
1/1	896	635	-	-	-	22.3	132.0	-	154.3	620.1	38.6	132.0	170.6
1/2	96	96	-	-	-	0.7	0.1	-	0.8	28.7	1.5	0.1	1.5
2/1+2/2	582	582	-	-	-	6.0	2.5	-	8.5	52.4	16.3	2.5	18.8
3/2+3/1	943	657	-	-	-	29.7	144.6	-	174.3	665.4	45.3	144.6	189.9
4/2+4/1	144	144	-	-	-	2.0	1.0	-	3.0	74.6	4.3	1.0	5.2
5/1	176	176	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	693	693	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	196	196	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	184	184	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	866	866	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**475**	**0**	**0**	**0.0**	**1.5**	**0.0**	**1.5**	**-**	**-**	**-**	**-**
1/2+1/1	747	747	-	-	-	0.0	0.3	-	0.3	1.6	0.0	0.3	0.3
1/3	129	129	129	0	0	0.0	0.2	-	0.2	4.5	0.0	0.2	0.2
2/2+2/1	918	918	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
2/3	50	50	50	0	0	0.0	0.0	-	0.0	3.3	0.0	0.0	0.0
3/1	22	22	22	0	0	0.0	0.0	-	0.0	6.6	0.0	0.0	0.0
4/2+4/1	137	137	274	0	0	0.0	0.5	-	0.5	11.9	0.1	0.5	0.6
5/1	134	134	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	576	576	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	778	778	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**122**	**0**	**0**	**0.0**	**1.7**	**0.0**	**1.7**	**-**	**-**	**-**	**-**
1/1+1/2	1012	1012	10	0	0	0.0	0.6	-	0.6	2.2	0.0	0.6	0.6
2/1	1199	1199	-	-	-	0.0	1.0	-	1.0	3.0	0.0	1.0	1.0
3/2+3/1	56	56	112	0	0	0.0	0.1	-	0.1	7.1	0.0	0.1	0.1

Full Input Data And Results

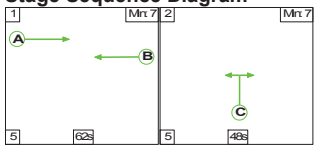
4/1	1034	1034	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	262	262	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	971	971	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**8.6**	**2.2**	**0.0**	**10.8**	**-**	**-**	**-**	**-**
1/1	460	460	-	-	-	0.9	0.3	-	1.1	8.8	5.9	0.3	6.2
1/2+1/3	1024	1024	-	-	-	2.0	0.7	-	2.6	9.2	7.8	0.7	8.4
2/1	235	235	-	-	-	2.7	0.6	-	3.3	50.2	6.9	0.6	7.5
2/2	262	262	-	-	-	3.0	0.6	-	3.7	50.2	7.7	0.6	8.4
3/1	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	262	262	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	460	460	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	442	442	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	69	69	-	-	-	0.1	0.0	-	0.1	6.7	0.7	0.0	0.7
6/1	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West	PRC for Signalled Lanes (%):	-10.4	Total Delay for Signalled Lanes (pcuHr):	41.67	Cycle Time (s): 120
C2 - Park && Ride	PRC for Signalled Lanes (%):	42.6	Total Delay for Signalled Lanes (pcuHr):	2.79	Cycle Time (s): 120
C3 - High Cross	PRC for Signalled Lanes (%):	-59.5	Total Delay for Signalled Lanes (pcuHr):	340.85	Cycle Time (s): 120
C4 - Western Access Road	PRC for Signalled Lanes (%):	56.5	Total Delay for Signalled Lanes (pcuHr):	10.82	Cycle Time (s): 120
	PRC Over All Lanes (%):	-59.5	Total Delay Over All Lanes(pcuHr):	401.10	

Scenario 2: '2031 DS PM Peak' (FG2: '2031 DS PM Peak', Plan 1: 'Network Control Plan 1')

C1 - M11 West

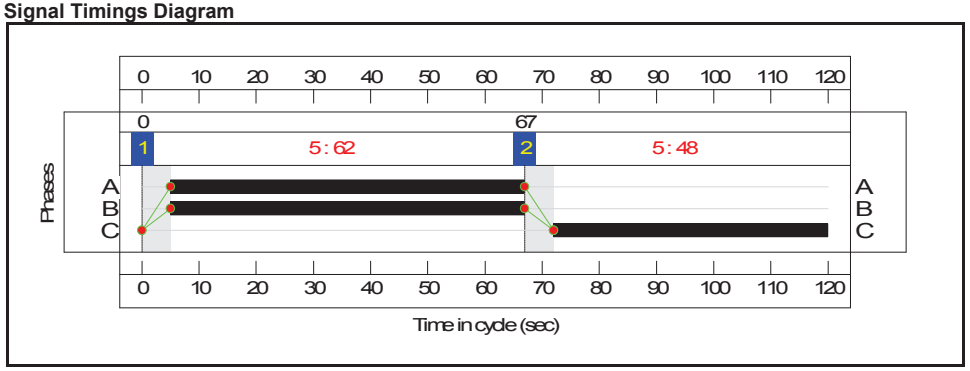
Stage Sequence Diagram



Stage Timings

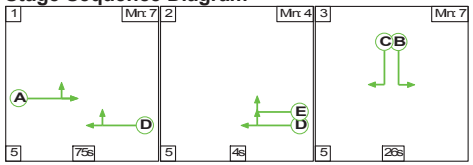
Stage	1	2
Duration	62	48
Change Point	0	67

Signal Timings Diagram



C2 - Park && Ride

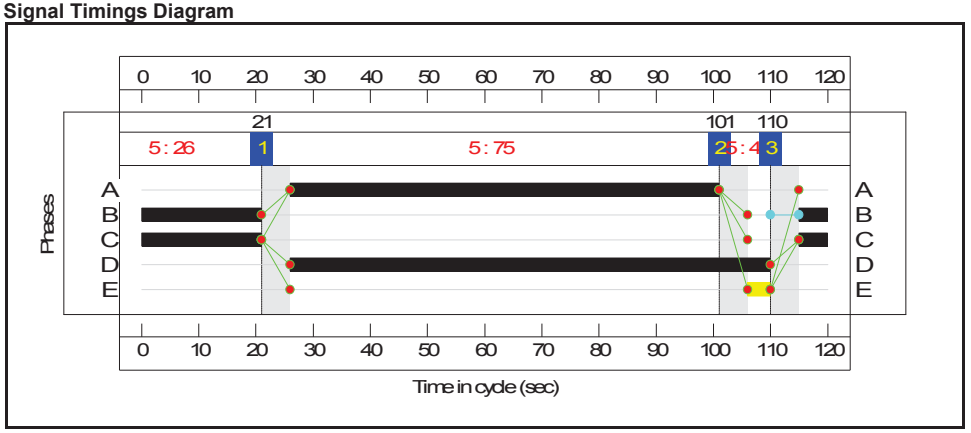
Stage Sequence Diagram



Stage Timings

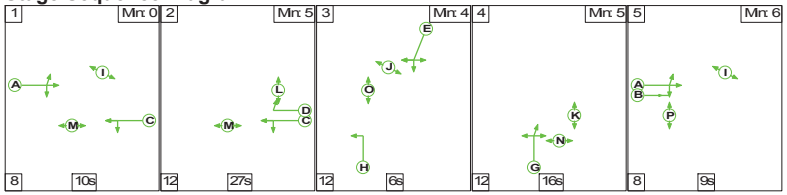
Stage	1	2	3
Duration	75	4	26
Change Point	21	101	110

Signal Timings Diagram



C3 - High Cross

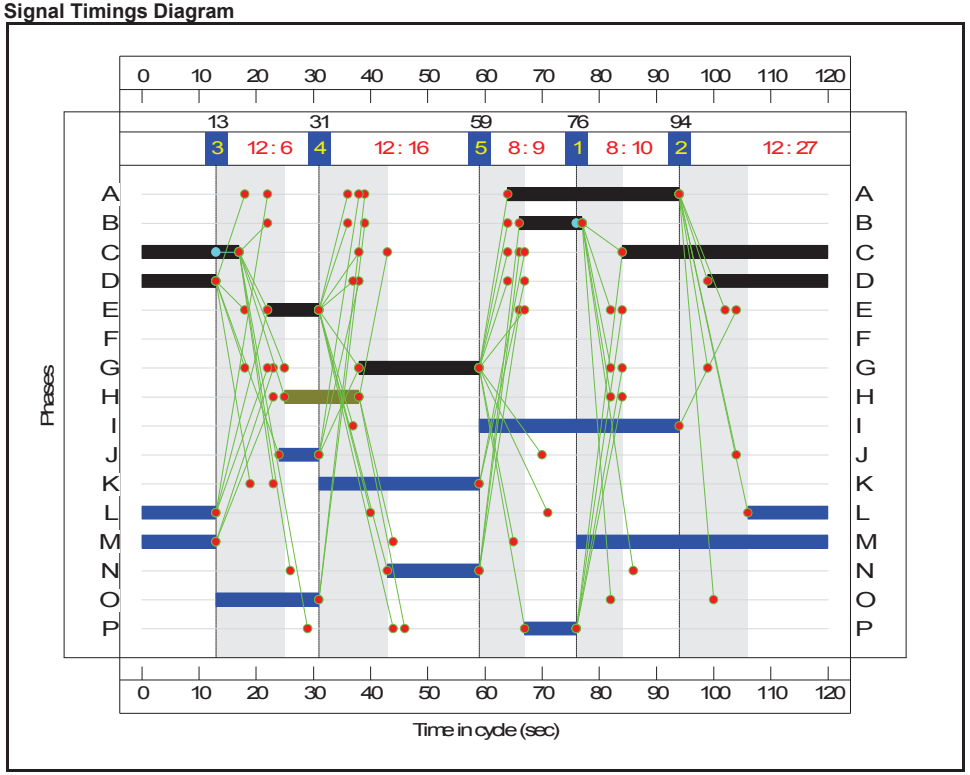
Stage Sequence Diagram



Stage Timings

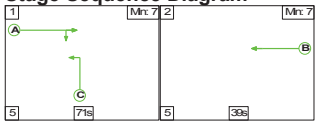
Stage	1	2	3	4	5
Duration	10	27	6	16	9
Change Point	76	94	13	31	59

Signal Timings Diagram



C4 - Western Access Road

Stage Sequence Diagram

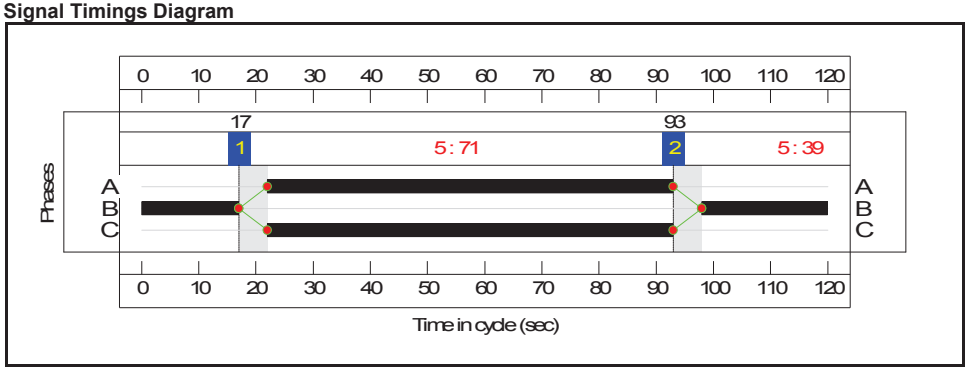


Stage Timings

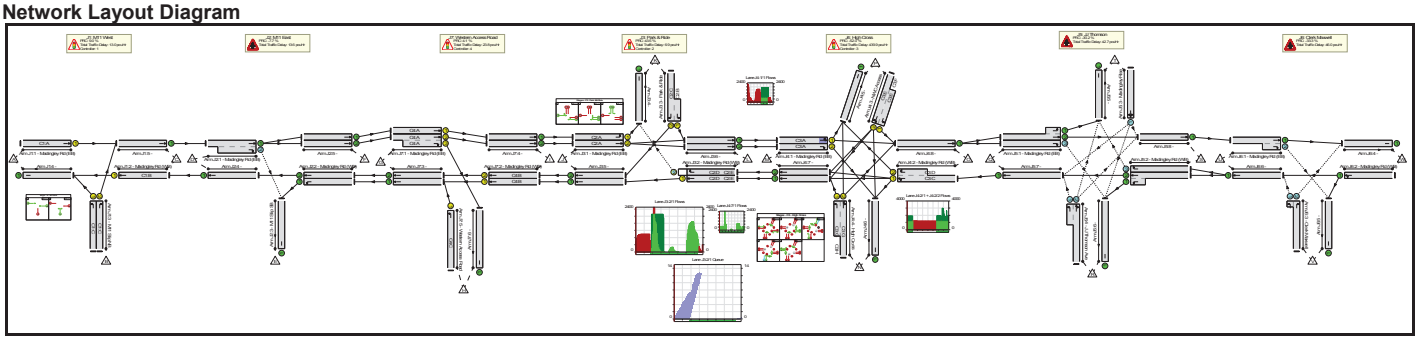
Stage	1	2
Duration	71	39
Change Point	17	93

Full Input Data And Results

Signal Timings Diagram



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	-	-	**N/A**	-	-		-	-	-	-	-	-	**136.8%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**82.6%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	62	-	363	2055	1079	33.6%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	62	-	830	1915	1005	82.6%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	48	-	511	1781	727	70.3%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	48	-	373	1741	711	52.5%
4/1		U	N/A	N/A	-		-	-	-	1341	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	736	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**96.9%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	738	2000: Inf	425+336	96.9 : 96.9%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	896	1800	1800	49.8%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	830	1800	1800	46.1%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	1222	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	830	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	206	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	206	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**62.7%**
1/1	Madingley Rd (EB) Left	U	N/A	N/A	C2:A		1	75	-	94	1741	1103	8.5%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	75	-	610	1915	1213	50.3%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	84	4	885	2105	1491	42.7%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	84	4	29	1854	492	4.2%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	26	-	285	1781:1741	344+110	62.7 : 62.7%
4/1		U	N/A	N/A	-		-	-	-	123	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	885	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	216	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	374	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	305	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**136.8%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	30	-	657	1899	491	133.9%
1/2	Madingley Rd (EB) Right	U	N/A	N/A	C3:A		1	30	-	5	1965	508	1.0%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	53:34	-	1220	1949:1828	528+340	136.8 : 136.8%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	9	0	304	1889:1687	157+67	135.3 : 135.3%
4/2+4/1	High Cross Ahead Left Right	U	N/A	N/A	C3:G	C3:H	1	21:34	13	574	2155:2033	394+29	135.7 : 135.7%
5/1		U	N/A	N/A	-		-	-	-	973	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	124	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	418	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	788	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**117.1%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	774	1915:1741	1901+12	31.0 : 31.0%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	26	1741	507	3.9%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	1013	1915:1741	1779+124	51.6 : 51.6%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	9	850	642	1.4%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	110	1915	271	40.5%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	478	1915:1915	245+163	117.1 : 117.1%
5/1		U	N/A	N/A	-		-	-	-	22	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	96	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	1197	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1095	Inf	Inf	0.0%
J6: Clerk Maxwell	-	-	**N/A**	-	-		-	-	-	-	-	-	**120.0%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	1099	1800: Inf	1799+7	60.9 : 60.9%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	964	1800	1800	53.6%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	443	600:1940	189+180	120.0 : 120.0%
4/1		U	N/A	N/A	-		-	-	-	1322	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	51	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	1133	Inf	Inf	0.0%
J7: Western Access Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**86.5%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C4:A		1	71	-	62	1915	1149	5.4%
1/2+1/3	Madingley Rd (EB) Ahead Right	U	N/A	N/A	C4:A		1	71	-	642	2055:2055	1120+192	48.9 : 48.9%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C4:B		1	39	-	552	1915	638	86.5%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	C4:B		1	39	-	592	2055	685	86.4%
3/1	Ahead	U	N/A	N/A	-		-	-	-	1152	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	592	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	62	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	548	Inf	Inf	0.0%
5/1	Western Access Road Left	U	N/A	N/A	C4:C		1	71	-	600	1915	1149	52.2%
6/1		U	N/A	N/A	-		-	-	-	94	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	**-**	**-**	**2097**	**0**	**0**	**117.0**	**468.9**	**0.0**	**585.9**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**8.7**	**4.3**	**0.0**	**13.0**	**-**	**-**	**-**	**-**
1/1	363	363	-	-	-	1.7	0.3	-	1.9	19.0	7.0	0.3	7.2
2/1	830	830	-	-	-	0.1	2.3	-	2.4	10.6	10.1	2.3	12.4
3/1	511	511	-	-	-	4.2	1.2	-	5.4	37.7	14.1	1.2	15.2
3/2	373	373	-	-	-	2.8	0.6	-	3.3	32.0	9.3	0.6	9.9
4/1	1341	1341	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	736	736	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**326**	**0**	**0**	**3.7**	**9.8**	**0.0**	**13.6**	**-**	**-**	**-**	**-**
1/1+1/2	738	738	326	0	0	1.9	8.9	-	10.8	52.9	10.6	8.9	19.5
2/1	896	896	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
2/2	830	830	-	-	-	1.8	0.4	-	2.2	9.7	26.7	0.4	27.2
3/1	1222	1222	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	830	830	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	206	206	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	206	206	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**21**	**0**	**0**	**5.1**	**1.8**	**0.0**	**6.9**	**-**	**-**	**-**	**-**
1/1	94	94	-	-	-	0.0	0.0	-	0.0	1.9	0.0	0.0	0.1
1/2	610	610	-	-	-	0.1	0.5	-	0.6	3.8	9.8	0.5	10.4
2/1	637	637	-	-	-	1.8	0.4	-	2.1	12.1	12.8	0.4	13.2
2/2	21	21	21	0	0	0.0	0.0	0.0	0.1	9.8	0.2	0.0	0.2
3/2+3/1	285	285	-	-	-	3.2	0.8	-	4.0	50.9	6.7	0.8	7.6
4/1	115	115	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	637	637	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	216	216	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	374	374	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	305	305	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**74.2**	**365.7**	**0.0**	**439.9**	**-**	**-**	**-**	**-**
1/1	657	491	-	-	-	18.0	85.1	-	103.1	565.0	31.1	85.1	116.2
1/2	5	5	-	-	-	0.0	0.0	-	0.0	23.0	0.1	0.0	0.1
2/1+2/2	1188	869	-	-	-	32.6	161.7	-	194.3	588.8	48.9	161.7	210.6
3/2+3/1	304	247	-	-	-	7.9	41.5	-	49.4	585.1	9.7	41.5	51.1
4/2+4/1	574	423	-	-	-	15.7	77.3	-	93.0	583.4	24.4	77.3	101.7
5/1	710	710	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	91	91	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	329	329	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	300	300	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	605	605	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**1008**	**0**	**0**	**3.5**	**39.2**	**0.0**	**42.7**	**-**	**-**	**-**	**-**
1/2+1/1	594	594	-	-	-	0.0	0.2	-	0.2	1.4	0.0	0.2	0.2
1/3	20	20	20	0	0	0.0	0.0	-	0.0	3.7	0.0	0.0	0.0
2/2+2/1	981	981	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
2/3	9	9	9	0	0	0.0	0.0	-	0.0	2.8	0.0	0.0	0.0
3/1	110	110	110	0	0	0.0	0.3	-	0.4	12.6	0.9	0.3	1.3
4/2+4/1	478	435	870	0	0	3.4	38.1	-	41.5	312.9	23.9	38.1	62.0
5/1	19	19	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	88	88	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1166	1166	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	875	875	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**743**	**0**	**0**	**5.0**	**41.0**	**0.0**	**46.0**	**-**	**-**	**-**	**-**
1/1+1/2	1099	1099	4	0	0	0.0	0.8	-	0.8	2.5	0.0	0.8	0.8
2/1	964	964	-	-	-	0.0	0.6	-	0.6	2.2	0.0	0.6	0.6
3/2+3/1	443	369	739	0	0	5.0	39.7	-	44.6	362.8	31.9	39.7	71.6

