

### User and Project Details

<b>Project:</b>	
<b>Title:</b>	
<b>Location:</b>	
<b>File name:</b>	Jct 2 Signals Mit - Widen - AM_PM.lsg3x
<b>Author:</b>	
<b>Company:</b>	
<b>Address:</b>	
<b>Notes:</b>	

### Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	2		7	7
C	Traffic	3		7	7
D	Traffic			7	7
E	Traffic	1		7	7
F	Traffic	2		7	7
G	Traffic	3		7	7
H	Traffic			7	7

### Phase Intergreens Matrix

	Starting Phase								
Terminating Phase		A	B	C	D	E	F	G	H
	A		-	-	-	5	-	-	-
	B	-		-	-	-	5	-	-
	C	-	-		-	-	-	5	-
	D	-	-	-		-	-	-	5
	E	5	-	-	-		-	-	-
	F	-	5	-	-	-		-	-
	G	-	-	5	-	-	-		-
	H	-	-	-	5	-	-	-	

### Phase Delays

#### Stage Stream: 1

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

**Stage Stream: 2**

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

**Stage Stream: 3**

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

**Prohibited Stage Change**

**Stage Stream: 1**

From Stage	To Stage	
	1	2
	1	5
	2	5

**Stage Stream: 2**

From Stage	To Stage	
	1	2
	1	5
	2	5

**Stage Stream: 3**

From Stage	To Stage	
	1	2
	1	5
	2	5

**Phases in Stage**

Stream	Stage No.	Phases in Stage
1	1	A
1	2	E
2	1	B
2	2	F
3	1	C
3	2	G

**Give-Way Lane Input Data**

Junction: Unnamed Junction											
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)
4/1 (Cottingham Link Road)	5/1 (Ahead)	1000	0	8/2	0.33	None	-	-	-	-	-
				8/3	0.33	All					
	5/2 (Ahead)	1000	0	8/2	0.33	None					
				8/3	0.33	All					
	9/1 (Ahead)	1000	0	8/2	0.33	None					
				8/3	0.33	All					
	9/2 (Ahead)	1000	0	8/2	0.33	None					
				8/3	0.33	All					
11/2	12/2 (Ahead)	1000	0	11/3	0.33	All	-	-	-	-	-

**Lane Input Data**

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A299 Hengist Way N)	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 11 Left	Inf
1/2 (A299 Hengist Way N)	U	A	2	3	60.0	Geom	-	5.00	15.00	Y	Arm 6 Ahead	16.43
1/3 (A299 Hengist Way N)	U	A	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 6 Ahead	16.43
2/1 (A299 Hengist Way E)	U	B	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 13 Left	40.88
2/2 (A299 Hengist Way E)	U	B	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 7 Ahead	43.79
											Arm 13 Left	43.79
3/1 (A256)	U	C	2	3	6.0	Geom	-	3.25	0.00	Y	Arm 8 Ahead	Inf
3/2 (A256)	U	C	2	3	60.0	Geom	-	4.85	0.00	Y	Arm 8 Ahead	32.73
3/3 (A256)	U	C	2	3	60.0	Geom	-	4.85	0.00	Y	Arm 8 Ahead	31.17
4/1 (Cottington Link Road)	O		2	3	60.0	Geom	-	4.16	0.00	Y	Arm 5 Ahead	140.99
											Arm 9 Ahead	20.44
5/1	U	E	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 11 Ahead	33.83
5/2	U	E	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 6 Right	28.14
											Arm 11 Ahead	28.14
6/1	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 13 Ahead	Inf
6/2	U	F	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 7 Right	25.72
											Arm 13 Ahead	39.88
7/1	U	G	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 8 Right	23.96
7/2	U	G	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 8 Right	19.28
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-



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8/2	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Right	Inf
											Arm 9 Ahead	Inf
8/3	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Right	Inf
9/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
9/2	U		2	3	60.0	Geom	-	3.25	0.00	Y		
10/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
11/1	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 12 Ahead	Inf
11/2	O		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 12 Ahead	Inf
11/3	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 12 Ahead	Inf
12/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
12/2	U		2	3	60.0	Geom	-	3.25	0.00	Y		
13/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
13/2	U		2	3	60.0	Geom	-	3.25	0.00	Y		

**Lane Saturation Flows****Scenario 1: 'AM 2039 Base + Dev Revised'** (FG3: 'AM 2039 + Dev PCUs Revised', Plan 3: 'AM 2039 + Dev PCUs')

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A299 Hengist Way N)	3.25	0.00	Y	Arm 11 Left	Inf	0.0 %	1940	1940
1/2 (A299 Hengist Way N)	5.00	15.00	Y	Arm 6 Ahead	16.43	100.0 %	1361	1361
1/3 (A299 Hengist Way N)	5.00	0.00	Y	Arm 6 Ahead	16.43	100.0 %	1938	1938
2/1 (A299 Hengist Way E)	5.00	0.00	Y	Arm 13 Left	40.88	100.0 %	2040	2040
2/2 (A299 Hengist Way E)	5.00	0.00	Y	Arm 7 Ahead	43.79	91.4 %	2045	2045
				Arm 13 Left	43.79	8.6 %		
3/1 (A256)	3.25	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1940	1940
3/2 (A256)	4.85	0.00	Y	Arm 8 Ahead	32.73	100.0 %	2008	2008
3/3 (A256)	4.85	0.00	Y	Arm 8 Ahead	31.17	100.0 %	2004	2004
4/1 (Cottington Link Road)	4.16	0.00	Y	Arm 5 Ahead	140.99	89.0 %	1996	1996
				Arm 9 Ahead	20.44	11.0 %		
5/1	5.00	0.00	Y	Arm 11 Ahead	33.83	100.0 %	2025	2025
5/2	5.00	0.00	Y	Arm 6 Right	28.14	8.1 %	2008	2008
				Arm 11 Ahead	28.14	91.9 %		
6/1	3.25	0.00	Y	Arm 13 Ahead	Inf	100.0 %	1940	1940
6/2	5.00	0.00	Y	Arm 7 Right	25.72	2.4 %	2037	2037
				Arm 13 Ahead	39.88	97.6 %		
7/1	5.00	0.00	Y	Arm 8 Right	23.96	100.0 %	1990	1990
7/2	5.00	0.00	Y	Arm 8 Right	19.28	100.0 %	1962	1962
8/1	Infinite Saturation Flow						Inf	Inf
8/2	3.25	0.00	Y	Arm 5 Right	Inf	45.5 %	1940	1940
				Arm 9 Ahead	Inf	54.5 %		
8/3	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
9/1	3.25	0.00	Y				1940	1940
9/2	3.25	0.00	Y				1940	1940
10/1	3.25	0.00	Y				1940	1940
11/1	3.25	0.00	Y	Arm 12 Ahead	Inf	0.0 %	1940	1940
11/2	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
11/3	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
12/1	3.25	0.00	Y				1940	1940
12/2	3.25	0.00	Y				1940	1940

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13/1	3.25	0.00	Y				1940	1940
13/2	3.25	0.00	Y				1940	1940

**Scenario 2: 'PM 2039 Base + Dev Revised'** (FG4: 'PM 2039 + Dev PCUs Revised', Plan 4: 'PM 2039 + Dev PCUs')

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A299 Hengist Way N)	3.25	0.00	Y	Arm 11 Left	Inf	0.0 %	1940	1940
1/2 (A299 Hengist Way N)	5.00	15.00	Y	Arm 6 Ahead	16.43	100.0 %	1361	1361
1/3 (A299 Hengist Way N)	5.00	0.00	Y	Arm 6 Ahead	16.43	100.0 %	1938	1938
2/1 (A299 Hengist Way E)	5.00	0.00	Y	Arm 13 Left	40.88	100.0 %	2040	2040
2/2 (A299 Hengist Way E)	5.00	0.00	Y	Arm 7 Ahead	43.79	87.6 %	2045	2045
				Arm 13 Left	43.79	12.4 %		
3/1 (A256)	3.25	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1940	1940
3/2 (A256)	4.85	0.00	Y	Arm 8 Ahead	32.73	100.0 %	2008	2008
3/3 (A256)	4.85	0.00	Y	Arm 8 Ahead	31.17	100.0 %	2004	2004
4/1 (Cottingham Link Road)	4.16	0.00	Y	Arm 5 Ahead	140.99	86.7 %	1993	1993
				Arm 9 Ahead	20.44	13.3 %		
5/1	5.00	0.00	Y	Arm 11 Ahead	33.83	100.0 %	2025	2025
5/2	5.00	0.00	Y	Arm 6 Right	28.14	3.0 %	2008	2008
				Arm 11 Ahead	28.14	97.0 %		
6/1	3.25	0.00	Y	Arm 13 Ahead	Inf	100.0 %	1940	1940
6/2	5.00	0.00	Y	Arm 7 Right	25.72	8.8 %	2035	2035
				Arm 13 Ahead	39.88	91.3 %		
7/1	5.00	0.00	Y	Arm 8 Right	23.96	100.0 %	1990	1990
7/2	5.00	0.00	Y	Arm 8 Right	19.28	100.0 %	1962	1962
8/1	Infinite Saturation Flow						Inf	Inf
8/2	3.25	0.00	Y	Arm 5 Right	Inf	37.5 %	1940	1940
				Arm 9 Ahead	Inf	62.5 %		
8/3	3.25	0.00	Y	Arm 5 Right	Inf	100.0 %	1940	1940
9/1	3.25	0.00	Y				1940	1940
9/2	3.25	0.00	Y				1940	1940
10/1	3.25	0.00	Y				1940	1940
11/1	3.25	0.00	Y	Arm 12 Ahead	Inf	0.0 %	1940	1940
11/2	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
11/3	3.25	0.00	Y	Arm 12 Ahead	Inf	100.0 %	1940	1940
12/1	3.25	0.00	Y				1940	1940
12/2	3.25	0.00	Y				1940	1940
13/1	3.25	0.00	Y				1940	1940

13/2	3.25	0.00	Y				1940	1940
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**Traffic Flow Groups**

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM 2039 + Dev (Link + Sigs) PCUs'	08:00	09:00	01:00	
2: 'PM 2039 + Dev (Link + Sigs) PCUs'	17:00	18:00	01:00	
3: 'AM 2039 + Dev PCUs Revised'	08:00	09:00	01:00	
4: 'PM 2039 + Dev PCUs Revised'	17:00	18:00	01:00	

**Traffic Flows, Desired****FG1: 'AM 2039 + Dev (Link + Sigs) PCUs'****Desired Flow :**

Origin	Destination					
		A	B	C	D	Tot.
	A	0	1244	13	655	1912
	B	839	0	17	682	1538
	C	31	69	0	19	119
	D	0	685	7	0	692
	Tot.	870	1998	37	1356	4261

**FG2: 'PM 2039 + Dev (Link + Sigs) PCUs'****Desired Flow :**

Origin	Destination					
		A	B	C	D	Tot.
	A	0	941	12	493	1446
	B	1185	0	31	660	1876
	C	5	8	0	5	18
	D	0	381	9	0	390
	Tot.	1190	1330	52	1158	3730

**FG3: 'AM 2039 + Dev PCUs Revised'****Desired Flow :**

Origin	Destination					
		A	B	C	D	Tot.
	A	0	1198	44	964	2206
	B	1137	0	24	509	1670
	C	55	58	0	14	127
	D	0	697	9	0	706
	Tot.	1192	1953	77	1487	4709

**FG4: 'PM 2039 + Dev PCUs Revised'**

**Desired Flow :**

	Destination					
Origin		A	B	C	D	Tot.
	A	0	1013	72	718	1803
	B	1212	0	35	689	1936
	C	47	25	0	11	83
	D	0	435	21	0	456
	Tot.	1259	1473	128	1418	4278

**Stage Timings**

**Scenario 1: 'AM 2039 Base + Dev Revised'** (FG3: 'AM 2039 + Dev PCUs Revised', Plan 3: 'AM 2039 + Dev PCUs')

**Stage Stream: 1**

Stage	1	2
Duration	12	28
Change Point	28	45

**Stage Stream: 2**

Stage	1	2
Duration	27	13
Change Point	49	31

**Stage Stream: 3**

Stage	1	2
Duration	15	25
Change Point	36	6

**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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	99.9%
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	99.9%
1/1	A299 Hengist Way N Left	U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
1/2	A299 Hengist Way N Ahead	U	1	N/A	A		1	12	-	353	1361	354	99.8%
1/3	A299 Hengist Way N Ahead	U	1	N/A	A		1	12	-	353	1938	504	70.1%
2/1	A299 Hengist Way E Left	U	2	N/A	B		1	27	-	1103	2040	1142	96.6%
2/2	A299 Hengist Way E Ahead Left	U	2	N/A	B		1	27	-	1103	2045	1145	96.3%
3/2+3/1	A256 Ahead	U	3	N/A	C		1	15	-	1033	2008:1940	501+534	99.9 : 99.9%
3/3	A256 Ahead	U	3	N/A	C		1	15	-	637	2004	641	99.3%
4/1	Cottington Link Road Ahead Ahead2	O	N/A	N/A	-		-	-	-	127	1996	790	16.1%
5/1	Ahead	U	1	N/A	E		1	28	-	535	2025	1175	45.6%
5/2	Right Ahead	U	1	N/A	E		1	28	-	715	2008	1165	61.4%
6/1	Ahead	U	2	N/A	F		1	13	-	382	1940	543	70.3%
6/2	Right Ahead	U	2	N/A	F		1	13	-	382	2037	570	67.0%
7/1	Right	U	3	N/A	G		1	25	-	417	1990	1035	40.3%
7/2	Right	U	3	N/A	G		1	25	-	600	1962	1020	58.8%
8/1	Ahead Left	U	N/A	N/A	-		-	-	-	950	Inf	Inf	0.0%
8/2	Right Ahead	U	N/A	N/A	-		-	-	-	1100	1940	1940	56.7%
8/3	Right	U	N/A	N/A	-		-	-	-	637	1940	1940	32.8%
9/1		U	N/A	N/A	-		-	-	-	880	1940	1940	45.4%
9/2		U	N/A	N/A	-		-	-	-	607	1940	1940	31.3%

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10/1		U	N/A	N/A	-		-	-	-	77	1940	1940	4.0%
11/1	Ahead	U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
11/2	Ahead	O	N/A	N/A	-		-	-	-	535	1940	783	68.3%
11/3	Ahead	U	N/A	N/A	-		-	-	-	657	1940	1940	33.9%
12/1		U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
12/2		U	N/A	N/A	-		-	-	-	1192	1940	1940	61.4%
13/1		U	N/A	N/A	-		-	-	-	1485	1940	1940	76.5%
13/2		U	N/A	N/A	-		-	-	-	468	1940	1940	24.1%



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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)
<b>Network</b>	-	-	662	0	0	20.7	66.2	0.0	86.9	-	-	-	-
<b>Unnamed Junction</b>	-	-	662	0	0	20.7	66.2	0.0	86.9	-	-	-	-
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	353	353	-	-	-	1.8	9.2	-	11.0	112.1	4.8	9.2	14.0
1/3	353	353	-	-	-	1.6	1.2	-	2.8	28.5	4.4	1.2	5.6
2/1	1103	1103	-	-	-	3.2	9.5	-	12.7	41.4	14.4	9.5	23.9
2/2	1103	1103	-	-	-	3.2	9.1	-	12.3	40.3	14.4	9.1	23.5
3/2+3/1	1033	1033	-	-	-	4.6	15.7	-	20.3	70.6	8.6	15.7	24.3
3/3	637	637	-	-	-	3.0	11.6	-	14.6	82.5	8.7	11.6	20.3
4/1	127	127	127	0	0	0.0	0.1	-	0.1	2.7	0.0	0.1	0.1
5/1	535	535	-	-	-	0.0	0.4	-	0.5	3.1	0.3	0.4	0.7
5/2	715	715	-	-	-	0.1	0.8	-	0.9	4.5	1.1	0.8	1.9
6/1	382	382	-	-	-	0.5	1.2	-	1.7	16.2	1.1	1.2	2.2
6/2	382	382	-	-	-	0.3	1.0	-	1.3	12.4	0.6	1.0	1.6
7/1	417	417	-	-	-	0.1	0.3	-	0.4	3.8	0.8	0.3	1.2
7/2	600	600	-	-	-	0.1	0.7	-	0.8	4.9	1.3	0.7	2.0
8/1	950	950	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1100	1100	-	-	-	0.0	0.7	-	0.7	2.1	0.0	0.7	0.7
8/3	637	637	-	-	-	0.0	0.2	-	0.3	1.5	0.1	0.2	0.4
9/1	880	880	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
9/2	607	607	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
10/1	77	77	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
11/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	535	535	535	0	0	1.7	1.1	-	2.8	18.8	7.0	1.1	8.0
11/3	657	657	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3

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12/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	1192	1192	-	-	-	0.2	0.8	-	1.0	3.0	7.1	0.8	7.9
13/1	1485	1485	-	-	-	0.1	1.6	-	1.7	4.2	4.1	1.6	5.7
13/2	468	468	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
<div> <div>C1</div> <div>Stream: 1 PRC for Signalled Lanes (%): -10.8</div> <div>Total Delay for Signalled Lanes (pcuHr): 15.15</div> <div>Cycle Time (s): 50</div> </div> <div> <div>C1</div> <div>Stream: 2 PRC for Signalled Lanes (%): -7.3</div> <div>Total Delay for Signalled Lanes (pcuHr): 28.06</div> <div>Cycle Time (s): 50</div> </div> <div> <div>C1</div> <div>Stream: 3 PRC for Signalled Lanes (%): -11.0</div> <div>Total Delay for Signalled Lanes (pcuHr): 36.12</div> <div>Cycle Time (s): 50</div> </div> <div> <div>PRC Over All Lanes (%): -11.0</div> <div>Total Delay Over All Lanes(pcuHr): 86.95</div> </div>													

### Stage Timings

**Scenario 2: 'PM 2039 Base + Dev Revised'** (FG4: 'PM 2039 + Dev PCUs Revised', Plan 4: 'PM 2039 + Dev PCUs')

#### Stage Stream: 1

Stage	1	2
Duration	10	20
Change Point	37	12

#### Stage Stream: 2

Stage	1	2
Duration	18	12
Change Point	18	1

#### Stage Stream: 3

Stage	1	2
Duration	15	15
Change Point	3	23

**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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	100.5%
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	100.5%
1/1	A299 Hengist Way N Left	U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
1/2	A299 Hengist Way N Ahead	U	1	N/A	A		1	10	-	228	1361	374	60.9%
1/3	A299 Hengist Way N Ahead	U	1	N/A	A		1	10	-	228	1938	533	42.8%
2/1	A299 Hengist Way E Left	U	2	N/A	B		1	18	-	901	2040	969	93.0%
2/2	A299 Hengist Way E Ahead Left	U	2	N/A	B		1	18	-	902	2045	971	92.9%
3/2+3/1	A256 Ahead	U	3	N/A	C		1	15	-	1130	2008:1940	663+663	85.2 : 85.2%
3/3	A256 Ahead	U	3	N/A	C		1	15	-	806	2004	802	100.5%
4/1	Cottington Link Road Ahead Ahead2	O	N/A	N/A	-		-	-	-	83	1993	735	11.3%
5/1	Ahead	U	1	N/A	E		1	20	-	453	2025	1063	42.6%
5/2	Right Ahead	U	1	N/A	E		1	20	-	831	2008	1054	78.4%
6/1	Ahead	U	2	N/A	F		1	12	-	241	1940	631	38.2%
6/2	Right Ahead	U	2	N/A	F		1	12	-	240	2035	661	36.3%
7/1	Right	U	3	N/A	G		1	15	-	293	1990	796	36.8%
7/2	Right	U	3	N/A	G		1	15	-	518	1962	785	66.0%
8/1	Ahead Left	U	N/A	N/A	-		-	-	-	858	Inf	Inf	0.0%
8/2	Right Ahead	U	N/A	N/A	-		-	-	-	1083	1940	1940	55.8%
8/3	Right	U	N/A	N/A	-		-	-	-	806	1940	1940	41.3%
9/1		U	N/A	N/A	-		-	-	-	735	1940	1940	37.9%
9/2		U	N/A	N/A	-		-	-	-	683	1940	1940	35.2%

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10/1		U	N/A	N/A	-		-	-	-	128	1940	1940	6.6%
11/1	Ahead	U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
11/2	Ahead	O	N/A	N/A	-		-	-	-	453	1940	735	61.6%
11/3	Ahead	U	N/A	N/A	-		-	-	-	806	1940	1940	41.3%
12/1		U	N/A	N/A	-		-	-	-	0	1940	1940	0.0%
12/2		U	N/A	N/A	-		-	-	-	1259	1940	1940	64.7%
13/1		U	N/A	N/A	-		-	-	-	1142	1940	1940	58.9%
13/2		U	N/A	N/A	-		-	-	-	331	1940	1940	17.1%

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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)
<b>Network</b>	-	-	536	0	0	14.6	39.1	0.0	53.7	-	-	-	-
<b>Unnamed Junction</b>	-	-	536	0	0	14.6	39.1	0.0	53.7	-	-	-	-
1/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
1/2	228	228	-	-	-	0.8	0.8	-	1.6	24.8	2.2	0.8	2.9
1/3	228	228	-	-	-	0.8	0.4	-	1.1	17.8	2.0	0.4	2.4
2/1	901	901	-	-	-	2.5	5.7	-	8.1	32.6	9.3	5.7	14.9
2/2	902	902	-	-	-	2.5	5.6	-	8.1	32.2	9.3	5.6	14.9
3/2+3/1	1130	1130	-	-	-	3.2	2.8	-	6.0	19.0	5.2	2.8	8.0
3/3	806	802	-	-	-	2.8	15.3	-	18.1	80.8	9.0	15.3	24.3
4/1	83	83	83	0	0	0.0	0.1	-	0.1	2.8	0.0	0.1	0.1
5/1	453	453	-	-	-	0.1	0.4	-	0.4	3.6	0.3	0.4	0.7
5/2	827	827	-	-	-	0.1	1.8	-	1.9	8.2	0.4	1.8	2.2
6/1	241	241	-	-	-	0.1	0.3	-	0.4	6.0	0.2	0.3	0.5
6/2	240	240	-	-	-	0.1	0.3	-	0.4	5.5	0.2	0.3	0.5
7/1	293	293	-	-	-	0.3	0.3	-	0.6	7.1	0.8	0.3	1.1
7/2	518	518	-	-	-	0.4	1.0	-	1.4	9.6	1.3	1.0	2.3
8/1	858	858	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/2	1083	1083	-	-	-	0.0	0.6	-	0.6	2.1	0.0	0.6	0.7
8/3	802	802	-	-	-	0.0	0.4	-	0.4	1.7	0.1	0.4	0.5
9/1	735	735	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
9/2	683	683	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
10/1	128	128	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
11/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	453	453	453	0	0	0.9	0.8	-	1.7	13.3	4.6	0.8	5.4
11/3	802	802	-	-	-	0.0	0.4	-	0.4	1.6	0.0	0.4	0.4

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12/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/2	1255	1255	-	-	-	0.2	0.9	-	1.1	3.3	7.0	0.9	8.0
13/1	1142	1142	-	-	-	0.0	0.7	-	0.8	2.4	0.3	0.7	1.0
13/2	331	331	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
<div> <div>C1</div> <div>Stream: 1 PRC for Signalled Lanes (%): 14.8</div> <div>Total Delay for Signalled Lanes (pcuHr): 5.03</div> <div>Cycle Time (s): 40</div> </div> <div> <div>C1</div> <div>Stream: 2 PRC for Signalled Lanes (%): -3.3</div> <div>Total Delay for Signalled Lanes (pcuHr): 16.99</div> <div>Cycle Time (s): 40</div> </div> <div> <div>C1</div> <div>Stream: 3 PRC for Signalled Lanes (%): -11.7</div> <div>Total Delay for Signalled Lanes (pcuHr): 26.02</div> <div>Cycle Time (s): 40</div> </div> <div> <div>PRC Over All Lanes (%): -11.7</div> <div>Total Delay Over All Lanes(pcuHr): 53.74</div> </div>													

### User and Project Details

<b>Project:</b>	
<b>Title:</b>	
<b>Location:</b>	
<b>File name:</b>	Jct 4 Signals Mit_RevC - AM_PM.lsg3x
<b>Author:</b>	
<b>Company:</b>	
<b>Address:</b>	
<b>Notes:</b>	

### Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	2		7	7
C	Traffic	3		7	7
D	Traffic	1		7	7
E	Traffic	2		7	7
F	Traffic	3		7	7
G	Traffic	4		7	7
H	Traffic	4		7	7
I	Pedestrian	4		6	6
J	Pedestrian	4		6	6



**Phase Intergreens Matrix**

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

**Phase Delays****Stage Stream: 1**

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

**Stage Stream: 2**

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

**Stage Stream: 3**

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

**Stage Stream: 4**

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

**Prohibited Stage Change****Stage Stream: 1**

To Stage		
From Stage	1	2
1		5
2	5	

**Stage Stream: 2**

To Stage		
From Stage	1	2
1		5
2	5	

**Stage Stream: 3**

From Stage	To Stage		
		1	2
	1		5
	2	5	

**Stage Stream: 4**

From Stage	To Stage		
		1	2
	1		5
	2	7	

**Phases in Stage**

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

**Give-Way Lane Input Data**

Junction: Unnamed Junction											
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)
3/1 (Tothill Street)	7/1 (Ahead)	1000	0	6/1	0.33	All	-	-	-	-	-
				6/2	0.33	To 10/2 (Ahead)					
	7/2 (Ahead)	1000	0	6/1	0.33	All					
				6/2	0.33	To 10/2 (Ahead)					
	10/1 (Left)	1000	0	6/1	0.33	All					
				6/2	0.33	To 10/2 (Ahead)					
	10/2 (Left)	1000	0	6/1	0.33	All					
				6/2	0.33	To 10/2 (Ahead)					

**Lane Input Data**

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (B2190 N)	U	A	2	3	60.0	Geom	-	3.87	0.00	Y	Arm 5 Ahead	34.44
											Arm 12 Left	20.69
1/2 (B2190 N)	U	A	2	3	60.0	Geom	-	3.87	0.00	Y	Arm 5 Ahead	34.44
2/1 (Hengist Way E)	U	B	2	3	60.0	Geom	-	4.37	0.00	Y	Arm 6 Ahead	146.76
											Arm 9 Left	95.29
2/2 (Hengist Way E)	U	B	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 6 Ahead	Inf
3/1 (Tothill Street)	O		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 7 Ahead	163.43
											Arm 10 Left	31.89
4/1 (A299 W)	U	C	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 8 Ahead	Inf
4/2 (A299 W)	U	C	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 11 Left	37.70
											Arm 8 Ahead	55.74
5/1	U	E	2	3	60.0	Geom	-	4.95	0.00	Y	Arm 6 Right	Inf
											Arm 9 Ahead	Inf
5/2	U	E	2	3	60.0	Geom	-	4.95	0.00	Y	Arm 6 Right	Inf
6/1	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 10 Ahead	Inf
6/2	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 7 Right	Inf
											Arm 10 Ahead	Inf
7/1	U	F	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 11 Ahead	Inf
7/2	U	F	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 8 Right	Inf
											Arm 11 Ahead	Inf
8/1	U	D	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 12 Ahead	Inf
8/2	U	D	2	3	60.0	Geom	-	5.00	0.00	Y	Arm 5 Right	Inf

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											Arm 12 Ahead	Inf
9/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
10/1	U	H	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 14 Ahead	Inf
10/2	U	H	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 14 Ahead	Inf
11/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
11/2	U		2	3	60.0	Geom	-	3.25	0.00	Y		
12/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
12/2	U		2	3	60.0	Geom	-	3.25	0.00	Y		
13/1	U	G	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
13/2	U	G	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 4 Ahead	Inf
14/1	U		2	3	60.0	Inf	-	-	-	-	-	-
14/2	U		2	3	60.0	Inf	-	-	-	-	-	-