Full Input Data And Results

4/1	1284	1284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	51	51	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1097	1097	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**16.7**	**7.0**	**0.0**	**23.8**	**-**	**-**	**-**	**-**
1/1	62	62	-	-	-	0.3	0.0	-	0.3	16.5	1.0	0.0	1.0
1/2+1/3	642	642	-	-	-	2.3	0.5	-	2.7	15.3	9.9	0.5	10.4
2/1	552	552	-	-	-	5.7	3.0	-	8.7	57.0	17.2	3.0	20.2
2/2	592	592	-	-	-	6.2	3.0	-	9.2	55.6	18.4	3.0	21.4
3/1	1152	1152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	592	592	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	62	62	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	548	548	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	600	600	-	-	-	2.3	0.5	-	2.9	17.3	11.5	0.5	12.0
6/1	94	94	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

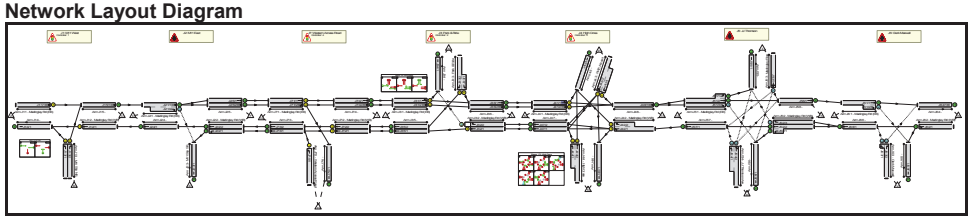
C1 - M11 West	PRC for Signalled Lanes (%):	9.0	Total Delay for Signalled Lanes (pcuHr):	13.03	Cycle Time (s):	120
C2 - Park && Ride	PRC for Signalled Lanes (%):	43.5	Total Delay for Signalled Lanes (pcuHr):	6.92	Cycle Time (s):	120
C3 - High Cross	PRC for Signalled Lanes (%):	-52.0	Total Delay for Signalled Lanes (pcuHr):	439.89	Cycle Time (s):	120
C4 - Western Access Road	PRC for Signalled Lanes (%):	4.1	Total Delay for Signalled Lanes (pcuHr):	23.78	Cycle Time (s):	120
	PRC Over All Lanes (%):	-52.0	Total Delay Over All Lanes(pcuHr):	585.90		

Full Input Data And Results

User and Project Details

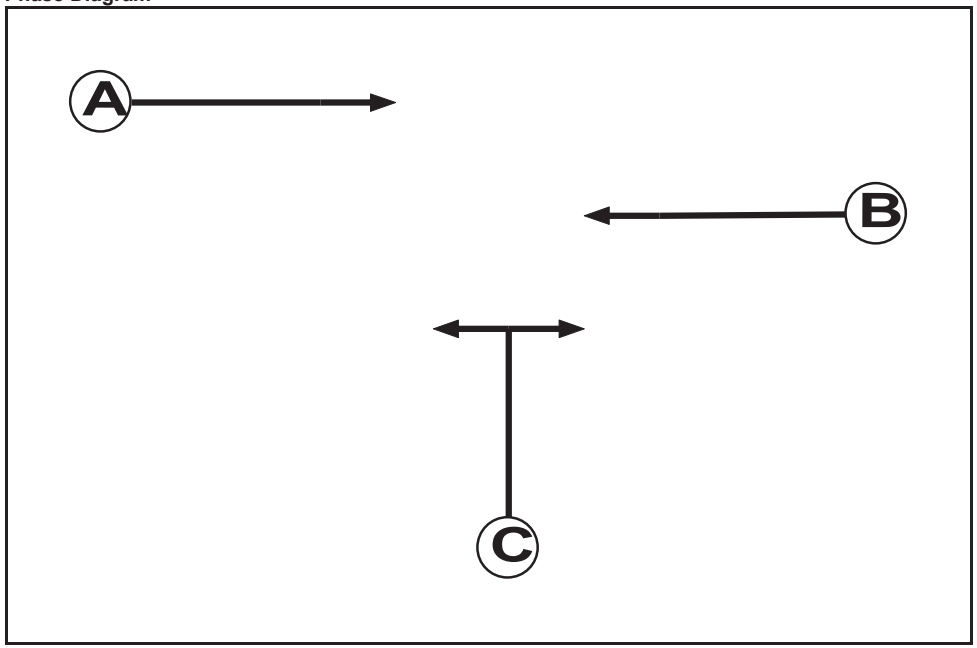
Project:	
Title:	
Location:	
File name:	170601 West Cambridge 2031 DS Existing Layout + WAR - HX Right Turn + Straight Mitigation.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



C1 - M11 West

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

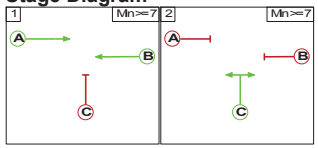
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C
A		-	5
B	-		5
C	5	5	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	C

Stage Diagram



Phase Delays

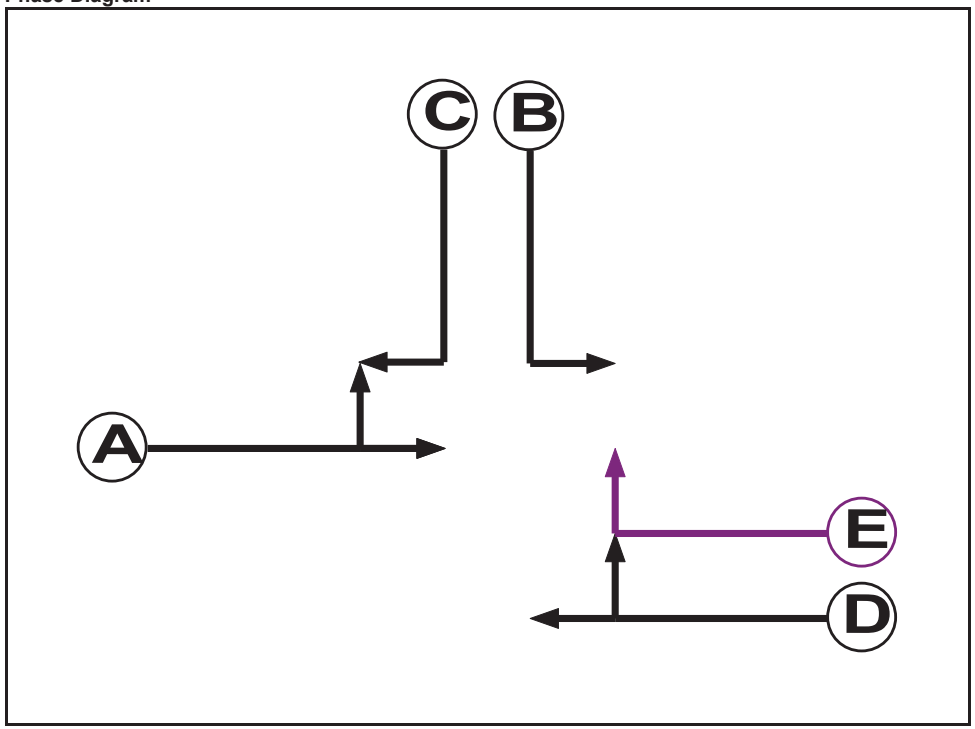
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

From Stage \ To Stage	1	2
1		5
2	5	

C2 - Park && Ride

Phase Diagram



Phase Input Data

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

Full Input Data And Results

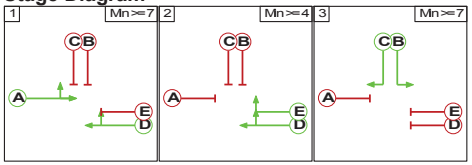
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

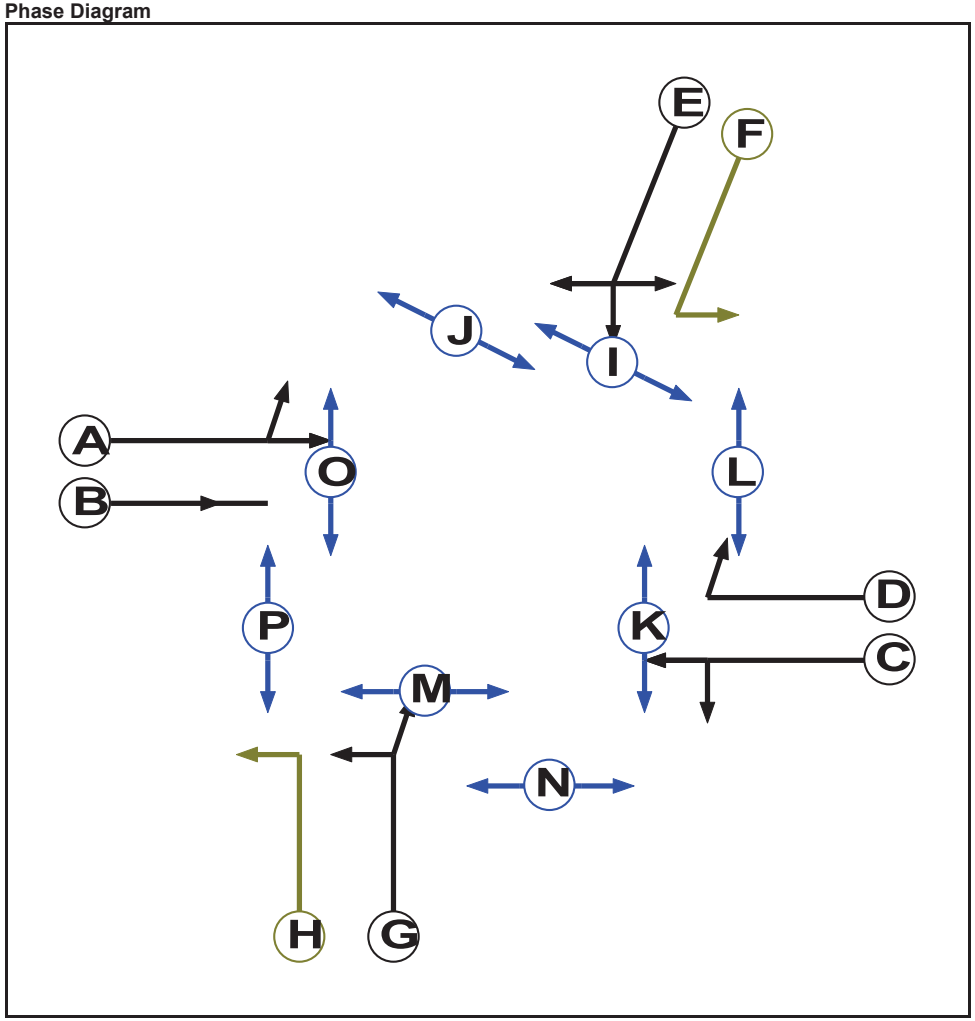
Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	B	Gaining absolute	5	5

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		5	5
	2	5		5
	3	5	5	

C3 - High Cross

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Traffic		7	7
F	Filter	E	4	4
G	Traffic		7	7
H	Filter	G	4	0
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Pedestrian		5	5
M	Pedestrian		5	5
N	Pedestrian		5	5
O	Pedestrian		5	5
P	Pedestrian		5	5

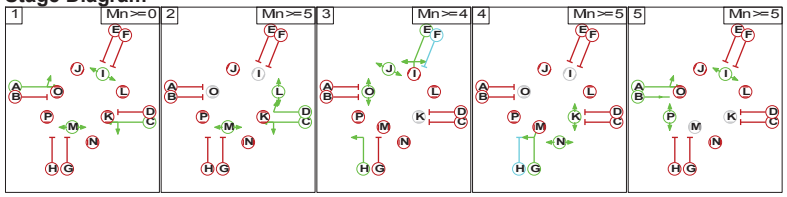
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A		-	-	5	8	8	5	-	-	10	-	12	-	-	6	-
B	-		7	-	5	-	5	5	-	-	-	-	-	9	5	-
C	-	5		-	5	-	8	8	-	-	6	-	-	9	-	12
D	5	-	-		5	-	5	-	-	11	6	-	-	-	-	-
E	5	5	7	6		-	7	-	6	-	-	9	-	12	-	13
F	5	-	-	-	-		5	-	6	-	-	9	-	-	-	-
G	5	5	5	5	8	8		-	-	11	-	12	6	-	-	8
H	-	-	5	-	-	-	-		-	-	-	-	6	-	-	8
I	-	-	-	-	10	10	-	-		-	-	-	-	-	-	-
J	7	-	-	7	-	-	7	-	-		-	-	-	-	-	-
K	-	-	8	8	-	-	-	-	-	-		-	-	-	-	-
L	9	-	-	-	9	9	9	-	-	-	-		-	-	-	-
M	-	-	-	-	-	-	10	10	-	-	-	-		-	-	-
N	-	7	7	-	7	-	-	-	-	-	-	-	-		-	-
O	8	8	-	-	-	-	-	-	-	-	-	-	-	-		-
P	-	-	8	-	8	-	8	8	-	-	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



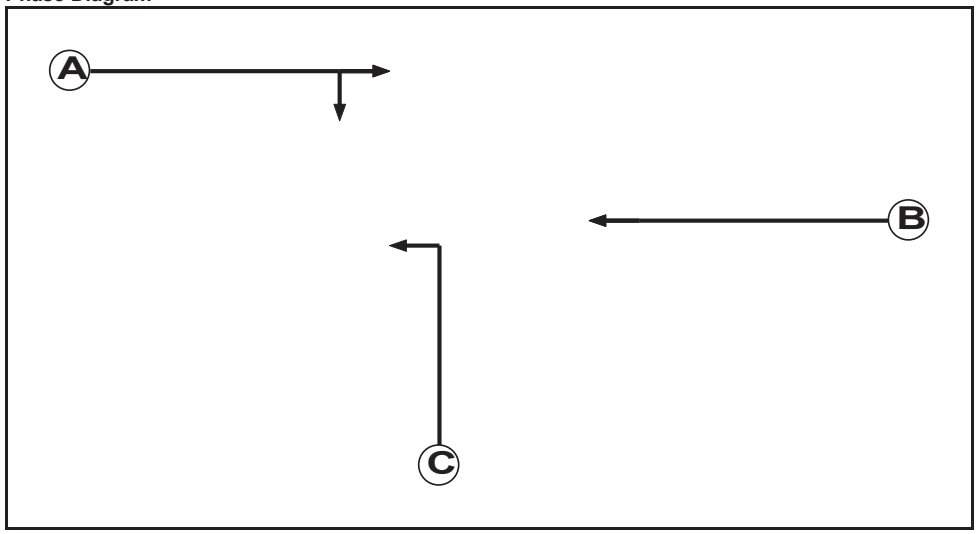
Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	C	Losing	4	4
5	1	B	Losing	1	1

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		12	10	10	12
2	9		12	10	12
3	X	X		12	X
4	8	12	11		8
5	8	12	10	9	

C4 - Western Access Road
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

Full Input Data And Results

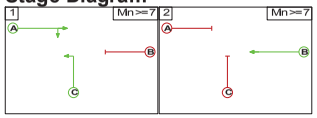
Phase Intergreens Matrix

		Starting Phase		
		A	B	C
Terminating Phase	A		5	-
	B	5		5
	C	-	5	

Phases in Stage

Stage No.	Phases in Stage
1	A C
2	B

Stage Diagram



Phase Delays

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

Prohibited Stage Change

		To Stage	
		1	2
From Stage	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: M11 West

There are no Opposed Lanes in this Junction

Junction: J2: M11 East

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)
J2:1/2 (Madingley Rd (EB))	J2:3/1 (Right)	850	0	J2:2/2	0.35	All	-	-	-	-	-
				J2:2/1	0.35	All					

Junction: J3: Park && Ride

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)
J3:2/2 (Madingley Rd (WB))	J3:4/1 (Right)	1440	0	J3:1/1	1.09	All	2.00	-	0.50	2	2.00
				J3:1/2	1.09	All					

Junction: J4: High Cross

There are no Opposed Lanes in this Junction

Junction: J5: JJ Thomson

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)
J5:1/3 (Madingley Rd (EB))	J5:6/1 (Right)	850	0	J5:2/2	0.35	All	-	-	-	-	-
				J5:2/1	0.35	All					
J5:2/3 (Madingley Rd (WB))	J5:5/1 (Right)	850	0	J5:1/1	0.35	All	-	-	-	-	-
				J5:1/2	0.35	All					
J5:3/1 (Madingley Rise)	J5:6/1 (Ahead)	600	0	J5:1/1	0.22	All	-	-	-	-	-
				J5:1/2	0.22	All					
				J5:1/3	0.22	All					
				J5:2/1	0.19	All					
				J5:2/2	0.19	All					
				J5:2/3	0.19	All					
	J5:7/1 (Right)	600	0	J5:1/2	0.22	All					
				J5:2/2	0.19	All					
				J5:2/1	0.19	All					
				J5:2/3	0.19	All					
				J5:1/1	0.22	All					
				J5:1/3	0.22	All					
				J5:4/1	0.19	All					
				J5:4/2	0.19	All					
	J5:8/1 (Left)	715	0	J5:1/2	0.22	All					
J5:4/1 (JJ Thomson Ave)	J5:7/1 (Left)	715	0	J5:2/2	0.22	All	-	-	-	-	-
J5:4/2 (JJ Thomson Ave)	J5:5/1 (Ahead)	600	0	J5:2/1	0.22	All	-	-	-	-	-
				J5:2/3	0.22	All					
				J5:1/1	0.19	All					

Full Input Data And Results

				J5:1/2	0.19	All					
				J5:1/3	0.19	All					
				J5:2/2	0.22	All					
	J5:8/1 (Right)	600	0	J5:2/2	0.22	All					
				J5:2/1	0.22	All					
				J5:2/3	0.22	All					
				J5:1/1	0.19	All					
				J5:1/2	0.19	All					
				J5:1/3	0.19	All					
				J5:3/1	0.19	All					

Junction: J6: Clerk Maxwell

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)
J6:1/2 (Madingley Rd (EB))	J6:5/1 (Right)	850	0	J6:2/1	0.35	All	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	J6:6/1 (Left)	1439	0	J6:2/1	1.09	All	-	-	-	-	-
J6:3/2 (Clerk Maxwell)	J6:4/1 (Right)	600	0	J6:1/1	0.19	All	-	-	-	-	-
				J6:1/2	0.19	All					
				J6:2/1	0.22	To J6:6/1 (Ahead)					

Junction: J7: Western Access Road

There are no Opposed Lanes in this Junction

Lane Input Data

Junction: J1: M11 West

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 (Madingley Rd (EB))	U	A	2	3	87.0	Geom	-	3.00	0.00	N	Arm J1:5 Ahead	Inf
J1:2/1 (Madingley Rd (WB))	U	B	2	3	31.3	Geom	-	3.00	0.00	Y	Arm J1:4 Ahead	Inf
J1:3/1 (M11 Slip NB)	U	C	2	3	34.8	Geom	-	3.00	0.00	Y	Arm J1:4 Left	20.00
J1:3/2 (M11 Slip NB)	U	C	2	3	87.0	Geom	-	3.00	0.00	Y	Arm J1:5 Right	15.00
J1:4/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J1:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J2: M11 East