**Lane Saturation Flows****Scenario 1: 'AM 2039 + Dev Revised'** (FG3: 'AM 2039 + Dev PCUs Revised', Plan 1: 'AM')

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B2190 N)	3.87	0.00	Y	Arm 5 Ahead	34.44	40.4 %	1887	1887
				Arm 12 Left	20.69	59.6 %		
1/2 (B2190 N)	3.87	0.00	Y	Arm 5 Ahead	34.44	100.0 %	1918	1918
2/1 (Hengist Way E)	4.37	0.00	Y	Arm 6 Ahead	146.76	81.5 %	2029	2029
				Arm 9 Left	95.29	18.5 %		
2/2 (Hengist Way E)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
3/1 (Tothill Street)	5.00	0.00	Y	Arm 7 Ahead	163.43	71.6 %	2074	2074
				Arm 10 Left	31.89	28.4 %		
4/1 (A299 W)	3.70	0.00	Y	Arm 8 Ahead	Inf	54.1 %	1949	1949
				Arm 11 Left	37.70	45.9 %		
4/2 (A299 W)	3.70	0.00	Y	Arm 8 Ahead	55.74	100.0 %	1933	1933
5/1	4.95	0.00	Y	Arm 6 Right	Inf	0.0 %	2110	2110
				Arm 9 Ahead	Inf	100.0 %		
5/2	4.95	0.00	Y	Arm 6 Right	Inf	100.0 %	2110	2110
6/1	3.25	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1940	1940
6/2	3.25	0.00	Y	Arm 7 Right	Inf	24.4 %	1940	1940
				Arm 10 Ahead	Inf	75.6 %		
7/1	5.00	0.00	Y	Arm 11 Ahead	Inf	100.0 %	2115	2115
7/2	5.00	0.00	Y	Arm 8 Right	Inf	43.3 %	2115	2115
				Arm 11 Ahead	Inf	56.7 %		
8/1	5.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	2115	2115
8/2	5.00	0.00	Y	Arm 5 Right	Inf	17.8 %	2115	2115
				Arm 12 Ahead	Inf	82.2 %		
9/1	3.25	0.00	Y				1940	1940
10/1	3.25	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1940	1940
10/2	3.25	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1940	1940
11/1	3.25	0.00	Y				1940	1940
11/2	3.25	0.00	Y				1940	1940
12/1	3.25	0.00	Y				1940	1940
12/2	3.25	0.00	Y				1940	1940
13/1	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
13/2	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
14/1				Infinite Saturation Flow			Inf	Inf

14/2	Infinite Saturation Flow	Inf	Inf
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**Scenario 2: 'PM 2039 + Dev Revised'** (FG4: 'PM 2039 + Dev PCUs Revised', Plan 2: 'PM')

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (B2190 N)	3.87	0.00	Y	Arm 5 Ahead	34.44	48.5 %	1891	1891
				Arm 12 Left	20.69	51.5 %		
1/2 (B2190 N)	3.87	0.00	Y	Arm 5 Ahead	34.44	100.0 %	1918	1918
2/1 (Hengist Way E)	4.37	0.00	Y	Arm 6 Ahead	146.76	72.9 %	2028	2028
				Arm 9 Left	95.29	27.1 %		
2/2 (Hengist Way E)	3.25	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1940	1940
3/1 (Tothill Street)	5.00	0.00	Y	Arm 7 Ahead	163.43	69.9 %	2072	2072
				Arm 10 Left	31.89	30.1 %		
4/1 (A299 W)	3.70	0.00	Y	Arm 8 Ahead	Inf	60.9 %	1955	1955
				Arm 11 Left	37.70	39.1 %		
4/2 (A299 W)	3.70	0.00	Y	Arm 8 Ahead	55.74	100.0 %	1933	1933
5/1	4.95	0.00	Y	Arm 6 Right	Inf	0.0 %	2110	2110
				Arm 9 Ahead	Inf	100.0 %		
5/2	4.95	0.00	Y	Arm 6 Right	Inf	100.0 %	2110	2110
6/1	3.25	0.00	Y	Arm 10 Ahead	Inf	100.0 %	1940	1940
6/2	3.25	0.00	Y	Arm 7 Right	Inf	22.7 %	1940	1940
				Arm 10 Ahead	Inf	77.3 %		
7/1	5.00	0.00	Y	Arm 11 Ahead	Inf	100.0 %	2115	2115
7/2	5.00	0.00	Y	Arm 8 Right	Inf	42.0 %	2115	2115
				Arm 11 Ahead	Inf	58.0 %		
8/1	5.00	0.00	Y	Arm 12 Ahead	Inf	100.0 %	2115	2115
8/2	5.00	0.00	Y	Arm 5 Right	Inf	17.5 %	2115	2115
				Arm 12 Ahead	Inf	82.5 %		
9/1	3.25	0.00	Y				1940	1940
10/1	3.25	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1940	1940
10/2	3.25	0.00	Y	Arm 14 Ahead	Inf	100.0 %	1940	1940
11/1	3.25	0.00	Y				1940	1940
11/2	3.25	0.00	Y				1940	1940
12/1	3.25	0.00	Y				1940	1940
12/2	3.25	0.00	Y				1940	1940
13/1	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
13/2	3.25	0.00	Y	Arm 4 Ahead	Inf	100.0 %	1940	1940
14/1	Infinite Saturation Flow						Inf	Inf
14/2	Infinite Saturation Flow						Inf	Inf



## Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2039 + Dev (Link + Sign) PCUs AM'	08:00	09:00	01:00	
2: '2039 + Dev (Link + Sign) PCUs PM'	17:00	18:00	01:00	
3: 'AM 2039 + Dev PCUs Revised'	08:00	09:00	01:00	
4: 'PM 2039 + Dev PCUs Revised'	17:00	18:00	01:00	

## Traffic Flows, Desired

### FG1: '2039 + Dev (Link + Sign) PCUs AM'

#### Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	155	693	536	1384
	B	154	0	117	192	463
	C	621	85	0	593	1299
	D	453	98	648	0	1199
	Tot.	1228	338	1458	1321	4345

### FG2: '2039 + Dev (Link + Sign) PCUs PM'

#### Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	148	591	425	1164
	B	127	0	88	126	341
	C	786	123	0	784	1693
	D	217	153	503	0	873
	Tot.	1130	424	1182	1335	4071

### FG3: 'AM 2039 + Dev PCUs Revised'

#### Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	147	1152	293	1592
	B	199	0	169	227	595
	C	1278	152	0	490	1920
	D	424	287	403	0	1114
	Tot.	1901	586	1724	1010	5221

**FG4: 'PM 2039 + Dev PCUs Revised'**

**Desired Flow :**

	Destination					
Origin		A	B	C	D	Tot.
	A	0	189	929	278	1396
	B	179	0	170	215	564
	C	1397	188	0	385	1970
	D	315	297	526	0	1138
	Tot.	1891	674	1625	878	5068

**Stage Timings**

**Scenario 1: 'AM 2039 + Dev Revised'** (FG3: 'AM 2039 + Dev PCUs Revised', Plan 1: 'AM')

**Stage Stream: 1**

Stage	1	2
Duration	18	22
Change Point	37	10

**Stage Stream: 2**

Stage	1	2
Duration	17	23
Change Point	4	26

**Stage Stream: 3**

Stage	1	2
Duration	23	17
Change Point	45	23

**Stage Stream: 4**

Stage	1	2
Duration	32	6
Change Point	36	25

**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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	114.2%
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	114.2%
1/1	B2190 N Ahead Left	U	1	N/A	A		1	18	-	711	1887	717	99.2%
1/2	B2190 N Ahead	U	1	N/A	A		1	18	-	403	1918	729	55.3%
2/1	Hengist Way E Ahead Left	U	2	N/A	B		1	17	-	796	2029	730	109.0%
2/2	Hengist Way E Ahead	U	2	N/A	B		1	17	-	796	1940	698	114.0%
3/1	Tothill Street Ahead Left	O	N/A	N/A	-		-	-	-	595	2074	525	113.4%
4/1	A299 W Ahead Left	U	3	N/A	C		1	23	-	1068	1949	936	114.2%
4/2	A299 W Ahead	U	3	N/A	C		1	23	-	852	1933	928	91.8%
5/1	Right Ahead	U	2	N/A	E		1	23	-	439	2110	1013	43.3%
5/2	Right	U	2	N/A	E		1	23	-	403	2110	1013	39.8%
6/1	Ahead	U	N/A	N/A	-		-	-	-	649	1940	1940	30.7%
6/2	Right Ahead	U	N/A	N/A	-		-	-	-	1199	1940	1940	56.8%
7/1	Ahead	U	3	N/A	F		1	17	-	259	2115	761	29.9%
7/2	Right Ahead	U	3	N/A	F		1	17	-	460	2115	761	53.2%
8/1	Ahead	U	1	N/A	D		1	22	-	777	2115	973	70.1%
8/2	Right Ahead	U	1	N/A	D		1	22	-	852	2115	973	87.6%
9/1		U	N/A	N/A	-		-	-	-	586	1940	1940	29.6%
10/1	Ahead	U	4	N/A	H		1	32	-	733	1940	1280	52.3%
10/2	Ahead	U	4	N/A	H		1	32	-	991	1940	1280	71.8%
11/1		U	N/A	N/A	-		-	-	-	504	1940	1940	22.8%
11/2		U	N/A	N/A	-		-	-	-	506	1940	1940	22.9%

LinSig V1 style report

12/1		U	N/A	N/A	-		-	-	-	989	1940	1940	46.1%
12/2		U	N/A	N/A	-		-	-	-	912	1940	1940	47.0%
13/1	Ahead	U	4	N/A	G		1	32	-	1068	1940	1280	83.4%
13/2	Ahead	U	4	N/A	G		1	32	-	852	1940	1280	66.5%
14/1		U	N/A	N/A	-		-	-	-	733	Inf	Inf	0.0%
14/2		U	N/A	N/A	-		-	-	-	991	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	4	-	I		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	4	-	J		1	6	-	0	-	0	0.0%

LinSig V1 style report

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)
<b>Network</b>	-	-	<b>525</b>	<b>0</b>	<b>0</b>	<b>38.8</b>	<b>230.7</b>	<b>0.0</b>	<b>269.5</b>	-	-	-	-
<b>Unnamed Junction</b>	-	-	<b>525</b>	<b>0</b>	<b>0</b>	<b>38.8</b>	<b>230.7</b>	<b>0.0</b>	<b>269.5</b>	-	-	-	-
1/1	711	711	-	-	-	3.0	11.9	-	14.9	75.7	9.7	11.9	21.6
1/2	403	403	-	-	-	1.4	0.6	-	2.0	17.7	4.4	0.6	5.0
2/1	796	730	-	-	-	5.0	38.0	-	43.0	194.6	12.0	38.0	50.0
2/2	796	698	-	-	-	5.7	52.6	-	58.3	263.7	12.4	52.6	65.0
3/1	595	525	525	0	0	3.1	39.0	-	42.1	254.7	22.0	39.0	61.0
4/1	1068	936	-	-	-	5.1	70.1	-	75.2	253.5	16.7	70.1	86.7
4/2	852	852	-	-	-	1.6	5.0	-	6.6	27.9	10.9	5.0	15.9
5/1	439	439	-	-	-	1.3	0.4	-	1.7	14.1	4.2	0.4	4.6
5/2	403	403	-	-	-	0.8	0.3	-	1.1	9.7	1.7	0.3	2.0
6/1	596	596	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
6/2	1101	1101	-	-	-	0.0	0.7	-	0.7	2.1	0.0	0.7	0.7
7/1	228	228	-	-	-	0.6	0.2	-	0.8	12.5	2.2	0.2	2.4
7/2	405	405	-	-	-	1.6	0.6	-	2.1	18.9	4.6	0.6	5.2
8/1	682	682	-	-	-	1.1	1.2	-	2.3	12.0	7.2	1.2	8.4
8/2	852	852	-	-	-	2.0	3.3	-	5.4	22.7	11.8	3.3	15.2
9/1	574	574	-	-	-	0.0	0.2	-	0.2	1.3	1.7	0.2	1.9
10/1	670	670	-	-	-	1.8	0.5	-	2.3	12.5	5.9	0.5	6.4
10/2	919	919	-	-	-	1.5	1.3	-	2.8	11.0	6.2	1.3	7.5
11/1	442	442	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
11/2	444	444	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
12/1	894	894	-	-	-	0.0	0.4	-	0.5	1.8	5.5	0.4	5.9
12/2	912	912	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
13/1	1068	1068	-	-	-	1.9	2.5	-	4.4	14.7	11.0	2.5	13.4

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13/2	852	852	-	-	-	1.2	1.0	-	2.2	9.3	7.1	1.0	8.1
14/1	670	670	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	919	919	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
<div> <div>C1</div> <div>Stream: 1 PRC for Signalled Lanes (%):</div> <div>-10.2</div> <div>Total Delay for Signalled Lanes (pcuHr):</div> <div>24.57</div> <div>Cycle Time (s):</div> <div>50</div> </div> <div> <div>C1</div> <div>Stream: 2 PRC for Signalled Lanes (%):</div> <div>-26.6</div> <div>Total Delay for Signalled Lanes (pcuHr):</div> <div>104.13</div> <div>Cycle Time (s):</div> <div>50</div> </div> <div> <div>C1</div> <div>Stream: 3 PRC for Signalled Lanes (%):</div> <div>-26.8</div> <div>Total Delay for Signalled Lanes (pcuHr):</div> <div>84.72</div> <div>Cycle Time (s):</div> <div>50</div> </div> <div> <div>C1</div> <div>Stream: 4 PRC for Signalled Lanes (%):</div> <div>7.9</div> <div>Total Delay for Signalled Lanes (pcuHr):</div> <div>11.71</div> <div>Cycle Time (s):</div> <div>50</div> </div> <div> <div>PRC Over All Lanes (%):</div> <div>-26.8</div> <div>Total Delay Over All Lanes(pcuHr):</div> <div>269.50</div> </div>													

## Stage Timings

**Scenario 2: 'PM 2039 + Dev Revised'** (FG4: 'PM 2039 + Dev PCUs Revised', Plan 2: 'PM')

### Stage Stream: 1

Stage	1	2
Duration	11	19
Change Point	7	23

### Stage Stream: 2

Stage	1	2
Duration	13	17
Change Point	28	6

### Stage Stream: 3

Stage	1	2
Duration	22	8
Change Point	27	14

### Stage Stream: 4

Stage	1	2
Duration	22	6
Change Point	21	10

**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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>107.9%</b>
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>107.9%</b>
1/1	B2190 N Ahead Left	U	1	N/A	A		1	11	-	612	1891	567	107.9%
1/2	B2190 N Ahead	U	1	N/A	A		1	11	-	526	1918	575	91.4%
2/1	Hengist Way E Ahead Left	U	2	N/A	B		1	13	-	698	2028	710	98.3%
2/2	Hengist Way E Ahead	U	2	N/A	B		1	13	-	698	1940	679	102.8%
3/1	Tothill Street Ahead Left	O	N/A	N/A	-		-	-	-	564	2072	523	107.8%
4/1	A299 W Ahead Left	U	3	N/A	C		1	22	-	985	1955	1124	87.6%
4/2	A299 W Ahead	U	3	N/A	C		1	22	-	985	1933	1111	88.6%
5/1	Right Ahead	U	2	N/A	E		1	17	-	485	2110	950	48.7%
5/2	Right	U	2	N/A	E		1	17	-	526	2110	950	55.4%
6/1	Ahead	U	N/A	N/A	-		-	-	-	509	1940	1940	26.2%
6/2	Right Ahead	U	N/A	N/A	-		-	-	-	1224	1940	1940	62.1%
7/1	Ahead	U	3	N/A	F		1	8	-	246	2115	476	49.3%
7/2	Right Ahead	U	3	N/A	F		1	8	-	426	2115	476	84.4%
8/1	Ahead	U	1	N/A	D		1	19	-	690	2115	1058	64.6%
8/2	Right Ahead	U	1	N/A	D		1	19	-	1074	2115	1058	101.0%
9/1		U	N/A	N/A	-		-	-	-	674	1940	1940	33.6%
10/1	Ahead	U	4	N/A	H		1	22	-	594	1940	1115	52.7%
10/2	Ahead	U	4	N/A	H		1	22	-	1031	1940	1115	90.9%
11/1		U	N/A	N/A	-		-	-	-	439	1940	1940	22.0%
11/2		U	N/A	N/A	-		-	-	-	439	1940	1940	22.0%



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12/1		U	N/A	N/A	-		-	-	-	848	1940	1940	42.8%
12/2		U	N/A	N/A	-		-	-	-	1043	1940	1940	52.4%
13/1	Ahead	U	4	N/A	G		1	22	-	985	1940	1115	88.3%
13/2	Ahead	U	4	N/A	G		1	22	-	985	1940	1115	88.3%
14/1		U	N/A	N/A	-		-	-	-	594	Inf	Inf	0.0%
14/2		U	N/A	N/A	-		-	-	-	1031	Inf	Inf	0.0%
Ped Link: P1	Unnamed Ped Link	-	4	-	I		1	6	-	0	-	0	0.0%
Ped Link: P2	Unnamed Ped Link	-	4	-	J		1	6	-	0	-	0	0.0%

LinSig V1 style report

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)
<b>Network</b>	-	-	<b>523</b>	<b>0</b>	<b>0</b>	<b>27.3</b>	<b>133.4</b>	<b>0.0</b>	<b>160.7</b>	-	-	-	-
<b>Unnamed Junction</b>	-	-	<b>523</b>	<b>0</b>	<b>0</b>	<b>27.3</b>	<b>133.4</b>	<b>0.0</b>	<b>160.7</b>	-	-	-	-
1/1	612	567	-	-	-	3.1	27.8	-	31.0	182.2	7.3	27.8	35.1
1/2	526	526	-	-	-	2.0	4.5	-	6.5	44.3	5.6	4.5	10.1
2/1	698	698	-	-	-	2.5	10.6	-	13.1	67.5	7.6	10.6	18.1
2/2	698	679	-	-	-	2.9	18.8	-	21.7	112.0	8.0	18.8	26.8
3/1	564	523	523	0	0	1.6	25.8	-	27.4	175.1	18.5	25.8	44.3
4/1	985	985	-	-	-	0.2	3.4	-	3.5	12.9	0.6	3.4	4.0
4/2	985	985	-	-	-	0.2	3.7	-	3.8	14.0	3.8	3.7	7.4
5/1	463	463	-	-	-	0.6	0.5	-	1.1	8.5	2.2	0.5	2.7
5/2	526	526	-	-	-	0.1	0.6	-	0.8	5.2	0.3	0.6	0.9
6/1	509	509	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
6/2	1205	1205	-	-	-	0.0	0.8	-	0.8	2.4	0.0	0.8	0.8
7/1	235	235	-	-	-	0.7	0.5	-	1.2	18.9	2.4	0.5	2.8
7/2	402	402	-	-	-	1.5	2.5	-	4.0	36.1	4.2	2.5	6.7
8/1	684	684	-	-	-	1.6	0.9	-	2.5	13.3	4.3	0.9	5.2
8/2	1068	1058	-	-	-	3.2	19.1	-	22.3	75.1	10.9	19.1	30.0
9/1	652	652	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
10/1	588	588	-	-	-	1.2	0.6	-	1.7	10.5	3.2	0.6	3.7
10/2	1013	1013	-	-	-	1.8	4.6	-	6.4	22.6	9.4	4.6	13.9
11/1	428	428	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
11/2	427	427	-	-	-	0.0	0.1	-	0.1	1.2	0.0	0.1	0.1
12/1	830	830	-	-	-	0.0	0.4	-	0.4	1.6	1.7	0.4	2.1
12/2	1016	1016	-	-	-	0.0	0.5	-	0.5	1.9	0.0	0.5	0.5
13/1	985	985	-	-	-	2.0	3.6	-	5.6	20.4	9.3	3.6	12.9

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13/2	985	985	-	-	-	2.0	3.6	-	5.6	20.4	9.3	3.6	12.9
14/1	588	588	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	1013	1013	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P2	0	0	-	-	-	-	-	-	-	-	-	-	-
<div> <div>C1</div> <div>Stream: 1 PRC for Signalled Lanes (%): -19.9</div> <div>Total Delay for Signalled Lanes (pcuHr): 62.26</div> <div>Cycle Time (s): 40</div> </div> <div> <div>C1</div> <div>Stream: 2 PRC for Signalled Lanes (%): -14.2</div> <div>Total Delay for Signalled Lanes (pcuHr): 36.66</div> <div>Cycle Time (s): 40</div> </div> <div> <div>C1</div> <div>Stream: 3 PRC for Signalled Lanes (%): 1.6</div> <div>Total Delay for Signalled Lanes (pcuHr): 12.63</div> <div>Cycle Time (s): 40</div> </div> <div> <div>C1</div> <div>Stream: 4 PRC for Signalled Lanes (%): -0.9</div> <div>Total Delay for Signalled Lanes (pcuHr): 19.27</div> <div>Cycle Time (s): 40</div> </div> <div> <div>PRC Over All Lanes (%): -19.9</div> <div>Total Delay Over All Lanes(pcuHr): 160.69</div> </div>													

### User and Project Details

<b>Project:</b>	
<b>Title:</b>	
<b>Location:</b>	
<b>File name:</b>	Jct 6 Signals Mit RevA - AM_PM.lsg3x
<b>Author:</b>	
<b>Company:</b>	
<b>Address:</b>	
<b>Notes:</b>	

### Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic			7	7
C	Traffic	2		7	7
D	Traffic			7	7
E	Traffic	3		7	7
F	Traffic	1		7	7
G	Traffic			7	7
H	Traffic	2		7	7
I	Traffic			7	7
J	Traffic	3		7	7

**Phase Intergreens Matrix**

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

**Phase Delays****Stage Stream: 1**

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

**Stage Stream: 2**

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

**Stage Stream: 3**

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

**Prohibited Stage Change****Stage Stream: 1**

		To Stage	
From Stage		1	2
	1		5
	2	5	

**Stage Stream: 2**

		To Stage	
From Stage		1	2
	1		5
	2	5	

**Stage Stream: 3**

		To Stage	
From Stage		1	2
	1		5
	2	5	

**Phases in Stage**

Stream	Stage No.	Phases in Stage
1	1	A
1	2	F
2	1	C
2	2	H
3	1	E
3	2	J

**Give-Way Lane Input Data**

Junction: Unnamed Junction											
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)
2/1 (Seamark Road)	9/1 (Ahead)	1000	0	8/1	0.33	All	-	-	-	-	-
				8/2	0.33	All					
	9/2 (Ahead)	1000	0	8/1	0.33	All					
				8/2	0.33	All					
	12/1 (Left)	1000	0	8/1	0.33	All					
				8/2	0.33	All					
	12/2 (Left)	1000	0	8/1	0.33	All					
				8/2	0.33	All					
4/1 (Willetts Hill S)	7/1 (Ahead)	1000	0	6/1	0.33	All	-	-	-	-	-
				6/2	0.33	All					
	7/2 (Ahead)	1000	0	6/1	0.33	All					
				6/2	0.33	All					
	14/1 (Left)	1000	0	6/1	0.33	All					
				6/2	0.33	All					

**Lane Input Data**

Junction: Unnamed Junction												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A299 (N))	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 8 Left	Inf
1/2 (A299 (N))	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 8 Left	Inf
2/1 (Seamark Road)	O		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 9 Ahead Arm 12 Left	182.87 41.14
3/1 (A299 E)	U	C	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 6 Ahead Arm 13 Left	81.41 49.73
3/2 (A299 E)	U	C	2	3	60.0	Geom	-	3.70	0.00	Y	Arm 6 Ahead	81.41
4/1 (Willetts Hill S)	O		2	3	60.0	Geom	-	5.00	0.00	Y	Arm 7 Ahead Arm 14 Left	132.96 97.37
5/1 (A254 Canterbury Road (W))	U	E	2	3	3.0	Geom	-	4.17	0.00	Y	Arm 10 Left Arm 15 Ahead	Inf Inf
5/2 (A254 Canterbury Road (W))	U	E	2	3	60.0	Geom	-	4.17	0.00	Y	Arm 15 Ahead	27.85
6/1	U		2	3	60.0	Geom	-	4.62	0.00	Y	Arm 7 Right Arm 14 Ahead	Inf Inf
6/2	U		2	3	60.0	Geom	-	4.62	0.00	Y	Arm 7 Right	Inf
7/1	U	J	2	3	60.0	Geom	-	4.60	0.00	Y	Arm 10 Ahead	52.76
7/2	U	J	2	3	60.0	Geom	-	4.60	0.00	Y	Arm 10 Ahead Arm 15 Right	34.86 34.86
8/1	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 11 Left Arm 12 Ahead	Inf Inf
8/2	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm 9 Right Arm 12 Ahead	Inf Inf



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9/1	U	H	2	3	60.0	Geom	-	4.63	0.00	Y	Arm 13 Ahead	51.85
9/2	U	H	2	3	60.0	Geom	-	4.63	0.00	Y	Arm 6 Right	36.32
10/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
10/2	U		2	3	60.0	Geom	-	3.25	0.00	Y		
11/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
12/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
12/2	U		2	3	60.0	Geom	-	3.25	0.00	Y		
13/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
14/1	U		2	3	60.0	Geom	-	3.25	0.00	Y		
15/1	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 8 Ahead	Inf
15/2	U	F	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 8 Ahead	Inf

**Lane Saturation Flows****Scenario 1: 'AM 2039 + Dev (Link + Sigs)' (FG1: 'AM 2039 + Dev (Link + Sigs) PCUs', Plan 1: 'AM')**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A299 (N))	3.25	0.00	Y	Arm 8 Left	Inf	100.0 %	1940	1940
1/2 (A299 (N))	3.25	0.00	Y	Arm 8 Left	Inf	100.0 %	1940	1940
2/1 (Seamark Road)	5.00	0.00	Y	Arm 9 Ahead	182.87	66.7 %	2078	2078
				Arm 12 Left	41.14	33.3 %		
3/1 (A299 E)	3.70	0.00	Y	Arm 6 Ahead	81.41	94.0 %	1948	1948
				Arm 13 Left	49.73	6.0 %		
3/2 (A299 E)	3.70	0.00	Y	Arm 6 Ahead	81.41	100.0 %	1949	1949
4/1 (Willets Hill S)	5.00	0.00	Y	Arm 7 Ahead	132.96	87.9 %	2090	2090
				Arm 14 Left	97.37	12.1 %		
5/1 (A254 Canterbury Road (W))	4.17	0.00	Y	Arm 10 Left	Inf	16.9 %	2032	2032
				Arm 15 Ahead	Inf	83.1 %		
5/2 (A254 Canterbury Road (W))	4.17	0.00	Y	Arm 15 Ahead	27.85	100.0 %	1928	1928
6/1	4.62	0.00	Y	Arm 7 Right	Inf	38.6 %	2077	2077
				Arm 14 Ahead	Inf	61.4 %		
6/2	4.62	0.00	Y	Arm 7 Right	Inf	100.0 %	2077	2077
7/1	4.60	0.00	Y	Arm 10 Ahead	52.76	100.0 %	2018	2018
7/2	4.60	0.00	Y	Arm 10 Ahead	34.86	87.7 %	1989	1989
				Arm 15 Right	34.86	12.3 %		
8/1	3.25	0.00	Y	Arm 11 Left	Inf	2.6 %	1940	1940
				Arm 12 Ahead	Inf	97.4 %		
8/2	3.25	0.00	Y	Arm 9 Right	Inf	6.3 %	1940	1940
				Arm 12 Ahead	Inf	93.7 %		
9/1	4.63	0.00	Y	Arm 13 Ahead	51.85	100.0 %	2020	2020
9/2	4.63	0.00	Y	Arm 6 Right	36.32	100.0 %	1996	1996
10/1	3.25	0.00	Y				1940	1940
10/2	3.25	0.00	Y				1940	1940
11/1	3.25	0.00	Y				1940	1940
12/1	3.25	0.00	Y				1940	1940
12/2	3.25	0.00	Y				1940	1940
13/1	3.25	0.00	Y				1940	1940
14/1	3.25	0.00	Y				1940	1940
15/1	3.25	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1940	1940
15/2	3.25	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1940	1940