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 (Madingley Rd (EB))	U		2	3	33.0	User	2000	-	-	-	-	-
J2:1/2 (Madingley Rd (EB))	O		2	3	10.4	Inf	-	-	-	-	-	-
J2:2/1 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:2/2 (Madingley Rd (WB))	U		2	3	29.6	User	1800	-	-	-	-	-
J2:3/1 (M11 Slip SB)	U		2	3	87.0	Inf	-	-	-	-	-	-
J2:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J2:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J3: Park && Ride

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)
J3:1/1 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:4 Left	15.00
											Arm J3:6 Ahead	Inf
J3:1/2 (Madingley Rd (EB))	U	A	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:6 Ahead	Inf
J3:2/1 (Madingley Rd (WB))	U	D E	2	3	13.9	Geom	-	3.50	0.00	N	Arm J3:5 Ahead	Inf
J3:2/2 (Madingley Rd (WB))	O	D E	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J3:4 Right	25.00
J3:3/1 (Park & Ride)	U	B	2	3	5.2	Geom	-	3.00	0.00	Y	Arm J3:6 Left	15.00
J3:3/2 (Park & Ride)	U	C	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J3:5 Right	20.00
J3:4/1	U		2	3	17.4	Inf	-	-	-	-	-	-
J3:5/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:5/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J3:6/2	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J4: High Cross

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)
J4:1/1 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	Y	Arm J4:5 Left	30.00
											Arm J4:8 Ahead	Inf
J4:1/2 (Madingley Rd (EB))	U	A	2	3	13.9	Geom	-	3.50	0.00	N	Arm J4:8 Ahead	Inf
J4:2/1 (Madingley Rd (WB))	U	C	2	3	88.7	Geom	-	3.50	0.00	Y	Arm J4:6 Left	20.00
											Arm J4:7 Ahead	Inf
J4:2/2 (Madingley Rd (WB))	U	D	2	3	7.0	Geom	-	3.50	0.00	Y	Arm J4:5 Right	20.00
J4:3/1 (NWC Access)	U	E F	2	3	8.7	Geom	-	3.25	0.00	Y	Arm J4:8 Left	10.00
J4:3/2 (NWC Access)	U	E	2	3	87.0	Geom	-	3.25	0.00	Y	Arm J4:6 Ahead	Inf
											Arm J4:7 Right	45.00
J4:4/1 (High Cross)	U	G H	2	3	8.3	Geom	-	4.00	0.00	N	Arm J4:7 Left	25.00
J4:4/2 (High Cross)	U	G	2	3	60.0	Geom	-	4.00	0.00	N	Arm J4:5 Ahead	Inf
J4:5/1	U		2	3	87.0	Inf	-	-	-	-	-	-
J4:6/1	U		2	3	8.7	Inf	-	-	-	-	-	-
J4:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:7/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J4:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J5: JJ Thomson

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)
J5:1/1 (Madingley Rd (EB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:5 Left	15.00
J5:1/2 (Madingley Rd (EB))	U		2	3	90.4	Geom	-	3.00	0.00	Y	Arm J5:8 Ahead	Inf
J5:1/3 (Madingley Rd (EB))	O		2	3	15.7	Geom	-	3.00	0.00	Y	Arm J5:6 Right	15.00
J5:2/1 (Madingley Rd (WB))	U		2	3	3.5	Geom	-	3.00	0.00	Y	Arm J5:6 Left	15.00
J5:2/2 (Madingley Rd (WB))	U		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:7 Ahead	Inf
J5:2/3 (Madingley Rd (WB))	O		2	3	7.1	User	850	-	-	-	-	-
J5:3/1 (Madingley Rise)	O		2	3	34.8	Geom	-	3.00	0.00	Y	Arm J5:6 Ahead	Inf
											Arm J5:7 Right	Inf
											Arm J5:8 Left	Inf
J5:4/1 (JJ Thomson Ave)	O		2	3	8.7	Geom	-	3.00	0.00	Y	Arm J5:7 Left	Inf
J5:4/2 (JJ Thomson Ave)	O		2	3	60.0	Geom	-	3.00	0.00	Y	Arm J5:5 Ahead	Inf
											Arm J5:8 Right	Inf
J5:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J5:6/1	U		2	3	59.1	Inf	-	-	-	-	-	-
J5:7/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J5:8/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J6: Clerk Maxwell

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)
J6:1/1 (Madingley Rd (EB))	U		2	3	48.7	User	1800	-	-	-	-	-
J6:1/2 (Madingley Rd (EB))	O		2	3	4.3	Inf	-	-	-	-	-	-
J6:2/1 (Madingley Rd (WB))	U		2	3	60.9	User	1800	-	-	-	-	-
J6:3/1 (Clerk Maxwell)	O		2	3	1.4	Geom	-	3.25	0.00	Y	Arm J6:6 Left	Inf
J6:3/2 (Clerk Maxwell)	O		2	3	60.0	User	600	-	-	-	-	-
J6:4/1	U		2	3	60.9	Inf	-	-	-	-	-	-
J6:5/1	U		2	3	34.8	Inf	-	-	-	-	-	-
J6:6/1	U		2	3	0.2	Inf	-	-	-	-	-	-

Junction: J7: Western Access 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)
J7:1/1 (Madingley Rd (EB))	U	A	2	3	26.1	Geom	-	3.00	0.00	Y	Arm J7:4 Ahead	Inf
J7:1/2 (Madingley Rd (EB))	U	A	2	3	26.1	Geom	-	3.00	0.00	N	Arm J7:4 Ahead	Inf
											Arm J7:6 Right	Inf
J7:2/1 (Madingley Rd (WB))	U	B	2	3	17.4	Geom	-	3.00	0.00	Y	Arm J7:3 Ahead	Inf
J7:2/2 (Madingley Rd (WB))	U	B	2	3	17.4	Geom	-	3.00	0.00	N	Arm J7:3 Ahead	Inf
J7:3/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:3/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/1	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:4/2	U		2	3	0.2	Inf	-	-	-	-	-	-
J7:5/1 (Western Access Road)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J7:3 Left	Inf
J7:6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2031 DS AM Peak HX Mitigation'	08:00	09:00	01:00	
2: '2031 DS PM Peak HX Mitigation'	17:00	18:00	01:00	

Scenario 1: '2031 DS AM Peak' (FG1: '2031 DS AM Peak HX Mitigation', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																								
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	To
Origin	A	0	0	741	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74
	B	359	0	980	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
	C	245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
	D	0	0	0	0	252	1469	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	245	319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56
	G	0	0	0	0	0	0	0	582	902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	H	0	0	0	0	0	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	I	0	0	0	0	0	0	497	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49
	J	0	0	0	0	0	0	0	0	0	0	156	957	0	0	0	0	0	0	0	0	0	0	0	11
	K	0	0	0	0	0	0	0	0	0	17	0	23	0	0	0	0	0	0	0	0	0	0	0	4
	L	0	0	0	0	0	0	0	0	0	486	37	0	0	0	0	0	0	0	0	0	0	0	0	52
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	897	94	0	0	0	0	0	0	0	99
	N	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	17	0	0	0	0	0	0	0	2
	O	0	0	0	0	0	0	0	0	0	0	0	0	44	446	0	92	0	0	0	0	0	0	0	58
	P	0	0	0	0	0	0	0	0	0	0	0	0	466	216	261	0	0	0	0	0	0	0	0	94
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	270	837	64	0	0	0	11
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	182	37	0	0	0	25
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	535	383	0	50	0	0	0	96
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	3	11	0	0	0	0	2
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1002	10
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	32	5
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	947	252	0	11
	Tot.	604	0	1721	245	571	1469	566	582	902	503	193	980	522	662	1158	203	576	656	1030	151	971	262	1034	155

Traffic Lane Flows

Lane	Scenario 1: 2031 DS AM Peak
Junction: J1: M11 West	
J1:1/1	741
J1:2/1	245
J1:3/1	359
J1:3/2	980
J1:4/1	604
J1:5/1	1721
Junction: J2: M11 East	
J2:1/1 (with short)	1721(In) 1469(Out)
J2:1/2 (short)	252
J2:2/1	319
J2:2/2	245
J2:3/1	571
J2:4/1	245
J2:5/1	734
J2:5/2	735
Junction: J3: Park && Ride	
J3:1/1	535
J3:1/2	578
J3:2/1	486
J3:2/2	37
J3:3/1 (short)	23
J3:3/2 (with short)	40(In) 17(Out)
J3:4/1	193
J3:5/1	486
J3:5/2	17
J3:6/1	402
J3:6/2	578
Junction: J4: High Cross	
J4:1/1	475
J4:1/2	516
J4:2/1 (with short)	582(In) 490(Out)
J4:2/2 (short)	92
J4:3/1 (short)	261
J4:3/2 (with short)	943(In) 682(Out)
J4:4/1 (short)	12

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J4:4/2 (with short)	29(In) 17(Out)
J4:5/1	203
J4:6/1	662
J4:7/1	267
J4:7/2	255
J4:8/1	1158
Junction: J5: JJ Thomson	
J5:1/1 (short)	64
J5:1/2 (with short)	901(In) 837(Out)
J5:1/3	270
J5:2/1 (short)	383
J5:2/2 (with short)	918(In) 535(Out)
J5:2/3	50
J5:3/1	22
J5:4/1 (short)	33
J5:4/2 (with short)	252(In) 219(Out)
J5:5/1	151
J5:6/1	656
J5:7/1	576
J5:8/1	1030
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	1012(In) 1002(Out)
J6:1/2 (short)	10
J6:2/1	1199
J6:3/1 (short)	24
J6:3/2 (with short)	56(In) 32(Out)
J6:4/1	1034
J6:5/1	262
J6:6/1	971
Junction: J7: Western Access Road	
J7:1/1	714
J7:1/2	770
J7:2/1	235
J7:2/2	262
J7:3/1	304
J7:3/2	262
J7:4/1	714
J7:4/2	188

J7:5/1	69
J7:6/1	582

Lane Saturation Flows

Junction: J1: M11 West

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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East

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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	29.2 %	1861	1861
				Arm J3:6 Ahead	Inf	70.8 %		
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	19.8 %	1946	1946
				Arm J4:8 Ahead	Inf	80.2 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	N	Arm J4:8 Ahead	Inf	100.0 %	2105	2105
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	91.0 %	1839	1839
				Arm J4:7 Ahead	Inf	9.0 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	31.7 %	1897	1897
				Arm J4:7 Right	45.00	68.3 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	100.0 %	2155	2155
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	13.6 %	1915	1915
				Arm J5:7 Right	Inf	36.4 %		
				Arm J5:8 Left	Inf	50.0 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	16.9 %	1915	1915
				Arm J5:8 Right	Inf	83.1 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J7: Western Access Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J7:4 Ahead	Inf	100.0 %	1915	1915
J7:1/2 (Madingley Rd (EB))	3.00	0.00	N	Arm J7:4 Ahead	Inf	24.4 %	2055	2055
				Arm J7:6 Right	Inf	75.6 %		
J7:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J7:3 Ahead	Inf	100.0 %	1915	1915
J7:2/2 (Madingley Rd (WB))	3.00	0.00	N	Arm J7:3 Ahead	Inf	100.0 %	2055	2055
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf
J7:5/1 (Western Access Road)	3.00	0.00	Y	Arm J7:3 Left	Inf	100.0 %	1915	1915
J7:6/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2031 DS PM Peak' (FG2: '2031 DS PM Peak HX Mitigation', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination																						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	Tot
Origin	A	0	0	363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	363
	B	511	0	373	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	884
	C	830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	830
	D	0	0	0	0	326	412	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	738
	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	F	0	0	0	830	896	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172
	G	0	0	0	0	0	0	0	94	610	0	0	0	0	0	0	0	0	0	0	0	0	0	0	704
	H	0	0	0	0	0	0	600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	600
	I	0	0	0	0	0	0	1144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114
	J	0	0	0	0	0	0	0	0	0	0	14	597	0	0	0	0	0	0	0	0	0	0	0	611
	K	0	0	0	0	0	0	0	0	0	216	0	69	0	0	0	0	0	0	0	0	0	0	0	285
	L	0	0	0	0	0	0	0	0	0	885	29	0	0	0	0	0	0	0	0	0	0	0	0	914
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202	460	0	0	0	0	0	0	0	662
	N	0	0	0	0	0	0	0	0	0	0	0	0	39	0	0	35	0	0	0	0	0	0	0	74
	O	0	0	0	0	0	0	0	0	0	0	0	0	663	79	0	478	0	0	0	0	0	0	0	122
	P	0	0	0	0	0	0	0	0	0	0	0	0	173	40	91	0	0	0	0	0	0	0	0	304
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	269	5	0	0	0	305
	R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191	0	780	8	0	0	0	979
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	947	66	0	9	0	0	0	102
	T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	4	47	0	0	0	0	110
	U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1095	109
	V	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216	0	227	443
	W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	917	47	0	964
	Tot.	1341	0	736	830	1222	412	1744	94	610	1101	43	666	875	119	293	973	1197	101	1096	22	1133	51	1322	1598

Traffic Lane Flows

Lane	Scenario 2: 2031 DS PM Peak
Junction: J1: M11 West	
J1:1/1	363
J1:2/1	830
J1:3/1	511
J1:3/2	373
J1:4/1	1341
J1:5/1	736
Junction: J2: M11 East	
J2:1/1 (with short)	738(In) 412(Out)
J2:1/2 (short)	326
J2:2/1	896
J2:2/2	830
J2:3/1	1222
J2:4/1	830
J2:5/1	206
J2:5/2	206
Junction: J3: Park && Ride	
J3:1/1	228
J3:1/2	383
J3:2/1	885
J3:2/2	29
J3:3/1 (short)	69
J3:3/2 (with short)	285(In) 216(Out)
J3:4/1	43
J3:5/1	885
J3:5/2	216
J3:6/1	283
J3:6/2	383
Junction: J4: High Cross	
J4:1/1	460
J4:1/2	202
J4:2/1 (with short)	1220(In) 742(Out)
J4:2/2 (short)	478
J4:3/1 (short)	91
J4:3/2 (with short)	304(In) 213(Out)
J4:4/1 (short)	39

J4:4/2 (with short)	74(In) 35(Out)
J4:5/1	973
J4:6/1	119
J4:7/1	457
J4:7/2	418
J4:8/1	293
Junction: J5: JJ Thomson	
J5:1/1 (short)	5
J5:1/2 (with short)	274(In) 269(Out)
J5:1/3	31
J5:2/1 (short)	66
J5:2/2 (with short)	1013(In) 947(Out)
J5:2/3	9
J5:3/1	110
J5:4/1 (short)	191
J5:4/2 (with short)	979(In) 788(Out)
J5:5/1	22
J5:6/1	101
J5:7/1	1197
J5:8/1	1096
Junction: J6: Clerk Maxwell	
J6:1/1 (with short)	1099(In) 1095(Out)
J6:1/2 (short)	4
J6:2/1	964
J6:3/1 (short)	216
J6:3/2 (with short)	443(In) 227(Out)
J6:4/1	1322
J6:5/1	51
J6:6/1	1133
Junction: J7: Western Access Road	
J7:1/1	154
J7:1/2	550
J7:2/1	547
J7:2/2	597
J7:3/1	1147
J7:3/2	597
J7:4/1	154
J7:4/2	456

Full Input Data And Results

J7:5/1	600
J7:6/1	94

Lane Saturation Flows

Junction: J1: M11 West								
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 (Madingley Rd (EB))	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1915	1915
J1:3/1 (M11 Slip NB)	3.00	0.00	Y	Arm J1:4 Left	20.00	100.0 %	1781	1781
J1:3/2 (M11 Slip NB)	3.00	0.00	Y	Arm J1:5 Right	15.00	100.0 %	1741	1741
J1:4/1	Infinite Saturation Flow						Inf	Inf
J1:5/1	Infinite Saturation Flow						Inf	Inf

Junction: J2: M11 East								
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 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						2000	2000
J2:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J2:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J2:2/2 (Madingley Rd (WB) Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
J2:3/1 (M11 Slip SB Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1	Infinite Saturation Flow						Inf	Inf
J2:5/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J3: Park && Ride

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:4 Left	15.00	6.1 %	1903	1903
				Arm J3:6 Ahead	Inf	93.9 %		
J3:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J3:6 Ahead	Inf	100.0 %	1915	1915
J3:2/1 (Madingley Rd (WB))	3.50	0.00	N	Arm J3:5 Ahead	Inf	100.0 %	2105	2105
J3:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J3:4 Right	25.00	100.0 %	1854	1854
J3:3/1 (Park & Ride)	3.00	0.00	Y	Arm J3:6 Left	15.00	100.0 %	1741	1741
J3:3/2 (Park & Ride)	3.00	0.00	Y	Arm J3:5 Right	20.00	100.0 %	1781	1781
J3:4/1	Infinite Saturation Flow						Inf	Inf
J3:5/1	Infinite Saturation Flow						Inf	Inf
J3:5/2	Infinite Saturation Flow						Inf	Inf
J3:6/1	Infinite Saturation Flow						Inf	Inf
J3:6/2	Infinite Saturation Flow						Inf	Inf

Junction: J4: High Cross

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1 (Madingley Rd (EB))	3.50	0.00	Y	Arm J4:5 Left	30.00	100.0 %	1871	1871
				Arm J4:8 Ahead	Inf	0.0 %		
J4:1/2 (Madingley Rd (EB))	3.50	0.00	N	Arm J4:8 Ahead	Inf	100.0 %	2105	2105
J4:2/1 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:6 Left	20.00	10.6 %	1949	1949
				Arm J4:7 Ahead	Inf	89.4 %		
J4:2/2 (Madingley Rd (WB))	3.50	0.00	Y	Arm J4:5 Right	20.00	100.0 %	1828	1828
J4:3/1 (NWC Access)	3.25	0.00	Y	Arm J4:8 Left	10.00	100.0 %	1687	1687
J4:3/2 (NWC Access)	3.25	0.00	Y	Arm J4:6 Ahead	Inf	18.8 %	1889	1889
				Arm J4:7 Right	45.00	81.2 %		
J4:4/1 (High Cross)	4.00	0.00	N	Arm J4:7 Left	25.00	100.0 %	2033	2033
J4:4/2 (High Cross)	4.00	0.00	N	Arm J4:5 Ahead	Inf	100.0 %	2155	2155
J4:5/1	Infinite Saturation Flow						Inf	Inf
J4:6/1	Infinite Saturation Flow						Inf	Inf
J4:7/1	Infinite Saturation Flow						Inf	Inf
J4:7/2	Infinite Saturation Flow						Inf	Inf
J4:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J5: JJ Thomson