**Scenario 2: 'PM 2039 + Dev (Link + Sigs)' (FG2: 'PM 2039 + Dev (Link + Sigs)' PCUs', Plan 2: 'PM')**

Junction: Unnamed Junction								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A299 (N))	3.25	0.00	Y	Arm 8 Left	Inf	100.0 %	1940	1940
1/2 (A299 (N))	3.25	0.00	Y	Arm 8 Left	Inf	100.0 %	1940	1940
2/1 (Seamark Road)	5.00	0.00	Y	Arm 9 Ahead Arm 12 Left	182.87 41.14	32.1 % 67.9 %	2059	2059
3/1 (A299 E)	3.70	0.00	Y	Arm 6 Ahead Arm 13 Left	81.41 49.73	87.9 % 12.1 %	1946	1946
3/2 (A299 E)	3.70	0.00	Y	Arm 6 Ahead	81.41	100.0 %	1949	1949
4/1 (Willets Hill S)	5.00	0.00	Y	Arm 7 Ahead Arm 14 Left	132.96 97.37	89.5 % 10.5 %	2091	2091
5/1 (A254 Canterbury Road (W))	4.17	0.00	Y	Arm 10 Left Arm 15 Ahead	Inf Inf	8.6 % 91.4 %	2032	2032
5/2 (A254 Canterbury Road (W))	4.17	0.00	Y	Arm 15 Ahead	27.85	100.0 %	1928	1928
6/1	4.62	0.00	Y	Arm 7 Right Arm 14 Ahead	Inf Inf	53.2 % 46.8 %	2077	2077
6/2	4.62	0.00	Y	Arm 7 Right	Inf	100.0 %	2077	2077
7/1	4.60	0.00	Y	Arm 10 Ahead	52.76	100.0 %	2018	2018
7/2	4.60	0.00	Y	Arm 10 Ahead Arm 15 Right	34.86 34.86	90.2 % 9.8 %	1989	1989
8/1	3.25	0.00	Y	Arm 11 Left Arm 12 Ahead	Inf Inf	4.0 % 96.0 %	1940	1940
8/2	3.25	0.00	Y	Arm 9 Right Arm 12 Ahead	Inf Inf	5.4 % 94.6 %	1940	1940
9/1	4.63	0.00	Y	Arm 13 Ahead	51.85	100.0 %	2020	2020
9/2	4.63	0.00	Y	Arm 6 Right	36.32	100.0 %	1996	1996
10/1	3.25	0.00	Y				1940	1940
10/2	3.25	0.00	Y				1940	1940
11/1	3.25	0.00	Y				1940	1940
12/1	3.25	0.00	Y				1940	1940
12/2	3.25	0.00	Y				1940	1940
13/1	3.25	0.00	Y				1940	1940
14/1	3.25	0.00	Y				1940	1940
15/1	3.25	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1940	1940
15/2	3.25	0.00	Y	Arm 8 Ahead	Inf	100.0 %	1940	1940

**Traffic Flow Groups**

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM 2039 + Dev (Link + Sigs) PCUs'	08:00	09:00	01:00	
2: 'PM 2039 + Dev (Link + Sigs) PCUs'	17:00	18:00	01:00	
3: 'AM 2039 + Dev Revised'	08:00	09:00	01:00	
4: 'PM 2039 + Dev Revised'	17:00	18:00	01:00	

**Traffic Flows, Desired****FG1: 'AM 2039 + Dev (Link + Sigs) PCUs'****Desired Flow :**

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	45	421	1011	15	1492
	B	89	0	15	20	0	124
	C	284	6	0	27	3	320
	D	1100	18	25	0	2	1145
	E	10	9	5	6	0	30
	Tot.	1483	78	466	1064	20	3111

**FG2: 'PM 2039 + Dev (Link + Sigs) PCUs'****Desired Flow :**

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	87	289	1038	27	1441
	B	48	0	8	19	1	76
	C	531	15	0	25	8	579
	D	1203	23	12	0	1	1239
	E	19	6	2	1	0	28
	Tot.	1801	131	311	1083	37	3363

**FG3: 'AM 2039 + Dev Revised'****Desired Flow :**

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	36	414	1270	45	1765
	B	63	0	44	45	9	161
	C	292	14	0	33	9	348
	D	1317	56	30	0	28	1431
	E	11	7	17	50	0	85
	Tot.	1683	113	505	1398	91	3790

**FG4: 'PM 2039 + Dev Revised'**

**Desired Flow :**

	Destination						
Origin		A	B	C	D	E	Tot.
	A	0	103	335	1226	71	1735
	B	40	0	16	34	4	94
	C	513	23	0	30	20	586
	D	1384	49	15	0	15	1463
	E	33	9	6	45	0	93
	Tot.	1970	184	372	1335	110	3971

**Stage Timings**

**Scenario 1: 'AM 2039 + Dev (Link + Sigs)' (FG1: 'AM 2039 + Dev (Link + Sigs) PCUs', Plan 1: 'AM')**

**Stage Stream: 1**

Stage	1	2
Duration	32	8
Change Point	46	33

**Stage Stream: 2**

Stage	1	2
Duration	33	7
Change Point	37	25

**Stage Stream: 3**

Stage	1	2
Duration	9	31
Change Point	31	45

**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 (%)
<b>Network</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>66.6%</b>
<b>Unnamed Junction</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>66.6%</b>
1/1	A299 (N) Left	U	1	N/A	A		1	32	-	572	1940	1280	44.7%
1/2	A299 (N) Left	U	1	N/A	A		1	32	-	573	1940	1280	44.8%
2/1	Seamark Road Ahead Left	O	N/A	N/A	-		-	-	-	30	2078	508	5.9%
3/1	A299 E Ahead Left	U	2	N/A	C		1	33	-	746	1948	1325	56.3%
3/2	A299 E Ahead	U	2	N/A	C		1	33	-	746	1949	1325	56.3%
4/1	Willetts Hill S Ahead Left	O	N/A	N/A	-		-	-	-	124	2090	538	23.1%
5/2+5/1	A254 Canterbury Road (W) Left Ahead	U	3	N/A	E		1	9	-	320	1928:2032	295+295	54.2 : 54.2%
6/1	Right Ahead	U	N/A	N/A	-		-	-	-	734	2077	2077	35.3%
6/2	Right	U	N/A	N/A	-		-	-	-	749	2077	2077	36.1%
7/1	Ahead	U	3	N/A	J		1	31	-	293	2018	1292	22.7%
7/2	Ahead Right	U	3	N/A	J		1	31	-	848	1989	1273	66.6%
8/1	Left Ahead	U	N/A	N/A	-		-	-	-	765	1940	1940	39.4%
8/2	Right Ahead	U	N/A	N/A	-		-	-	-	777	1940	1940	40.1%
9/1	Ahead	U	2	N/A	H		1	7	-	33	2020	323	10.2%
9/2	Right	U	2	N/A	H		1	7	-	36	1996	319	11.3%
10/1		U	N/A	N/A	-		-	-	-	306	1940	1940	15.8%
10/2		U	N/A	N/A	-		-	-	-	758	1940	1940	39.1%
11/1		U	N/A	N/A	-		-	-	-	20	1940	1940	1.0%
12/1		U	N/A	N/A	-		-	-	-	750	1940	1940	38.7%
12/2		U	N/A	N/A	-		-	-	-	733	1940	1940	37.8%
13/1		U	N/A	N/A	-		-	-	-	78	1940	1940	4.0%

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14/1		U	N/A	N/A	-		-	-	-	466	1940	1940	24.0%
15/1	Ahead	U	1	N/A	F		1	8	-	193	1940	349	55.3%
15/2	Ahead	U	1	N/A	F		1	8	-	204	1940	349	58.4%

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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)
<b>Network</b>	-	-	<b>154</b>	<b>0</b>	<b>0</b>	<b>6.6</b>	<b>7.9</b>	<b>0.0</b>	<b>14.4</b>	-	-	-	-
<b>Unnamed Junction</b>	-	-	<b>154</b>	<b>0</b>	<b>0</b>	<b>6.6</b>	<b>7.9</b>	<b>0.0</b>	<b>14.4</b>	-	-	-	-
1/1	572	572	-	-	-	0.7	0.4	-	1.1	6.6	3.8	0.4	4.2
1/2	573	573	-	-	-	0.7	0.4	-	1.1	6.6	3.8	0.4	4.2
2/1	30	30	30	0	0	0.0	0.0	-	0.0	4.1	0.1	0.0	0.1
3/1	746	746	-	-	-	0.9	0.6	-	1.5	7.3	5.2	0.6	5.8
3/2	746	746	-	-	-	0.9	0.6	-	1.5	7.2	5.2	0.6	5.8
4/1	124	124	124	0	0	0.0	0.1	-	0.2	5.5	0.4	0.1	0.6
5/2+5/1	320	320	-	-	-	1.5	0.6	-	2.1	24.1	1.9	0.6	2.5
6/1	734	734	-	-	-	0.0	0.3	-	0.3	1.3	0.0	0.3	0.3
6/2	749	749	-	-	-	0.0	0.3	-	0.3	1.4	0.0	0.3	0.3
7/1	293	293	-	-	-	0.1	0.1	-	0.3	3.4	0.5	0.1	0.6
7/2	848	848	-	-	-	0.5	1.0	-	1.5	6.3	5.6	1.0	6.6
8/1	765	765	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
8/2	777	777	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
9/1	33	33	-	-	-	0.2	0.1	-	0.2	23.6	0.4	0.1	0.5
9/2	36	36	-	-	-	0.2	0.1	-	0.2	21.4	0.4	0.1	0.5
10/1	306	306	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/2	758	758	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
11/1	20	20	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/1	750	750	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
12/2	733	733	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
13/1	78	78	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
14/1	466	466	-	-	-	0.0	0.2	-	0.2	1.2	0.0	0.2	0.2
15/1	193	193	-	-	-	0.5	0.6	-	1.2	21.5	1.1	0.6	1.7



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15/2	204	204	-	-	-	0.5	0.7	-	1.2	21.0	0.9	0.7	1.6
		C1	Stream: 1	PRC for Signalled Lanes (%)	54.1	Total Delay for Signalled Lanes (pcuHr)	4.46	Cycle Time (s)	50				
		C1	Stream: 2	PRC for Signalled Lanes (%)	59.8	Total Delay for Signalled Lanes (pcuHr)	3.44	Cycle Time (s)	50				
		C1	Stream: 3	PRC for Signalled Lanes (%)	35.1	Total Delay for Signalled Lanes (pcuHr)	3.89	Cycle Time (s)	50				
				PRC Over All Lanes (%)	35.1	Total Delay Over All Lanes(pcuHr)	14.44						

**Stage Timings**

**Scenario 2: 'PM 2039 + Dev (Link + Sigs)'** (FG2: 'PM 2039 + Dev (Link + Sigs) PCUs', Plan 2: 'PM')

**Stage Stream: 1**

Stage	1	2
Duration	28	12
Change Point	44	27

**Stage Stream: 2**

Stage	1	2
Duration	33	7
Change Point	32	20

**Stage Stream: 3**

Stage	1	2
Duration	10	30
Change Point	26	41

**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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>91.8%</b>
<b>Unnamed Junction</b>	-	-	N/A	-	-		-	-	-	-	-	-	<b>91.8%</b>
1/1	A299 (N) Left	U	1	N/A	A		1	28	-	619	1940	1125	55.0%
1/2	A299 (N) Left	U	1	N/A	A		1	28	-	620	1940	1125	55.1%
2/1	Seamark Road Ahead Left	O	N/A	N/A	-		-	-	-	28	2059	416	6.7%
3/1	A299 E Ahead Left	U	2	N/A	C		1	33	-	721	1946	1323	54.5%
3/2	A299 E Ahead	U	2	N/A	C		1	33	-	720	1949	1325	54.3%
4/1	Willetts Hill S Ahead Left	O	N/A	N/A	-		-	-	-	76	2091	567	13.4%
5/2+5/1	A254 Canterbury Road (W) Left Ahead	U	3	N/A	E		1	10	-	579	1928:2032	315+316	91.8 : 91.8%
6/1	Right Ahead	U	N/A	N/A	-		-	-	-	648	2077	2077	31.2%
6/2	Right	U	N/A	N/A	-		-	-	-	721	2077	2077	34.7%
7/1	Ahead	U	3	N/A	J		1	30	-	355	2018	1251	28.4%
7/2	Ahead Right	U	3	N/A	J		1	30	-	779	1989	1233	63.2%
8/1	Left Ahead	U	N/A	N/A	-		-	-	-	936	1940	1940	48.2%
8/2	Right Ahead	U	N/A	N/A	-		-	-	-	933	1940	1940	48.1%
9/1	Ahead	U	2	N/A	H		1	7	-	44	2020	323	13.6%
9/2	Right	U	2	N/A	H		1	7	-	15	1996	319	4.7%
10/1		U	N/A	N/A	-		-	-	-	367	1940	1940	18.9%
10/2		U	N/A	N/A	-		-	-	-	716	1940	1940	36.9%
11/1		U	N/A	N/A	-		-	-	-	37	1940	1940	1.9%
12/1		U	N/A	N/A	-		-	-	-	908	1940	1940	46.8%
12/2		U	N/A	N/A	-		-	-	-	893	1940	1940	46.0%
13/1		U	N/A	N/A	-		-	-	-	131	1940	1940	6.8%

LinSig V1 style report

14/1		U	N/A	N/A	-		-	-	-	311	1940	1940	16.0%
15/1	Ahead	U	1	N/A	F		1	12	-	317	1940	504	62.8%
15/2	Ahead	U	1	N/A	F		1	12	-	313	1940	504	62.1%

LinSig V1 style report

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)
<b>Network</b>	-	-	<b>104</b>	<b>0</b>	<b>0</b>	<b>8.6</b>	<b>12.9</b>	<b>0.0</b>	<b>21.5</b>	-	-	-	-
<b>Unnamed Junction</b>	-	-	<b>104</b>	<b>0</b>	<b>0</b>	<b>8.6</b>	<b>12.9</b>	<b>0.0</b>	<b>21.5</b>	-	-	-	-
1/1	619	619	-	-	-	1.1	0.6	-	1.7	10.0	5.2	0.6	5.8
1/2	620	620	-	-	-	1.1	0.6	-	1.7	10.0	5.2	0.6	5.8
2/1	28	28	28	0	0	0.0	0.0	-	0.0	5.5	0.1	0.0	0.1
3/1	721	721	-	-	-	0.8	0.6	-	1.4	7.1	5.0	0.6	5.6
3/2	720	720	-	-	-	0.8	0.6	-	1.4	7.0	5.0	0.6	5.6
4/1	76	76	76	0	0	0.0	0.1	-	0.1	4.5	0.2	0.1	0.3
5/2+5/1	579	579	-	-	-	2.9	4.7	-	7.6	47.5	4.7	4.7	9.4
6/1	648	648	-	-	-	0.0	0.2	-	0.2	1.3	0.0	0.2	0.2
6/2	721	721	-	-	-	0.0	0.3	-	0.3	1.3	0.0	0.3	0.3
7/1	355	355	-	-	-	0.2	0.2	-	0.4	3.7	0.7	0.2	0.9
7/2	779	779	-	-	-	0.5	0.9	-	1.3	6.2	5.7	0.9	6.5
8/1	936	936	-	-	-	0.0	0.5	-	0.5	1.8	0.0	0.5	0.5
8/2	933	933	-	-	-	0.0	0.5	-	0.5	1.8	0.0	0.5	0.5
9/1	44	44	-	-	-	0.2	0.1	-	0.3	23.6	0.5	0.1	0.6
9/2	15	15	-	-	-	0.1	0.0	-	0.1	18.6	0.2	0.0	0.2
10/1	367	367	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
10/2	716	716	-	-	-	0.0	0.3	-	0.3	1.5	0.0	0.3	0.3
11/1	37	37	-	-	-	0.0	0.0	-	0.0	0.9	0.0	0.0	0.0
12/1	908	908	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
12/2	893	893	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
13/1	131	131	-	-	-	0.0	0.0	-	0.0	1.0	0.0	0.0	0.0
14/1	311	311	-	-	-	0.0	0.1	-	0.1	1.1	0.0	0.1	0.1
15/1	317	317	-	-	-	0.5	0.8	-	1.3	15.2	1.0	0.8	1.9

# LinSig V1 style report

15/2	313	313	-	-	-	0.4	0.8	-	1.2	14.1	0.7	0.8	1.5
		C1	Stream: 1 PRC for Signalled Lanes (%):	43.2	Total Delay for Signalled Lanes (pcuHr):	6.02	Cycle Time (s):	50					
		C1	Stream: 2 PRC for Signalled Lanes (%):	65.2	Total Delay for Signalled Lanes (pcuHr):	3.18	Cycle Time (s):	50					
		C1	Stream: 3 PRC for Signalled Lanes (%):	-2.0	Total Delay for Signalled Lanes (pcuHr):	9.33	Cycle Time (s):	50					
			PRC Over All Lanes (%):	-2.0	Total Delay Over All Lanes(pcuHr):	21.51							

### User and Project Details

<b>Project:</b>	
<b>Title:</b>	
<b>Location:</b>	
<b>File name:</b>	Junction 2 Signal with Pedestrian crossings_R5 AF.lsg3x
<b>Author:</b>	
<b>Company:</b>	
<b>Address:</b>	
<b>Notes:</b>	

### 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	Filter	C	4	0
F	Ind. Arrow	A	4	4
G	Pedestrian		6	6

### Phase Intergreens Matrix

	Starting Phase						
	A	B	C	D	E	F	G
Terminating Phase	A	-	5	8	-	-	-
	B	-	6	6	6	5	-
	C	9	7	-	-	9	11
	D	6	6	-	6	5	9
	E	-	7	-	6	-	11
	F	-	6	5	8	-	-
	G	12	12	-	-	-	-

### Phase Delays

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

### Prohibited Stage Change

From Stage	To Stage				
		1	2	3	4
	1		9	9	11
	2	8		6	0
	3	11	X		X
	4	2	12	X	

### Phases in Stage

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



**Give-Way Lane Input Data**

Junction: Junction 2											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/2 (Spitfire Way_Entry)	5/1 (Right)	1440	0	3/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	6.00	-	0.50	6	3.00
2/1 (Manston Road West_ Entry)	6/1 (Right)	1439	0	4/2 4/1	1.09 1.09	To 7/1 (Ahead) All	1.00	1.00	0.50	1	1.00
3/1 (Manston Road North_ Entry)	7/1 (Right)	1439	0	1/1	1.09	All	3.00	3.00	0.50	3	3.00
4/2 (Manston Road East_ Entry)	8/1 (Right)	1439	0	2/1	1.09	To 5/1 (Ahead) To 8/1 (Left)	5.00	5.00	0.50	5	3.00

**Lane Input Data**

Junction: Junction 2												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Spitfire Way_Entry)	U	A	2	3	7.0	Geom	-	3.00	0.00	Y	Arm 7 Left	21.50
											Arm 8 Ahead	Inf
1/2 (Spitfire Way_Entry)	O	A F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	20.00
2/1 (Manston Road West_Entry)	O	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	64.00
											Arm 6 Right	20.00
											Arm 8 Left	16.50
3/1 (Manston Road North_Entry)	O	B	2	3	60.0	Geom	-	3.45	0.00	Y	Arm 5 Left	11.50
											Arm 6 Ahead	Inf
4/1 (Manston Road East_Entry)	U	C E	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	10.00
											Arm 6 Left	31.50
4/2 (Manston Road East_Entry)	O	C	2	3	14.0	Geom	-	3.00	0.00	Y	Arm 7 Ahead	64.00
											Arm 8 Right	8.00
5/1 (Manston Road East_Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (Spitfire Way_Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Manston Road West_Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (Manston Road North_Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

**Lane Saturation Flows**

**Scenario 1: '2039 Growthed Future Baseline + Development - AM Peak with Ped'** (FG1: '2039 Growthed Future Baseline + Development - AM Peak ', Plan 10: '2039 Growthed Future Baseline + Development - AM Peak with Ped')

Junction: Junction 2								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Spitfire Way_Entry)	3.00	0.00	Y	Arm 7 Left	21.50	5.7 %	1907	1907
				Arm 8 Ahead	Inf	94.3 %		
1/2 (Spitfire Way_Entry)	3.00	0.00	Y	Arm 5 Right	20.00	100.0 %	1781	1781
2/1 (Manston Road West_ Entry)	3.00	0.00	Y	Arm 5 Ahead	64.00	77.7 %	1846	1846
				Arm 6 Right	20.00	7.4 %		
				Arm 8 Left	16.50	14.9 %		
3/1 (Manston Road North_ Entry)	3.45	0.00	Y	Arm 5 Left	11.50	27.9 %	1873	1873
				Arm 6 Ahead	Inf	65.3 %		
				Arm 7 Right	10.00	6.9 %		
4/1 (Manston Road East_ Entry)	3.00	0.00	Y	Arm 6 Left	31.50	100.0 %	1828	1828
4/2 (Manston Road East_ Entry)	3.00	0.00	Y	Arm 7 Ahead	64.00	58.9 %	1755	1755
				Arm 8 Right	8.00	41.1 %		
5/1 (Manston Road East_ Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Spitfire Way_Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Manston Road West_ Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Manston Road North_ Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

**Scenario 2: '2039 Growthed Future Baseline + Development - PM Peak with Ped'** (FG2: '2039 Growthed Future Baseline + Development - PM Peak ', Plan 12: '2039 Growthed Future Baseline + Development - PM Peak with Ped')

Junction: Junction 2								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (Spitfire Way_Entry)	3.00	0.00	Y	Arm 7 Left	21.50	2.9 %	1911	1911
				Arm 8 Ahead	Inf	97.1 %		
1/2 (Spitfire Way_Entry)	3.00	0.00	Y	Arm 5 Right	20.00	100.0 %	1781	1781
				Arm 5 Ahead	64.00	85.3 %	1854	1854
2/1 (Manston Road West_Entry)	3.00	0.00	Y	Arm 6 Right	20.00	4.0 %		
				Arm 8 Left	16.50	10.6 %		
3/1 (Manston Road North_Entry)	3.45	0.00	Y	Arm 5 Left	11.50	36.3 %	1832	1832
				Arm 6 Ahead	Inf	48.7 %		
4/1 (Manston Road East_Entry)	3.00	0.00	Y	Arm 7 Right	10.00	14.9 %	1828	1828
				Arm 6 Left	31.50	100.0 %		
4/2 (Manston Road East_Entry)	3.00	0.00	Y	Arm 7 Ahead	64.00	81.6 %	1817	1817
				Arm 8 Right	8.00	18.4 %		
5/1 (Manston Road East_Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (Spitfire Way_Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (Manston Road West_Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (Manston Road North_Exit Lane 1)	Infinite Saturation Flow						Inf	Inf

### Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2039 Growthed Future Baseline + Development - AM Peak '	07:45	08:45	01:00	
2: '2039 Growthed Future Baseline + Development - PM Peak '	16:45	17:45	01:00	

## Traffic Flows, Desired

### FG1: '2039 Growthed Future Baseline + Development - AM Peak '

#### Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	467	311	217	995
	B	296	0	15	248	559
	C	397	38	0	76	511
	D	105	246	26	0	377
	Tot.	798	751	352	541	2442

### FG2: '2039 Growthed Future Baseline + Development - PM Peak '

#### Desired Flow :

	Destination					
Origin		A	B	C	D	Tot.
	A	0	386	372	84	842
	B	364	0	8	264	636
	C	233	11	0	29	273
	D	173	232	71	0	476
	Tot.	770	629	451	377	2227

## Stage Timings

**Scenario 1: '2039 Growthed Future Baseline + Development - AM Peak with Ped'** (FG1: '2039 Growthed Future Baseline + Development - AM Peak ', Plan 10: '2039 Growthed Future Baseline + Development - AM Peak with Ped')

Stage	1	4	2	3	1	2	3
Duration	50	6	9	9	22	34	4
Change Point	0	61	78	99	114	147	190

**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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	87.5%
<b>Junction 2</b>	-	-	N/A	-	-		-	-	-	-	-	-	87.5%
1/2+1/1	Spitfire Way_Entry Right Left Ahead	O+U	N/A	N/A	A	F	2	68	15	559	1781:1907	338+301	87.5 : 87.5%
2/1	Manston Road West_Entry Ahead Right Left	O	N/A	N/A	D		2	72	-	511	1846	674	75.8%
3/1	Manston Road North_Entry Left Ahead Right	O	N/A	N/A	B		2	45	-	377	1873	440	85.7%
4/1+4/2	Manston Road East_Entry Left Ahead Right	U+O	N/A	N/A	C	E	2	107:84	23	995	1828:1755	542+613	86.2 : 86.2%
5/1	Manston Road East_Exit	U	N/A	N/A	-		-	-	-	798	Inf	Inf	0.0%
6/1	Spitfire Way_Exit	U	N/A	N/A	-		-	-	-	751	Inf	Inf	0.0%
7/1	Manston Road West_Exit	U	N/A	N/A	-		-	-	-	352	Inf	Inf	0.0%
8/1	Manston Road North_Exit	U	N/A	N/A	-		-	-	-	541	Inf	Inf	0.0%

LinSig V1 style report

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)
<b>Network</b>	-	-	<b>219</b>	<b>230</b>	<b>128</b>	<b>20.2</b>	<b>10.5</b>	<b>2.7</b>	<b>33.3</b>	-	-	-	-
<b>Junction 2</b>	-	-	<b>219</b>	<b>230</b>	<b>128</b>	<b>20.2</b>	<b>10.5</b>	<b>2.7</b>	<b>33.3</b>	-	-	-	-
1/2+1/1	559	559	43	187	66	4.5	3.2	0.9	8.6	55.6	10.9	3.2	14.1
2/1	511	511	35	0	3	4.2	1.5	0.1	5.8	40.8	13.2	1.5	14.8
3/1	377	377	26	0	0	6.3	2.7	0.0	9.0	86.2	14.8	2.7	17.5
4/1+4/2	995	995	114	43	60	5.3	3.0	1.6	9.9	35.8	11.9	3.0	14.9
5/1	798	798	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	751	751	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	352	352	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	541	541	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 2.9</div> <div>PRC Over All Lanes (%): 2.9</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 33.35</div> <div>Total Delay Over All Lanes(pcuHr): 33.35</div> </div> <div>Cycle Time (s): 200</div> </div>													

## Stage Timings

**Scenario 2: '2039 Growthed Future Baseline + Development - PM Peak with Ped'** (FG2: '2039 Growthed Future Baseline + Development - PM Peak ', Plan 12: '2039 Growthed Future Baseline + Development - PM Peak with Ped')

Stage	1	4	2	3	1	2	3
Duration	30	6	27	16	38	52	5
Change Point	0	41	58	97	119	168	229



**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 (%)
<b>Network</b>	-	-	N/A	-	-		-	-	-	-	-	-	86.5%
<b>Junction 2</b>	-	-	N/A	-	-		-	-	-	-	-	-	86.5%
1/2+1/1	Spitfire Way_Entry Right Left Ahead	O+U	N/A	N/A	A	F	2	112	23	636	1781:1911	421+315	86.4 : 86.4%
2/1	Manston Road West_Entry Ahead Right Left	O	N/A	N/A	D		2	68	-	273	1854	541	50.5%
3/1	Manston Road North_Entry Left Ahead Right	O	N/A	N/A	B		2	81	-	476	1832	634	75.1%
4/1+4/2	Manston Road East_Entry Left Ahead Right	U+O	N/A	N/A	C	E	2	111:80	31	842	1828:1817	446+527	86.5 : 86.5%
5/1	Manston Road East_Exit	U	N/A	N/A	-		-	-	-	770	Inf	Inf	0.0%
6/1	Spitfire Way_Exit	U	N/A	N/A	-		-	-	-	629	Inf	Inf	0.0%
7/1	Manston Road West_Exit	U	N/A	N/A	-		-	-	-	451	Inf	Inf	0.0%
8/1	Manston Road North_Exit	U	N/A	N/A	-		-	-	-	377	Inf	Inf	0.0%