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:5 Left	15.00	100.0 %	1741	1741
J5:1/2 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:8 Ahead	Inf	100.0 %	1915	1915
J5:1/3 (Madingley Rd (EB))	3.00	0.00	Y	Arm J5:6 Right	15.00	100.0 %	1741	1741
J5:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:6 Left	15.00	100.0 %	1741	1741
J5:2/2 (Madingley Rd (WB))	3.00	0.00	Y	Arm J5:7 Ahead	Inf	100.0 %	1915	1915
J5:2/3 (Madingley Rd (WB) Lane 3)	This lane uses a directly entered Saturation Flow						850	850
J5:3/1 (Madingley Rise)	3.00	0.00	Y	Arm J5:6 Ahead	Inf	3.6 %	1915	1915
				Arm J5:7 Right	Inf	53.6 %		
				Arm J5:8 Left	Inf	42.7 %		
J5:4/1 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:7 Left	Inf	100.0 %	1915	1915
J5:4/2 (JJ Thomson Ave)	3.00	0.00	Y	Arm J5:5 Ahead	Inf	1.0 %	1915	1915
				Arm J5:8 Right	Inf	99.0 %		
J5:5/1	Infinite Saturation Flow						Inf	Inf
J5:6/1	Infinite Saturation Flow						Inf	Inf
J5:7/1	Infinite Saturation Flow						Inf	Inf
J5:8/1	Infinite Saturation Flow						Inf	Inf

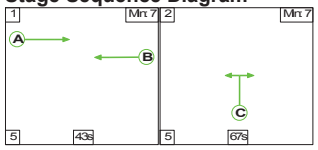
Junction: J6: Clerk Maxwell

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J6:1/1 (Madingley Rd (EB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:1/2 (Madingley Rd (EB) Lane 2)	Infinite Saturation Flow						Inf	Inf
J6:2/1 (Madingley Rd (WB) Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
J6:3/1 (Clerk Maxwell)	3.25	0.00	Y	Arm J6:6 Left	Inf	100.0 %	1940	1940
J6:3/2 (Clerk Maxwell Lane 2)	This lane uses a directly entered Saturation Flow						600	600
J6:4/1	Infinite Saturation Flow						Inf	Inf
J6:5/1	Infinite Saturation Flow						Inf	Inf
J6:6/1	Infinite Saturation Flow						Inf	Inf

Junction: J7: Western Access Road

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J7:1/1 (Madingley Rd (EB))	3.00	0.00	Y	Arm J7:4 Ahead	Inf	100.0 %	1915	1915
J7:1/2 (Madingley Rd (EB))	3.00	0.00	N	Arm J7:4 Ahead	Inf	82.9 %	2055	2055
				Arm J7:6 Right	Inf	17.1 %		
J7:2/1 (Madingley Rd (WB))	3.00	0.00	Y	Arm J7:3 Ahead	Inf	100.0 %	1915	1915
J7:2/2 (Madingley Rd (WB))	3.00	0.00	N	Arm J7:3 Ahead	Inf	100.0 %	2055	2055
J7:3/1	Infinite Saturation Flow						Inf	Inf
J7:3/2	Infinite Saturation Flow						Inf	Inf
J7:4/1	Infinite Saturation Flow						Inf	Inf
J7:4/2	Infinite Saturation Flow						Inf	Inf
J7:5/1 (Western Access Road)	3.00	0.00	Y	Arm J7:3 Left	Inf	100.0 %	1915	1915
J7:6/1	Infinite Saturation Flow						Inf	Inf

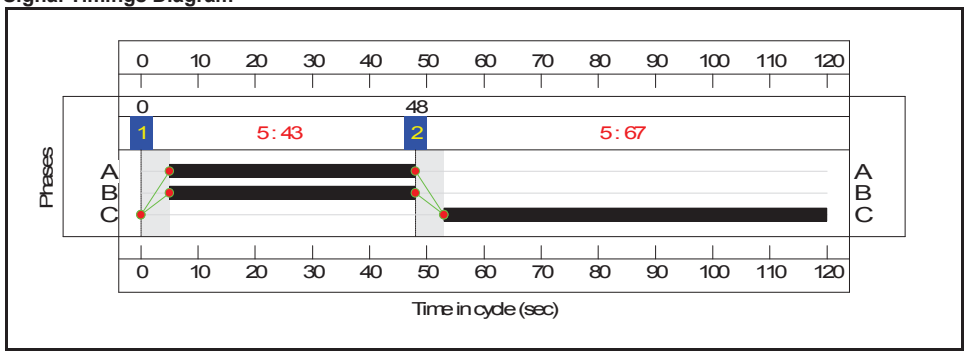
Scenario 1: '2031 DS AM Peak' (FG1: '2031 DS AM Peak HX Mitigation', Plan 1: 'Network Control Plan 1')
C1 - M11 West
Stage Sequence Diagram



Stage Timings

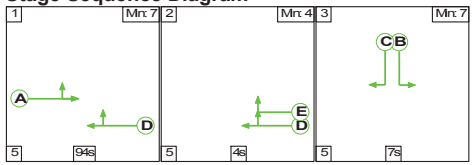
Stage	1	2
Duration	43	67
Change Point	0	48

Signal Timings Diagram



Full Input Data And Results

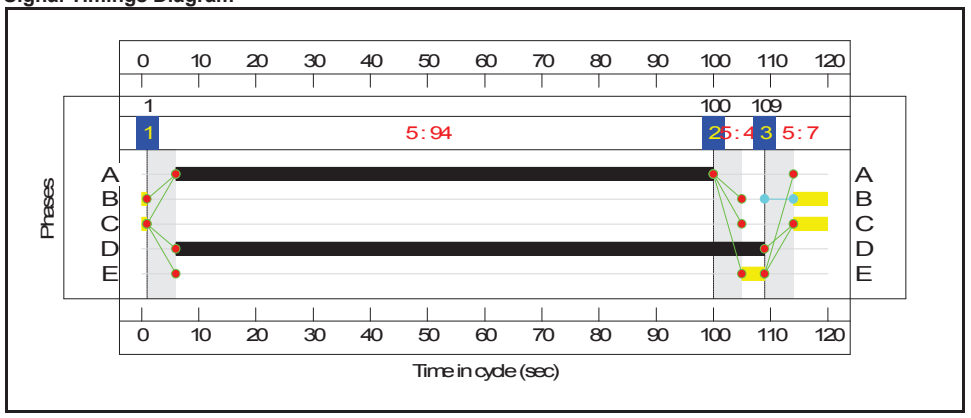
C2 - Park && Ride
Stage Sequence Diagram



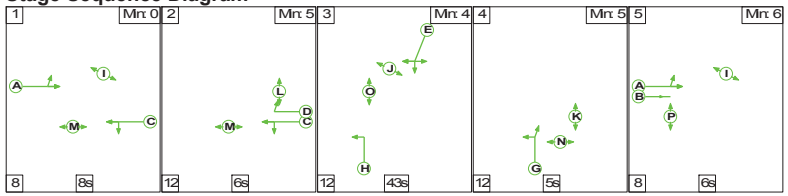
Stage Timings

Stage	1	2	3
Duration	94	4	7
Change Point	1	100	109

Signal Timings Diagram



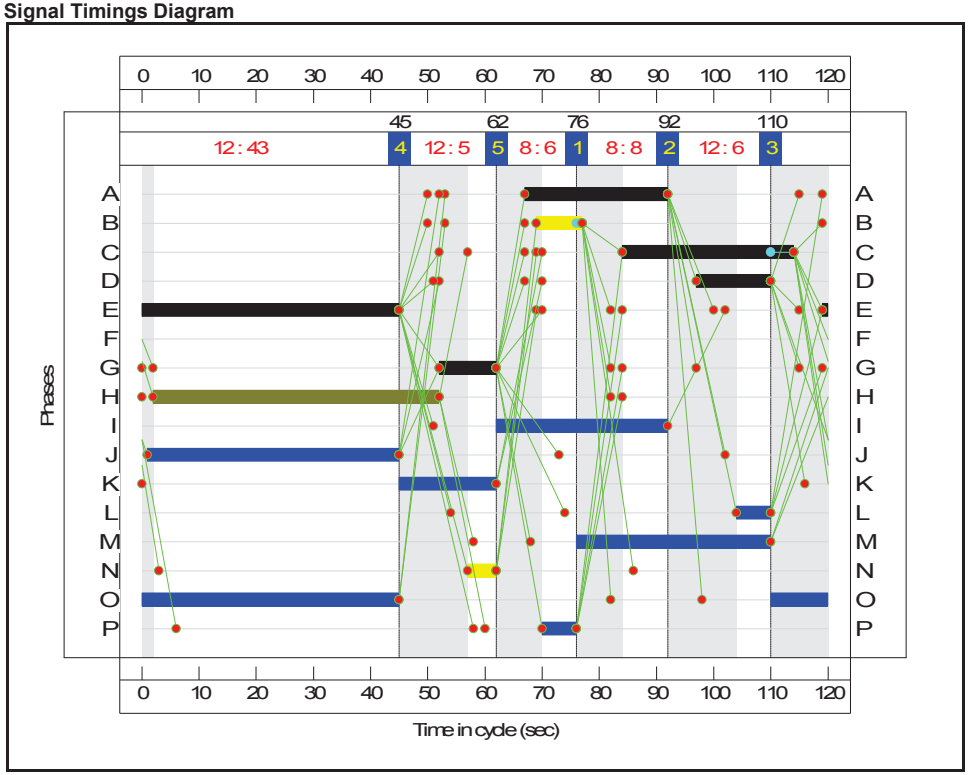
C3 - High Cross
Stage Sequence Diagram



Stage Timings

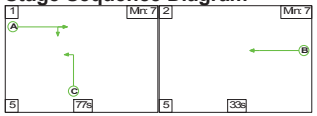
Stage	1	2	3	4	5
Duration	8	6	43	5	6
Change Point	76	92	110	45	62

Signal Timings Diagram



C4 - Western Access Road

Stage Sequence Diagram

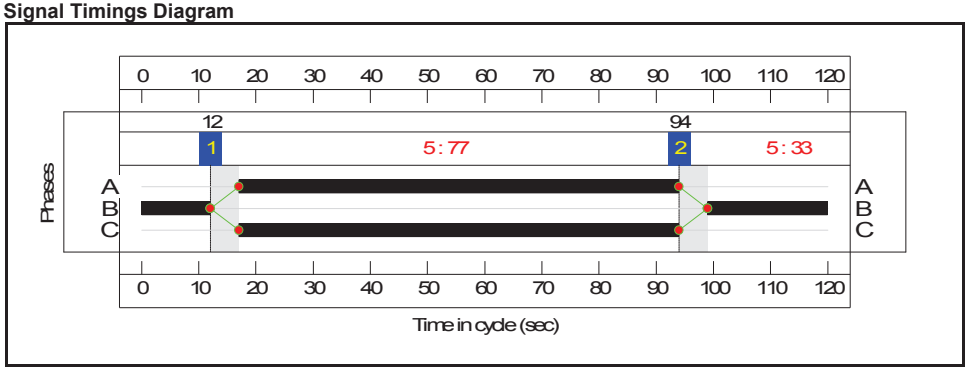


Stage Timings

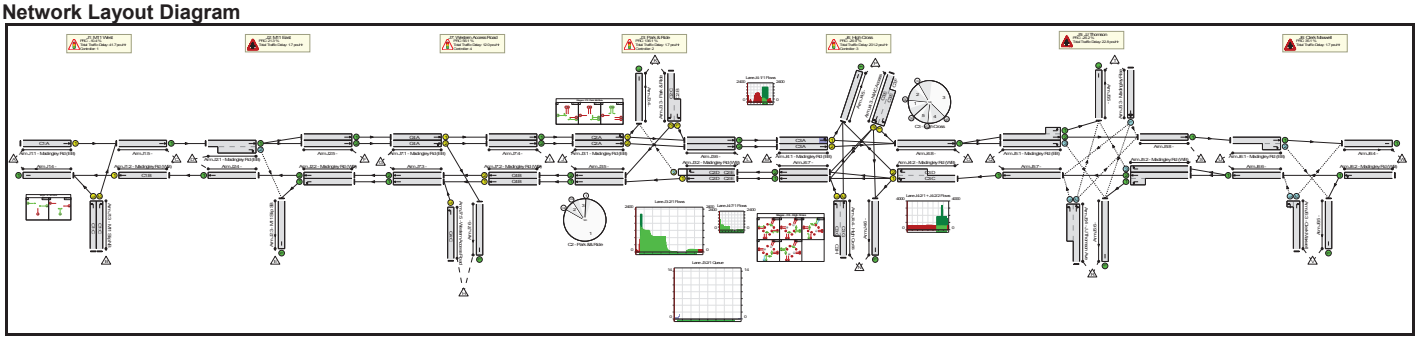
Stage	1	2
Duration	77	33
Change Point	12	94

Full Input Data And Results

Signal Timings Diagram



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	-	-	**N/A**	-	-		-	-	-	-	-	-	**114.2%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.3%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	43	-	741	2055	753	98.3%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	43	-	245	1915	702	34.9%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	67	-	359	1781	1009	35.6%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	67	-	980	1741	987	99.3%
4/1		U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	1721	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**74.2%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	1721	2000: Inf	1980+340	74.2 : 74.2%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	319	1800	1800	17.7%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	245	1800	1800	13.6%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	571	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	245	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	734	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	735	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**38.1%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C2:A		1	94	-	535	1861	1473	36.3%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	94	-	578	1915	1516	38.1%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	103	4	486	2105	1824	23.8%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	103	4	37	1854	444	7.4%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	7	-	40	1781:1741	86+116	19.8 : 19.8%
4/1		U	N/A	N/A	-		-	-	-	193	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	486	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	17	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	402	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	578	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**114.2%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	25	-	475	1946	422	112.7%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C3:A		1	25	-	516	2105	456	113.1%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	30:13	-	582	1839:1828	429+81	114.2 : 114.2%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	46	0	943	1897:1687	608+233	112.2 : 112.2%
4/2+4/1	High Cross Ahead Left	U	N/A	N/A	C3:G	C3:H	1	10:60	50	29	2155:2033	198+139	8.6 : 8.6%
5/1		U	N/A	N/A	-		-	-	-	203	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	662	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	267	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	255	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1158	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**113.6%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	901	1915:1741	1766+135	42.0 : 42.0%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	270	1741	529	45.3%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	918	1915:1741	1071+767	49.9 : 49.9%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	50	850	570	8.8%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	22	1915	246	9.0%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	252	1915:1915	193+29	113.6 : 113.6%
5/1		U	N/A	N/A	-		-	-	-	151	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	656	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	576	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1030	Inf	Inf	0.0%
J6: Clerk Maxwell	-	-	**N/A**	-	-		-	-	-	-	-	-	**66.6%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	1012	1800: Inf	1798+18	55.7 : 55.7%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	1199	1800	1800	66.6%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	56	600:1940	179+132	17.9 : 18.2%
4/1		U	N/A	N/A	-		-	-	-	1034	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	262	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	971	Inf	Inf	0.0%
J7: Western Access Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**57.6%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C4:A		1	77	-	714	1915	1245	57.4%
1/2	Madingley Rd (EB) Ahead Right	U	N/A	N/A	C4:A		1	77	-	770	2055	1336	57.6%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C4:B		1	33	-	235	1915	543	43.3%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	C4:B		1	33	-	262	2055	582	45.0%
3/1	Ahead	U	N/A	N/A	-		-	-	-	304	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	262	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	714	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	188	Inf	Inf	0.0%
5/1	Western Access Road Left	U	N/A	N/A	C4:C		1	77	-	69	1915	1245	5.5%
6/1		U	N/A	N/A	-		-	-	-	582	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	**-**	**-**	**1169**	**1**	**0**	**71.2**	**211.5**	**0.1**	**282.8**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**16.2**	**25.5**	**0.0**	**41.7**	**-**	**-**	**-**	**-**
1/1	741	741	-	-	-	7.7	10.8	-	18.6	90.3	24.3	10.8	35.1
2/1	245	245	-	-	-	0.0	0.3	-	0.3	4.5	1.1	0.3	1.4
3/1	359	359	-	-	-	1.4	0.3	-	1.7	16.9	6.5	0.3	6.8
3/2	980	980	-	-	-	7.0	14.1	-	21.1	77.6	32.1	14.1	46.2
4/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1721	1721	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**252**	**0**	**0**	**0.1**	**1.6**	**0.0**	**1.7**	**-**	**-**	**-**	**-**
1/1+1/2	1721	1721	252	0	0	0.1	1.4	-	1.5	3.2	1.5	1.4	3.0
2/1	319	319	-	-	-	0.0	0.1	-	0.1	1.2	2.5	0.1	2.6
2/2	245	245	-	-	-	0.0	0.1	-	0.1	1.2	1.0	0.1	1.1
3/1	571	571	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	245	245	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	734	734	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	735	735	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**32**	**1**	**0**	**0.8**	**0.9**	**0.1**	**1.7**	**-**	**-**	**-**	**-**
1/1	535	535	-	-	-	0.1	0.3	-	0.3	2.3	0.3	0.3	0.6
1/2	578	578	-	-	-	0.1	0.3	-	0.4	2.3	0.3	0.3	0.6
2/1	435	435	-	-	-	0.0	0.2	-	0.2	1.7	1.8	0.2	1.9
2/2	33	33	32	1	0	0.0	0.0	0.1	0.1	10.7	0.0	0.0	0.1
3/2+3/1	40	40	-	-	-	0.6	0.1	-	0.7	64.0	0.7	0.1	0.8
4/1	189	189	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	435	435	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	402	402	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	578	578	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**41.5**	**159.7**	**0.0**	**201.2**	**-**	**-**	**-**	**-**
1/1	475	422	-	-	-	7.3	30.6	-	37.8	286.8	17.7	30.6	48.3
1/2	516	456	-	-	-	7.6	33.8	-	41.4	288.9	19.2	33.8	53.0
2/1+2/2	582	510	-	-	-	11.0	39.8	-	50.8	314.5	21.8	39.8	61.6
3/2+3/1	943	840	-	-	-	15.2	55.5	-	70.7	270.1	33.4	55.5	88.9
4/2+4/1	29	29	-	-	-	0.3	0.0	-	0.3	41.2	0.5	0.0	0.6
5/1	181	181	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	583	583	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	227	227	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	1027	1027	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**763**	**0**	**0**	**2.9**	**19.8**	**0.0**	**22.8**	**-**	**-**	**-**	**-**
1/2+1/1	799	799	-	-	-	0.2	0.4	-	0.6	2.8	18.5	0.4	18.8
1/3	239	239	239	0	0	0.3	0.4	-	0.7	11.2	6.0	0.4	6.4
2/2+2/1	918	918	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
2/3	50	50	50	0	0	0.0	0.0	-	0.0	3.5	0.0	0.0	0.0
3/1	22	22	22	0	0	0.0	0.0	-	0.1	13.3	0.2	0.0	0.3
4/2+4/1	252	226	452	0	0	2.3	18.5	-	20.8	296.7	15.6	18.5	34.0
5/1	139	139	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	625	625	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	576	576	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	913	913	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**122**	**0**	**0**	**0.0**	**1.7**	**0.0**	**1.7**	**-**	**-**	**-**	**-**
1/1+1/2	1012	1012	10	0	0	0.0	0.6	-	0.6	2.2	0.0	0.6	0.6
2/1	1199	1199	-	-	-	0.0	1.0	-	1.0	3.0	0.0	1.0	1.0
3/2+3/1	56	56	112	0	0	0.0	0.1	-	0.1	7.1	0.0	0.1	0.1