LinSig V1 style report

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	-	-	277	210	43	18.1	8.1	1.9	28.0	-	-	-	-
Junction 2	-	-	277	210	43	18.1	8.1	1.9	28.0	-	-	-	-
1/2+1/1	636	636	116	207	41	4.1	3.0	1.7	8.8	49.7	11.0	3.0	14.0
2/1	273	273	11	0	0	2.7	0.5	0.0	3.2	42.6	7.8	0.5	8.3
3/1	476	476	71	0	0	4.6	1.5	0.0	6.1	46.3	14.3	1.5	15.8
4/1+4/2	842	842	79	3	2	6.7	3.1	0.2	9.9	42.4	13.8	3.1	16.9
5/1	770	770	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	629	629	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	451	451	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	377	377	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 4.0</div> <div>PRC Over All Lanes (%): 4.0</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 28.04</div> <div>Total Delay Over All Lanes(pcuHr): 28.04</div> </div> <div>Cycle Time (s): 240</div> </div>													

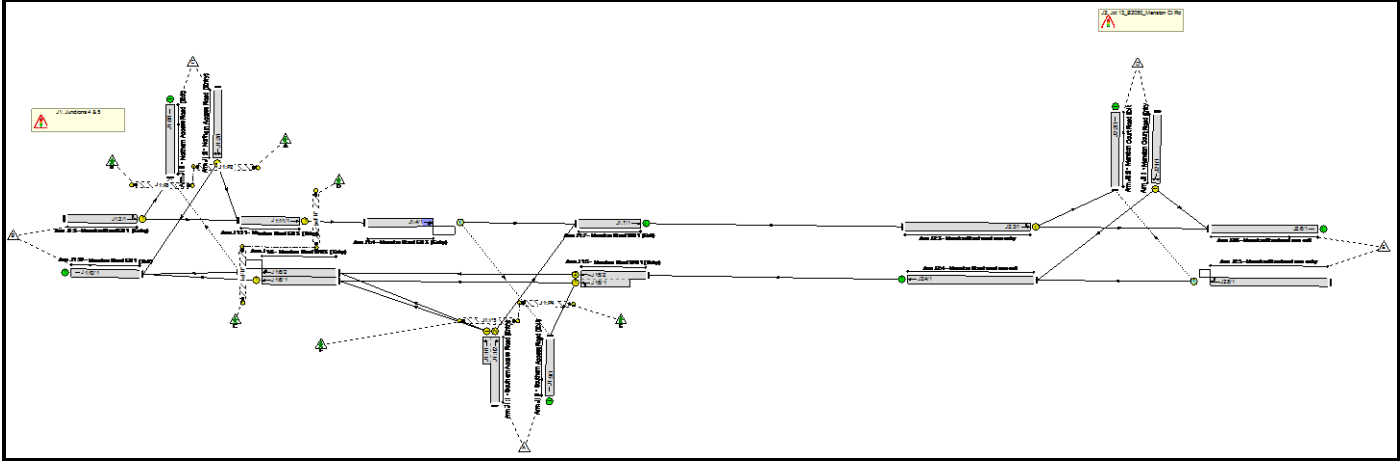
Full Input Data And Results

Full Input Data And Results

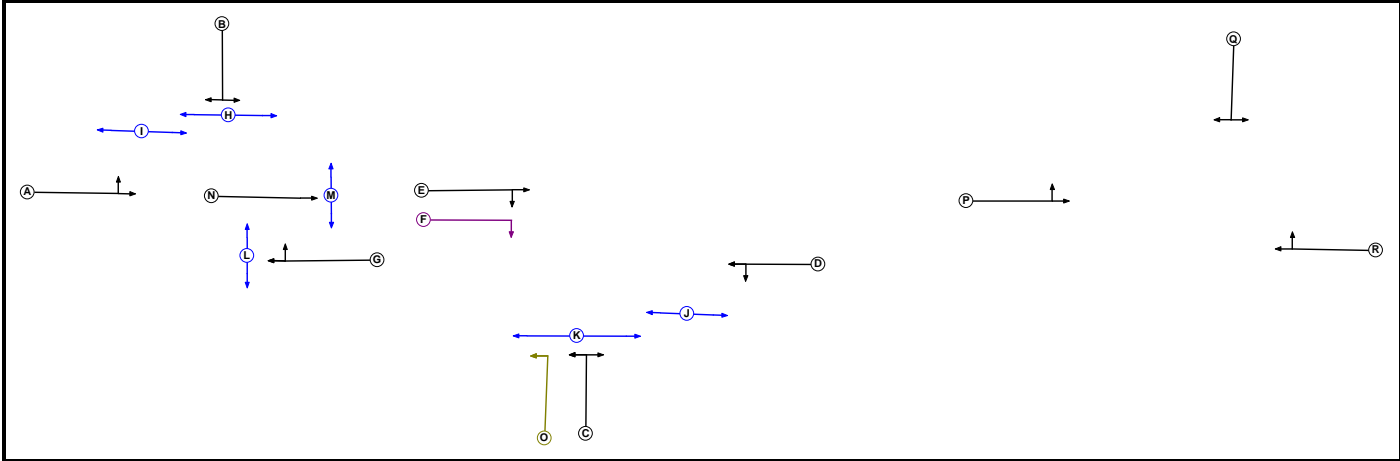
User and Project Details

Project:	Manston Airport DCO EIA
Title:	Junctions 4+5 Staggered
Location:	
File name:	Signalised_R12 - AM_PM.lsg3x
Author:	Fouda
Company:	AmecFW
Address:	
Notes:	

Network Layout Diagram



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	0
F	Ind. Arrow	E	4	0
G	Traffic		7	4
H	Pedestrian		6	6
I	Pedestrian		6	6
J	Pedestrian		6	0
K	Pedestrian		7	7
L	Pedestrian		7	7
M	Pedestrian		7	7
N	Traffic		7	1
O	Filter	C	4	0
P	Traffic		7	7
Q	Traffic		7	7
R	Traffic		7	7

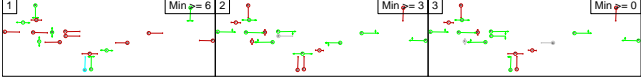
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	A	Gaining absolute	16	16
1	2	J	Losing	6	6
1	2	L	Losing	12	12
1	2	M	Losing	3	3
1	2	N	Gaining absolute	11	11
1	3	J	Losing	9	9
2	1	E	Losing	10	10
2	1	G	Losing	10	10
2	1	H	Losing	9	9
2	1	K	Losing	10	10
2	1	N	Losing	6	6
3	1	E	Losing	8	8
3	1	G	Losing	3	3
3	1	N	Losing	6	6
3	1	P	Losing	19	19
3	1	Q	Gaining absolute	0	0

Prohibited Stage Change

	To Stage		
From Stage	1	2	3
	1	16	15
	2	21	8
	3	25	X

## Full Input Data And Results

**Give-Way Lane Input Data**

Junction: J1: Junctions 4 & 5											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
J1:4/1 (Manston Road EB 3 (Entry))	J1:9/1 (Right)	1439	0	J1:5/2	1.09	All	4.00	4.00	0.50	4	3.00
				J1:5/1	1.09	All					
J1:6/2 (Manston Road WB 3 (Entry))	J1:8/1 (Right)	1439	0	J1:3/1	1.09	All	3.00	3.00	0.50	3	3.00

Junction: J2: Jct 13_B2050_Manston Ct Rd											
Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
J2:5/1 (Manston Road east arm entry)	J2:2/1 (Right)	1439	0	J2:3/1	1.09	All	2.00	2.00	0.50	2	2.00

## Full Input Data And Results

## Lane Input Data

Junction: J1: Junctions 4 & 5												
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 (Southern Access Road (Entry))	U	C O	2	3	5.0	Geom	-	3.50	0.00	Y	Arm J1:6 Left	Inf
J1:1/2 (Southern Access Road (Entry))	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:7 Right	Inf
J1:2/1 (Northern Access Road (Entry))	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:10 Right	20.00
											Arm J1:11 Left	20.00
J1:3/1 (Manston Road EB 1 (Entry))	U	A	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:8 Left	Inf
											Arm J1:11 Ahead	Inf
J1:4/1 (Manston Road EB 3 (Entry))	O	E F	2	3	10.0	Geom	-	3.50	0.00	Y	Arm J1:7 Ahead	Inf
											Arm J1:9 Right	20.00
J1:5/1 (Manston Road WB 1 (Entry))	U	D	2	3	9.0	Geom	-	3.25	0.00	Y	Arm J1:6 Ahead	Inf
											Arm J1:9 Left	15.00
J1:5/2 (Manston Road WB 1 (Entry))	U	D	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:6 Ahead	Inf
J1:6/1 (Manston Road WB 3 (Entry))	U	G	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:10 Ahead	Inf
J1:6/2 (Manston Road WB 3 (Entry))	O	G	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:8 Right	Inf
											Arm J1:10 Ahead	Inf
J1:7/1 (Manston Road WB 1 (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-



## Full Input Data And Results

J1:8/1 (Northern Access Road (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:9/1 (Southern Access Road (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:10/1 (Manston Road EB 1 (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:11/1 (Manston Road EB 3 (Entry))	U	N	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:4 Ahead	Inf

Junction: J2: Jct 13_B2050_Manston Ct Rd												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1 (Manston Court Road Entry)	U	Q	2	3	60.0	Geom	-	3.11	0.00	Y	Arm J2:4 Right	15.00
											Arm J2:6 Left	15.00
J2:2/1 (Manston Court Road Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:3/1 (Manston Road west arm entry)	U	P	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:2 Left	12.00
											Arm J2:6 Ahead	Inf
J2:4/1 (Manston Road west arm exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:5/1 (Manston Road east arm entry)	O	R	2	3	60.0	Geom	-	2.50	0.00	Y	Arm J2:2 Right	15.00
											Arm J2:4 Ahead	Inf
J2:6/1 (Manston Road east arm exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

## Full Input Data And Results

### Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2039 Growthed Traffic Airport Peak'	13:00	14:00	01:00	
2: '2039 Growthed Traffic AM'	08:00	09:00	01:00	
3: '2039 Growthed Traffic PM'	17:00	18:00	01:00	
4: '2039 + Dev Traffic AM'	08:00	09:00	01:00	
5: '2039 + Dev Traffic PM'	17:00	18:00	01:00	
6: '2039 + Dev Traffic Airport Peak'	13:00	14:00	01:00	
7: '2039 B+Dev - Net change - AM'	08:00	09:00	01:00	
8: '2039 B+Dev - Net change - PM'	17:00	18:00	01:00	
9: '2039 B+Dev - Net change - Airport Peak'	13:00	14:00	01:00	

**Scenario 1: '2039 + Dev Traffic AM'** (FG4: '2039 + Dev Traffic AM', Plan 1: '2039 Growthed Traffic Airport Peak')

### Traffic Flows, Desired

#### Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	108	0	11	49	168
	B	128	0	73	126	470	797
	C	0	16	0	0	23	39
	D	0	183	23	0	34	240
	E	82	712	83	10	0	887
	Tot.	210	1019	179	147	576	2131

## Full Input Data And Results

### Traffic Lane Flows

Lane	Scenario 1: 2039 + Dev Traffic AM
<b>Junction: J1: Junctions 4 &amp; 5</b>	
J1:1/1 (short)	108
J1:1/2 (with short)	168(In) 60(Out)
J1:2/1	39
J1:3/1	797
J1:4/1	747
J1:5/1 (short)	594
J1:5/2 (with short)	1083(In) 489(Out)
J1:6/1	566
J1:6/2	543
J1:7/1	679
J1:8/1	179
J1:9/1	210
J1:10/1	1019
J1:11/1	747
<b>Junction: J2: Jct 13_B2050_Manston Ct Rd</b>	
J2:1/1	240
J2:2/1	147
J2:3/1	679
J2:4/1	1083
J2:5/1	887
J2:6/1	576

**Lane Saturation Flows**

Junction: J1: Junctions 4 & 5								
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 (Southern Access Road (Entry))	3.50	0.00	Y	Arm J1:6 Left	Inf	100.0 %	1965	1965
J1:1/2 (Southern Access Road (Entry))	3.50	0.00	Y	Arm J1:7 Right	Inf	100.0 %	1965	1965
J1:2/1 (Northern Access Road (Entry))	3.50	0.00	Y	Arm J1:10 Right	20.00	41.0 %	1828	1828
				Arm J1:11 Left	20.00	59.0 %		
J1:3/1 (Manston Road EB 1 (Entry))	3.50	0.00	Y	Arm J1:8 Left	Inf	9.2 %	1965	1965
				Arm J1:11 Ahead	Inf	90.8 %		
J1:4/1 (Manston Road EB 3 (Entry))	3.50	0.00	Y	Arm J1:7 Ahead	Inf	82.9 %	1940	1940
				Arm J1:9 Right	20.00	17.1 %		
J1:5/1 (Manston Road WB 1 (Entry))	3.25	0.00	Y	Arm J1:6 Ahead	Inf	86.2 %	1914	1914
				Arm J1:9 Left	15.00	13.8 %		
J1:5/2 (Manston Road WB 1 (Entry))	3.50	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1965	1965
J1:6/1 (Manston Road WB 3 (Entry))	3.25	0.00	Y	Arm J1:10 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Manston Road WB 3 (Entry))	3.50	0.00	Y	Arm J1:8 Right	Inf	19.5 %	1965	1965
				Arm J1:10 Ahead	Inf	80.5 %		
J1:7/1 (Manston Road WB 1 (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Northern Access Road (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/1 (Southern Access Road (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (Manston Road EB 1 (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:11/1 (Manston Road EB 3 (Entry))	3.50	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1965	1965

## Full Input Data And Results

Junction: J2: Jct 13_B2050_Manston Ct Rd								
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 (Manston Court Road Entry)	3.11	0.00	Y	Arm J2:4 Right	15.00	85.8 %	1751	1751
				Arm J2:6 Left	15.00	14.2 %		
J2:2/1 (Manston Court Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (Manston Road west arm entry)	3.00	0.00	Y	Arm J2:2 Left	12.00	20.2 %	1868	1868
				Arm J2:6 Ahead	Inf	79.8 %		
J2:4/1 (Manston Road west arm exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/1 (Manston Road east arm entry)	2.50	0.00	Y	Arm J2:2 Right	15.00	1.1 %	1863	1863
				Arm J2:4 Ahead	Inf	98.9 %		
J2:6/1 (Manston Road east arm exit Lane 1)	Infinite Saturation Flow						Inf	Inf

## Scenario 2: '2039 + Dev Traffic PM' (FG5: '2039 + Dev Traffic PM', Plan 1: '2039 Growthed Traffic Airport Peak')

### Traffic Flows, Desired

#### Desired Flow :

	Destination						
		A	B	C	D	E	Tot.
Origin	A	0	63	0	14	53	130
	B	53	0	15	155	544	767
	C	0	69	0	0	125	194
	D	0	179	2	0	17	198
	E	21	534	6	18	0	579
	Tot.	74	845	23	187	739	1868

## Full Input Data And Results

### Traffic Lane Flows

Lane	Scenario 2: 2039 + Dev Traffic PM
<b>Junction: J1: Junctions 4 &amp;&amp; 5</b>	
J1:1/1 (short)	63
J1:1/2 (with short)	130(In) 67(Out)
J1:2/1	194
J1:3/1	767
J1:4/1	877
J1:5/1 (short)	412
J1:5/2 (with short)	742(In) 330(Out)
J1:6/1	435
J1:6/2	349
J1:7/1	891
J1:8/1	23
J1:9/1	74
J1:10/1	845
J1:11/1	877
<b>Junction: J2: Jct 13_B2050_Manston Ct Rd</b>	
J2:1/1	198
J2:2/1	187
J2:3/1	891
J2:4/1	742
J2:5/1	579
J2:6/1	739

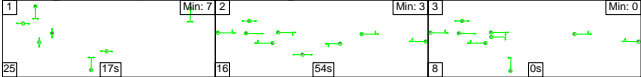
**Lane Saturation Flows**

Junction: J1: Junctions 4 & 5								
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 (Southern Access Road (Entry))	3.50	0.00	Y	Arm J1:6 Left	Inf	100.0 %	1965	1965
J1:1/2 (Southern Access Road (Entry))	3.50	0.00	Y	Arm J1:7 Right	Inf	100.0 %	1965	1965
J1:2/1 (Northern Access Road (Entry))	3.50	0.00	Y	Arm J1:10 Right	20.00	35.6 %	1828	1828
				Arm J1:11 Left	20.00	64.4 %		
J1:3/1 (Manston Road EB 1 (Entry))	3.50	0.00	Y	Arm J1:8 Left	Inf	2.0 %	1965	1965
				Arm J1:11 Ahead	Inf	98.0 %		
J1:4/1 (Manston Road EB 3 (Entry))	3.50	0.00	Y	Arm J1:7 Ahead	Inf	94.0 %	1956	1956
				Arm J1:9 Right	20.00	6.0 %		
J1:5/1 (Manston Road WB 1 (Entry))	3.25	0.00	Y	Arm J1:6 Ahead	Inf	94.9 %	1930	1930
				Arm J1:9 Left	15.00	5.1 %		
J1:5/2 (Manston Road WB 1 (Entry))	3.50	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1965	1965
J1:6/1 (Manston Road WB 3 (Entry))	3.25	0.00	Y	Arm J1:10 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Manston Road WB 3 (Entry))	3.50	0.00	Y	Arm J1:8 Right	Inf	2.3 %	1965	1965
				Arm J1:10 Ahead	Inf	97.7 %		
J1:7/1 (Manston Road WB 1 (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:8/1 (Northern Access Road (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/1 (Southern Access Road (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (Manston Road EB 1 (Exit) Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:11/1 (Manston Road EB 3 (Entry))	3.50	0.00	Y	Arm J1:4 Ahead	Inf	100.0 %	1965	1965

Full Input Data And Results

Junction: J2: Jct 13_B2050_Manston Ct Rd								
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 (Manston Court Road Entry)	3.11	0.00	Y	Arm J2:4 Right	15.00	91.4 %	1751	1751
				Arm J2:6 Left	15.00	8.6 %		
J2:2/1 (Manston Court Road Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:3/1 (Manston Road west arm entry)	3.00	0.00	Y	Arm J2:2 Left	12.00	19.0 %	1871	1871
				Arm J2:6 Ahead	Inf	81.0 %		
J2:4/1 (Manston Road west arm exit Lane 1)	Infinite Saturation Flow						Inf	Inf
J2:5/1 (Manston Road east arm entry)	2.50	0.00	Y	Arm J2:2 Right	15.00	3.1 %	1859	1859
				Arm J2:4 Ahead	Inf	96.9 %		
J2:6/1 (Manston Road east arm exit Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2039 + Dev Traffic AM' (FG4: '2039 + Dev Traffic AM', Plan 1: '2039 Growthed Traffic Airport Peak')  
Stage Sequence Diagram

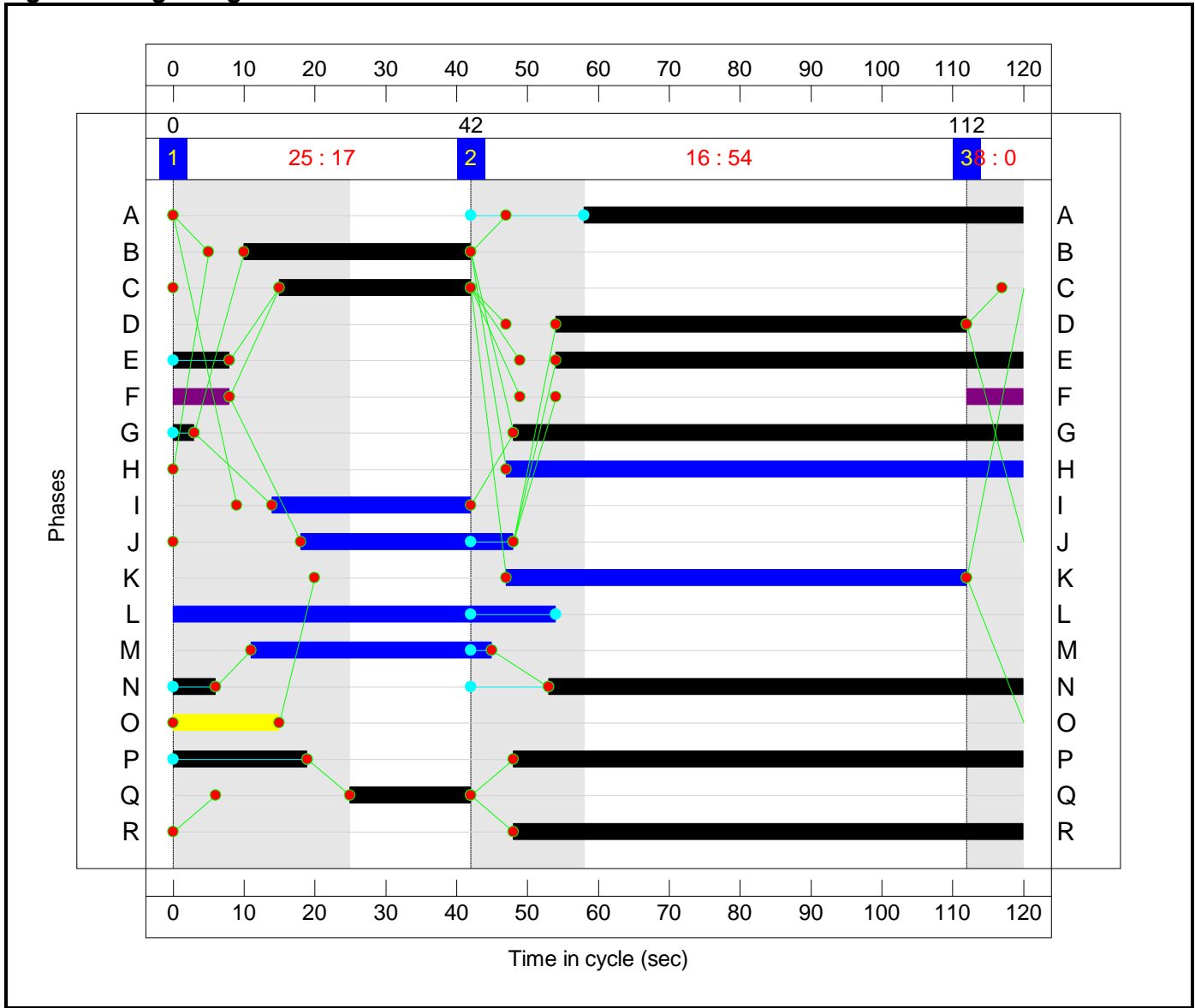


Stage Timings

Stage	1	2	3
Duration	17	54	0
Change Point	0	42	112

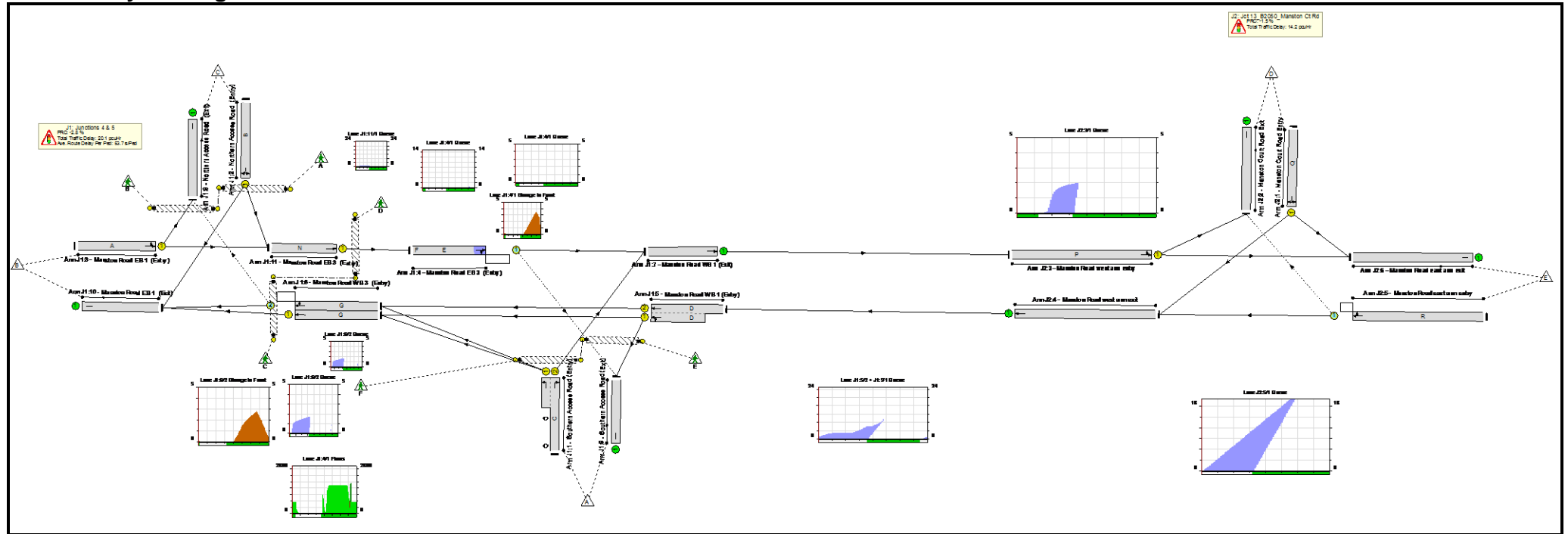


Signal Timings Diagram



### Full Input Data And Results

#### Network Layout Diagram



# Full Input Data And Results

## Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Junctions 4+5 Staggered</b>	-	-	N/A	-	-		-	-	-	-	-	-	92.6%
<b>J1: Junctions 4 &amp; 5</b>	-	-	N/A	-	-		-	-	-	-	-	-	92.6%
1/2+1/1	Southern Access Road (Entry) Left Right	U	N/A	N/A	C	O	1	27:42	15	168	1965:1965	261+470	23.0 : 23.0%
2/1	Northern Access Road (Entry) Right Left	U	N/A	N/A	B		1	32	-	39	1828	503	7.8%
3/1	Manston Road EB 1 (Entry) Left Ahead	U	N/A	N/A	A		1	62	-	797	1965	1032	77.3%
4/1	Manston Road EB 3 (Entry) Ahead Right	O	N/A	N/A	E	F	1	74	16	747	1940	1055	70.8%
5/2+5/1	Manston Road WB 1 (Entry) Ahead Left	U	N/A	N/A	D		1	58	-	1083	1965:1914	528+642	92.6 : 92.6%
6/1	Manston Road WB 3 (Entry) Ahead	U	N/A	N/A	G		1	75	-	566	1940	1229	46.1%
6/2	Manston Road WB 3 (Entry) Right Ahead	O	N/A	N/A	G		1	75	-	543	1965	936	58.0%
7/1	Manston Road WB 1 (Exit) Ahead	U	N/A	N/A	-		-	-	-	679	Inf	Inf	0.0%
8/1	Northern Access Road (Exit)	U	N/A	N/A	-		-	-	-	179	Inf	Inf	0.0%
9/1	Southern Access Road (Exit)	U	N/A	N/A	-		-	-	-	210	Inf	Inf	0.0%
10/1	Manston Road EB 1 (Exit)	U	N/A	N/A	-		-	-	-	1019	Inf	Inf	0.0%
11/1	Manston Road EB 3 (Entry) Ahead	U	N/A	N/A	N		1	73	-	747	1965	1212	61.6%

# Full Input Data And Results

Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	54	-	2	-	32400	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	73	-	2	-	43800	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	28	-	2	-	16800	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	30	-	2	-	18000	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	K		1	65	-	2	-	39000	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	34	-	2	-	20400	0.0%
<b>J2: Jct 13_B2050_Manston Ct Rd</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>91.4%</b>
1/1	Manston Court Road Entry Right Left	U	N/A	N/A	Q		1	17	-	240	1751	263	91.4%
2/1	Manston Court Road Exit	U	N/A	N/A	-		-	-	-	147	Inf	Inf	0.0%
3/1	Manston Road west arm entry Left Ahead	U	N/A	N/A	P		1	91	-	679	1868	1432	47.4%
4/1	Manston Road west arm exit Ahead	U	N/A	N/A	-		-	-	-	1083	Inf	Inf	0.0%
5/1	Manston Road east arm entry Right Ahead	O	N/A	N/A	R		1	72	-	887	1863	1133	78.3%
6/1	Manston Road east arm exit	U	N/A	N/A	-		-	-	-	576	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)
<b>Network: Junctions 4+5 Staggered</b>	-	-	158	85	2	19.2	13.5	1.5	34.3	-	-	-	-
<b>J1: Junctions 4 &amp; 5</b>	-	-	148	85	2	11.2	7.4	1.5	20.1	-	-	-	-
1/2+1/1	168	168	-	-	-	1.4	0.1	-	1.5	33.0	2.4	0.1	2.6
2/1	39	39	-	-	-	0.3	0.0	-	0.4	36.1	1.0	0.0	1.0
3/1	797	797	-	-	-	5.0	1.7	-	6.7	30.3	21.0	1.7	22.7
4/1	747	747	42	85	1	0.0	0.0	0.8	0.8	3.9	0.3	0.0	0.3
5/2+5/1	1083	1083	-	-	-	3.2	5.5	-	8.7	28.9	11.0	5.5	16.6
6/1	566	566	-	-	-	0.5	0.0	-	0.5	3.2	1.7	0.0	1.7
6/2	543	543	106	0	0	0.5	0.0	0.7	1.2	8.2	1.7	0.0	1.7
7/1	679	679	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	179	179	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	210	210	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	1019	1019	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	747	747	-	-	-	0.2	0.0	-	0.2	1.1	0.8	0.0	0.8
Ped Link: P1	2	2	-	-	-	-	-	-	0.0	9.3	-	-	0.0
Ped Link: P2	2	2	-	-	-	-	-	-	0.0	16.2	-	-	0.0
Ped Link: P3	2	2	-	-	-	-	-	-	0.0	47.6	-	-	0.1
Ped Link: P4	2	2	-	-	-	-	-	-	0.0	50.1	-	-	0.1
Ped Link: P5	2	2	-	-	-	-	-	-	0.0	15.8	-	-	0.0
Ped Link: P6	2	2	-	-	-	-	-	-	0.0	22.1	-	-	0.0
<b>J2: Jct 13_B2050_Manston Ct Rd</b>	-	-	10	0	0	8.0	6.2	0.0	14.2	-	-	-	-
1/1	240	240	-	-	-	3.3	3.9	-	7.3	109.2	7.9	3.9	11.8
2/1	147	147	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	679	679	-	-	-	0.3	0.5	-	0.8	4.1	2.0	0.5	2.4
4/1	1083	1083	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

## Full Input Data And Results

5/1	887	887	10	0	0	4.3	1.8	0.0	6.1	24.9	21.9	1.8	23.7
6/1	576	576	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<div> <div>C1</div> <div> <div>PRC for Signalised Lanes (%): -2.8</div> <div>Total Delay for Signalised Lanes (pcuHr): 34.30</div> </div> <div> <div>PRC Over All Lanes (%): -2.8</div> <div>Total Delay Over All Lanes (pcuHr): 34.30</div> </div> <div>Cycle Time (s): 120</div> </div>													

# Full Input Data And Results

**Scenario 2: '2039 + Dev Traffic PM'** (FG5: '2039 + Dev Traffic PM', Plan 1: '2039 Growthed Traffic Airport Peak')

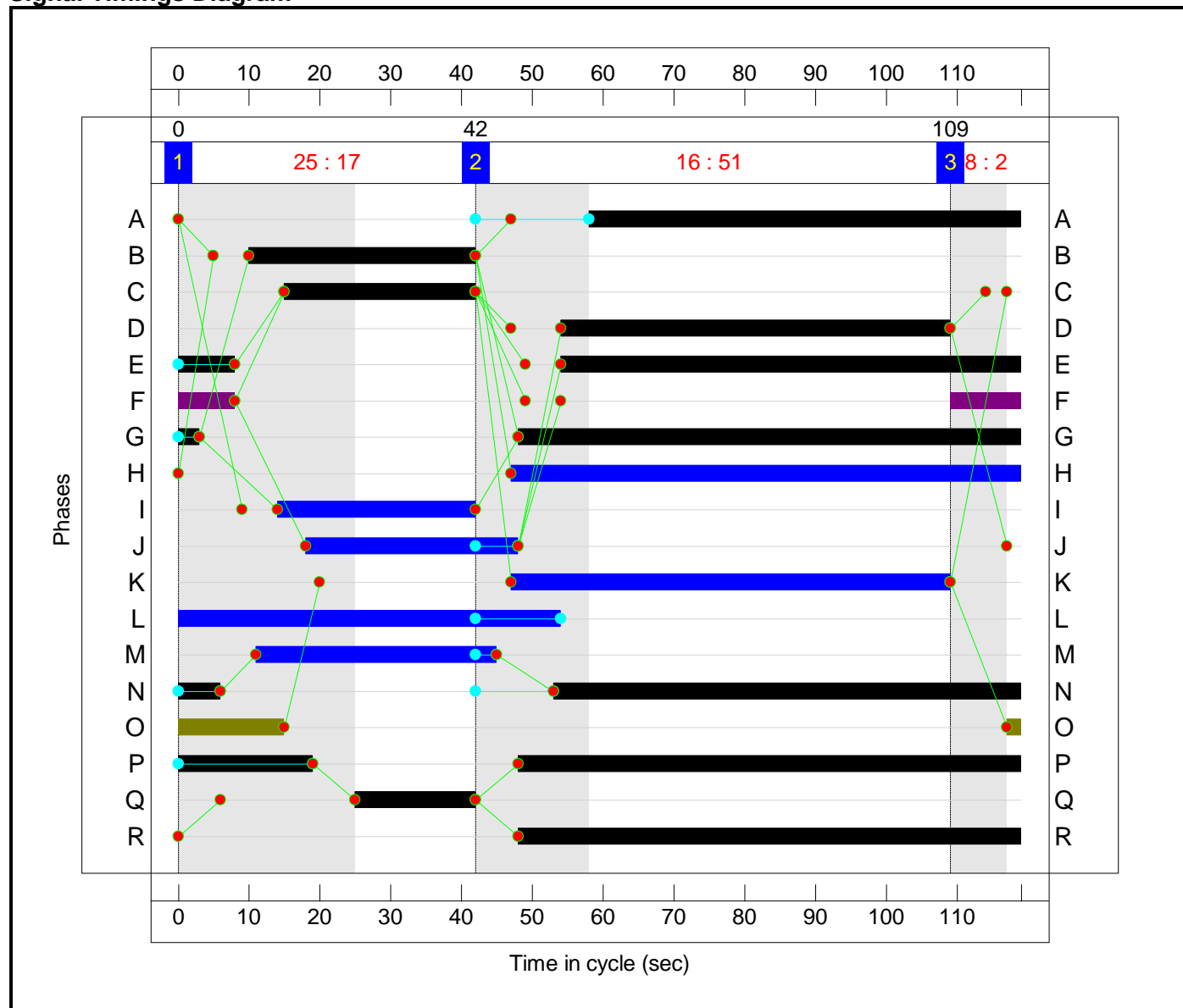
## Stage Sequence Diagram



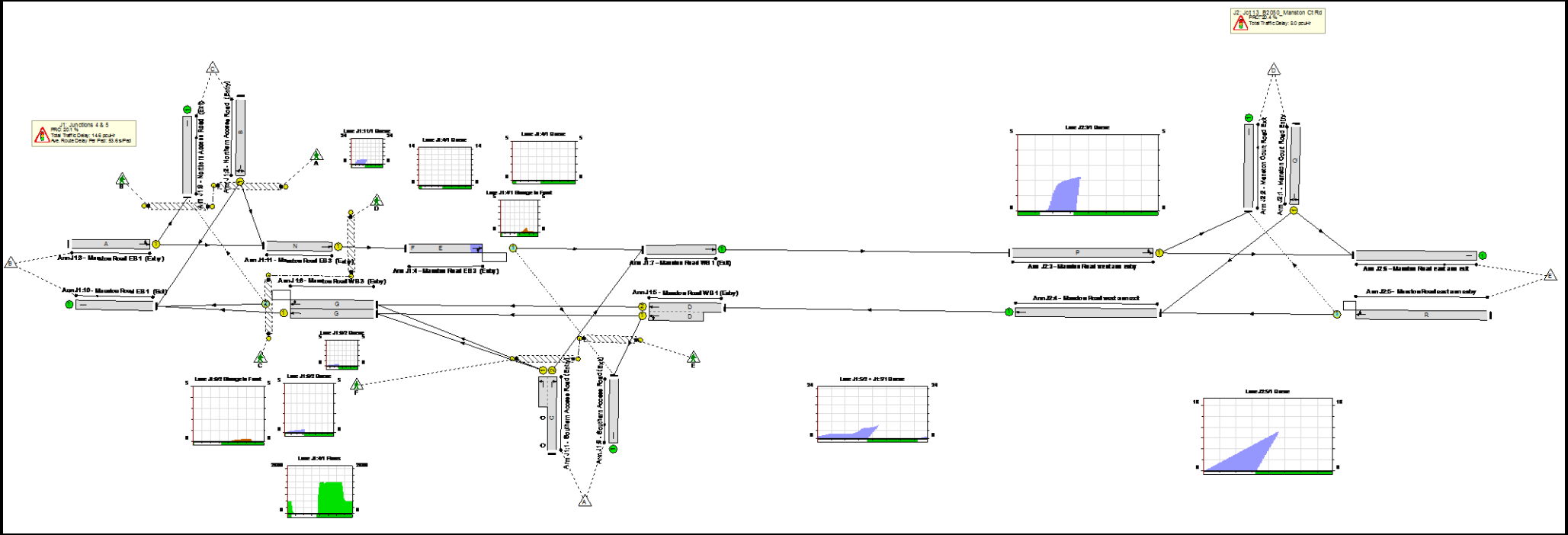
## Stage Timings

Stage	1	2	3
Duration	17	51	2
Change Point	0	42	109

## Signal Timings Diagram



Full Input Data And Results  
Network Layout Diagram





## Full Input Data And Results

### Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
<b>Network: Junctions 4+5 Staggered</b>	-	-	N/A	-	-		-	-	-	-	-	-	74.9%
<b>J1: Junctions 4 &amp; 5</b>	-	-	N/A	-	-		-	-	-	-	-	-	74.9%
1/2+1/1	Southern Access Road (Entry) Left Right	U	N/A	N/A	C	O	1	27:44	17	130	1965:1965	313+294	21.4 : 21.4%
2/1	Northern Access Road (Entry) Right Left	U	N/A	N/A	B		1	32	-	194	1828	507	38.3%
3/1	Manston Road EB 1 (Entry) Left Ahead	U	N/A	N/A	A		1	61	-	767	1965	1024	74.9%
4/1	Manston Road EB 3 (Entry) Ahead Right	O	N/A	N/A	E	F	1	73	18	877	1956	1216	72.1%
5/2+5/1	Manston Road WB 1 (Entry) Ahead Left	U	N/A	N/A	D		1	55	-	742	1965:1930	502+626	65.8 : 65.8%
6/1	Manston Road WB 3 (Entry) Ahead	U	N/A	N/A	G		1	74	-	435	1940	1223	35.6%
6/2	Manston Road WB 3 (Entry) Right Ahead	O	N/A	N/A	G		1	74	-	349	1965	1238	28.2%
7/1	Manston Road WB 1 (Exit) Ahead	U	N/A	N/A	-		-	-	-	891	Inf	Inf	0.0%
8/1	Northern Access Road (Exit)	U	N/A	N/A	-		-	-	-	23	Inf	Inf	0.0%
9/1	Southern Access Road (Exit)	U	N/A	N/A	-		-	-	-	74	Inf	Inf	0.0%
10/1	Manston Road EB 1 (Exit)	U	N/A	N/A	-		-	-	-	845	Inf	Inf	0.0%
11/1	Manston Road EB 3 (Entry) Ahead	U	N/A	N/A	N		1	72	-	877	1965	1205	72.8%

## Full Input Data And Results

Ped Link: P1	Unnamed Ped Link	-	N/A	-	L		1	54	-	2	-	32672	0.0%
Ped Link: P2	Unnamed Ped Link	-	N/A	-	H		1	72	-	2	-	43563	0.0%
Ped Link: P3	Unnamed Ped Link	-	N/A	-	I		1	28	-	2	-	16941	0.0%
Ped Link: P4	Unnamed Ped Link	-	N/A	-	J		1	30	-	2	-	18151	0.0%
Ped Link: P5	Unnamed Ped Link	-	N/A	-	K		1	62	-	2	-	37513	0.0%
Ped Link: P6	Unnamed Ped Link	-	N/A	-	M		1	34	-	2	-	20571	0.0%
<b>J2: Jct 13_B2050_Manston Ct Rd</b>	-	-	<b>N/A</b>	-	-		-	-	-	-	-	-	<b>74.8%</b>
1/1	Manston Court Road Entry Right Left	U	N/A	N/A	Q		1	17	-	198	1751	265	74.8%
2/1	Manston Court Road Exit	U	N/A	N/A	-		-	-	-	187	Inf	Inf	0.0%
3/1	Manston Road west arm entry Left Ahead	U	N/A	N/A	P		1	90	-	891	1871	1431	62.3%
4/1	Manston Road west arm exit Ahead	U	N/A	N/A	-		-	-	-	742	Inf	Inf	0.0%
5/1	Manston Road east arm entry Right Ahead	O	N/A	N/A	R		1	71	-	579	1859	1125	51.5%
6/1	Manston Road east arm exit	U	N/A	N/A	-		-	-	-	739	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)
<b>Network: Junctions 4+5 Staggered</b>	-	-	<b>71</b>	<b>7</b>	<b>1</b>	<b>16.8</b>	<b>5.7</b>	<b>0.1</b>	<b>22.6</b>	-	-	-	-
<b>J1: Junctions 4 &amp;&amp; 5</b>	-	-	<b>53</b>	<b>7</b>	<b>1</b>	<b>11.6</b>	<b>2.9</b>	<b>0.1</b>	<b>14.6</b>	-	-	-	-
1/2+1/1	130	130	-	-	-	1.1	0.1	-	1.2	33.9	1.7	0.1	1.9
2/1	194	194	-	-	-	1.9	0.3	-	2.2	40.5	5.2	0.3	5.5
3/1	767	767	-	-	-	4.8	1.5	-	6.2	29.3	19.8	1.5	21.3
4/1	877	877	45	7	1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
5/2+5/1	742	742	-	-	-	2.4	1.0	-	3.3	16.2	6.2	1.0	7.2
6/1	435	435	-	-	-	0.2	0.0	-	0.2	1.6	0.8	0.0	0.8
6/2	349	349	8	0	0	0.1	0.0	0.0	0.1	1.3	0.3	0.0	0.3
7/1	891	891	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	23	23	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	74	74	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	845	845	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	877	877	-	-	-	1.2	0.0	-	1.2	5.1	4.5	0.0	4.5
Ped Link: P1	2	2	-	-	-	-	-	-	0.0	9.1	-	-	0.0
Ped Link: P2	2	2	-	-	-	-	-	-	0.0	16.2	-	-	0.0
Ped Link: P3	2	2	-	-	-	-	-	-	0.0	47.1	-	-	0.1
Ped Link: P4	2	2	-	-	-	-	-	-	0.0	50.1	-	-	0.1
Ped Link: P5	2	2	-	-	-	-	-	-	0.0	16.3	-	-	0.0
Ped Link: P6	2	2	-	-	-	-	-	-	0.0	21.9	-	-	0.0
<b>J2: Jct 13_B2050_Manston Ct Rd</b>	-	-	<b>18</b>	<b>0</b>	<b>0</b>	<b>5.2</b>	<b>2.8</b>	<b>0.1</b>	<b>8.0</b>	-	-	-	-
1/1	198	198	-	-	-	2.7	1.4	-	4.1	74.2	6.2	1.4	7.6
2/1	187	187	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	891	891	-	-	-	0.4	0.8	-	1.2	4.8	2.2	0.8	3.1
4/1	742	742	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

## Full Input Data And Results

5/1	579	579	18	0	0	2.2	0.5	0.1	2.8	17.1	10.9	0.5	11.5
6/1	739	739	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
<div> <div>C1</div> <div> <div>PRC for Signalled Lanes (%): 20.1</div> <div>PRC Over All Lanes (%): 20.1</div> </div> <div> <div>Total Delay for Signalled Lanes (pcuHr): 22.62</div> <div>Total Delay Over All Lanes(pcuHr): 22.62</div> </div> <div>Cycle Time (s): 119</div> </div>													

**B2050 Manston Road / Manston Court Road Junction,  
Ramsgate, Kent  
Proposed Highway Works**

**Road Safety Audit – Stage 1  
(Preliminary Design)**

**Client: RSP**

**10th June 2019**

**Badingham Limited**

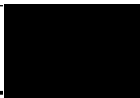
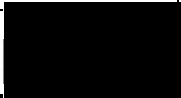
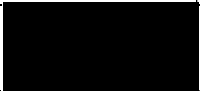
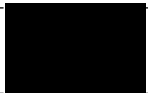
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## DOCUMENT ISSUE

<i>Issue / Revision:</i>	Issue 1				
<i>Description / Status:</i>	Final				
<i>Date:</i>	10/06/2019				
<i>Prepared:</i>	A. R. J. Setter				
<i>Signature:</i>					
<i>Document Check:</i>	D. F. Rogers				
<i>Signature:</i>					
<i>Technical Check:</i>	D. F. Rogers				
<i>Signature:</i>					
<i>Authorised:</i>	A. R. J. Setter				
<i>Signature:</i>					
<i>File Reference:</i>	0781 Manston Airport - 13 - RSA1 - Issue 1.docx				

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SECTION 2: ITEMS RAISED AT PREVIOUS AUDITS	4
SECTION 3: ITEMS RAISED AT THIS AUDIT	5
SECTION 4: AUDIT STATEMENT	11

## FIGURES

Figure 1	Site Location Plan
Figure 2	Aerial Photo
Figure 3	Audit Plan

## APPENDICES

Appendix 1	Road Safety Audit Brief
------------	-------------------------

## SECTION 1: INTRODUCTION

### General

- 1.1 This Road Safety Audit Stage 1 (Preliminary Design) report has been undertaken at the request of the Highway Authority. It has been prepared on behalf of RSP and relates to proposed modifications to the Manston Road / Manston Court Road junction, Margate, Kent. The works are associated with the redevelopment of Manston Airport.
- 1.2 Thanet District Council is the local planning authority. Kent County Council is the local highway authority for the area.

### Audit Team

- 1.3 A. R. J. Setter BA (Hons) MSc CMILT MCIHT AMICE MSoRSA CoC  
Badingham Limited
- D. F. Rogers JP CEng BEng (Hons) MICE FIHE MSoRSA  
Ashburn Partnership

### Audit Brief

- 1.4 The Road Safety Audit has been undertaken in accordance with the Road Safety Audit Brief contained in Appendix 1.
- 1.5 The terms of reference for this Road Safety Audit are described in GG119. The Audit Team has not been made aware of any departures from standard.
- 1.6 The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.



### **Main Parties to the Audit**

1.7 The following are the main parties to the audit:

- Client Organisation: RSP
- Overseeing Organisation: Kent County Council
- Design Organisation: Wood Plc

1.8 The Audit Team visited the site together on Sunday 10<sup>th</sup> June 2019 between 08:54am and 09:15am. The weather was fine and surfaces were dry. There were no adverse traffic conditions to affect the audit. Photographs of the site and surrounding area are included where relevant.

1.9 The location of the site is shown on Figure 1 Site Location Plan and Figure 2 Aerial Photo. The area of the audit extends solely to the works shown on the drawings included in the Audit Brief. Any issues identified are cross-referenced by paragraph number to the Audit Plan (Figure 3).

1.10 The works comprise modifications to the existing priority T junction to change it to signal control. No drainage, signage or lighting details are provided at this stage.

1.11 The B2050 Manston Road has a relatively straight horizontal alignment in this location on an approximate east/west axis. It is subject to a 40mph speed limit. Gradients are minimal although there is a slight dip in vertical alignment through the junction. No street lighting or footways are provided. A bridleway is signed on the south side of the junction together with a concrete field access crossover.

1.12 Traffic flows at the time of the site visit were light, with a single pedestrian noted walking in the road together with ten cyclists. No PSVs or HGVs were noted. Two cars accessed and two cars egressed Manston Court Road. Manston Court Road is signed as closed to traffic.

- 1.13 A total of five collisions are recorded at this junction. One is categorised as serious where a car pulled out of Manston Court Road and collided with a moving car on Manston Road. Four collisions are categorised as slight. Four involve right-turn movements and one a PSV. All occurred during fine and dry conditions. All collisions were a result of driver error.

## **SECTION 2: ITEMS RAISED AT PREVIOUS AUDITS**

2.1 No previous audits have been undertaken.

## SECTION 3: ITEMS RAISED AT THIS AUDIT

### 3.1 PROBLEM

*Location:* B2050/Manston Court Road junction.

*Summary:* Potential collisions involving HGVs.

- 3.1.1 The swept path assessment for an HGV turning left from the B2050 into Manston Court Road suggests that there is a possibility of a side-swipe collision with a vehicle waiting at the stop line in Manston Court Road possibly resulting in injuries to vehicle occupants.
- 3.1.2 The swept path assessment is undertaken for a 10metre rigid HGV. There is no analysis for an articulated HGV. There are a number of caravan parks served by Manor Court Road together with a large solar panel facility.
- 3.1.3 Manston Court Road (later becoming Star Lane) is signed at both ends as unsuitable for HGVs. It is not clear how servicing of the mentioned facilities via this highway is undertaken and there is a possibility that articulated HGVs could turn at this junction.

### *RECOMMENDATION*

- 3.1.4 It is recommended that a swept path assessment is undertaken for an articulated vehicle and the junction geometry modified as necessary to provide safe and efficient access.



Photo 1 - Manston Court Road view north.

## 3.2 PROBLEM

*Location:* B2050/Manston Court Road junction.

*Summary:* Potential lack of forward visibility.

- 3.2.1 Driver forward visibility on the westbound Manston Road approach may be compromised by the sweeping bend in this location and also the raised verge north of the B2050. Lack of sufficient visibility may lead to late-braking decisions, skids, and loss-of-control type incidents resulting in collisions with traffic at the signal junction leading to possible injuries to vehicle occupants.

### RECOMMENDATION

- 3.2.2 It is recommended that appropriate unobstructed forward visibility is provided.



Photo 2 - Manston Road view west - note vertical dip and high verge.

### 3.3 PROBLEM

*Location:* B2050/Manston Court Road junction.

*Summary:* Potential for drivers to make use of hatched area for overtaking.

- 3.3.1 The central hatched markings may encourage some users, such as motorcyclists or cyclists to seek to over-take vehicles waiting or moving-off from the B2050 stop lines. This may lead to collisions and result in possible injuries to motorcyclists or cyclists.

#### RECOMMENDATION

- 3.3.2 It is recommended that the hatched markings are enclosed with solid continuous white lines to discourage overtaking and that advance cycle stop lines are provided to provide facilities for cyclists.





*Photo 3 - Manston Road view east.*

### 3.4 PROBLEM

*Location:* B2050/Manston Court Road junction.

*Summary:* Potential for carriageway condition to lead to collisions.

- 3.4.1 The B2050 and Manston Court Road carriageways in the vicinity of the junction are of poor condition with evidence of potholes, fretting and deteriorating trench reinstatement. Lack of effective skid resistance may lead to skid and loss-of-control type incidents, resulting in collisions between vehicles or involving motorcyclists or cyclists, resulting in injuries.

#### *RECOMMENDATION*

- 3.4.2 It is recommended that the B2050 and Manston Court Road wearing course is renewed.



Photo 4 - Manston Road / Manston Court Road view east.

### 3.5 PROBLEM

*Location:* B2050/Manston Court Road junction.

*Summary:* Lack of inter-visibility with bridleway.

- 3.5.1 No intervisibility is shown with the existing bridleway, which is currently compromised by a hoarding. Lack of inter-visibility may lead to collisions between equestrians and vehicles at the junction resulting in possible injuries to horse and rider.

#### RECOMMENDATION

- 3.5.2 It is recommended that appropriate inter-visibility is provided in this location.