Full Input Data And Results

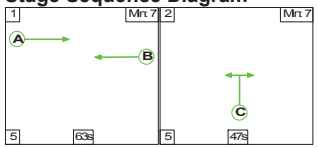
4/1	1034	1034	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	262	262	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	971	971	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**9.8**	**2.2**	**0.0**	**12.0**	**-**	**-**	**-**	**-**
1/1	714	714	-	-	-	2.3	0.7	-	3.0	14.9	12.5	0.7	13.1
1/2	770	770	-	-	-	2.5	0.7	-	3.2	14.9	14.3	0.7	15.0
2/1	235	235	-	-	-	2.3	0.4	-	2.7	41.0	6.4	0.4	6.8
2/2	262	262	-	-	-	2.6	0.4	-	3.0	40.9	7.1	0.4	7.5
3/1	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	262	262	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	188	188	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	69	69	-	-	-	0.1	0.0	-	0.2	9.2	0.8	0.0	0.9
6/1	582	582	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West	PRC for Signalled Lanes (%):	-10.4	Total Delay for Signalled Lanes (pcuHr):	41.69	Cycle Time (s):	120
C2 - Park && Ride	PRC for Signalled Lanes (%):	136.1	Total Delay for Signalled Lanes (pcuHr):	1.73	Cycle Time (s):	120
C3 - High Cross	PRC for Signalled Lanes (%):	-26.9	Total Delay for Signalled Lanes (pcuHr):	201.18	Cycle Time (s):	120
C4 - Western Access Road	PRC for Signalled Lanes (%):	56.1	Total Delay for Signalled Lanes (pcuHr):	11.99	Cycle Time (s):	120
	PRC Over All Lanes (%):	-26.9	Total Delay Over All Lanes(pcuHr):	282.79		

Scenario 2: '2031 DS PM Peak' (FG2: '2031 DS PM Peak HX Mitigation', Plan 1: 'Network Control Plan 1')

C1 - M11 West

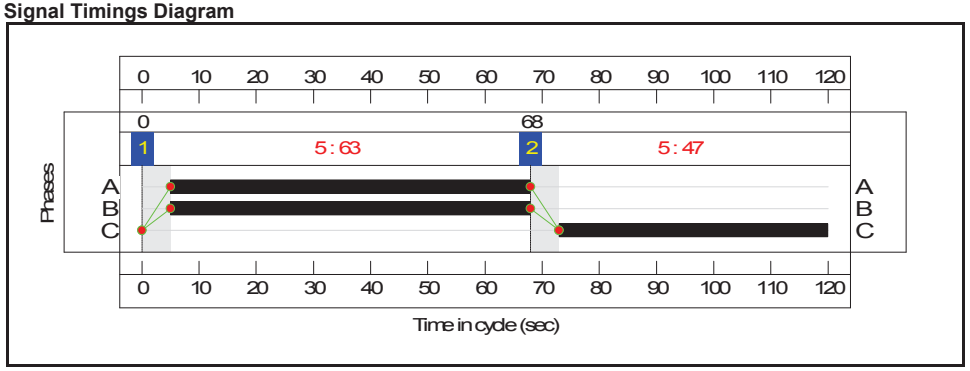
Stage Sequence Diagram



Stage Timings

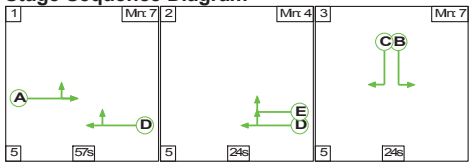
Stage	1	2
Duration	63	47
Change Point	0	68

Signal Timings Diagram



C2 - Park && Ride

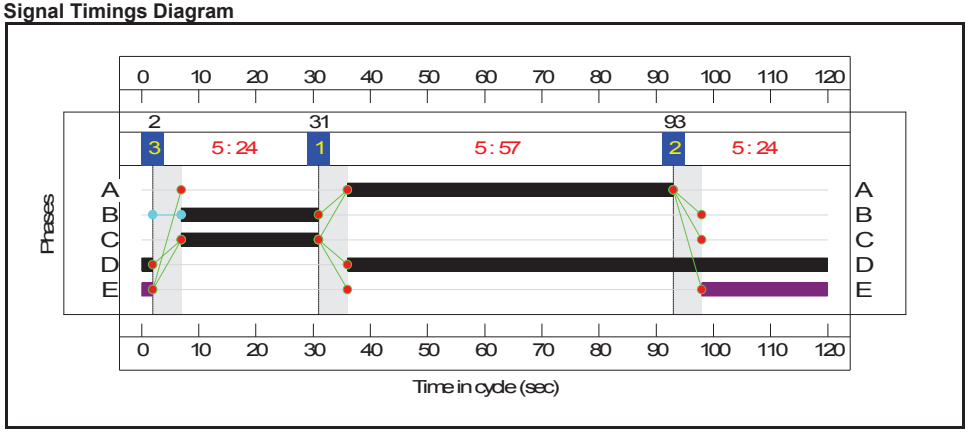
Stage Sequence Diagram



Stage Timings

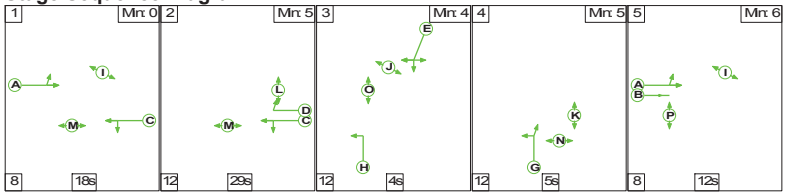
Stage	1	2	3
Duration	57	24	24
Change Point	31	93	2

Signal Timings Diagram



C3 - High Cross

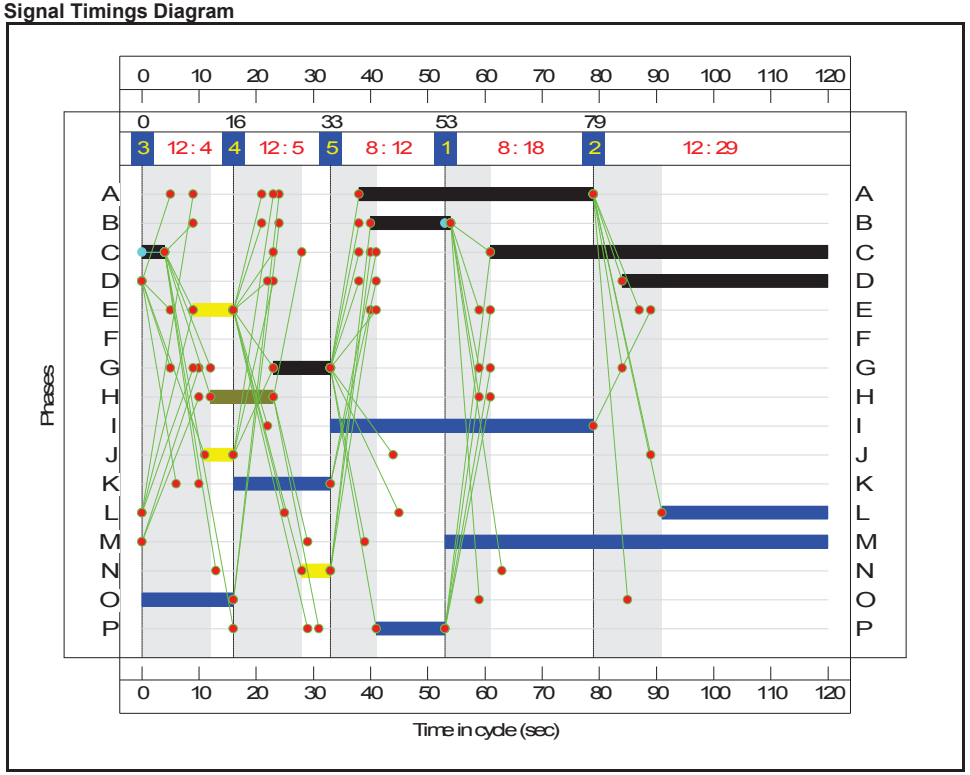
Stage Sequence Diagram



Stage Timings

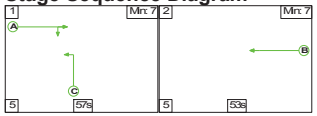
Stage	1	2	3	4	5
Duration	18	29	4	5	12
Change Point	53	79	0	16	33

Signal Timings Diagram



C4 - Western Access Road

Stage Sequence Diagram

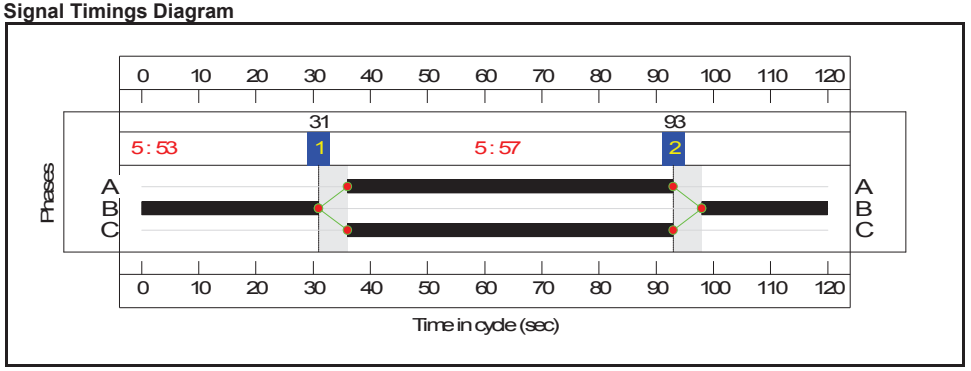


Stage Timings

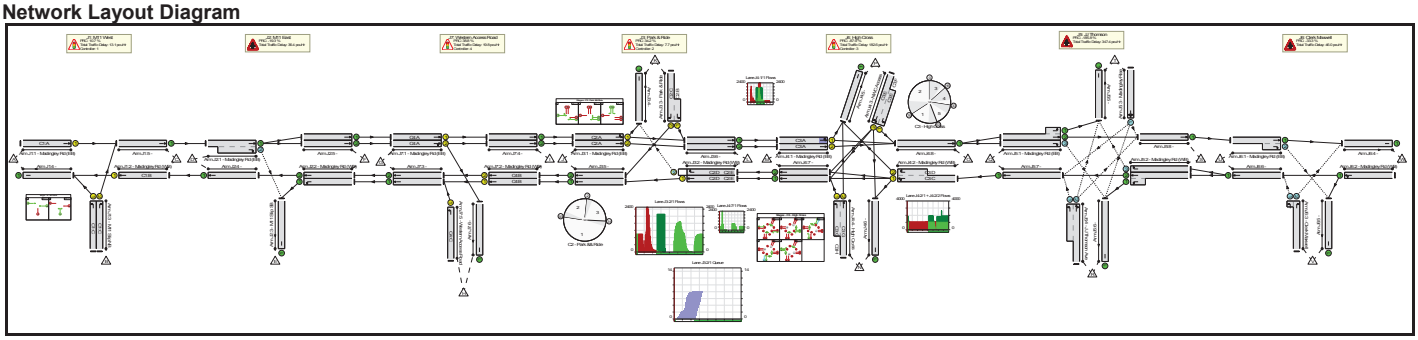
Stage	1	2
Duration	57	53
Change Point	31	93

Full Input Data And Results

Signal Timings Diagram



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	-	-	**N/A**	-	-		-	-	-	-	-	-	**257.2%**
J1: M11 West	-	-	**N/A**	-	-		-	-	-	-	-	-	**81.3%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C1:A		1	63	-	363	2055	1096	33.1%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C1:B		1	63	-	830	1915	1021	81.3%
3/1	M11 Slip NB Left	U	N/A	N/A	C1:C		1	47	-	511	1781	712	71.7%
3/2	M11 Slip NB Right	U	N/A	N/A	C1:C		1	47	-	373	1741	696	53.6%
4/1		U	N/A	N/A	-		-	-	-	1341	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	736	Inf	Inf	0.0%
J2: M11 East	-	-	**N/A**	-	-		-	-	-	-	-	-	**107.4%**
1/1+1/2	Madingley Rd (EB) Right Ahead	U+O	N/A	N/A	-		-	-	-	738	2000: Inf	384+304	107.4 : 107.4%
2/1	Madingley Rd (WB) Left	U	N/A	N/A	-		-	-	-	896	1800	1800	49.8%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	-		-	-	-	830	1800	1800	46.1%
3/1	M11 Slip SB	U	N/A	N/A	-		-	-	-	1222	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	830	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	206	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	206	Inf	Inf	0.0%
J3: Park && Ride	-	-	**N/A**	-	-		-	-	-	-	-	-	**67.1%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C2:A		1	57	-	228	1903	920	24.8%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C2:A		1	57	-	383	1915	926	41.4%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C2:D	C2:E	1	86	24	885	2105	1526	42.5%

Full Input Data And Results

2/2	Madingley Rd (WB) Right	O	N/A	N/A	C2:D	C2:E	1	86	24	29	1854	726	2.8%
3/2+3/1	Park & Ride Right Left	U	N/A	N/A	C2:C C2:B		1	24	-	285	1781:1741	322+103	67.1 : 67.1%
4/1		U	N/A	N/A	-		-	-	-	43	Inf	Inf	0.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	885	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	216	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	283	Inf	Inf	0.0%
6/2	Ahead	U	N/A	N/A	-		-	-	-	383	Inf	Inf	0.0%
J4: High Cross	-	-	**N/A**	-	-		-	-	-	-	-	-	**169.1%**
1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	C3:A		1	41	-	460	1871	655	70.2%
1/2	Madingley Rd (EB) Ahead	U	N/A	N/A	C3:A		1	41	-	202	2105	737	27.4%
2/1+2/2	Madingley Rd (WB) Right Left Ahead	U	N/A	N/A	C3:C C3:D		1	63:36	-	1220	1949:1828	547+353	118.9 : 118.9%
3/2+3/1	NWC Access Ahead Right Left	U	N/A	N/A	C3:E	C3:F	1	7	0	304	1889:1687	126+61	169.1 : 148.8%
4/2+4/1	High Cross Ahead Left	U	N/A	N/A	C3:G	C3:H	1	10:21	11	74	2155:2033	198+220	17.7 : 17.7%
5/1		U	N/A	N/A	-		-	-	-	973	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	119	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%
7/2	Ahead	U	N/A	N/A	-		-	-	-	418	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	293	Inf	Inf	0.0%
J5: JJ Thomson	-	-	**N/A**	-	-		-	-	-	-	-	-	**257.2%**
1/2+1/1	Madingley Rd (EB) Left Ahead	U	N/A	N/A	-		-	-	-	274	1915:1741	1877+35	13.6 : 13.6%
1/3	Madingley Rd (EB) Right	O	N/A	N/A	-		-	-	-	31	1741	507	5.8%
2/2+2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	1013	1915:1741	1779+124	51.6 : 51.6%

Full Input Data And Results

2/3	Madingley Rd (WB) Right	O	N/A	N/A	-		-	-	-	9	850	759	1.1%
3/1	Madingley Rise Ahead Right Left	O	N/A	N/A	-		-	-	-	110	1915	370	29.7%
4/2+4/1	JJ Thomson Ave Ahead Left Right	O	N/A	N/A	-		-	-	-	979	1915:1915	306+74	257.2 : 257.2%
5/1		U	N/A	N/A	-		-	-	-	22	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	101	Inf	Inf	0.0%
7/1	Ahead	U	N/A	N/A	-		-	-	-	1197	Inf	Inf	0.0%
8/1	Ahead	U	N/A	N/A	-		-	-	-	1096	Inf	Inf	0.0%
J6: Clerk Maxwell	-	-	**N/A**	-	-		-	-	-	-	-	-	**120.0%**
1/1+1/2	Madingley Rd (EB) Ahead Right	U+O	N/A	N/A	-		-	-	-	1099	1800: Inf	1799+7	60.9 : 60.9%
2/1	Madingley Rd (WB) Left Ahead	U	N/A	N/A	-		-	-	-	964	1800	1800	53.6%
3/2+3/1	Clerk Maxwell Right Left	O	N/A	N/A	-		-	-	-	443	600:1940	189+180	120.0 : 120.0%
4/1		U	N/A	N/A	-		-	-	-	1322	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	51	Inf	Inf	0.0%
6/1	Ahead	U	N/A	N/A	-		-	-	-	1133	Inf	Inf	0.0%
J7: Western Access Road	-	-	**N/A**	-	-		-	-	-	-	-	-	**64.8%**
1/1	Madingley Rd (EB) Ahead	U	N/A	N/A	C4:A		1	57	-	154	1915	926	16.6%
1/2	Madingley Rd (EB) Ahead Right	U	N/A	N/A	C4:A		1	57	-	550	2055	993	55.4%
2/1	Madingley Rd (WB) Ahead	U	N/A	N/A	C4:B		1	53	-	547	1915	862	63.5%
2/2	Madingley Rd (WB) Ahead	U	N/A	N/A	C4:B		1	53	-	597	2055	925	64.6%
3/1	Ahead	U	N/A	N/A	-		-	-	-	1147	Inf	Inf	0.0%
3/2	Ahead	U	N/A	N/A	-		-	-	-	597	Inf	Inf	0.0%
4/1	Ahead	U	N/A	N/A	-		-	-	-	154	Inf	Inf	0.0%

Full Input Data And Results

4/2	Ahead	U	N/A	N/A	-		-	-	-	456	Inf	Inf	0.0%
5/1	Western Access Road Left	U	N/A	N/A	C4:C		1	57	-	600	1915	926	64.8%
6/1		U	N/A	N/A	-		-	-	-	94	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	**-**	**-**	**1970**	**5**	**0**	**120.0**	**532.9**	**0.0**	**652.9**	**-**	**-**	**-**	**-**
J1: M11 West	**-**	**-**	**0**	**0**	**0**	**8.9**	**4.2**	**0.0**	**13.1**	**-**	**-**	**-**	**-**
1/1	363	363	-	-	-	1.6	0.2	-	1.8	18.3	6.9	0.2	7.1
2/1	830	830	-	-	-	0.2	2.1	-	2.3	9.9	10.1	2.1	12.3
3/1	511	511	-	-	-	4.3	1.3	-	5.6	39.1	14.2	1.3	15.4
3/2	373	373	-	-	-	2.8	0.6	-	3.4	33.0	9.4	0.6	10.0
4/1	1341	1341	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	736	736	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: M11 East	**-**	**-**	**304**	**0**	**0**	**4.3**	**32.2**	**0.0**	**36.4**	**-**	**-**	**-**	**-**
1/1+1/2	738	716	304	0	0	3.0	31.2	-	34.2	166.7	32.2	31.2	63.5
2/1	896	896	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
2/2	830	830	-	-	-	1.3	0.4	-	1.8	7.7	26.1	0.4	26.6
3/1	1200	1200	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	830	830	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	206	206	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	206	206	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J3: Park && Ride	**-**	**-**	**15**	**5**	**0**	**5.7**	**1.9**	**0.0**	**7.7**	**-**	**-**	**-**	**-**
1/1	228	228	-	-	-	0.1	0.2	-	0.3	4.8	4.9	0.2	5.0
1/2	383	383	-	-	-	0.4	0.4	-	0.8	7.3	0.9	0.4	1.2
2/1	648	648	-	-	-	1.8	0.4	-	2.2	12.1	8.2	0.4	8.6
2/2	21	21	15	5	0	0.0	0.0	0.0	0.1	11.1	0.2	0.0	0.2
3/2+3/1	285	285	-	-	-	3.3	1.0	-	4.3	54.9	6.9	1.0	7.9
4/1	35	35	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	648	648	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	216	216	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