*Photo 5 - View south to bridleway - note hoarding.*

## SECTION 4: AUDIT STATEMENT

4.1 This audit has been undertaken in accordance with DMRB Standard GG119.

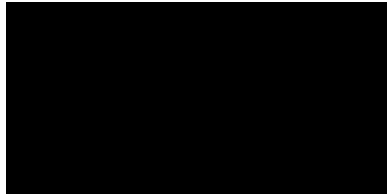
### Road Safety Audit Team Leader

A. R. J. Setter BA (Hons) MSc CMILT MCIHT AMICE MSoRSA CoC

Director - Badingham Limited

16 Ashley Piece, Ramsbury, Marlborough, Wiltshire, SN8 2QE

Signed:



Date: 10<sup>th</sup> June 2019

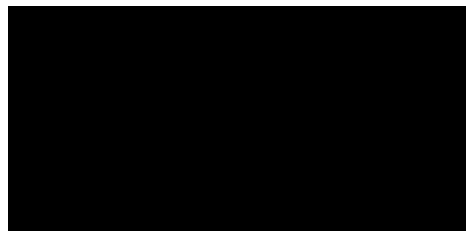
### Audit Team Member

D. F. Rogers JP CEng BEng (Hons) MICE MSoRSA FIHE

Partner - Ashburn Partnership

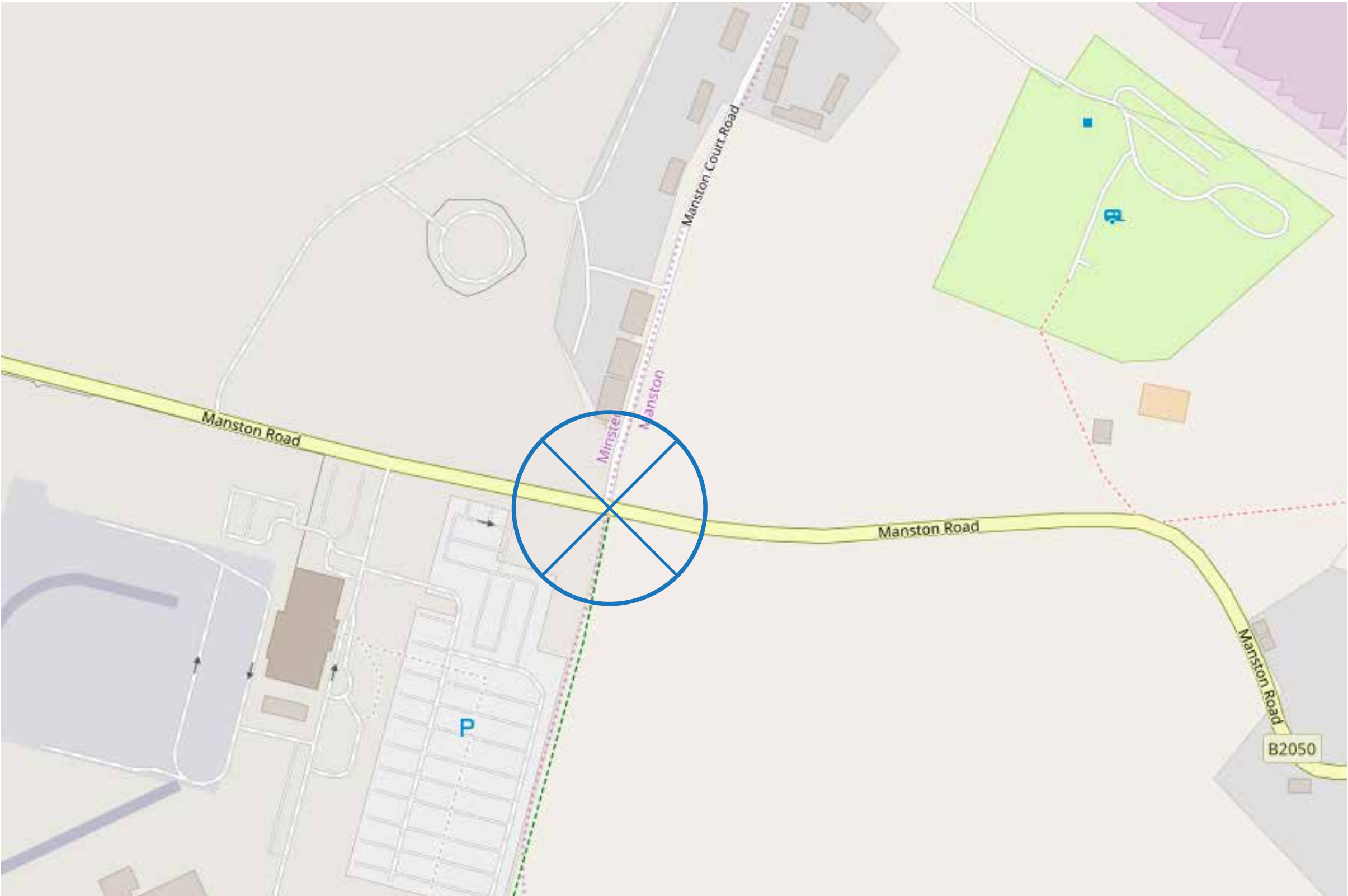
5 Mayfield, Upper Wanborough, Swindon, SN4 0ED

Signed:



Date: 10<sup>th</sup> June 2019

## FIGURES



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Notes:

1. Do not scale from this drawing.
2. All dimensions must be checked on site.

Rev.	Date	Initials	Amendments

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Client

RSP

Project

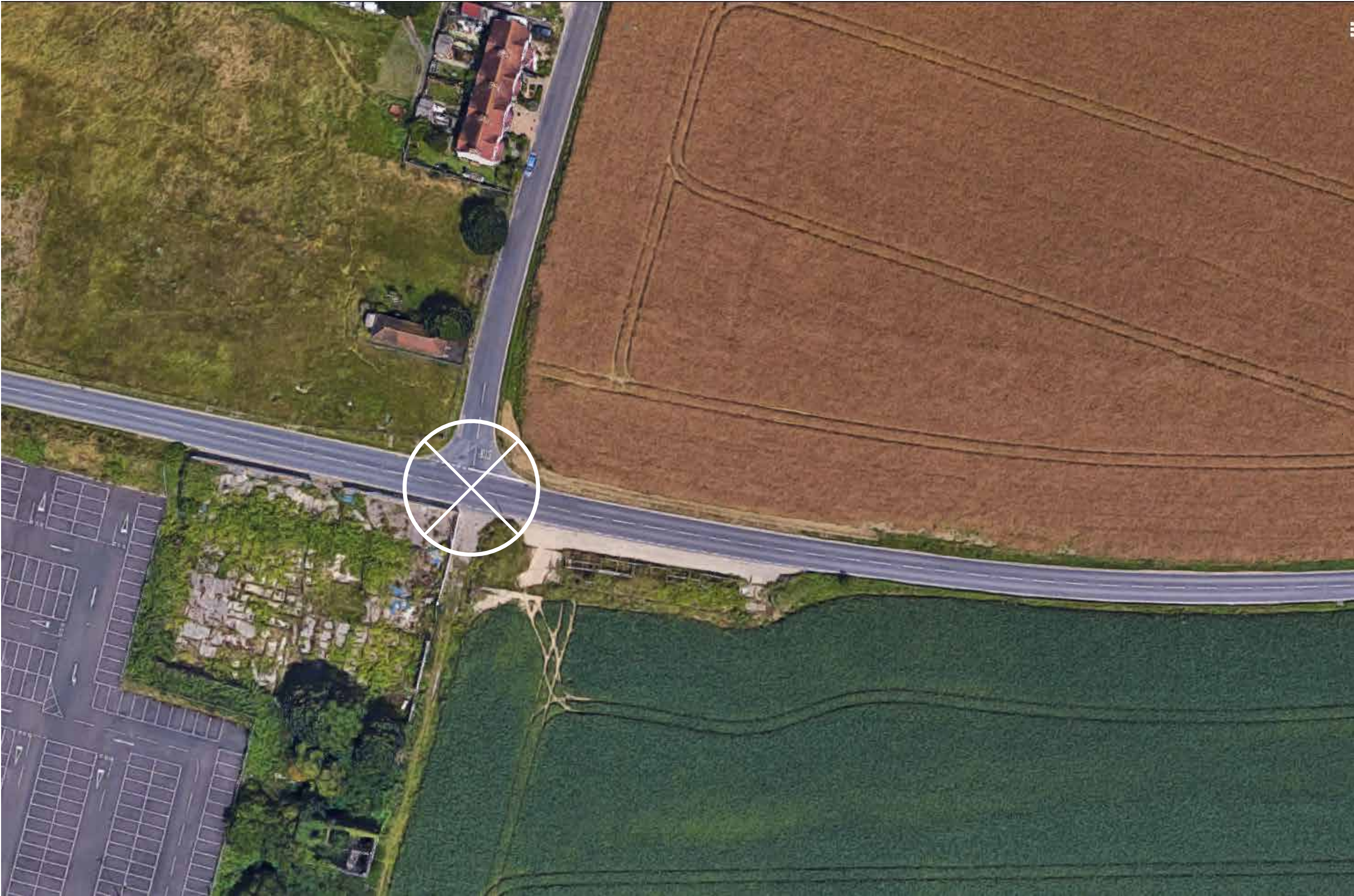
Manston Airport

Title

Location Plan

Date	10/06/2019	Status	FINAL
Scale	NTS	Original Size	A3
Drawn	AS	Checked	AS
Job No.	0781	Drawing No.	FIGURE 1
		Rev.	-





North



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Project

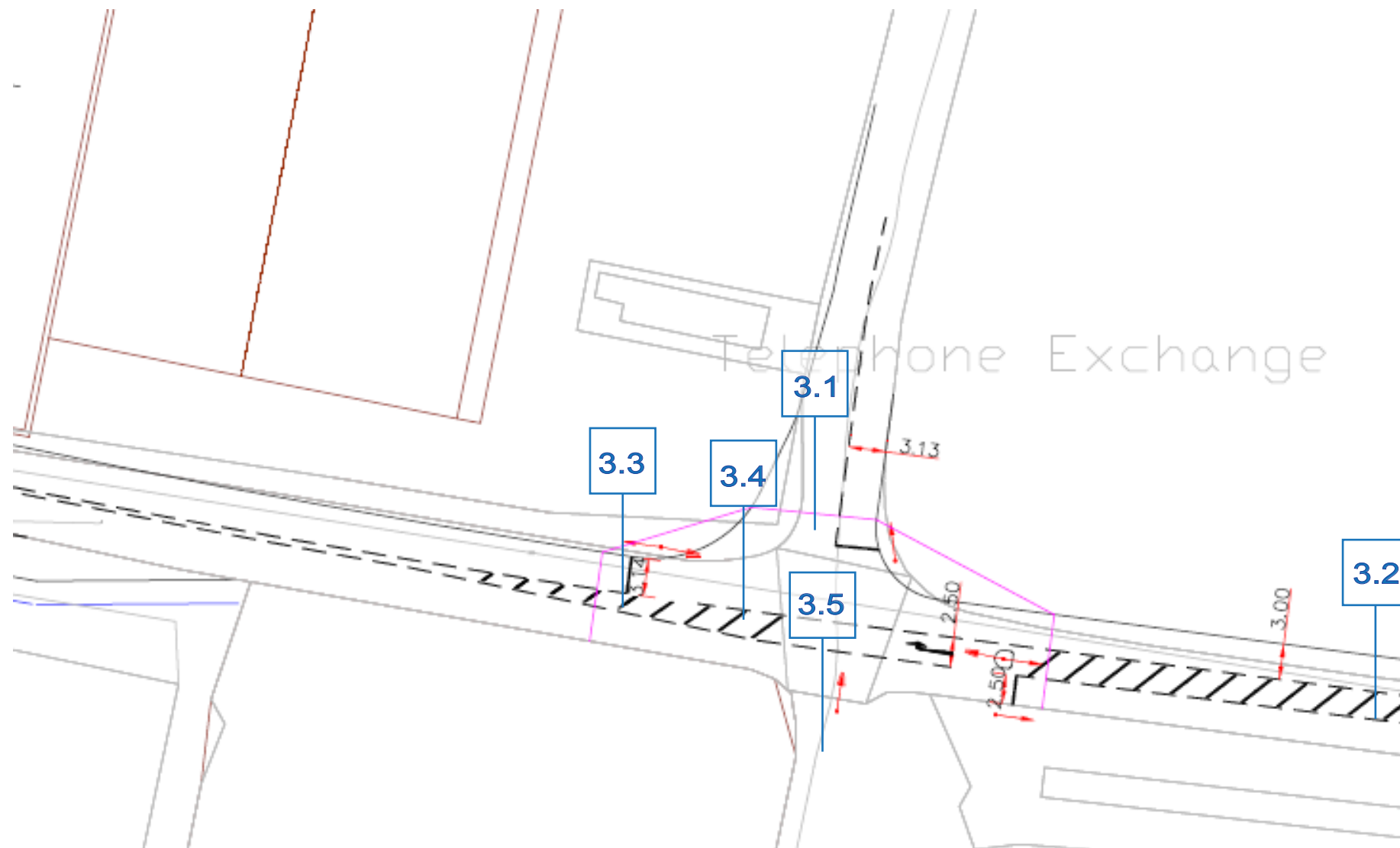
Manston Airport

Title

Aerial Photo

Date	10/06/2019	Status	FINAL
Scale	NTS	Original Size	A3
Drawn	AS	Checked	AS
Job No.	0781	Drawing No.	FIGURE 2
		Rev.	-





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Manston Airport

Title

Audit Plan

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Drawn	AS	Checked	AS
Job No.	0781	Drawing No.	FIGURE 3
		Rev.	-

## APPENDIX 1

### Road Safety Audit Brief

## ROAD SAFETY AUDIT BRIEF

---

<b>Project Summary</b>	
<b>Date:</b>	07/06/2019
<b>Document Reference:</b>	N/A
<b>Prepared by:</b>	Wood
<b>On Behalf of:</b>	RiverOak Strategic Partners
<b>AUTHORISATION SHEET</b>	
<b>Project:</b>	Manston Airport – B2050 Manston Road / Manston Court Road Mitigation Proposal
<b>Report title:</b>	B2050 Manston Road / Manston Court Road Mitigation Proposal - RSA Stage 1
<b>PREPARED BY:</b>	
<b>Name:</b>	Pranav Yadav
<b>Signed:</b>	
<b>Organisation:</b>	Wood
<b>Date:</b>	07/06/2019
<b>I APPROVE THE RSA BRIEF AND INSTRUCT THE RSA TO TAKE PLACE ON BEHALF OF THE OVERSEEING ORGANISATION:</b>	
<b>Name:</b>	Tony Freudmann
<b>Signed:</b>	
<b>Organisation:</b>	RiverOak Strategic Partners
<b>Date:</b>	



# ROAD SAFETY AUDIT BRIEF

<b>General Details</b>				
<b>Highway Scheme Name &amp; Road Number</b>		Manston Road / Manston Court Road Mitigation Proposal - Manston Road B2050		
<b>Type of Scheme</b> <i>e.g. new road scheme, smart motorway, junction improvement, traffic signs and road markings improvement, traffic calming, etc.</i>				
Junction Improvement				
<b>RSA Stage</b> <i>Tick as appropriate ✓</i>	1	✓	2	3
	Interim			4
<b>Overseeing Organisation Details</b>		<b>Design Organisation Details</b>		
16 Charles II Street London SW1Y 4NW		Wood Glyn Price Associate Director Canon Court, Abbey Lawn, Abbey Forgate, Shrewsbury, SY2 5DE, UK		
<b>Police Contact Details (RSA3 Only)</b>		<b>Maintaining Agent Contact Details</b>		
N/A		N/A		
<b>RSA Team Membership</b>				
A.R.J. Setter (Team Leader)		BA (Hons) MSc CMILT MCIHT AMICE MSoRSA Highways England Certificate of Competence & Compliant with EU Directive 2008/96/EC Badingham Limited		
D. F. Rogers (Team Member)		JP, CEng BEng (Hons) MICE MSoRSA FIHE Ashburn Consultants		
<b>Terms of Reference</b> <i>Make reference to relevant DMRB documents and other guidance where appropriate.</i>				
Design Manual for Roads and Bridges (DMRB) and Traffic Signs Regulations and General Directions (TSRGD)				

# ROAD SAFETY AUDIT BRIEF

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<b>Scheme Details</b>
<b>Scheme Description/Objective</b>
<b>General</b> <i>Define the extents of the RSA, include a brief scheme description, the scheme objectives, a start date for construction if known and a completion date. In addition, for stage 4 RSAs, confirm when all related traffic management has been removed.</i>
The proposal is for converting existing priority junction into a signalised junction.  The extents of the area requiring RSA assessment is the extents of new road marking.  It is unknown when this junction would be constructed as this is to be agreed with KCC as part of ongoing discussions. Completion should take between 3-6 months.
<b>Design Standards Applied to the Scheme Design</b> <i>For example, DMRB.</i>
Design Manual for Roads and Bridges (DMRB) and Traffic Signs Regulations and General Directions (TSRGD)
<b>Design Speeds</b> <i>Provide details of applied and/or existing design speeds.</i>
40mph
<b>Speed Limits</b> <i>State whether mandatory or advisory, available speed data.</i>
40mph
<b>Existing Traffic Flows/Queues</b> <i>To include current automatic traffic counter (ATC) data, up-to-date turning count and queue information etc.</i>
The traffic flow of the junction will be provided from the MCC taken at this junction.
<b>Forecast Traffic Flows</b> <i>Where available and relevant, provide future traffic flow data including vehicle proportions.</i>
Future Traffic flows at the junction for the AM and PM Peak will be provided in a matrix format.
<b>Pedestrian, Cyclist &amp; Equestrian Desire Lines</b> <i>Include details of pedestrian, cyclist and equestrian movements in the vicinity of the scheme and, when applicable the relevant walking, cycling and horse-riding assessment and review reports HD 42/17 [Ref 7.1].</i>
There is no existing footway or pedestrian crossing. It is not proposed to provide one.
<b>Environmental Constraints</b> <i>Include all environmental constraints within the scheme extents, for example sites of special scientific interest (SSSI), conservation areas, listed properties etc.</i>
No environmental constraints have been observed.

# ROAD SAFETY AUDIT BRIEF

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<b>Locality</b>
<b>Description of Locality</b> <i>Include all environmental constraints within the scheme extents, e.g. (SSSI), conservation areas, listed properties etc.</i>
Junction is located north of the Manston Airport and surrounded by green fields.
<b>General Description</b> <i>Include road network, road type, relevant land uses etc.</i>
Manston Road (B2050) is a two-way standard single carriageway with 40mph speed limit. Manston Court Road is a two-way single carriageway with 30mph speed limit.  As this junction is in the rural area, there is no facility for non-motorists.
<b>Relevant Factors Which May Affect Road Safety</b> <i>Factors known to the Design Organisation and considered as part of the design. This should also include anything that would not be immediately obvious to the RSA Team – such as school crossing patrols and large events, for example.</i>
Total five accidents have been recorded at this junction. These are accident 18, 355, 474, 532 and 537.  One of the five accident was serious. The serious accident occurred when a car pulled out of Manston Court Road and collided with a moving car on Manston Road.  Four of five accidents were slight. All slight accident occurred due to poor turning movement at the junction.  The details of these accidents will be provided with this brief.

# ROAD SAFETY AUDIT BRIEF

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<b>Analysis</b>												
<b>Collision Data Analysis</b> <i>Stages 1,2, and 3 provide a summary of road traffic collision data covering both the extent of the scheme and the adjoining sections of highway. As a minimum, the most recent 36 month of data. At Stage 4, provide 12 months of post-opening validated road traffic collision data. Raw data should be provided as an appendix.</i>												
Accident data for the junction will be provided with this brief.												
<b>Departures from Standards</b> <i>Include status details, i.e. approved/pending/rejected, and any design strategy records produced for improvements to existing trunk roads and motorways.</i>												
N/A												
<b>Previous Road Safety Audit Stage Reports, Road Safety Audit Response Reports &amp; Evidence of Agreed Actions</b> <i>Attach previous reports to the RSA Brief, or provide an explanation where these are not available.</i>												
N/A												
<b>Strategic Decisions</b> <i>Includes items outside the scope of this RSA, which will not change irrespective of the RSA, for example route choice, junction type, approved departures from standard.</i>												
N/A												
<b>List of Included Documents and Drawings</b> <i>For example: previous RSA reports; Design Responses; Departures; Road Traffic Collision Data; Walking, Cycling and Horse-Riding Assessment and Reviews. This could include any relevant operational data such as damage-only collision data or incident logs. This list could be included as an attachment to the RSA Brief or a hyperlink to a shared electronic location where the RSA Brief information has been collated.</i>												
<b>Documents</b>												
<table border="1"><thead><tr><th>Reference/Revision</th><th>Title</th><th>Date</th></tr></thead><tbody><tr><td>RSA - Manston Court-Manston Road - MCC counts</td><td></td><td>07/06/2019</td></tr><tr><td>RSA - Manston Court-Manston Road - Future Year traffic flows (2039)</td><td></td><td>07/06/2019</td></tr><tr><td>RSA - Manston Court-Manston Road – Accident Data</td><td></td><td>07/06/2019</td></tr></tbody></table>	Reference/Revision	Title	Date	RSA - Manston Court-Manston Road - MCC counts		07/06/2019	RSA - Manston Court-Manston Road - Future Year traffic flows (2039)		07/06/2019	RSA - Manston Court-Manston Road – Accident Data		07/06/2019
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<b>Drawings</b>												
<table border="1"><thead><tr><th>Reference/Revision</th><th>Title</th><th>Date</th></tr></thead><tbody><tr><td>RSA - Manston Court-Manston Road – Site Location and scheme</td><td></td><td>07/06/2019</td></tr><tr><td>RSA - Manston Court Road-Manston Road - Cad file</td><td></td><td>07/06/2019</td></tr></tbody></table>	Reference/Revision	Title	Date	RSA - Manston Court-Manston Road – Site Location and scheme		07/06/2019	RSA - Manston Court Road-Manston Road - Cad file		07/06/2019			
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RSA - Manston Court-Manston Road – Site Location and scheme		07/06/2019										
RSA - Manston Court Road-Manston Road - Cad file		07/06/2019										

## ROAD SAFETY AUDIT BRIEF

---

Checklist			
Tick all that are included and provide reasons for those that are not included. ✓			
Site Location plan		Scale Layout Plans	
Departures and Relaxations from Standards		Construction/Typical Details	
Previous RSA Reports		Previous RSA Response Reports & Evidence of Agreed Actions	
Collision Data and Collision Data Analysis		Road Traffic Collision Plot	
Traffic Signal Staging		Traffic Counts	
Speed Surveys		Pedestrian, Cyclist, Horse-Riding Desire Lines & Volumes	
Walking, Cycling and Horse-Riding Assessment & Reviews		Items Outside the Scope of the RSA/Strategic Decisions	
Other Factors that may Impact Upon Road Safety		Design Speeds/Speed Limits	
Design Standards Used		Adjacent Land Uses	

**B2050 Manston Road / B2014 Newington Road Junction,  
Ramsgate, Kent  
Proposed Highway Works**

**Road Safety Audit – Stage 1  
(Preliminary Design)**

**Client: RSP**

**11<sup>th</sup> June 2019**

**Badingham Limited**

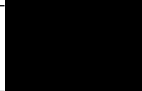
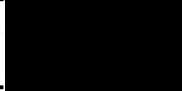
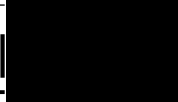
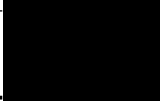
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## DOCUMENT ISSUE

<i>Issue / Revision:</i>	Issue 1				
<i>Description / Status:</i>	Final				
<i>Date:</i>	11/06/2019				
<i>Prepared:</i>	A. R. J. Setter				
<i>Signature:</i>					
<i>Document Check:</i>	D. F. Rogers				
<i>Signature:</i>					
<i>Technical Check:</i>	D. F. Rogers				
<i>Signature:</i>					
<i>Authorised:</i>	A. R. J. Setter				
<i>Signature:</i>					
<i>File Reference:</i>	0781 Manston Airport - 26 - RSA1 - Issue 1.docx				

## CONTENTS

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SECTION 1: INTRODUCTION	1
SECTION 2: ITEMS RAISED AT PREVIOUS AUDITS	4
SECTION 3: ITEMS RAISED AT THIS AUDIT	5
SECTION 4: AUDIT STATEMENT	12

## FIGURES

Figure 1	Site Location Plan
Figure 2	Aerial Photo
Figure 3	Audit Plan

## APPENDICES

Appendix 1	Road Safety Audit Brief
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## SECTION 1: INTRODUCTION

### General

- 1.1 This Road Safety Audit Stage 1 (Preliminary Design) report has been undertaken at the request of the Highway Authority. It has been prepared on behalf of RSP and relates to proposed modifications to the B2050 Manston Road / B2014 Newington Road junction, Ramsgate, Kent. The works are associated with the redevelopment of Manston Airport.
- 1.2 Thanet District Council is the local planning authority. Kent County Council is the local highway authority for the area.

### Audit Team

- 1.3 A. R. J. Setter BA (Hons) MSc CMILT MCIHT AMICE MSoRSA CoC  
Badingham Limited
- D. F. Rogers JP CEng BEng (Hons) MICE FIHE MSoRSA  
Ashburn Partnership

### Audit Brief

- 1.4 The Road Safety Audit has been undertaken in accordance with the Road Safety Audit Brief contained in Appendix 1.
- 1.5 The terms of reference for this Road Safety Audit are described in GG119. The Audit Team has not been made aware of any departures from standard.
- 1.6 The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.

## **Main Parties to the Audit**

1.7 The following are the main parties to the audit:

- Client Organisation: RSP
- Overseeing Organisation: Kent County Council
- Design Organisation: Wood Plc

1.8 The Audit Team visited the site together on Sunday 10<sup>th</sup> June 2019 between 09:15am and 09:45am. The weather was fine and surfaces were dry. There were no adverse traffic conditions to affect the audit. Photographs of the site and surrounding area are included where relevant.

1.9 The location of the site is shown on Figure 1 Site Location Plan and Figure 2 Aerial Photo. The area of the audit extends solely to the works shown on the drawings included in the Audit Brief. Any issues identified are cross-referenced by paragraph number to the Audit Plan (Figure 3).

1.10 The works comprise modifications to the existing mini-roundabout junction to change it to signal control including a staggered pedestrian crossing facility across Manston Road. No drainage, signage or lighting details are provided at this stage.

1.11 The junction is located within a 30mph speed limit. A zebra crossing is situated north of the junction. Footways and street lighting are provided. Gradients are minimal. Parking bays adjacent to St Lawrence Court are provided on the south side of Manston Road close to the junction. Uncontrolled pedestrian refuge crossings are provided on the south and west approaches to the junction. Double yellow line parking restrictions are in place. Private driveways take access directly from the roundabout on the east side of Newington Road.

1.12 The DoT publication Mini Roundabouts Good Practice Guidance paragraph 2.4 and TD 54/07 suggest that mini-roundabouts for 3-arm sites have an accident rate 30% less than signalised junctions.

- 1.13 Traffic flows at the time of the site visit were constant and generally free-flowing with occasional short-term vehicle queues observed. The roundabout wearing course appears in good condition. One PSV and one coach were observed transiting the junction, no HGVs were seen. Pedestrian movements were occasional, no cyclists were noted. The existing junction appears to operate satisfactorily and within capacity.
- 1.14 A total of five collisions are recorded at this junction within the latest five-year period, all of which are categorised as slight. One collision involved three vehicles the remainder involved two vehicles. All occurring in daylight and dry conditions. There were eight slight injury casualties resulting from these collisions. No highway deficiencies were recorded as contributing causation factors.

## **SECTION 2: ITEMS RAISED AT PREVIOUS AUDITS**

2.1 No previous audits have been undertaken.

## SECTION 3: ITEMS RAISED AT THIS AUDIT

### 3.1 PROBLEM

*Location:* B2014 Newington Road approaches.

*Summary:* Narrow lane widths and potential collisions involving HGVs.

- 3.1.1 Lane width dimensions of 2.50m and 2.58m are proposed. The right-turn storage lane also appears narrow. HGVs and PSVs have a maximum width of 2.55m. An HGV waiting in the central right-turn storage lane may obstruct southbound ahead traffic movements. There is a risk of side-scape type collisions or collisions with pedestrians if the vehicles were to mount the footway in order to pass on the inside. Limited road space may also lead to risk of collisions with opposing traffic, overrunning of adjacent footways or islands, or 'squeezing' of cyclists possibly resulting in injuries to vehicle occupants and other road users.

### RECOMMENDATION

- 3.1.2 It is recommended that lane widths are increased.



Photo 1 - Newington Road view south.

## 3.2 PROBLEM

*Location:* B2014 Newington Road northbound approach.

*Summary:* Kerb line and storage.

- 3.2.1 The western kerb line appears contrived. It is doubtful whether sufficient storage for a single vehicle could be achieved at the left-turn stop line. There is a risk that HGVs waiting to turn left may block the ahead movement with ahead vehicles seeking to make use of the hatched areas to overtake. This could lead to collisions with right-turn traffic from Manston Road and subsequent risk of injuries to vehicle occupants.

### RECOMMENDATION

- 3.2.2 It is recommended that short left-turn storage lane is removed and the kerb radius 'smoothed' accordingly.



Photo 2 - View west to kerb line.



### 3.3 PROBLEM

*Location:* Proposed junction.

*Summary:* Potential for collisions with vehicles associated with private driveways.

- 3.3.1 Several private driveways take direct access from the existing mini-roundabout junction on the east side of Newington Road. It is unclear how residents will safely access and egress these driveways once the junction is under signal control. This may lead to unsafe and unexpected ad-hoc movements being undertaken in the inter-green periods with unacceptable gap acceptance decisions being made by drivers. This may result in collisions with footway users as well as vehicles utilising the signal junction leading to possible injuries to vehicle occupants, cyclists or motor cyclists.

#### RECOMMENDATION

- 3.3.2 It is recommended that safe access and egress is provide to and from the adjacent private driveways.



*Photo 3 - View south east from Manston Road.*

## 3.4 PROBLEM

*Location:* Proposed junction.

*Summary:* Potential for signal columns to cause obstruction.