6/1	283	283	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	383	383	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: High Cross	**-**	**-**	**0**	**0**	**0**	**33.2**	**149.4**	**0.0**	**182.6**	**-**	**-**	**-**	**-**
1/1	460	460	-	-	-	1.5	1.2	-	2.6	20.7	5.7	1.2	6.9
1/2	202	202	-	-	-	0.7	0.2	-	0.9	15.5	1.2	0.2	1.4
2/1+2/2	1070	900	-	-	-	19.5	88.2	-	107.7	362.3	38.1	88.2	126.3
3/2+3/1	304	202	-	-	-	10.6	59.7	-	70.3	832.8	13.1	59.7	72.8
4/2+4/1	74	74	-	-	-	0.9	0.1	-	1.0	50.6	1.1	0.1	1.2
5/1	848	848	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	82	82	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	335	335	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	296	296	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	278	278	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J5: JJ Thomson	**-**	**-**	**909**	**0**	**0**	**46.5**	**300.8**	**0.0**	**347.4**	**-**	**-**	**-**	**-**
1/2+1/1	260	260	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
1/3	29	29	29	0	0	0.0	0.0	-	0.0	3.8	0.0	0.0	0.0
2/2+2/1	981	981	-	-	-	0.0	0.5	-	0.5	2.0	0.0	0.5	0.5
2/3	9	9	9	0	0	0.0	0.0	-	0.0	2.4	0.0	0.0	0.0
3/1	110	110	110	0	0	0.0	0.2	-	0.2	6.9	0.0	0.2	0.2
4/2+4/1	979	381	761	0	0	46.5	300.0	-	346.5	1274.2	87.8	300.0	387.8
5/1	17	17	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	97	97	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	1050	1050	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	605	605	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J6: Clerk Maxwell	**-**	**-**	**743**	**0**	**0**	**5.0**	**41.0**	**0.0**	**46.0**	**-**	**-**	**-**	**-**
1/1+1/2	1099	1099	4	0	0	0.0	0.8	-	0.8	2.5	0.0	0.8	0.8
2/1	964	964	-	-	-	0.0	0.6	-	0.6	2.2	0.0	0.6	0.6
3/2+3/1	443	369	739	0	0	5.0	39.7	-	44.6	362.8	31.9	39.7	71.6

Full Input Data And Results

4/1	1284	1284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	51	51	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1097	1097	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J7: Western Access Road	**-**	**-**	**0**	**0**	**0**	**16.4**	**3.4**	**0.0**	**19.8**	**-**	**-**	**-**	**-**
1/1	154	154	-	-	-	1.0	0.1	-	1.1	26.2	3.9	0.1	4.0
1/2	550	550	-	-	-	3.3	0.6	-	4.0	25.9	12.8	0.6	13.5
2/1	547	547	-	-	-	3.9	0.9	-	4.7	31.1	14.0	0.9	14.8
2/2	597	597	-	-	-	4.2	0.9	-	5.1	31.0	15.4	0.9	16.3
3/1	1147	1147	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/2	597	597	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	154	154	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	456	456	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	600	600	-	-	-	3.9	0.9	-	4.8	28.8	15.0	0.9	15.9
6/1	94	94	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 - M11 West	PRC for Signalled Lanes (%):	10.7	Total Delay for Signalled Lanes (pcuHr):	13.10	Cycle Time (s): 120
C2 - Park && Ride	PRC for Signalled Lanes (%):	34.2	Total Delay for Signalled Lanes (pcuHr):	7.66	Cycle Time (s): 120
C3 - High Cross	PRC for Signalled Lanes (%):	-87.9	Total Delay for Signalled Lanes (pcuHr):	182.60	Cycle Time (s): 120
C4 - Western Access Road	PRC for Signalled Lanes (%):	38.8	Total Delay for Signalled Lanes (pcuHr):	19.76	Cycle Time (s): 120
	PRC Over All Lanes (%):	-185.8	Total Delay Over All Lanes(pcuHr):	652.92	

Appendix 15.3 - 2031 Madingley Mulch Junction Capacity Assessments

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 2031 DM Madingley Mulch Rbout - Arm E Adjusted - St Neots Rd Adjusted.j9
Path: J:\31500 West Cambridge\Junctions 9\2017 Work\Madingley Mulch Roundabout - Revised\2031 DM
Report generation date: 05/06/2017 08:55:31

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
2031 DM Adj										
Arm 1	0.1	3.32	0.09	A	8.92	0.1	3.05	0.08	A	9.46
Arm 2	0.7	3.70	0.41	A		4.8	11.80	0.83	B	
Arm 3	0.1	2.84	0.07	A		0.1	3.77	0.09	A	
Arm 5	4.0	13.45	0.80	B		1.6	6.71	0.61	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/05/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\pcullen
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Generated on 05/06/2017 08:55:59 using Junctions 9 (9.0.1.4646)

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75		✓		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2031 DM Adj	AM	ONE HOUR	08:00	09:30	15	✓
D2	2031 DM Adj	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2031 DM Adj, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	8.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Church Ln	
2	Madingley Rd	
3	St Neots Rd	
4	A428 On-slip	
5	A428 Off-slip	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.00	8.00	13.0	24.5	76.0	10.0	
2	4.00	8.00	10.0	27.0	76.0	10.0	
3	3.50	6.00	34.0	25.0	76.0	20.0	
4							✓
5	3.65	4.50	7.0	25.0	76.0	5.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.503	1713
2	0.530	1887
3	0.500	1748
4		
5	0.462	1416

The slope and intercept shown above include any corrections and adjustments.

Generated on 05/06/2017 08:55:59 using Junctions 9 (9.0.1.4646)

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2031 DM Adj	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	97	100.000
2		ONE HOUR	✓	652	100.000
3		ONE HOUR	✓	91	100.000
4					
5		ONE HOUR	✓	994	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	23	43	31	0
	2	17	1	81	553	0
	3	61	0	4	26	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	145	717	129	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	5	5	4	0
	2	6	0	6	8	0
	3	2	10	33	4	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	1	7	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.09	3.32	0.1	A	89	134	6.88	3.09	0.08	6.88	3.09
2	0.41	3.70	0.7	A	598	897	49.67	3.32	0.55	49.67	3.32
3	0.07	2.84	0.1	A	84	125	5.64	2.70	0.06	5.64	2.70
4											
5	0.80	13.45	4.0	B	912	1368	206.54	9.06	2.29	206.58	9.06

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	73	18	639	1391	0.052	73	167	0.0	0.1	2.857	A
2	491	123	157	1803	0.272	489	554	0.0	0.4	2.945	A
3	69	17	454	1521	0.045	68	193	0.0	0.0	2.568	A
4			62				460				
5	748	187	62	1387	0.539	743	0	0.0	1.2	5.836	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	87	22	765	1328	0.066	87	200	0.1	0.1	3.037	A
2	586	147	188	1787	0.328	586	664	0.4	0.5	3.225	A
3	82	20	543	1476	0.055	82	231	0.0	0.1	2.674	A
4			75				551				
5	894	223	75	1382	0.647	891	0	1.2	1.9	7.668	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	107	27	934	1243	0.086	107	244	0.1	0.1	3.315	A
2	718	179	230	1765	0.407	717	810	0.5	0.7	3.696	A
3	100	25	665	1415	0.071	100	282	0.1	0.1	2.836	A
4			91				674				
5	1094	274	91	1374	0.797	1087	0	1.9	3.9	12.820	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	107	27	940	1240	0.086	107	245	0.1	0.1	3.324	A
2	718	179	231	1764	0.407	718	816	0.7	0.7	3.703	A
3	100	25	666	1415	0.071	100	283	0.1	0.1	2.837	A
4			91				675				
5	1094	274	91	1374	0.797	1094	0	3.9	4.0	13.454	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	87	22	775	1323	0.066	87	202	0.1	0.1	3.048	A
2	586	147	190	1786	0.328	587	672	0.7	0.5	3.234	A
3	82	20	545	1476	0.055	82	232	0.1	0.1	2.678	A
4			75				552				
5	894	223	75	1382	0.647	902	0	4.0	2.0	8.010	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	73	18	645	1388	0.053	73	168	0.1	0.1	2.867	A
2	491	123	159	1803	0.272	491	560	0.5	0.4	2.956	A
3	69	17	456	1520	0.045	69	194	0.1	0.0	2.571	A
4			63				462				
5	748	187	63	1387	0.539	751	0	2.0	1.2	5.976	A

Queueing Delay Results for each time segment

08:00 - 08:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.85	0.06	2.857	A	A
2	5.90	0.39	2.945	A	A
3	0.72	0.05	2.568	A	A
4					
5	17.41	1.16	5.836	A	A

08:15 - 08:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.09	0.07	3.037	A	A
2	7.72	0.51	3.225	A	A
3	0.90	0.06	2.674	A	A
4					
5	26.94	1.80	7.668	A	A

08:30 - 08:45

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.45	0.10	3.315	A	A
2	10.79	0.72	3.696	A	A
3	1.17	0.08	2.836	A	A
4					
5	52.48	3.50	12.820	B	B

08:45 - 09:00

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.47	0.10	3.324	A	A
2	11.03	0.74	3.703	A	A
3	1.18	0.08	2.837	A	A
4					
5	58.92	3.93	13.454	B	B

09:00 - 09:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.13	0.08	3.048	A	A
2	8.07	0.54	3.234	A	A
3	0.93	0.06	2.678	A	A
4					
5	31.36	2.09	8.010	A	A

09:15 - 09:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.88	0.06	2.867	A	A
2	6.16	0.41	2.956	A	A
3	0.74	0.05	2.571	A	A
4					
5	19.44	1.30	5.976	A	A

Generated on 05/06/2017 08:55:59 using Junctions 9 (9.0.1.4646)

2031 DM Adj, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	9.46	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2031 DM Adj	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	94	100.000
2		ONE HOUR	✓	1378	100.000
3		ONE HOUR	✓	90	100.000
4					
5		ONE HOUR	✓	767	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	1	10	30	53	0
	2	16	0	195	1167	0
	3	33	0	0	57	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	12	737	18	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	0	0	2	0
	2	7	0	4	2	0
	3	0	3	0	2	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	0	2	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.08	3.05	0.1	A	86	129	6.18	2.87	0.07	6.18	2.87
2	0.83	11.80	4.8	B	1264	1897	238.26	7.54	2.65	238.29	7.54
3	0.09	3.77	0.1	A	83	124	6.98	3.38	0.08	6.98	3.38
4											
5	0.61	6.71	1.6	A	704	1056	97.04	5.51	1.08	97.05	5.52

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	71	18	566	1428	0.050	71	46	0.0	0.1	2.681	A
2	1037	259	77	1846	0.562	1032	560	0.0	1.3	4.498	A
3	68	17	927	1284	0.053	68	182	0.0	0.1	2.995	A
4			37				957				
5	577	144	37	1399	0.413	575	0	0.0	0.7	4.437	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	678	1372	0.062	84	56	0.1	0.1	2.827	A
2	1239	310	92	1838	0.674	1236	670	1.3	2.1	6.083	A
3	81	20	1109	1193	0.068	81	218	0.1	0.1	3.277	A
4			45				1145				
5	690	172	45	1395	0.494	688	0	0.7	1.0	5.181	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	103	26	829	1296	0.080	103	68	0.1	0.1	3.052	A
2	1517	379	112	1827	0.830	1507	820	2.1	4.7	11.145	B
3	99	25	1353	1071	0.093	99	266	0.1	0.1	3.749	A
4			55				1397				
5	844	211	55	1391	0.607	842	0	1.0	1.5	6.661	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	103	26	831	1295	0.080	103	68	0.1	0.1	3.055	A
2	1517	379	112	1827	0.830	1517	822	4.7	4.8	11.795	B
3	99	25	1361	1067	0.093	99	267	0.1	0.1	3.765	A
4			55				1405				
5	844	211	55	1391	0.607	844	0	1.5	1.6	6.714	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	681	1370	0.062	85	56	0.1	0.1	2.831	A
2	1239	310	92	1838	0.674	1249	674	4.8	2.2	6.370	A
3	81	20	1121	1187	0.068	81	220	0.1	0.1	3.297	A
4			45				1157				
5	690	172	45	1395	0.494	692	0	1.6	1.0	5.233	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	71	18	570	1426	0.050	71	47	0.1	0.1	2.687	A
2	1037	259	77	1846	0.562	1041	563	2.2	1.3	4.593	A
3	68	17	934	1281	0.053	68	183	0.1	0.1	3.007	A
4			38				964				
5	577	144	38	1399	0.413	579	0	1.0	0.7	4.481	A

Queueing Delay Results for each time segment

17:00 - 17:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.78	0.05	2.681	A	A
2	18.74	1.25	4.498	A	A
3	0.83	0.06	2.995	A	A
4					
5	10.33	0.69	4.437	A	A

17:15 - 17:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.98	0.07	2.827	A	A
2	29.78	1.99	6.083	A	A
3	1.09	0.07	3.277	A	A
4					
5	14.38	0.96	5.181	A	A

17:30 - 17:45

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.30	0.09	3.052	A	A
2	63.24	4.22	11.145	B	B
3	1.52	0.10	3.749	A	A
4					
5	22.29	1.49	6.661	A	A

17:45 - 18:00

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.31	0.09	3.055	A	A
2	71.51	4.77	11.795	B	B
3	1.55	0.10	3.765	A	A
4					
5	23.34	1.56	6.714	A	A

18:00 - 18:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.01	0.07	2.831	A	A
2	34.41	2.29	6.370	A	A
3	1.13	0.08	3.297	A	A
4					
5	15.59	1.04	5.233	A	A

18:15 - 18:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.80	0.05	2.687	A	A
2	20.59	1.37	4.593	A	A
3	0.86	0.06	3.007	A	A
4					
5	11.10	0.74	4.481	A	A

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 2031 DS Madingley Mulch Rbout - Arm E Adjusted - St Neots Rd Adjusted.j9
Path: J:\31500 West Cambridge\Junctions 9\2017 Work\Madingley Mulch Roundabout - Revised\2031 DS
Report generation date: 05/06/2017 08:58:05

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
2031 DS Adj										
Arm 1	0.1	3.45	0.09	A	12.05	0.1	3.06	0.08	A	11.69
Arm 2	0.7	3.71	0.41	A		6.5	15.36	0.87	C	
Arm 3	0.1	2.84	0.07	A		0.1	3.89	0.10	A	
Arm 5	5.9	18.72	0.86	C		1.6	6.74	0.61	A	

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	19/05/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	PBA\pcullen
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Generated on 05/06/2017 08:58:37 using Junctions 9 (9.0.1.4646)

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75		✓		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2031 DS Adj	AM	ONE HOUR	08:00	09:30	15	✓
D2	2031 DS Adj	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2031 DS Adj, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	12.05	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Church Ln	
2	Madingley Rd	
3	St Neots Rd	
4	A428 On-slip	
5	A428 Off-slip	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.00	8.00	13.0	24.5	76.0	10.0	
2	4.00	8.00	10.0	27.0	76.0	10.0	
3	3.50	6.00	34.0	25.0	76.0	20.0	
4							✓
5	3.65	4.50	7.0	25.0	76.0	5.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.503	1713
2	0.530	1887
3	0.500	1748
4		
5	0.462	1416

The slope and intercept shown above include any corrections and adjustments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2031 DS Adj	AM	ONE HOUR	08:00	09:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	97	100.000
2		ONE HOUR	✓	654	100.000
3		ONE HOUR	✓	91	100.000
4					
5		ONE HOUR	✓	1068	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	0	23	43	31	0
	2	17	1	81	555	0
	3	61	0	4	26	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	145	791	129	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	5	5	4	0
	2	6	0	6	8	0
	3	2	10	33	4	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	1	7	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.09	3.45	0.1	A	89	134	7.08	3.18	0.08	7.08	3.18
2	0.41	3.71	0.7	A	600	900	49.90	3.33	0.55	49.90	3.33
3	0.07	2.84	0.1	A	84	125	5.64	2.70	0.06	5.64	2.70
4											
5	0.86	18.72	5.9	C	980	1470	275.16	11.23	3.06	275.21	11.23

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	73	18	694	1364	0.054	73	167	0.0	0.1	2.918	A
2	492	123	157	1803	0.273	491	609	0.0	0.4	2.949	A
3	69	17	455	1520	0.045	68	192	0.0	0.0	2.569	A
4			62				461				
5	804	201	62	1387	0.580	798	0	0.0	1.4	6.373	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	87	22	831	1295	0.067	87	200	0.1	0.1	3.120	A
2	588	147	188	1787	0.329	587	730	0.4	0.5	3.229	A
3	82	20	545	1475	0.055	82	231	0.0	0.1	2.676	A
4			75				552				
5	960	240	75	1382	0.695	957	0	1.4	2.3	8.835	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	107	27	1011	1204	0.089	107	244	0.1	0.1	3.432	A
2	720	180	230	1765	0.408	719	888	0.5	0.7	3.702	A
3	100	25	668	1414	0.071	100	281	0.1	0.1	2.838	A
4			91				676				
5	1176	294	91	1374	0.856	1163	0	2.3	5.5	17.000	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	107	27	1021	1199	0.089	107	245	0.1	0.1	3.448	A
2	720	180	231	1764	0.408	720	896	0.7	0.7	3.711	A
3	100	25	668	1414	0.071	100	283	0.1	0.1	2.839	A
4			91				677				
5	1176	294	91	1374	0.856	1175	0	5.5	5.9	18.722	C

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	87	22	846	1287	0.068	87	202	0.1	0.1	3.142	A
2	588	147	191	1786	0.329	589	743	0.7	0.5	3.240	A
3	82	20	546	1475	0.055	82	233	0.1	0.1	2.680	A
4			75				554				
5	960	240	75	1382	0.695	974	0	5.9	2.5	9.578	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	73	18	702	1360	0.054	73	168	0.1	0.1	2.928	A
2	492	123	159	1803	0.273	493	617	0.5	0.4	2.960	A
3	69	17	457	1519	0.045	69	194	0.1	0.0	2.571	A
4			63				463				
5	804	201	63	1387	0.580	808	0	2.5	1.5	6.588	A

Queueing Delay Results for each time segment

08:00 - 08:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.87	0.06	2.918	A	A
2	5.92	0.39	2.949	A	A
3	0.72	0.05	2.569	A	A
4					
5	20.34	1.36	6.373	A	A

08:15 - 08:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.12	0.07	3.120	A	A
2	7.76	0.52	3.229	A	A
3	0.90	0.06	2.676	A	A
4					
5	32.96	2.20	8.835	A	A

08:30 - 08:45

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.50	0.10	3.432	A	A
2	10.84	0.72	3.702	A	A
3	1.17	0.08	2.838	A	A
4					
5	72.35	4.82	17.000	C	B

08:45 - 09:00

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.53	0.10	3.448	A	A
2	11.08	0.74	3.711	A	A
3	1.18	0.08	2.839	A	A
4					
5	85.89	5.73	18.722	C	B

09:00 - 09:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.16	0.08	3.142	A	A
2	8.11	0.54	3.240	A	A
3	0.93	0.06	2.680	A	A
4					
5	40.50	2.70	9.578	A	A

09:15 - 09:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.90	0.06	2.928	A	A
2	6.19	0.41	2.960	A	A
3	0.74	0.05	2.571	A	A
4					
5	23.11	1.54	6.588	A	A

Generated on 05/06/2017 08:58:37 using Junctions 9 (9.0.1.4646)