- 3.4.1 There is potential for the proposed signal columns on the east side of Newington Road to present an obstruction to footway users and to residents' drives. There is a risk of collisions resulting in possible injuries to footway users, vehicle occupants, and possible injuries following secondary collisions should vehicle strike cause the signal poles to fall into the path of traffic.

## RECOMMENDATION

- 3.4.2 It is recommended that the signal poles are positioned outside of any vehicle strike zone and without obstruction to footway or driveway users.



Photo 4 - View south on Newington Road.



## 3.5 PROBLEM

*Location:* Proposed staggered controlled crossing.

*Summary:* Potential for parking.

- 3.5.1 There is a risk of residents seeking to park on the proposed widened footway on the south side of the proposed crossing adjacent to St Lawrence Court. There is potential for collisions with both vehicles leaving the junction or footway/crossing users resulting in possible injuries.

### RECOMMENDATION

- 3.5.2 It is recommended that measures are introduced to prevent parking on the footway in this location.



*Photo 5 - View south across Manston Road.*

## 3.6 PROBLEM

*Location:* Pedestrian refuge crossing south of junction.

*Summary:* Potential for pedestrians to be injured when crossing between vehicles.

- 3.6.1 There is a risk of injuries to pedestrians seeking to cross in this location should vehicles be queuing on the northbound Newington Road approach.

### RECOMMENDATION

- 3.6.2 It is recommended that a controlled facility for pedestrians to cross is incorporated into the design in this location.



Photo 6 - Newington Road northbound approach.



## 3.7 PROBLEM

*Location:* Proposed junction.

*Summary:* Potential for injuries to cyclists.

- 3.7.1 No advance cycle stop line storage facilities are proposed. There is a risk of cyclists being 'squeezed' by vehicles resulting in possible injuries, particularly involving left-turn movements.

## RECOMMENDATION

- 3.7.2 It is recommended that an advanced cycle stop lines are incorporated into the design in this location.



Photo 7 - Newington Road view north.

## SECTION 4: AUDIT STATEMENT

4.1 This audit has been undertaken in accordance with DMRB Standard GG119.

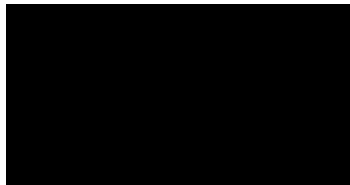
### Road Safety Audit Team Leader

A. R. J. Setter BA (Hons) MSc CMILT MCIHT AMICE MSoRSA CoC

Director - Badingham Limited

16 Ashley Piece, Ramsbury, Marlborough, Wiltshire, SN8 2QE

Signed:



Date: 11<sup>th</sup> June 2019

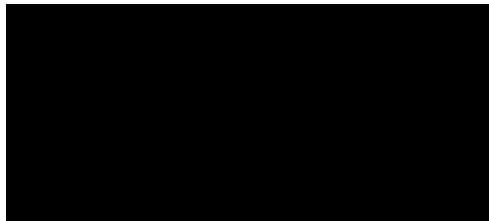
### Audit Team Member

D. F. Rogers JP CEng BEng (Hons) MICE MSoRSA FIHE

Partner - Ashburn Partnership

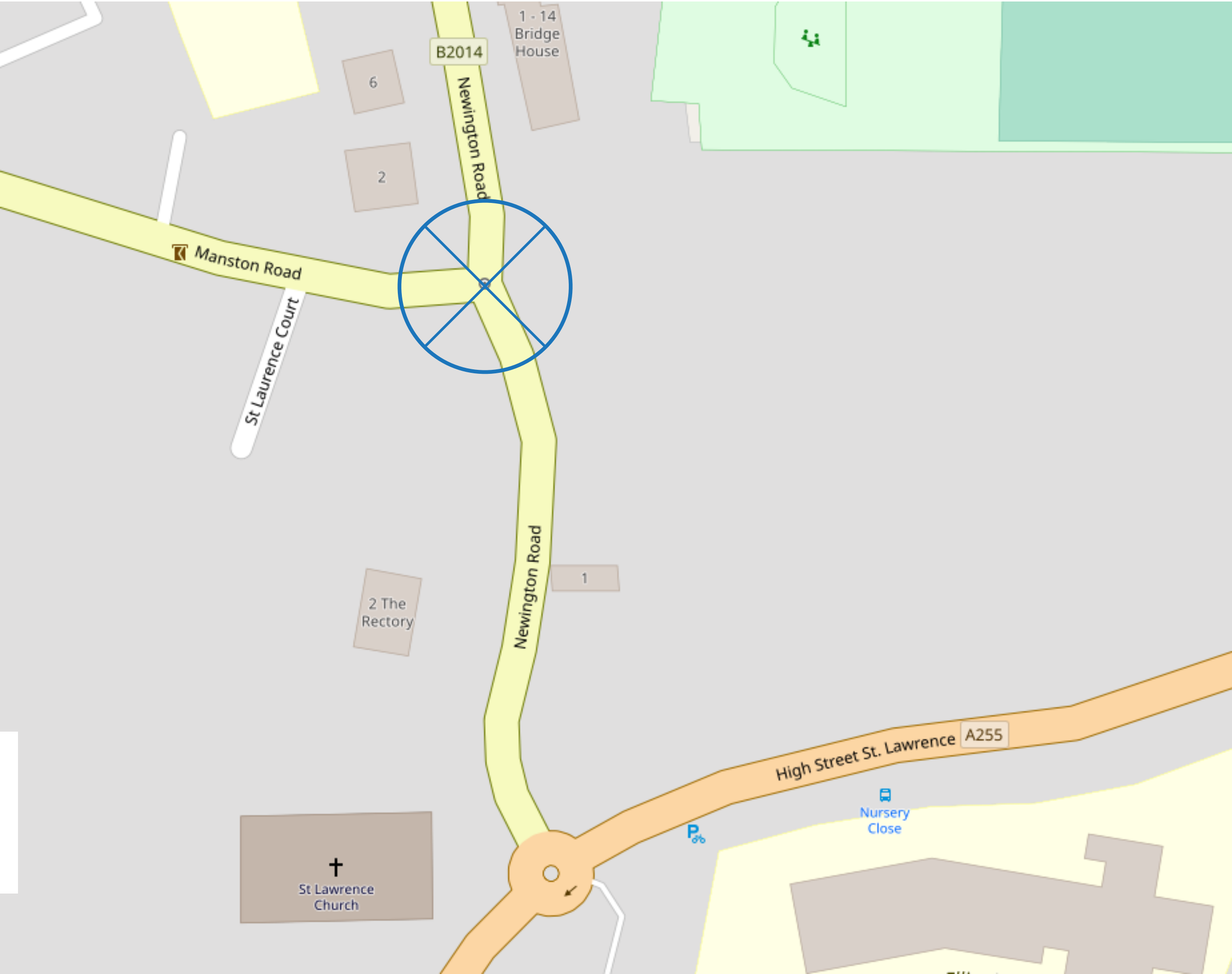
5 Mayfield, Upper Wanborough, Swindon, SN4 0ED

Signed:



Date: 11<sup>th</sup> June 2019

## FIGURES



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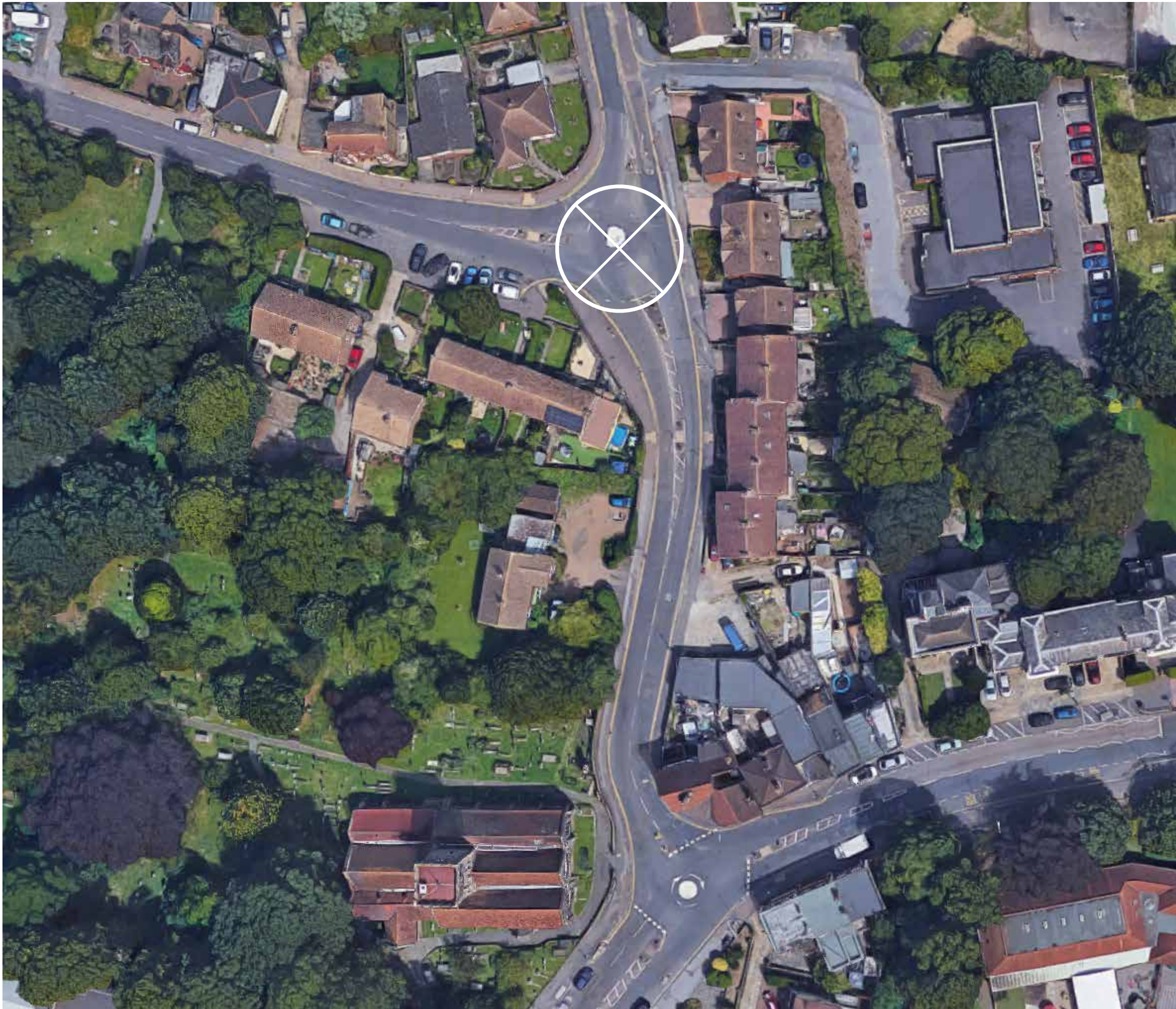
Manston Airport

Title

Location Plan

Date	10/06/2019	Status	FINAL
Scale	NTS	Original Size	A3
Drawn	AS	Checked	AS
Job No.	0781	Drawing No.	FIGURE 1
		Rev.	-





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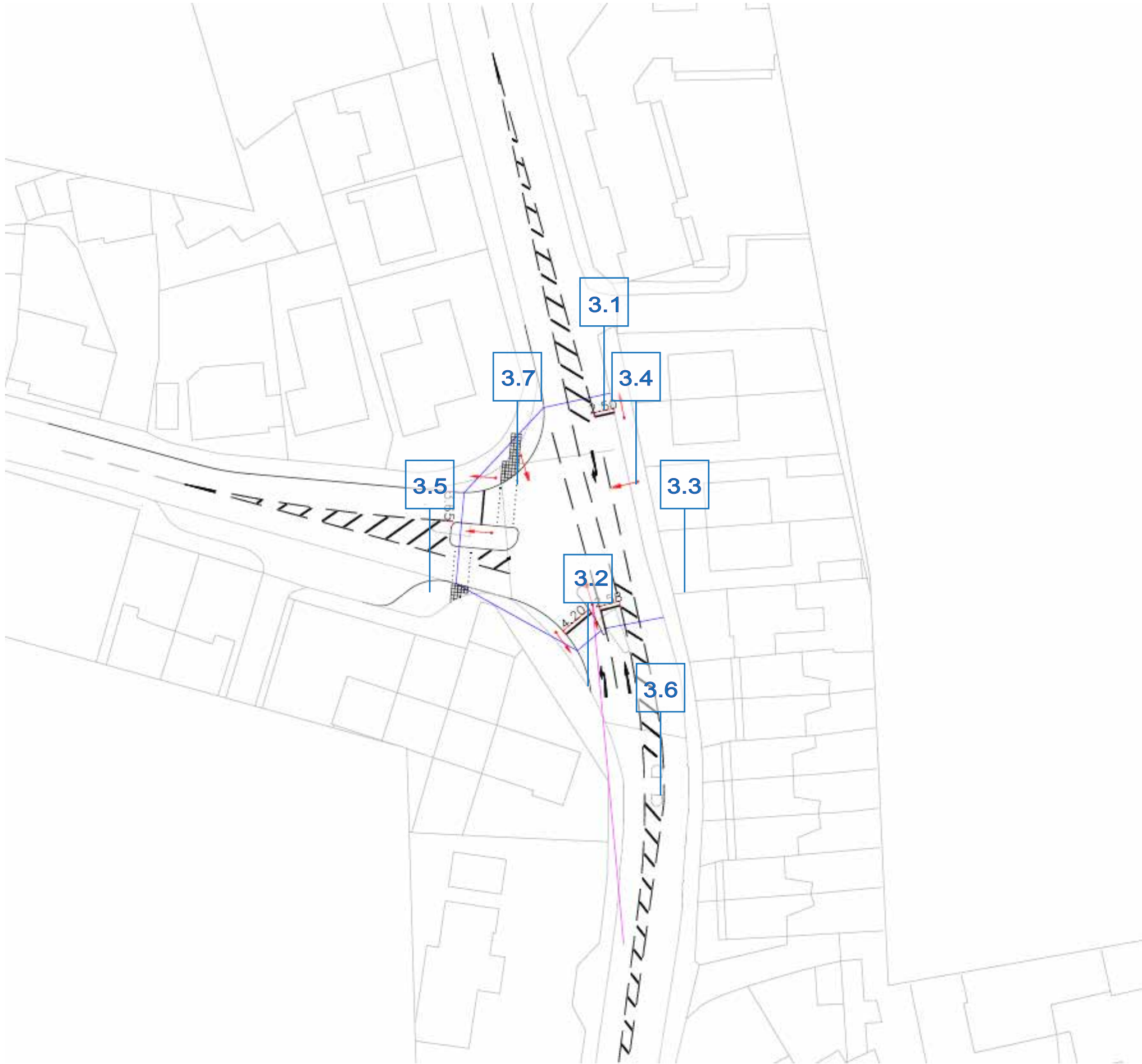
Manston Airport

Title

Aerial Photo

Date	10/06/2019	Status	FINAL
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Drawn	AS	Checked	AS
Job No.	0781	Drawing No.	FIGURE 2
		Rev.	-





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Source: JCT26- Fig.7.14 38199-Lon349

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Title

Audit Plan

Date

10/06/2019

Status

FINAL

Scale

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Original Size

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Checked

AS

Job No.

0781

Drawing No.

FIGURE 3

Rev.

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## APPENDIX 1

### Road Safety Audit Brief

## ROAD SAFETY AUDIT BRIEF

---

<b>Project Summary</b>	
<b>Date:</b>	06/06/2019
<b>Document Reference:</b>	N/A
<b>Prepared by:</b>	Wood Environment and Infrastructure Solutions
<b>On Behalf of:</b>	RiverOak Strategic Partners
<b>AUTHORISATION SHEET</b>	
<b>Project:</b>	Manston Airport – Junction B2050 Manston Road/B2014
<b>Report title:</b>	Manston Airport – Junction B2050 Manston Road/B2014 – RSA Stage 1
<b>PREPARED BY:</b>	
<b>Name:</b>	Adam Guy
<b>Signed:</b>	
<b>Organisation:</b>	Wood Environment and Infrastructure Solutions
<b>Date:</b>	06/06/2019
<b>I APPROVE THE RSA BRIEF AND INSTRUCT THE RSA TO TAKE PLACE ON BEHALF OF THE OVERSEEING ORGANISATION:</b>	
<b>Name:</b>	Tony Freudmann
<b>Signed:</b>	
<b>Organisation:</b>	RiverOak Strategic Partners
<b>Date:</b>	

# ROAD SAFETY AUDIT BRIEF

<b>General Details</b>				
<b>Highway Scheme Name &amp; Road Number</b>		Manston Airport – Junction B2050 Manston Road/B2014 – B2050 Manston Road (West), B2014 Newington Road (North), B2014 (South)		
<b>Type of Scheme</b> <i>e.g. new road scheme, smart motorway, junction improvement, traffic signs and road markings improvement, traffic calming, etc.</i>				
Signalisation of the junction with the addition of a pedestrian crossing and appropriate road markings.				
<b>RSA Stage</b> <i>Tick as appropriate ✓</i>	1	✓	2	3
	Interim			4
<b>Overseeing Organisation Details</b>		<b>Design Organisation Details</b>		
16 Charles II Street London SW1Y 4NW		Wood Glyn Price Associate Director Canon Court, Abbey Lawn, Abbey Foregate, Shrewsbury, SY2 5DE, UK		
<b>Police Contact Details (RSA3 Only)</b>		<b>Maintaining Agent Contact Details</b>		
N/A		N/A		
<b>RSA Team Membership</b>				
A.R.J. Setter (Team Leader)		BA (Hons) MSc CMILT MCIHT AMICE MSoRSA Highways England Certificate of Competence & Compliant with EU Directive 2008/96/EC Badingham Limited		
D. F. Rogers (Team Member)		JP, CEng BEng (Hons) MICE MSoRSA FIHE Ashburn Consultants		
<b>Terms of Reference</b> <i>Make reference to relevant DMRB documents and other guidance where appropriate.</i>				
DMRB – TD50/04 THE GEOMETRIC LAYOUT OF SIGNALCONTROLLED JUNCTIONS AND SIGNALISED ROUNDABOUTS				

# ROAD SAFETY AUDIT BRIEF

<b>Scheme Details</b>
<b>Scheme Description/Objective</b>
<p><b>General</b>  <i>Define the extents of the RSA, include a brief scheme description, the scheme objectives, a start date for construction if known and a completion date. In addition, for stage 4 RSAs, confirm when all related traffic management has been removed.</i></p> <p>The proposals are for a new signalised junction layout at the existing B2050 Manston Road/B2014 junction.</p> <p>The extent of the design is shown on drawing 38199-Lon349 provided in the pack of information for this junction, this includes the revised junction layout and approaches.</p> <p>The objectives of this scheme are to provide an improved junction in terms of capacity and safety that can accommodate the additional traffic from the Manston Airport Project.</p> <p>Construction would be proposed within the early years of the project (2-4) life cycle which will be 2021-2023 depending on the approvals process of a DCO that is going through examination. Completion should take between 3-6 months.</p> <p>Visibility requirements that have been used in the design are taken from DMRB guidance. A swept path assessment has been undertaken to ensure the design can adequately and safely accommodate a maximum legal length articulated HGV (UK 16.5m) for all movements within the junction.</p>
<p><b>Design Standards Applied to the Scheme Design</b>  <i>For example, DMRB.</i></p> <p>DMRB and Traffic signs regulations and general directions have been used in the design of this junction.</p>
<p><b>Design Speeds</b>  <i>Provide details of applied and/or existing design speeds.</i></p> <p>30MPH</p>
<p><b>Speed Limits</b>  <i>State whether mandatory or advisory, available speed data.</i></p> <p>The existing speed limit at the B2050 Manston Road/B2014 junction is 30 mph. It is not proposed to change this as part of the proposed scheme at the junction.</p>
<p><b>Existing Traffic Flows/Queues</b>  <i>To include current automatic traffic counter (ATC) data, up-to-date turning count and queue information etc.</i></p> <p>MCC Traffic Turning Counts were taken at the junction 2017 and the results of these counts will be provided. This also included queue information.</p>
<p><b>Forecast Traffic Flows</b>  <i>Where available and relevant, provide future traffic flow data including vehicle proportions.</i></p> <p>Future Traffic flows at the access for the AM and PM Peak will be provided in a matrix format.</p>
<p><b>Pedestrian, Cyclist &amp; Equestrian Desire Lines</b>  <i>Include details of pedestrian, cyclist and equestrian movements in the vicinity of the scheme and, when applicable the relevant walking, cycling and horse-riding assessment and review reports HD 42/17 [Ref 7.1].</i></p> <p>The proposed design in drawing 38199-Lon149 set out that pedestrian movements will be accommodated across the junction, with signalised crossings as necessary.</p>
<p><b>Environmental Constraints</b>  <i>Include all environmental constraints within the scheme extents, for example sites of special scientific interest (SSSI), conservation areas, listed properties etc.</i></p>

## ROAD SAFETY AUDIT BRIEF

---

No environmental constraints have been observed.

## ROAD SAFETY AUDIT BRIEF

---

<b>Locality</b>
<b>Description of Locality</b> <i>Include all environmental constraints within the scheme extents, e.g. (SSSI), conservation areas, listed properties etc.</i>
The proposed junction is proposed at the existing location of the B2050 Manston Road/B2014 junction.
<b>General Description</b> <i>Include road network, road type, relevant land uses etc.</i>
The existing B2050 Manston Road/B2014 junction is a mini roundabout junction. All approaches are subject to a 30mph speed limit and the junction is located within a residential setting.  Footpaths are located on both sides of the carriageway on all approaches to the junction and pedestrian dropped kerb crossings with central refuges are located on each arm.  The carriageway on each approach to the junction is single carriageway with two way flow.
<b>Relevant Factors Which May Affect Road Safety</b> <i>Factors known to the Design Organisation and considered as part of the design. This should also include anything that would not be immediately obvious to the RSA Team – such as school crossing patrols and large events, for example.</i>
N/A

# ROAD SAFETY AUDIT BRIEF

---

<b>Analysis</b>												
<b>Collision Data Analysis</b> <i>Stages 1,2, and 3 provide a summary of road traffic collision data covering both the extent of the scheme and the adjoining sections of highway. As a minimum, the most recent 36 month of data. At Stage 4, provide 12 months of post-opening validated road traffic collision data. Raw data should be provided as an appendix.</i>												
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<b>Departures from Standards</b> <i>Include status details, i.e. approved/pending/rejected, and any design strategy records produced for improvements to existing trunk roads and motorways.</i>												
N/A												
<b>Previous Road Safety Audit Stage Reports, Road Safety Audit Response Reports &amp; Evidence of Agreed Actions</b> <i>Attach previous reports to the RSA Brief, or provide an explanation where these are not available.</i>												
N/A												
<b>Strategic Decisions</b> <i>Includes items outside the scope of this RSA, which will not change irrespective of the RSA, for example route choice, junction type, approved departures from standard.</i>												
N/A												
<b>List of Included Documents and Drawings</b> <i>For example: previous RSA reports; Design Responses; Departures; Road Traffic Collision Data; Walking, Cycling and Horse-Riding Assessment and Reviews. This could include any relevant operational data such as damage-only collision data or incident logs. This list could be included as an attachment to the RSA Brief or a hyperlink to a shared electronic location where the RSA Brief information has been collated.</i>												
<b>Documents</b>												
<table border="1"><thead><tr><th>Reference/Revision</th><th>Title</th><th>Date</th></tr></thead><tbody><tr><td>RSA – B2050 Manston Road/B2014-MCC Results</td><td></td><td>06.06.2019</td></tr><tr><td>RSA – B2050 Manston Road/B2014-future year traffic flows</td><td></td><td>06.06.2019</td></tr><tr><td>RSA – B2050 Manston Road/B2014-LINSIG</td><td></td><td>06.06.2019</td></tr></tbody></table>	Reference/Revision	Title	Date	RSA – B2050 Manston Road/B2014-MCC Results		06.06.2019	RSA – B2050 Manston Road/B2014-future year traffic flows		06.06.2019	RSA – B2050 Manston Road/B2014-LINSIG		06.06.2019
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RSA – B2050 Manston Road/B2014-HGV SPA		06.06.2019										

## ROAD SAFETY AUDIT BRIEF

---

<b>Checklist</b>			
Tick all that are included and provide reasons for those that are not included. ✓			
Site Location plan	✓	Scale Layout Plans	✓
Departures and Relaxations from Standards		Construction/Typical Details	
Previous RSA Reports		Previous RSA Response Reports & Evidence of Agreed Actions	
Collision Data and Collision Data Analysis	✓	Road Traffic Collision Plot	✓
Traffic Signal Staging	✓	Traffic Counts	✓
Speed Surveys		Pedestrian, Cyclist, Horse-Riding Desire Lines & Volumes	
Walking, Cycling and Horse-Riding Assessment & Reviews		Items Outside the Scope of the RSA/Strategic Decisions	
Other Factors that may Impact Upon Road Safety		Design Speeds/Speed Limits	✓
Design Standards Used	✓	Adjacent Land Uses	



# **A255 / B2014 Newington Road Junction, Ramsgate, Kent Proposed Highway Works**

## **Road Safety Audit – Stage 1 (Preliminary Design)**

**Client: RSP**

**12<sup>th</sup> June 2019**

## **Badingham Limited**

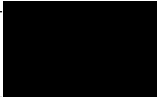

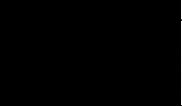

Transport Planning & Highway Engineering Consultants

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## DOCUMENT ISSUE

<i>Issue / Revision:</i>	Issue 1				
<i>Description / Status:</i>	Final				
<i>Date:</i>	12/06/2019				
<i>Prepared:</i>	A. R. J. Setter				
<i>Signature:</i>					
<i>Document Check:</i>	D. F. Rogers				
<i>Signature:</i>					
<i>Technical Check:</i>	D. F. Rogers				
<i>Signature:</i>					
<i>Authorised:</i>	A. R. J. Setter				
<i>Signature:</i>					
<i>File Reference:</i>	0781 Manston Airport - 27 - RSA1 - Issue 1.docx				

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SECTION 2: ITEMS RAISED AT PREVIOUS AUDITS	4
SECTION 3: ITEMS RAISED AT THIS AUDIT	5
SECTION 4: AUDIT STATEMENT	10

## FIGURES

Figure 1	Site Location Plan
Figure 2	Aerial Photo
Figure 3	Audit Plan

## APPENDICES

Appendix 1	Road Safety Audit Brief
------------	-------------------------

## SECTION 1: INTRODUCTION

### General

- 1.1 This Road Safety Audit Stage 1 (Preliminary Design) report has been undertaken at the request of the Highway Authority. It has been prepared on behalf of RSP and relates to proposed modifications to the A255 / B2014 Newington Road junction, Ramsgate, Kent. The works are associated with the redevelopment of Manston Airport.
- 1.2 Thanet District Council is the local planning authority. Kent County Council is the local highway authority for the area.

### Audit Team

- 1.3 A. R. J. Setter BA (Hons) MSc CMILT MCIHT AMICE MSoRSA CoC  
Badingham Limited
- D. F. Rogers JP CEng BEng (Hons) MICE FIHE MSoRSA  
Ashburn Partnership

### Audit Brief

- 1.4 The Road Safety Audit has been undertaken in accordance with the Road Safety Audit Brief contained in Appendix 1.
- 1.5 The terms of reference for this Road Safety Audit are described in GG119. The Audit Team has not been made aware of any departures from standard.
- 1.6 The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.

### **Main Parties to the Audit**

1.7 The following are the main parties to the audit:

- Client Organisation: RSP
- Overseeing Organisation: Kent County Council
- Design Organisation: Wood Plc

1.8 The Audit Team visited the site together on Sunday 10<sup>th</sup> June 2019 between 09:15am and 09:45am. The weather was fine and surfaces were dry. There were no adverse traffic conditions to affect the audit. Photographs of the site and surrounding area are included where relevant.