2031 DS Adj, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	1,2,3,4,5	11.69	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2031 DS Adj	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	94	100.000
2		ONE HOUR	✓	1446	100.000
3		ONE HOUR	✓	90	100.000
4					
5		ONE HOUR	✓	769	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
		1	2	3	4	5
From	1	1	10	30	53	0
	2	16	0	205	1225	0
	3	33	0	0	57	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	12	739	18	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1	2	3	4	5
From	1	0	0	0	2	0
	2	7	0	4	2	0
	3	0	3	0	2	0
	4	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	5	0	2	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.08	3.06	0.1	A	86	129	6.19	2.87	0.07	6.19	2.87
2	0.87	15.36	6.5	C	1327	1990	296.57	8.94	3.30	296.60	8.94
3	0.10	3.89	0.1	A	83	124	7.16	3.47	0.08	7.16	3.47
4											
5	0.61	6.74	1.6	A	706	1058	97.58	5.53	1.08	97.59	5.53

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	71	18	567	1427	0.050	71	46	0.0	0.1	2.682	A
2	1089	272	77	1846	0.590	1083	561	0.0	1.5	4.790	A
3	68	17	970	1263	0.054	68	190	0.0	0.1	3.049	A
4			37				1000				
5	579	145	37	1399	0.414	576	0	0.0	0.7	4.445	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	679	1371	0.062	84	56	0.1	0.1	2.829	A
2	1300	325	92	1838	0.707	1296	672	1.5	2.4	6.747	A
3	81	20	1161	1167	0.069	81	227	0.1	0.1	3.354	A
4			45				1197				
5	691	173	45	1395	0.495	690	0	0.7	1.0	5.194	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	103	26	831	1295	0.080	103	68	0.1	0.1	3.055	A
2	1592	398	112	1827	0.871	1577	822	2.4	6.2	13.938	B
3	99	25	1413	1041	0.095	99	276	0.1	0.1	3.869	A
4			55				1457				
5	847	212	55	1391	0.609	844	0	1.0	1.6	6.687	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	103	26	833	1294	0.080	103	68	0.1	0.1	3.058	A
2	1592	398	112	1827	0.871	1591	825	6.2	6.5	15.364	C
3	99	25	1425	1035	0.096	99	278	0.1	0.1	3.893	A
4			55				1469				
5	847	212	55	1391	0.609	847	0	1.6	1.6	6.741	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	85	21	683	1369	0.062	85	56	0.1	0.1	2.833	A
2	1300	325	92	1838	0.707	1316	675	6.5	2.5	7.261	A
3	81	20	1178	1159	0.070	81	230	0.1	0.1	3.382	A
4			45				1214				
5	691	173	45	1395	0.495	694	0	1.6	1.0	5.247	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	71	18	571	1425	0.050	71	47	0.1	0.1	2.686	A
2	1089	272	77	1846	0.590	1093	565	2.5	1.5	4.919	A
3	68	17	979	1258	0.054	68	191	0.1	0.1	3.061	A
4			38				1009				
5	579	145	38	1399	0.414	580	0	1.0	0.7	4.490	A

Queueing Delay Results for each time segment

17:00 - 17:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.78	0.05	2.682	A	A
2	20.88	1.39	4.790	A	A
3	0.84	0.06	3.049	A	A
4					
5	10.38	0.69	4.445	A	A

17:15 - 17:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.98	0.07	2.829	A	A
2	34.40	2.29	6.747	A	A
3	1.11	0.07	3.354	A	A
4					
5	14.45	0.96	5.194	A	A

17:30 - 17:45

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.30	0.09	3.055	A	A
2	80.96	5.40	13.938	B	B
3	1.57	0.10	3.869	A	A
4					
5	22.43	1.50	6.687	A	A

17:45 - 18:00

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.32	0.09	3.058	A	A
2	95.78	6.39	15.364	C	B
3	1.60	0.11	3.893	A	A
4					
5	23.49	1.57	6.741	A	A

18:00 - 18:15

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	1.01	0.07	2.833	A	A
2	41.34	2.76	7.261	A	A
3	1.16	0.08	3.382	A	A
4					
5	15.68	1.05	5.247	A	A

18:15 - 18:30

Arm	Queueing total delay (PCU-min)	Queueing rate of delay (PCU-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service	Signalised level of service
1	0.80	0.05	2.686	A	A
2	23.19	1.55	4.919	A	A
3	0.88	0.06	3.061	A	A
4					
5	11.15	0.74	4.490	A	A

Appendix 17.1 - Details of the 2021 Transport Strategy

Introduction

Whilst the assessment of the Initial Phase of West Cambridge shows that the traffic impact when compared to that consented is limited, a strategy has been developed reflecting the strategy for the Full Development.

This Appendix provides details of management measures shown on Figure 17.1, and referred to within Section 17 - Initial Phase as follows:

i) a summary of the transport management strategy measures already assumed within the modelled output;

ii) a summary of the proposed further transport management measures;

iii) details and consideration of the effects of these further transport management measures:

- to increase the use of improved pedestrian and cycle facilities;
- to encourage greater use of the enhanced public transport;
- physical interventions to preserve conditions and / or enhance capacity for all modes across the network; and
- to manage vehicle generation.

Summary of the transport management strategy incorporated within the modelling

As detailed in Section 12, the Initial Phase 2021 West Cambridge Do Something option test modelling incorporates the benefit of the proposed Development travel demand management strategy (summarised in Section 9). The measures inherent in that assessment include:

i) the new residential offer in the area - the new market housing being provided at Darwin Green (to the north of Huntingdon Road); as well as the additional units at the North West Cambridge Development, located immediately to the north of Madingley Road – with student accommodation, market housing, and Key Worker housing for University staff;

ii) the Framework Travel Plan (see separate document);

iii) the proposed public transport strategy summarised in Section 7.

These measures were formulated in order to:

i) decrease the journey to work trip distance across the area by providing complementary land-uses;

ii) taking advantage of the conveniently located facilities on North West Cambridge – the retail, the primary education and the community facilities - that would reduce the need to travel elsewhere during the working day;

iii) provide regular bus services to popular destinations to provide for as many longer distance movements as possible;

iv) reduce and control the total vehicular trip generation associated with the Development.

As noted in Section 8, the proposed Initial Phase of Development car parking is lower than was originally consented for West Cambridge in 1999. As such, the Development vehicle trip generation – and hence the impact of the Initial Phase of Development would be lower than that consented and mitigated previously.

In addition to the travel demand management measures already included in the modelling exercise referred to in Section 12, there are further measures that could be implemented to reduce further and control the vehicular trip generation of the Development, to minimise vehicle impact on the surrounding network. These are described later in this section.

Summary of further transport management measures

It has been agreed in principle with the highway authorities that the following additional measures would, in combination, form part of the transport strategy for the Initial Phase of Development:

i) measures directed at maintaining and controlling a **reduced vehicle trip rate** across the strategic and local highway network – by applying a control on the car parking patronage across the Development; and

ii) a series of additional measures to improve conditions for **pedestrian and cyclists** – the proposed first phase of improvements to Pedestrian / Cyclist infrastructure.

Measures directed at controlling and reducing vehicular trip generation

The provision of appropriate levels of car parking within the Development, combined with a series of parking management measures to reinforce the efficacy of this approach, are central to the Development travel demand management strategy.

Within the context of this strategy, delivery of a high quality development is a fundamental pre-requisite and therefore under-provision of car parking within the Site with consequential detriment to the street scene should be avoided.

The Development car parking strategy would complement the range of other measures to manage demand and to enhance the attraction of non-car modes of transport, and would hence reduce the demand for car parking.

The proposed 2,570 car parking spaces for the Initial Phase of Development would be 580 spaces lower than the Consented car parking provision of 3,150 spaces - an 18% reduction in number. This lower provision is considered appropriate in the context of:

i) the reductions in demand for car travel that would result from the accessibility of Development to non-car modes

ii) other travel demand management measures; and

iii) the proposed mix of land uses.

Management of car parking within the Development

Management of car parking would reflect the University's Estate transport strategy, being delivered through a combination of provision, design and management measures.

Parking Provision

It is considered that the delivery of appropriate levels of parking - in the context of good design - would be self-policing, and hence reduce the need for active policing or other intervention by the University.

The proposed car parking strategy for the Development has been established with reference to data collected from the existing Development, and is lower than the parking provision consented in 1999. The Development parking provision levels have been set sufficiently robustly to ensure the delivery of a quality development whilst also contributing to achievement of the modal shift sought by the Area Action Plan.

Each individual Reserved Matters application will contain a Monitoring Review of the on-site Estate Car Parking Strategy Assessment across West Cambridge. This Review will reflect the Framework included in Appendix 8.2.

Design

As part of delivery of the reduced levels of car parking referred to above, the University would:

i) provide appropriate levels of car and cycle parking carefully located to contain inconsiderate parking, encourage non-car modes of travel - such as cycling - and avoid the need for unsightly double yellow lines to be applied retrospectively with the associated restrictive and hostile impact to the environment; and

ii) incorporate appropriate road widths for the Development street hierarchy - to ensure both that parking is focussed to designated locations, and that inconsiderate parking is so apparent and obvious to contain any transgression.

Management

The University will commit to apply and manage the agreed Parking Strategy on a long-term basis.

The University would implement a combination of car parking space allocation, control and monitoring measures. These would include:

i) control of parking on-site at West Cambridge will be enforced by the University's Motor Proctor;

ii) for the academic research land-uses, applying the agreed Travel Plan measures to their staff;

iii) for the academic research land uses, providing sufficient car parking spaces to an appropriate, agreed, level of parking;

iv) for the academic research areas, extending the University's centrally-controlled existing car parking permit scheme;

v) reviewing the occupation of the University's car parks;

vi) reviewing the need to support a residents-only controlled parking zone scheme or off-site car parking prohibition on the surrounding existing residential areas – such as Clerk Maxwell Road and Adams Road (see below);

vii) as part of the regular review of the Travel Plan, undertaking that the Travel Plan Co-ordinator review parking conditions throughout the Development, for all times of day and for all conditions.

Management of car parking off-site

As part of the holistic car parking strategy for the West Cambridge Development, the University commits both to monitor parking conditions on the local roads, particularly to the east of the Development to ensure no "fly-parking" – car parking migrating out from the residential elements of the Development.

As detailed in Section 6, the University will offer contributions towards the replacement of the existing on-street car parking along Clerk Maxwell Road with two mandatory cycle lanes as part of the proposed improvement to cycling infrastructure on this route.

Should conditions deteriorate on further surrounding existing roads due to increased car parking, the University will offer funding to support the establishment of on-street residents-only controlled car parking zones, or a parking prohibition, or another method to manage car parking.

A controlled car parking zone had been offered previously by the University as mitigation for North West Cambridge within the vicinity of that development. It is likely that any controlled car parking zone scheme offered as part of the West Cambridge mitigation measures would reflect this implementation.

Any such off-site car parking management scheme would be implemented in conjunction with the local residents, as well as the Joint Authorities.

Physical interventions to preserve and improve conditions

Measures will be provided locally to preserve and improve environmental conditions.

Madingley Road speed limit

To provide environmental enhancements and safety benefits in the locality of West Cambridge, the University will contribute towards the costs of implementing a reduction in the existing 40mph speed limit on Madingley Road. The lower vehicle speeds will provide benefit for existing users of Madingley Road, as well as for the pedestrians and cyclists generated by West Cambridge.

A 40mph speed limit is in force on Madingley Road adjacent to the West Cambridge Development between the M11 Junction 13 and the approaches to the JJ Thomson Avenue junction. Whilst this speed limit was appropriate when the traffic regulation order was originally applied, conditions along Madingley Road have changed significantly subsequently. With the implementation of the North West Cambridge Development and the West Cambridge Development proposals, Madingley Road will be increasingly used by pedestrians and cyclists. As such, a speed limit slower than 40mph is appropriate.

For the Initial Phase, it is likely that the section of Madingley Road to be the subject of the revised 30mph speed limit would include the Madingley Road / High Cross junction.

Road Safety Schemes

As identified in Section 3.9, the road safety assessment has identified three existing issues to vulnerable road users at:

i) the Madingley Road / Storey's Way priority junction;

ii) Madingley Road / Grange Road signalised junction; and

iii) Madingley Road / Cambridge Road crossroads.

To promote and encourage walking and cycling to West Cambridge in a safe manner, the University will work with Cambridgeshire County Council in promoting schemes, and contribute towards road safety measures to resolve these issues.

At the Madingley Road / Storey's Way junction, the scheme involves removing the existing physical islands which appear to form a constriction to movement. These will be replaced with at-grade carriageway construction, to extend the advisory cycle lane across the junction up to the dropped kerb to access the toucan to the east. This concept is shown on Figure 6.8.

The road safety scheme identified at Madingley Road / Grange Road junction would include works to:

i) extend the advanced stop line on both Madingley Road approaches to 5m;

ii) consider whether cycle "head-start" green times can be included within the traffic sign controls; and

iii) provide a road-side safety mirror on the traffic signal posts – this will both alert motorists of this issue, as well as making approaching cyclists more conspicuous to motorists.

To assist in resolving the existing safety issue at Madingley Road / Cambridge Road, the scheme would include:

i) review of the road marking scheme – including red centre line colouring;

ii) review of the advanced signage strategy; and

iii) vegetation maintenance.

Measures directed at improving conditions for Pedestrians and Cyclists

As detailed in Section 6, a comprehensive Walking and Cycle Strategy will be brought forward with the proposals for West Cambridge, in the context of the new development at the North West Cambridge and the surrounding existing Cycling infrastructure.

On-site Infrastructure

The Pedestrian and Cycle connections through the Development will both:

i) ensure quality accessibility and connectivity to the surrounding areas; and

ii) significantly enhance and improve the linkages between existing developments by providing direct quality links on desire lines.

The Site has been provided with permeable footways and cycleways across the Development, with Pedestrian crossings delivered on the site access roads along the desire lines:

i) on the North - South connections - between Madingley Road and Coton Path using High Cross, JJ Thomson Avenue and Clerk Maxwell Road. These links will be supported with enhanced crossings on Madingley Road;

ii) on the East - West Shared Space Link - to provide the main east-west spine for Pedestrians and Cyclists connecting Clerk Maxwell Road and High Cross with access to a number of plots and lower-hierarchy Cycle routes.

These footpaths and cycleways throughout the Development will create links to existing public rights of way, and Cycle routes.

To maintain their attractiveness, the proposed with-flow segregated Cycle tracks along the main routes through West Cambridge would be:

i) continuous, and as such retain priority over side road junctions and vehicular accesses to plots by the track being level when crossing the side road;

ii) designed to provide good inter-visibility between cyclists and motorists to provide each with sufficient time to assess the situation on the approach and enhance safety – as such, the proposed landscaping will be designed so these should not inhibit visibility on the approaches to the side roads;

iii) designed in the context of all vehicle routes being designed for a 20mph speed limit using passive speed management measures to create a safer and more attractive environment for Pedestrians and Cyclists;

A series of further measures will be implemented within the Development to encourage walking and cycling, including:

- footways being provided on both sides of the on-site streets and at the Site Access locations. Controlled crossing points would be provided, and traffic calming measures would be present to reduce traffic speed and to ease Pedestrian movement;

- high levels of quality cycle parking - at least to the adopted Cambridge Local Plan 2014 minimum cycle parking standards - will be provided within private covered, secure, lit and well-located areas at the destinations, as well as further provision through the Development;

- all major employers would be required to provide associated shower and changing room facilities for walkers and cyclists after their journeys; and

- the application of a cycle parking provision and management strategy - cycle parking will be provided as near as possible to the main entrance of the buildings, and will be covered by natural surveillance or CCTV.

Off-site Infrastructure

To enhance the existing Pedestrian and Cyclist connectivity further, the following pedestrian and cycle infrastructure enhancements will be provided by the Development:

- providing remedial measures to assist in resolving existing road safety issues on two adjacent junctions, disproportionally affecting cyclists;

- along the corridor to the north – to Observatory Drive; and

- along the corridor to the City Centre – along Coton Path, Adams Road and Burrell's Walk.

To provide an environmental enhancement in the locality of West Cambridge, the University will provide a contribution towards the costs of the necessary traffic regulation order to extend the 30mph speed limit along Madingley Road adjacent the West Cambridge Development, between the Madingley Road / High Cross junction and the approaches to the JJ Thomson Avenue junction. The lower vehicle speeds will provide benefit for existing users of Madingley Road, as well as for the pedestrians and cyclists generated by West Cambridge.

Conclusion

Collectively the measures to improve conditions for cyclists and pedestrians would be likely to increase the number of those choosing walking or cycling as their mode of travel.

Measures directed at enhancing Public Transport

The scale of the proposed Development means that there will be both a high quantum of demand for public transport, and a number of locations that will need to be connected to West Cambridge. New and enhanced bus services will be phased in to align with the Development quantum and consequent growth in demand.

This analysis of the home post code data of the current and potential occupiers of West Cambridge confirms that the service routes would both provide easy access to public transport for many, and would assist the commercial viability of these routes.

On-site Bus infrastructure

In order to facilitate an attractive bus service with good, safe headway through the Site and hence to users to the service, the following would be provided:

- high quality bus stops;
- bus priority measures - selected vehicle detection for buses through any traffic signal controlled junctions to improve the flow of buses or enable passengers to access facilities; and
- information and incentives.

Bus Strategy

As detailed in Section 7, a comprehensive Public Transport Strategy will be brought forward with the proposals for West Cambridge, the implementation of the agreed bus services by the University will reflect the emerging Development construction phasing. The proposed final Bus Service provision is summarised as follows:

- Citi 4: to be revised to divert from a section of Madingley Road to operate via West Cambridge. This will provide links to West Cambridge from the city centre and the A428 corridor. This would be subject to discussion with Stagecoach as the commercial operator of this service;
- Universal: increased frequency, potentially to every 10 minutes, and operation extended to Saturdays; and
- Arc Service: operation of a new hourly orbital service from West Cambridge via North West Cambridge, Darwin Green and the Science Park to Milton Park and Ride.

Conclusions

The provision of a quality bus strategy will encourage the use of bus to form a significant percentage of the mode share for short, medium, and longer distance trips, and would reflect local and national policy guidance and strategies.

Measures directed at enhancing travel demand management – the West Cambridge Framework Travel Plan

Car Clubs / Pool cars

The University of Cambridge currently operates a business account Car Club membership whereby University Departments and Institutes can book vehicles at any Car Club location. The Car Club vehicles are already located at the West Cambridge and the Old Addenbrooke's Sites, and the University is planning to locate further Car Club vehicles at other sites.

As part of corporate membership, University staff can also have a personal account for use outside of work, at the current cost of £30 per year.

Car Sharing

Two local car share data bases are readily available, including:

i) Cambridge University's car share database - https://camuni.liftshare.com/default.asp; and

ii) the Cambridgeshire Liftshare - www.CamShare.co.uk.

Both of these will be encouraged and promoted to match similar journeys.

A higher priority will be given to car drivers who regularly car share in the provision of on-site car parking permits.

Cycling

The following initiatives have been considered, and are discussed in more detail within the associated Framework Travel Plan document:

- Cycle Pools;
- "Cycle Buddy" schemes;
- Development of cycling services;
- Cycle training;
- Offer of discounted cycles and equipment; and
- Bus operator to provide cycle carries on buses.

Marketing and Promotion

Traditional tools of marketing and advertising (i.e. travel packs and leaflets) will be used in conjunction with measures that encourage a higher level of community involvement to create awareness and promote sustainable travel at the Development. This will be achieved using a number of techniques:

- recruiting Sustainable Travel Behaviour Champions;
- identifying influencers, communicators and networkers to create a sustainable working and educational culture in the Development;
- creating social networks within the community; and
- encouraging community participation through travel planning events.

Potential physical interventions directed at preserving highway capacity across the network

The capacity assessment of the junctions within the locality using the forecast worst case 2021 future year flow has identified that the Madingley Road / High Cross junction could require minor enhancements.

It is acknowledged that this future year assessment is overly robust, as the first-principles Transport Modelling assessment adopted for this development would represent a worst case - the methodology adopted to assess the future year flows would not assess likely reassignment effects across the network.

It is therefore proposed that a cyclic monitoring strategy is proposed. Should this survey work identify that conditions deteriorate significantly, a fund will be provided to be expended on these enhancements to ensure that any increase in movement can be contained.

To provide a screening, the monitoring would be undertaken biennially and consist of a classified turning and queue count for a day in an agreed neutral month, along with a queue survey. The first survey would be undertaken the first neutral month date after first occupation. These results would enable a better understanding of daily and hourly variation of flows along this route. Should issues be identified, then a higher intensity of surveys would be provided.

Summary

This Appendix 17.1 details the proposed measures to manage any residual transport impacts of the Initial Phase of Development in 2021.

It highlights that the University has developed a range of measures to manage the effects of the Initial Phase of development on the transport network, varying from “softer” to physical infrastructure improvements.

It is concluded that this suite of measures aimed at mode shift, demand management and improvement of conditions on the network would manage the transport effects of the Initial Phase of Development.

As such, it is concluded that the strategy to respond to these junction capacity issues along Madingley Road Corridor should rely upon strategic solutions, within the context of the existing local transport policy identified within Section 4.

Appendix 18.1 - Details of the 2031 Transport Strategy

Summary of the transport management strategy incorporated within the 2031 Full Development modelling

As detailed in Section 17, the West Cambridge Do Something option test modelling incorporates the benefit of the overall Development travel demand management strategy (summarised in Section 9), including:

i) the additional new residential offer in the area: the new market housing being provided at Darwin Green (to the north of Huntingdon Road); as well as the additional units at the North West Cambridge Development, located immediately to the north of Madingley Road – with student accommodation, market housing, and Key Worker housing for University staff;

ii) the continuing delivery of the Framework Travel Plan (see separate document);

iii) later elements of the phased public transport strategy summarised in Section 7. Particularly, this relates specifically to the Arc service providing regular connections between the Milton Park and Ride, and West Cambridge.

These measures were formulated in order to:

i) as a worst case maintain, or indeed to reduce the journey to work trip distance across the area by providing complementary land-uses;

ii) continue to take advantage of the conveniently located facilities on North West Cambridge – the retail, the primary education and the community facilities - that would reduce the need to travel elsewhere during the working day;

iii) provide further regular bus services to popular destinations to accommodate as many longer distance movements as possible; and

iv) reduce and control the total vehicular trip generation associated with the Development.

As noted in Section 8, the proposed car parking for the originally consented West Cambridge Development in 1999 was at a far higher rate than would be appropriate now. As such, whilst the quantum of development has increased, the Development-generated vehicle trip generation has not increased proportionately.

In addition to the travel demand management measures already included in the modelling exercise referred to in Section 12 and referred to in Section 17 for the Initial Phase of Development, there are a range of further measures that could be implemented to reduce further and control the vehicular trip generation of the Development, to minimise vehicle impact on the surrounding network. These potential options are shown on Figure 18.1, and are described later in this section.

Summary of further transport management measures

Any mitigation strategy for West Cambridge in 2031 has to be considered within the context of the Section 106 highway mitigation measures already delivered by the University for the Extant West Cambridge Development – as identified in Section 2.3 - and the likely 2031 flows identified in Section 13. This identifies that mitigation has already been provided for around 13% of the additional movements generated between the 2031 Do Minimum and Do Something scenarios.

The proposed mitigation strategy for West Cambridge in 2031 is formed by a series of measures minimising development transport impacts, as well as those responding to likely impacts on specific corridors.

It has been agreed in principle with the highway authorities that the following additional measures would, in combination, form part of the continuing transport strategy for West Cambridge by minimising development transport impacts:

i) measures directed at ensuring a **reduced vehicle trip rate** across the strategic and local highway network – by maintaining a control on the car parking patronage across the Development;

ii) measures directed at **demand management** across the network – the extension of the SCOOT and MOVA traffic signal optimisation to any potential traffic signal enhancements along Madingley Road to reduce any additional queuing and delays as a consequence of the Development;

iii) a series of further measures to improve conditions for **pedestrian and cyclists**.

Further details are contained in this section.

The worst case additional West Cambridge development-generated 2031 flows reported in Section 15 are focussed on the following corridors:

Table A18.1 – Additional traffic movements to West Cambridge

Corridor	AM / PM peak hour two-way flow	Most direct route into West Cambridge
A14 (North-West)	200 / 170	via Huntingdon Road and North West Cambridge
A14 (East) and A10 (North)	120 / 110	via Histon Road, Lady Margaret Road and Madingley Road (East)
East of Cambridge	100 / 40	via Grange Road and Madingley Road (East)
M11 (South)	190 / 190	via M11 Junction 13
A428 (West)	85 / 75	via Madingley Road and M11 Junction 13

West Cambridge forms a relatively small part of the emerging Cambridge Local Plan allocation, for which the Joint Authorities have developed strategic transport solutions to accommodate these movements. A coherent transport strategy for West Cambridge has to be considered within this context – West Cambridge cannot be expected to resolve these major issues independently, albeit that the University will assist in delivering part of this solution.

This section contains details of how the University would be willing to work with the Joint Highway Authorities to assist in delivering the strategic schemes for the surrounding area.

Measures directed at controlling and reducing vehicular trip generation

Management of car parking within the Development

As identified earlier, the provision of appropriate levels of car parking within the Development, combined with a series of parking management measures to reinforce the efficacy of this approach, are central to the Development travel demand management strategy. Within this context, the delivery of a high quality development is a fundamental pre-requisite and therefore under-provision of car parking within the Site with consequential detriment to the street scene should be avoided.

The Development car parking strategy would complement the range of other measures to manage demand and to enhance the attraction of non-car modes of transport, and would hence reduce the demand for car parking.

The measures to manage on-site car parking are identified in Appendix 17.

Each individual Reserved Matters application will contain a Monitoring Review of the on-site Estate Car Parking Strategy Assessment across West Cambridge, reflecting the Framework included in Appendix 8.2.

These measures will continue to be applied throughout the implementation of West Cambridge.

Management of car parking off-site

As part of the Phase 1 holistic car parking strategy for the West Cambridge Development, the University committed to monitor parking conditions on the local roads to ensure no “fly-parking” – car parking migrating out from the residential elements of the Development.

As detailed in Appendix 17, should conditions deteriorate on further surrounding existing roads due to increased car parking, as part of the Initial Phase of West Cambridge, the University will offer funding to support the establishment of on-street residents-only controlled car parking zones, or a parking prohibition, or another method to manage car parking.

Should this funding not have been expended during Phase 1, conditions would continue to be monitored at the start of subsequent phases of development, and the University would be willing to provide this Phase 1 funding to support the establishment of on-street residents-only controlled car parking zones, or a parking prohibition, to manage car parking.

Any such further off-site car parking management scheme would be implemented in conjunction with the local residents.

Physical interventions to preserve and improve conditions

Measures will be provided locally to preserve and improve environmental conditions.

Madingley Road speed limit

As detailed in Section 17, part of the Initial Phase transport management strategy is for the University to contribute towards the costs of implementing a first-stage reduction in the existing 40mph speed limit on Madingley Road adjacent the West Cambridge Development between the Madingley Road / High Cross and the approaches to the JJ Thomson Avenue junction.

The lower vehicle speeds will provide benefit for existing users of Madingley Road, as well as for the pedestrians and cyclists generated by West Cambridge

Reflecting the later implementation of the further Site Access and associated toucan crossing to the Western Access Road, the University will provide a further contribution towards the costs of the necessary traffic regulation order to implement a further speed limit extending further this speed limit.

Road Safety Schemes

As detailed in Section 17, as part of the Initial Phase transport management strategy, the University will contribute towards the costs of implementing three minor road safety enhancement schemes in the locality.

Measures directed at demand management

Measures have been considered to manage vehicle trip demand at sensitive locations of the network. These measures comprise the provision of traffic signal optimisation apparatus – a relatively low-cost technique to reduce the total queuing and delays at the signals along the Madingley Road Corridor.

A LINSIG assessment undertaken of the linked traffic signal controlled junctions along this Madingley Road Corridor – between the M1 Junction 13 Northbound Off Slip, to the High Cross Access to West Cambridge - predicts that these would continue to work within capacity in the 2021 Initial Phase Do Something scenario.

Notwithstanding, to provide certainty of the future continued efficient operation of the M11, the University proposes that the existing MOVA and SCOOT traffic signal optimisation systems be extended along this route to the proposed Western Access Road junction, and to any other new signal controlled junction to minimise delays to traffic movements on this corridor, and hence reduce the chance of any obstruction to the operation of the M11. Typically, across the network, the MOVA and SCOOT optimisation systems would reduce any potential queuing and delay more than to increase stopline saturations.

Measures directed at improving conditions for Pedestrians and Cyclists

As detailed in Section 17, a comprehensive first phase of the Walking and Cycle Strategy will be brought forward with the proposals for the Initial Phase of West Cambridge, in the context of other proposals for improving Cycling infrastructure locally. This strategy will be reviewed and continued through the implementation of West Cambridge.

On-site Infrastructure

The on-site infrastructure for the Initial Phase of West Cambridge is detailed in Section 17.

Pedestrian and Cycle connections through new areas of development within West Cambridge will be reviewed so that these will both:

i) ensure quality accessibility and connectivity to the surrounding areas; and

ii) significantly enhance and improve the linkages between existing developments by providing direct quality links on desire lines.

By completion of the West Cambridge Development, the Site will be provided with permeable footways and cycleways across the Site, with further pedestrian crossings delivered on the site access roads along the Western Access Road, to complement those provided earlier on High Cross, JJ Thomson Avenue and Clerk Maxwell Road. These links will be supported with controlled crossings on Madingley Road.

Off-site Infrastructure

To enhance the existing Pedestrian and Cyclist connectivity further, the following pedestrian and cycle infrastructure measures will be provided by the Development:

- a review of future road safety issues, with a fund to deliver road safety mitigation if required;
- enhancements on movements along the corridor to the north – to Eddington Avenue towards North West Cambridge; and
- extending the corridor towards the City Centre – along Grange Road, West Road, Queen's Green and Silver Street.

To provide a further environmental enhancement in the locality of West Cambridge, the University will provide a contribution towards the costs of the necessary traffic regulation order to implement a further reduced speed limit along Madingley Road adjacent the West Cambridge Development between the Western Access Road and the High Cross junctions. The lower vehicle speeds will provide benefit for existing users of Madingley Road, as well as for the pedestrians and cyclists generated by West Cambridge.

Conclusion

Collectively the measures to improve conditions for cyclists and pedestrians will ensure that conditions will be improved for them - this would be likely to increase the number of those choosing walking or cycling as their mode of travel.

Measures directed at enhancing Public Transport

The scale of the proposed Development means that there will be both a high quantum of demand for public transport, and a number of locations that will need to be connected to West Cambridge.

As detailed in Section 17, enhanced bus services to support the Initial Phase will be phased in to align with the Development quantum and consequent growth in demand.

Further public transport measures will be implemented as the Development continues. These will be based upon a review of the earlier provision to ensure that all measures are focussed.

On-site Bus infrastructure

In order to maintain the attractiveness of bus services to the Site, the following additional measures would be provided:

- high quality bus stops on new links served by buses; and
- further bus priority measures - selected vehicle detection for buses through any new traffic signal controlled junctions to improve the flow of buses or enable passengers to access facilities; and
- a review of the information and incentives on offer.

Bus Strategy

As detailed in Section 17, a comprehensive Public Transport Strategy for West Cambridge will be brought forward by the University in a phased manner, to reflect the emerging Development construction phasing.

The proposed final Bus Service provision is summarised as follows:

- Citi 4: increased frequency, potentially to every 10 minutes, of the earlier diverted service from Madingley Road to operate via West Cambridge. This will improve the links to West Cambridge from the city centre and the A428 corridor;

- Universal: subject to review of demand and provision by other services on the Silver Street to Addenbrooke's Hospital section, the introduction of an enhanced orbital service that extends to Addenbrooke's (it may no longer be necessary to operate the Universal beyond the Rail Station - see below);

- Arc Service: significant enhancement of the proposed Arc Service with increased frequency (possibly to 20 minutes) and higher quality vehicles. The service would be extended beyond the currently proposed route to serve West Cambridge, then continue via the M11 motorway to Trumpington Meadows, the Biomedical Campus and Addenbrooke's Hospital. The service would then give links to West Cambridge from Milton Park and Ride, North Cambridge and South Cambridge; and

- Guided Bus: the potential for the introduction of a 30 minute frequency variation to Service B to operate from Orchard Park via North West Cambridge and West Cambridge. This would be in addition to the existing frequency on Service B and would provide links from the A14 corridor.

Conclusions

The provision of a quality bus strategy will encourage the use of bus to form a significant percentage of the mode share for short, medium, and longer distance trips, and would reflect local and national policy guidance and strategies.

Measures directed at enhancing travel demand management – the West Cambridge Framework Travel Plan

A summary of West Cambridge's quality Framework Travel Plan is contained in Section 17.

The Framework Travel Plan identifies a process to review and monitor the success of the travel demand management measures on an on-going basis. As such, the Travel Plan measures will be reviewed through the implementation of West Cambridge.

Potential strategic Corridor interventions to respond to West Cambridge demand across the network

For the purposes of assessing the Transport Cap financial contribution, further potential transport management measures are considered to mitigate the West Cambridge impact in 2031.

These transport management measures are more strategic in nature than those considered earlier within this Transport Assessment, and would provide a quality alternative to using the private car to travel to West Cambridge. The effectiveness of these measures will be enhanced significantly as these will be combined with the ability of the University to control the issue of car parking permits - and to refuse the granting of a car parking permit should there be a suitable alternative to car usage.

A14 (North-West)

Table A18.1 reports that in 2031, the worst case number of additional West Cambridge-bound peak hour vehicle movements along the A14 (North-West) Corridor would be around 200 trips. As well as the total additional peak hour vehicle trips, there are approximately twice as many existing vehicle trips associated with the Extant Consent - of which a proportion would also assign along this same route.

The University would consider the potential for the introduction of a 30 minute frequency variation to Service B to operate from Orchard Park via North West Cambridge and West Cambridge, and if appropriate make contributions to Guided Bus. This would be in addition to the existing frequency on Service B and would provide links from the A14 corridor.

A14 (East) and A10 (North)

Table A18.1 reports that in 2031, the worst case number of additional West Cambridge-bound peak hour vehicle movements along the A10 and A14 (East) Corridors would be around 120 trips.

These trips would pass the existing Milton Park and Ride, an established site with terminus facilities and a 792 space car park. The Cambridgeshire County Council assessment "Alternative Funding Arrangements for Cambridge Park and Ride Service" (February 2017) identified that its average occupation was around 55%.

The utilisation of the Park and Ride sites around the periphery of Cambridge to intercept traffic movements forms an important part of Cambridgeshire County Council's City Deal transport intervention strategy. It is proposed that West Cambridge conforms with this strategy, and utilises this facility.

The University would make appropriate contributions to the significant enhancement of the proposed Arc Service with increased frequency (possibly to 20 minutes) and higher quality vehicles referred to above.

Whilst these measures would assist in mitigating the West Cambridge impact, the additional patronage generated would improve and support the Park and Ride bus services, improving the accessibility to other locations served by this service.

M11 (South)

Table A18.1 reports that in 2031, the worst case number of additional West Cambridge-bound peak hour vehicle movements along the M11 (South) Corridor would be around 190 trips. Based upon these low contributions to overall flows there would be no justification for the University to be expected independently to deliver a significant enhancement scheme.

Following the implementation of the A14 Cambridge – Huntingdon scheme, it is likely that Highways England will promote a scheme to enhance the capacity of the M11 - possibly a "Smart Motorway" scheme to utilise the potential capacity of the hard shoulder.

Whilst it is acknowledged that there is no certainty to programme or funding to such a scheme to date, this proposal would provide mitigation for any additional West Cambridge trips.

As an alternative management strategy, the Cambridge Long-Term Transport Strategy identified a series of new park and ride sites around the periphery of the City to intercept strategic movements: one such was at the M11 Junction 12 / Barton Road. The proposed Orbital Bus Service would provide quality connections between this park and ride site around the western periphery of the City, including to West Cambridge.

The University would make appropriate contributions to this proposed Orbital Service, the additional patronage associated with West Cambridge would assist in the long-term sustainability of such a scheme.

East of Cambridge

Table A18.1 reports that in 2031, the worst case number of additional West Cambridge-bound peak hour vehicle movements from East Cambridge would be around 100 trips. It is considered that whilst these are shown assigning through the southern approaches to West Cambridge, this reflects more the simplistic assignment option of the Spreadsheet / OmniTRANS modelling, and would not be reflective of conditions on these approaches to West Cambridge.

It is concluded that the assignment choice of these movements would alter in the future following the delivery of a capacity enhancement scheme on the M11 – referred to above.

A428 (West)

Table A18.1 reports that in 2031, the worst case number of additional West Cambridge-bound peak hour vehicle movements along the A428 Corridor would be around 80 trips.

Cambridgeshire County Council has developed their A428 / A1303 Corridor Scheme, consisting of a combination of enhanced bus priority, and a new Park and Ride facility around the A1303 Madingley Mulch Roundabout. As identified in Section 2.8, contributions have been offered by the West Cambourne Development to fund enhancements to public transport facilities between Cambourne and the M1 Junction 13 to reduce bus transit times.

The University would make appropriate contributions towards the delivery of the new Park and Ride facility adjacent to Madingley Mulch Roundabout, with additional car parking dedicated to West Cambridge users.

Potential physical interventions directed at preserving capacity across the network

The capacity assessment of the junctions within the locality using the worst case forecast 2031 future year flow has identified that the Madingley Road Corridor would operate above capacity. It is acknowledged that this future year assessment may be overly robust:

i) the first-principles Transport Modelling assessment adopted for this development would represent a worst case: the methodology adopted to assess the future year flows would not assess likely reassignment effects across the network; and

ii) the junctions would still operate within practical capacity.

A strategy to manage completely these worst case increased movements along Madingley Road by physical measures has not been developed as:

i) the necessity for it reflects the University responding to a worst case assessment, which is unlike to materialise;

ii) such a scheme requiring significant additional infrastructure would be contrary to policy;

iii) to increase the physical scale of the Madingley Road carriageway to provide sections of three-lanes width to respond to peak hour conditions would be contrary to any enhanced urban design aspirations for this area, resulting in a poorer environment for pedestrians and cyclists; and

iv) a reduction in through-flow would have a benefit to conditions along this route.

As such, the strategy to respond to these junction capacity issues along Madingley Road Corridor should rely upon strategic solutions, within the context of the existing local transport policy identified within Section 4. This is summarised within Appendix 18.1.

Summary

This Appendix 18.1 summarises the proposed additional measures to manage any residual transport impacts of the Full Development in 2031 in excess of the Initial Phase.

Conditions will be imposed requiring further assessments of phases later than the Initial Phase to identify any further necessary mitigation measures.

It is concluded that this suite of measures aimed at mode shift, demand management and improvement of conditions on the network would manage the transport effects of the Development.

A strategy to manage these worst case increased movements along Madingley Road by physical measures has not been considered:

i) it would require significant additional infrastructure;

ii) to increase the physical scale of the Madingley Road carriageway would be contrary to any enhanced urban design aspirations for this area;

iii) it would result in a poorer environment for pedestrians and cyclists.

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