1.9 The location of the site is shown on Figure 1 Site Location Plan and Figure 2 Aerial Photo. The area of the audit extends solely to the works shown on the drawings included in the Audit Brief. Any issues identified are cross-referenced by paragraph number to the Audit Plan (Figure 3).

1.10 The works comprise modifications to the existing mini-roundabout junction including the relocation of an uncontrolled pedestrian refuge crossing facility across the A255 (south) and a short extension to double yellow line restrictions. No drainage, signage or lighting details are provided at this stage.

1.11 The junction is located within a 30mph speed limit. Footways and street lighting are provided. Gradients are minimal. Parking is permissible for a short section of highway on the north side of the A255 carriageway. Uncontrolled pedestrian refuge crossings are provided on all approaches to the junction. Double yellow line parking restrictions are in place. There are width restrictions on the A255 to the south of the junction together with a bus stop.

1.12 Traffic flows at the time of the site visit were constant and generally free-flowing with occasional short-term vehicle queues observed. The roundabout wearing course appears in poor condition. Pedestrian movements were occasional, six cyclists were noted.

- 1.13 A total of five collisions are recorded at this junction within the latest five-year period, all of which are categorised as slight. All collisions were multi-vehicle and generally occurring in daylight and dry conditions. One involved a cyclist. There were five slight injury casualties resulting from these collisions. No highway deficiencies were recorded as contributing causation factors.

## **SECTION 2: ITEMS RAISED AT PREVIOUS AUDITS**

2.1 No previous audits have been undertaken.

## SECTION 3: ITEMS RAISED AT THIS AUDIT

### 3.1 PROBLEM

*Location:* A255/B2014 Junction.

*Summary:* Poor carriageway condition.

- 3.1.1 The condition of the wearing course at the junction is deteriorating and if allowed to continue there is a risk of collisions resulting from loss-of-control type incidents particularly involving motorcycles and cyclists in this location.

### *RECOMMENDATION*

- 3.1.2 It is recommended that the wearing course at the junction is replaced.



Photo 1 - Existing junction view south.



## 3.2 PROBLEM

*Location:* A255/B2014 Junction.

*Summary:* Narrow lanes.

3.2.1 The proposed introduction of two-lane approaches at the give-ways on the A255 (south) and the B2014 appear narrow and insufficient for two vehicles to wait safely side-by-side. There is a risk of side-scrrape type collisions between vehicles or the possibility of over-running the adjacent footway leading to user injuries. There is a risk that vehicles on the A255 right-turn may make use of the hatched central area to wait where they may be at risk of strike by opposing vehicles resulting in possible injuries to occupants.

### RECOMMENDATION

3.2.2 It is recommended that single lane approaches are maintained.



*Photo 2 - B2014 approach view south.*



Photo 3 - A255 approach view west.

### 3.3 PROBLEM

*Location:* A255/B2014 Junction.

*Summary:* Inconsistent and confusing crossing arrangements.

- 3.3.1 Tactile paving and dropped kerbs are to be included at the re-located crossing on the A255 (south). However, this is inconsistent with the other uncontrolled crossing at the B2014 crossing, which has no tactile paving. There is potential for visually impaired users to suffer injury from unknowingly walking into the path of vehicles.

#### RECOMMENDATION

- 3.3.2 It is recommended that tactile paving is introduced in this location.





Photo 4 - View east across B2014.

### 3.4 PROBLEM

*Location:* South side of A255/B2014 Junction.

*Summary:* Potential for trips and falls on footway.

- 3.4.1 It is not clear what is intended at the south side of the junction where there is a narrow access immediately off the junction. It appears that a section of kerb is to be introduced although it is not clear if the access is to be closed, replaced with footway, or a cross-over introduced. The kerbed radii at the access presents a trip and fall hazard to pedestrians if retained leading to possible injuries.

#### RECOMMENDATION

- 3.4.2 It is recommended that level, unobstructed access for pedestrians is provided in this location.



*Photo 5 - Potential trip hazard.*

## SECTION 4: AUDIT STATEMENT

4.1 This audit has been undertaken in accordance with DMRB Standard GG119.

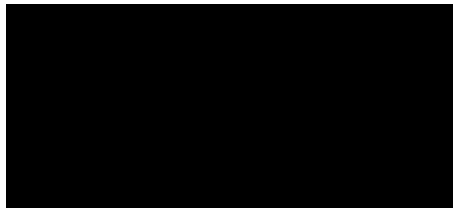
### Road Safety Audit Team Leader

A. R. J. Setter BA (Hons) MSc CMILT MCIHT AMICE MSoRSA CoC

Director - Badingham Limited

16 Ashley Piece, Ramsbury, Marlborough, Wiltshire, SN8 2QE

Signed:



Date: 12<sup>th</sup> June 2019

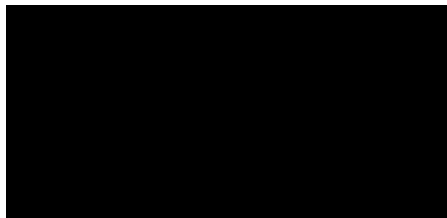
### Audit Team Member

D. F. Rogers JP CEng BEng (Hons) MICE MSoRSA FIHE

Partner - Ashburn Partnership

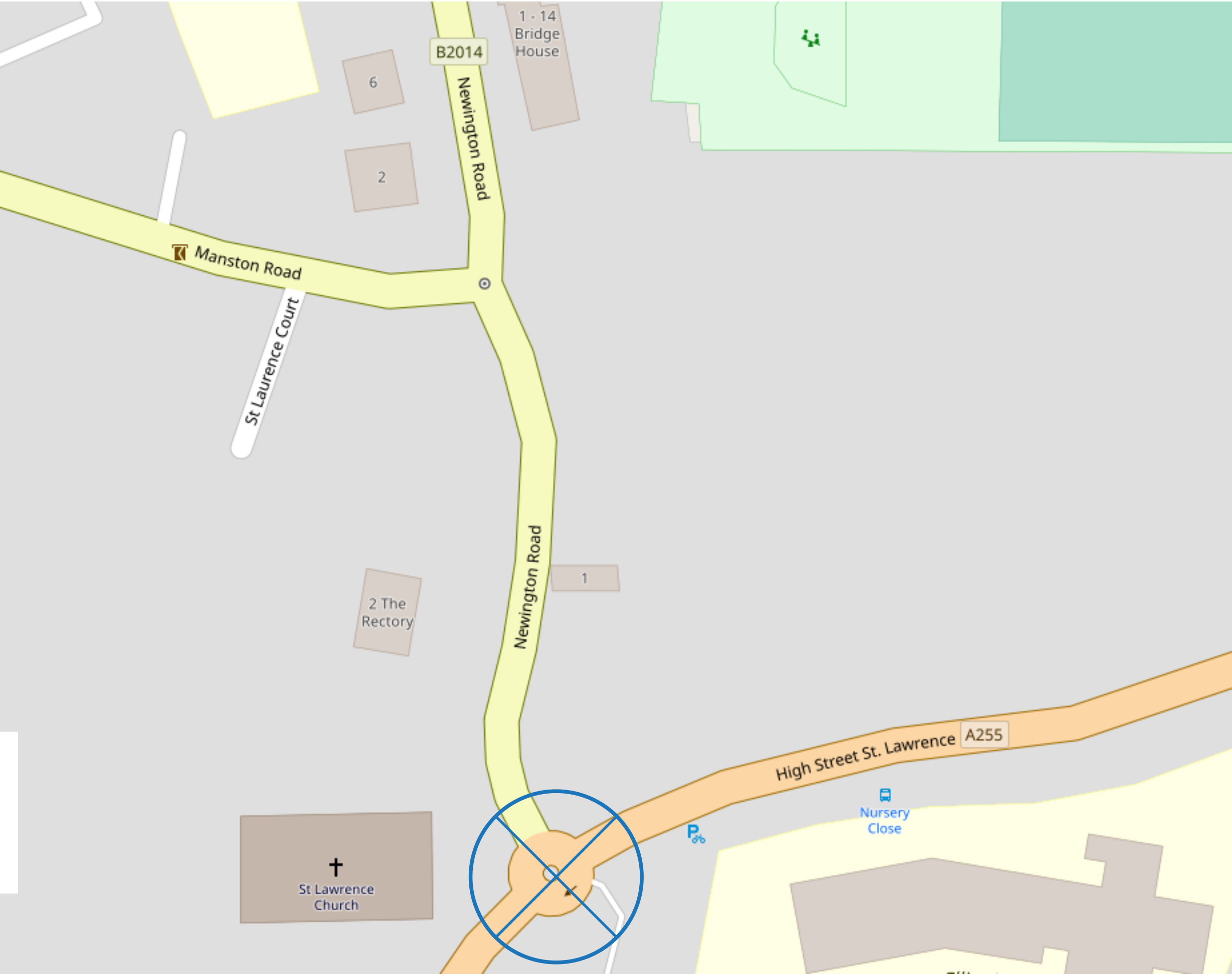
5 Mayfield, Upper Wanborough, Swindon, SN4 0ED

Signed:



Date: 12<sup>th</sup> June 2019

## FIGURES



North



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2. All dimensions must be checked on site.

Rev.	Date	Initials	Amendments

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Client

RSP

Project

Manston Airport

Title

Location Plan

Date	11/06/2019	Status	FINAL
Scale	NTS	Original Size	A3
Drawn	AS	Checked	AS
Job No.	0781	Drawing No.	FIGURE 1
		Rev.	-





North



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Rev.	Date	Initials	Amendments
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# Badingham

Transport Planning  
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Concept | Consult | Construct

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Client

RSP

Project

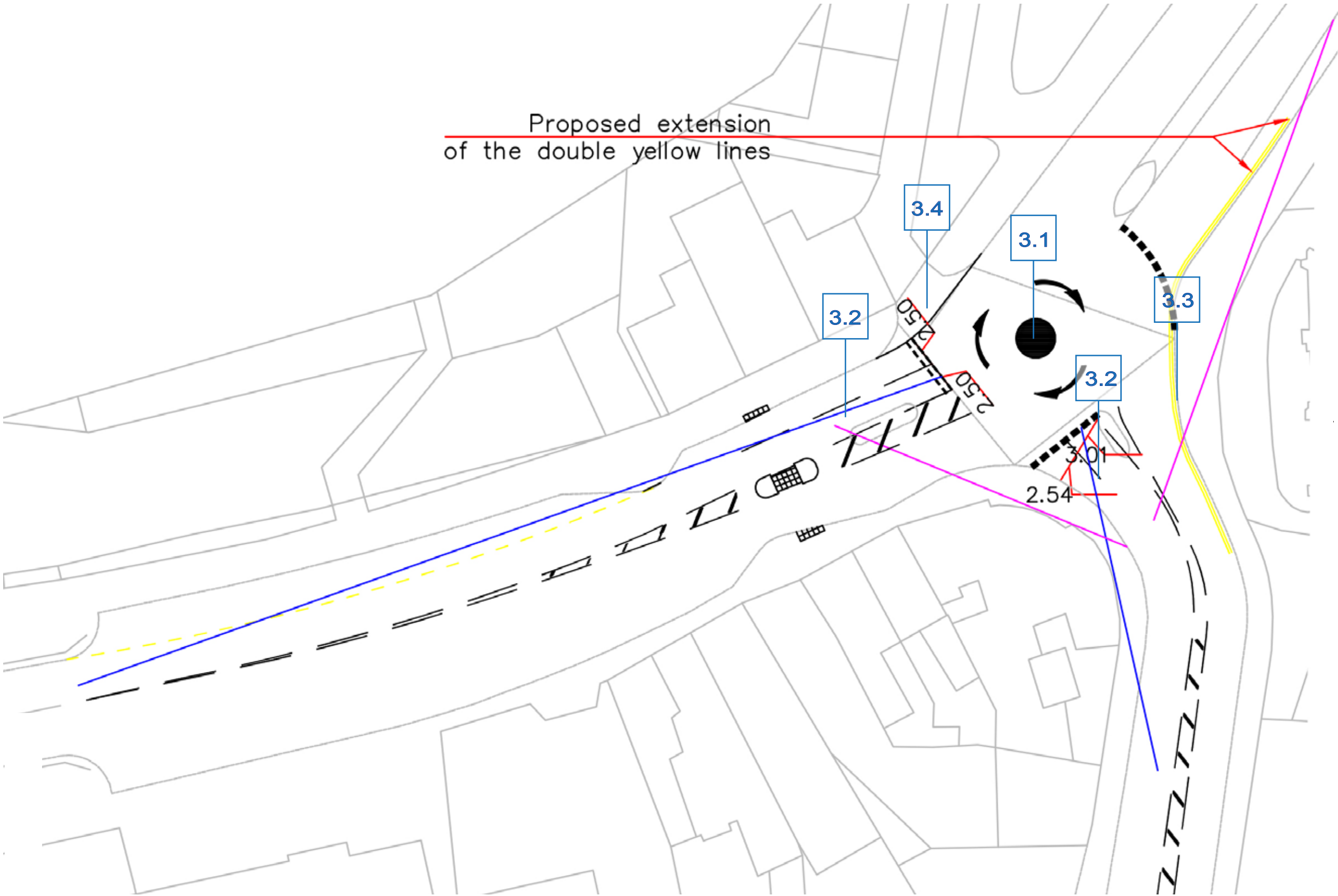
Manston Airport

Title

Aerial Photo

Date	11/06/2019	Status	FINAL
Scale	NTS	Original Size	A3
Drawn	AS	Checked	AS
Job No.	0781	Drawing No.	FIGURE 2
		Rev.	-





North



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Source: JCT27- Fig.7

Rev.	Date	Initials	Amendments

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Transport Planning  
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Highway Engineering

Concept | Consult | Construct

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Client

RSP

Project

Manston Airport

Title

Audit Plan

Date	11/06/2019	Status	FINAL
Scale	NTS	Original Size	A3
Drawn	AS	Checked	AS
Job No.	0781	Drawing No.	FIGURE 3
		Rev.	-

## APPENDIX 1

### Road Safety Audit Brief

## ROAD SAFETY AUDIT BRIEF

---

<b>Project Summary</b>	
<b>Date:</b>	06/06/2019
<b>Document Reference:</b>	N/A
<b>Prepared by:</b>	Wood Environment and Infrastructure Solutions
<b>On Behalf of:</b>	RiverOak Strategic Partners
<b>AUTHORISATION SHEET</b>	
<b>Project:</b>	Manston Airport – Junction B2014-A255 High Street
<b>Report title:</b>	Manston Airport – Junction B2014-A255 High Street – RSA Stage 1
<b>PREPARED BY:</b>	
<b>Name:</b>	Adam Guy
<b>Signed:</b>	
<b>Organisation:</b>	Wood Environment and Infrastructure Solutions
<b>Date:</b>	06/06/2019
<b>I APPROVE THE RSA BRIEF AND INSTRUCT THE RSA TO TAKE PLACE ON BEHALF OF THE OVERSEEING ORGANISATION:</b>	
<b>Name:</b>	Tony Freudmann
<b>Signed:</b>	
<b>Organisation:</b>	RiverOak Strategic Partners
<b>Date:</b>	

# ROAD SAFETY AUDIT BRIEF

<b>General Details</b>				
<b>Highway Scheme Name &amp; Road Number</b>		Manston Airport – Junction B2014-A255 – B2014 (north), A255 High Street (west), A255 High street (east).		
<b>Type of Scheme</b> <i>e.g. new road scheme, smart motorway, junction improvement, traffic signs and road markings improvement, traffic calming, etc.</i>				
Change to the road markings on the entries to the junction to accommodate a two lane entry for the northern and eastern arm of the junction.				
<b>RSA Stage</b> <i>Tick as appropriate ✓</i>	1	✓	2	3
	Interim			4
<b>Overseeing Organisation Details</b>		<b>Design Organisation Details</b>		
16 Charles II Street London SW1Y 4NW		Wood Glyn Price Associate Director Canon Court, Abbey Lawn, Abbey Foregate, Shrewsbury, SY2 5DE, UK		
<b>Police Contact Details (RSA3 Only)</b>		<b>Maintaining Agent Contact Details</b>		
N/A		N/A		
<b>RSA Team Membership</b>				
A.R.J. Setter (Team Leader)		BA (Hons) MSc CMILT MCIHT AMICE MSoRSA Highways England Certificate of Competence & Compliant with EU Directive 2008/96/EC Badingham Limited		
D. F. Rogers (Team Member)		JP, CEng BEng (Hons) MICE MSoRSA FIHE Ashburn Consultants		
<b>Terms of Reference</b> <i>Make reference to relevant DMRB documents and other guidance where appropriate.</i>				
DMRB – TD50/04 THE GEOMETRIC LAYOUT OF SIGNALCONTROLLED JUNCTIONS AND SIGNALISED ROUNDABOUTS				

# ROAD SAFETY AUDIT BRIEF

<b>Scheme Details</b>
<b>Scheme Description/Objective</b>
<b>General</b> <i>Define the extents of the RSA, include a brief scheme description, the scheme objectives, a start date for construction if known and a completion date. In addition, for stage 4 RSAs, confirm when all related traffic management has been removed.</i>
<p>The proposal is for a scheme to improve the existing A255/B2014 mini roundabout junction by providing new road marking that accommodates a tow lane entry on the northern and eastern arms of the junctions.</p> <p>The extent of the design is shown on drawing 38199-Lon370 provided in the pack of information for this junction, this includes the revised junction layout and approaches.</p> <p>The objectives of this scheme are to provide an improved junction in terms of capacity and safety that can accommodate the additional traffic from the Manston Airport Project.</p> <p>Construction would be proposed within the early years of the project (2-4) life cycle which will be 2021-2023 depending on the approvals process of a DCO that is going through examination. Completion should take between 3-6 months.</p> <p>Visibility requirements that have been used in the design are taken from DMRB guidance. A swept path assessment has been undertaken to ensure the design can adequately and safely accommodate a maximum legal length articulated HGV (UK 16.5m) for all movements within the junction.</p>
<b>Design Standards Applied to the Scheme Design</b> <i>For example, DMRB.</i>
DMRB and Traffic signs regulations and general directions have been used in the design of this junction.
<b>Design Speeds</b> <i>Provide details of applied and/or existing design speeds.</i>
30MPH.
<b>Speed Limits</b> <i>State whether mandatory or advisory, available speed data.</i>
The existing speed limit at the A255/B2014 junction is 30 mph. it is not proposed to change this as part of the proposed scheme at the junction.
<b>Existing Traffic Flows/Queues</b> <i>To include current automatic traffic counter (ATC) data, up-to-date turning count and queue information etc.</i>
MCC Traffic Turning Counts were taken at the junction 2017 and the results of these counts will be provided. This also included queue information.
<b>Forecast Traffic Flows</b> <i>Where available and relevant, provide future traffic flow data including vehicle proportions.</i>
Future Traffic flows at the access for the AM and PM Peak will be provided in a matrix format.
<b>Pedestrian, Cyclist &amp; Equestrian Desire Lines</b> <i>Include details of pedestrian, cyclist and equestrian movements in the vicinity of the scheme and, when applicable the relevant walking, cycling and horse-riding assessment and review reports HD 42/17 [Ref 7.1].</i>
The proposed design in drawing 38199-Lon370 set out that pedestrian movements will be accommodated across the junction, with dropped kerb crossings with central refuges as necessary.

## ROAD SAFETY AUDIT BRIEF

---

### **Environmental Constraints**

*Include all environmental constraints within the scheme extents, for example sites of special scientific interest (SSSI), conservation areas, listed properties etc.*

No environmental constraints have been observed.

## ROAD SAFETY AUDIT BRIEF

---

<b>Locality</b>
<b>Description of Locality</b> <i>Include all environmental constraints within the scheme extents, e.g. (SSSI), conservation areas, listed properties etc.</i>
The proposed junction is proposed at the existing location of the B2050 Manston Road/B2014 junction.
<b>General Description</b> <i>Include road network, road type, relevant land uses etc.</i>
The existing B2050 Manston Road/B2014 junction is a mini roundabout junction. All approaches are subject to a 30mph speed limit and the junction is located within a residential setting.  Footpaths are located on both sides of the carriageway on all approaches to the junction and pedestrian dropped kerb crossings with central refuges are located on each arm.  The carriageway on each approach to the junction is single carriageway with two way flow.
<b>Relevant Factors Which May Affect Road Safety</b> <i>Factors known to the Design Organisation and considered as part of the design. This should also include anything that would not be immediately obvious to the RSA Team – such as school crossing patrols and large events, for example.</i>
N/A

# ROAD SAFETY AUDIT BRIEF

---

<b>Analysis</b>		
<b>Collision Data Analysis</b> <i>Stages 1,2, and 3 provide a summary of road traffic collision data covering both the extent of the scheme and the adjoining sections of highway. As a minimum, the most recent 36 month of data. At Stage 4, provide 12 months of post-opening validated road traffic collision data. Raw data should be provided as an appendix.</i>		
N/A		
<b>Departures from Standards</b> <i>Include status details, i.e. approved/pending/rejected, and any design strategy records produced for improvements to existing trunk roads and motorways.</i>		
N/A		
<b>Previous Road Safety Audit Stage Reports, Road Safety Audit Response Reports &amp; Evidence of Agreed Actions</b> <i>Attach previous reports to the RSA Brief, or provide an explanation where these are not available.</i>		
N/A		
<b>Strategic Decisions</b> <i>Includes items outside the scope of this RSA, which will not change irrespective of the RSA, for example route choice, junction type, approved departures from standard.</i>		
N/A		
<b>List of Included Documents and Drawings</b> <i>For example: previous RSA reports; Design Responses; Departures; Road Traffic Collision Data; Walking, Cycling and Horse-Riding Assessment and Reviews. This could include any relevant operational data such as damage-only collision data or incident logs. This list could be included as an attachment to the RSA Brief or a hyperlink to a shared electronic location where the RSA Brief information has been collated.</i>		
<b>Documents</b>		
<b>Reference/Revision</b>	<b>Title</b>	<b>Date</b>
RSA –B2014/A255-MCC Results		06.06.2019
RSA – B2014/A255-future year traffic flows		06.06.2019
<b>Drawings</b>		
<b>Reference/Revision</b>	<b>Title</b>	<b>Date</b>
RSA – B2014/A255-Proposed scheme		06.06.2019
RSA – B2014/A255-Cad File		06.06.2019
RSA – B2014/A255-HGV SPA		06.06.2019

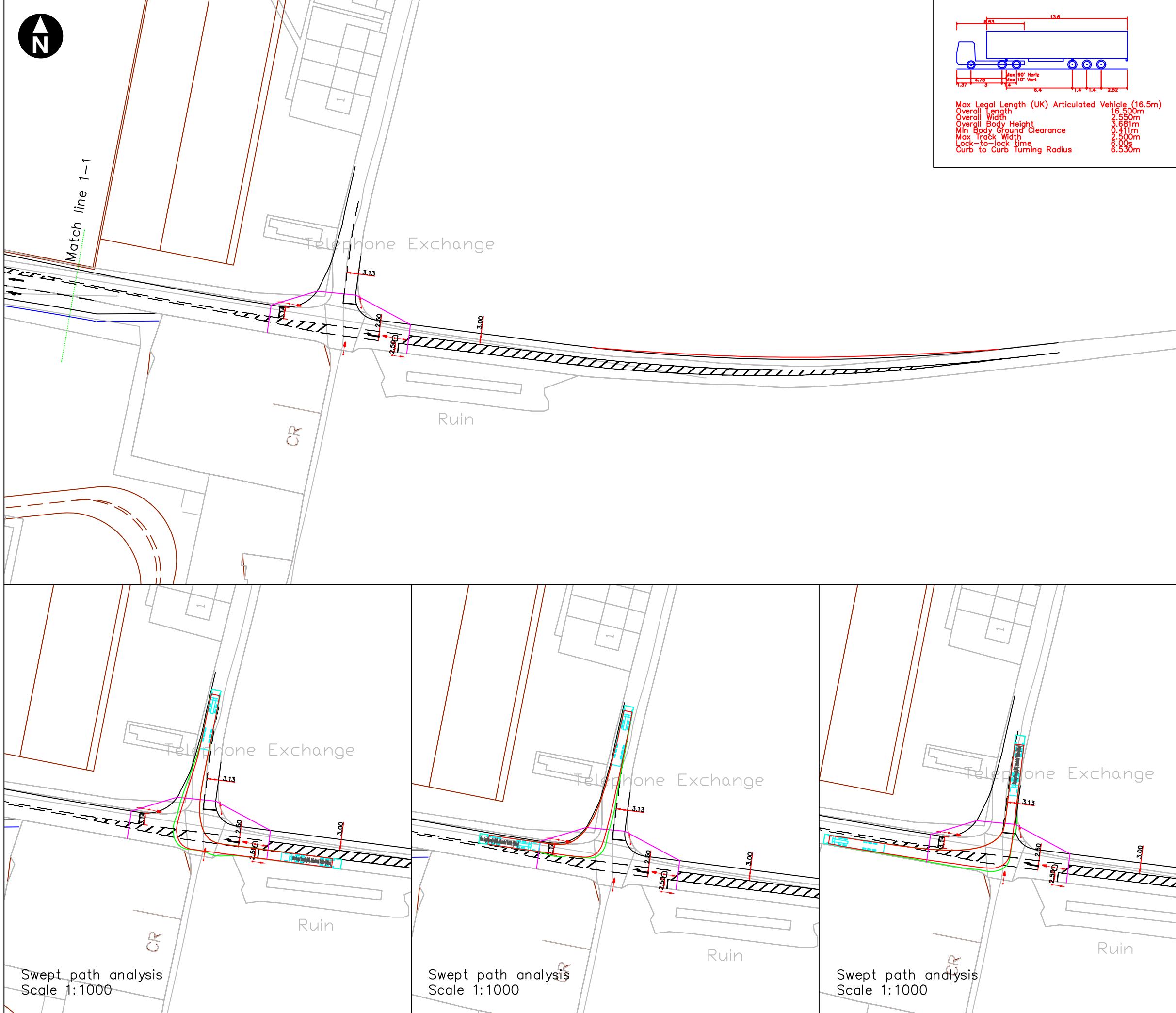


## ROAD SAFETY AUDIT BRIEF

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<b>Checklist</b>			
Tick all that are included and provide reasons for those that are not included. ✓			
Site Location plan	✓	Scale Layout Plans	✓
Departures and Relaxations from Standards		Construction/Typical Details	
Previous RSA Reports		Previous RSA Response Reports & Evidence of Agreed Actions	
Collision Data and Collision Data Analysis	✓	Road Traffic Collision Plot	✓
Traffic Signal Staging	✓	Traffic Counts	✓
Speed Surveys		Pedestrian, Cyclist, Horse-Riding Desire Lines & Volumes	
Walking, Cycling and Horse-Riding Assessment & Reviews		Items Outside the Scope of the RSA/Strategic Decisions	
Other Factors that may Impact Upon Road Safety		Design Speeds/Speed Limits	✓
Design Standards Used	✓	Adjacent Land Uses	

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Key

- Proposed masterplan
- Existing based on Ordnance Survey map
- Proposed kerline
- Proposed road marking
- Proposed tactile paving surface
- Proposed primary signal head
- Proposed secondary signal head
- Proposed signal head with additional green arrow signal
- Proposed signal head with substitute green arrow
- Junction intervisibility boundary
- Proposed footway edge
- Extent of visibility requirements

- Notes
1. All dimensions are in metres unless otherwise noted.
  2. This drawing is not to be used for construction.
  3. The proposed roads are designed in accordance with Design Manual for Roads and Bridges (DMRB) and Traffic Signs Regulations and General Directions (TSRGD).
  4. Junctions' intervisibility zones need to be kept clear from obstructions to maintain visibility.

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Manston Airport DCO  
RSA Stage 1- Designers Response

**Appendix B**  
**Revised B2050 Manston Road/Manston Court Road Mitigation Proposal**