

		Movement A ENTERING SITE							Movement B LEAVING SITE						
Times		Cars	LGV	OGV1	OGV2	PSV	M/cycles	Cycles	Cars	LGV	OGV1	OGV2	PSV	M/cycles	Cycles
00:00	- 00:15	6	2		1				1			3			
00:15	- 00:30	2			2				1			2			
00:30	- 00:45	1			3				2		3	7			
00:45	- 01:00	2		1	3				3			3			
<b>Hourly Total</b>		<b>11</b>	<b>2</b>	<b>1</b>	<b>9</b>				<b>7</b>		<b>3</b>	<b>15</b>			
01:00	- 01:15	1			2							2			
01:15	- 01:30	2			2					1		6			
01:30	- 01:45	2			4				1			3			
01:45	- 02:00	1	1	2	7						1	4			
<b>Hourly Total</b>		<b>6</b>	<b>1</b>	<b>2</b>	<b>15</b>				<b>1</b>	<b>1</b>	<b>1</b>	<b>15</b>			
02:00	- 02:15			1	4				5			1			
02:15	- 02:30	1	1		2				6		1	5			
02:30	- 02:45	1			5				6		2	4			
02:45	- 03:00	1		1	5				6	1		6			
<b>Hourly Total</b>		<b>3</b>	<b>1</b>	<b>2</b>	<b>16</b>				<b>23</b>	<b>1</b>	<b>3</b>	<b>16</b>			
03:00	- 03:15	2			1				4			2			
03:15	- 03:30	1		1	2				2			4			
03:30	- 03:45	1			2				3		1	6			
03:45	- 04:00	5			6		1		4			5			
<b>Hourly Total</b>		<b>9</b>		<b>1</b>	<b>11</b>		<b>1</b>		<b>13</b>		<b>1</b>	<b>17</b>			
04:00	- 04:15	5		1	4				4			1			
04:15	- 04:30	8			3				4		1	1			
04:30	- 04:45	9		1	6				3		1	3			
04:45	- 05:00	8			2				1	1		5			
<b>Hourly Total</b>		<b>30</b>		<b>2</b>	<b>15</b>				<b>12</b>	<b>1</b>	<b>2</b>	<b>10</b>			
05:00	- 05:15	5		1	3				1	1	5				
05:15	- 05:30	21		1	8				2		4	2			
05:30	- 05:45	85	2		7		1		74	1	3	7			
05:45	- 06:00	110	5	2	5				14	1	2	5			
<b>Hourly Total</b>		<b>221</b>	<b>7</b>	<b>4</b>	<b>23</b>		<b>1</b>		<b>91</b>	<b>3</b>	<b>14</b>	<b>14</b>			
06:00	- 06:15	12	1	1	5				37			2		1	
06:15	- 06:30	23	2		6		1		18	3	3	3		1	
06:30	- 06:45	32	15		7				10			4			
06:45	- 07:00	70	16	5	8		1		8	1	2	4			
<b>Hourly Total</b>		<b>137</b>	<b>34</b>	<b>6</b>	<b>26</b>		<b>2</b>		<b>73</b>	<b>4</b>	<b>5</b>	<b>13</b>		<b>2</b>	
07:00	- 07:15	27	21	5	15		2		14	2	3	10			
07:15	- 07:30	44	31	10	7				4	1	2	8			
07:30	- 07:45	43	23	4	13				6	1	3	8			
07:45	- 08:00	50	21	5	12		1		2	4	6	12			
<b>Hourly Total</b>		<b>164</b>	<b>96</b>	<b>24</b>	<b>47</b>		<b>3</b>		<b>26</b>	<b>8</b>	<b>14</b>	<b>38</b>			
08:00	- 08:15	56	16	7	7				4	3	1	5			
08:15	- 08:30	55	12	2	7				4	3	3	10			
08:30	- 08:45	56	8	5	3				3	4	1	7			
08:45	- 09:00	53	6	1	7				6	3	4	15			
<b>Hourly Total</b>		<b>220</b>	<b>42</b>	<b>15</b>	<b>24</b>				<b>17</b>	<b>13</b>	<b>9</b>	<b>37</b>			
09:00	- 09:15	20	5	5	11				8	6	3	10			
09:15	- 09:30	24	2	3	7				7	4	3	16			
09:30	- 09:45	21	4	4	9				4	2	3	5			
09:45	- 10:00	24	6	3	10				12	1	1	7			
<b>Hourly Total</b>		<b>89</b>	<b>17</b>	<b>15</b>	<b>37</b>				<b>31</b>	<b>13</b>	<b>10</b>	<b>38</b>			
10:00	- 10:15	15	6	6	11				10	8		6			
10:15	- 10:30	15	7	6	13				6	6	7	12			
10:30	- 10:45	16	5	2	10		2		13	2	1	10		1	
10:45	- 11:00	16	6	3	11		1		7	7	5	11			
<b>Hourly Total</b>		<b>62</b>	<b>24</b>	<b>17</b>	<b>45</b>		<b>3</b>		<b>36</b>	<b>23</b>	<b>13</b>	<b>39</b>		<b>1</b>	
11:00	- 11:15	5	6	3	14				10	3	5	14			
11:15	- 11:30	4	7	4	11				8	5	3	14			
11:30	- 11:45	16	13	7	28				10	2	1	12			
11:45	- 12:00	9	8	4	17				11	8	3	11			
<b>Hourly Total</b>		<b>34</b>	<b>34</b>	<b>18</b>	<b>70</b>				<b>39</b>	<b>18</b>	<b>12</b>	<b>51</b>			

		Movement A ENTERING SITE							Movement B LEAVING SITE						
Times		Cars	LGV	OGV1	OGV2	PSV	M/cycles	Cycles	Cars	LGV	OGV1	OGV2	PSV	M/cycles	Cycles
12:00	- 12:15	11	4	10					11	4	10	11			
12:15	- 12:30								19	4	7	10			
12:30	- 12:45								21	7	4	3			
12:45	- 13:00	10	6	7	6		1		11	1	7	7			
<b>Hourly Total</b>		<b>21</b>	<b>10</b>	<b>17</b>	<b>6</b>		<b>1</b>		<b>62</b>	<b>16</b>	<b>28</b>	<b>31</b>			
13:00	- 13:15	16	5	4	11				16	11	7	6			
13:15	- 13:30	23	4	12	8		1		20	6	5	10			
13:30	- 13:45	35	7	9	8		1		19	3	8	8			
13:45	- 14:00	23	10	6	3				18	9	2	10			
<b>Hourly Total</b>		<b>97</b>	<b>26</b>	<b>31</b>	<b>30</b>		<b>2</b>		<b>73</b>	<b>29</b>	<b>22</b>	<b>34</b>			
14:00	- 14:15	17	5	8	11				54	5	5	4		1	1
14:15	- 14:30	5	4	2	9				30	4	9	16			
14:30	- 14:45	11	7	9	6				24	3	1	11			
14:45	- 15:00	10	5	10	5				21	5	5	8			
<b>Hourly Total</b>		<b>43</b>	<b>21</b>	<b>29</b>	<b>31</b>				<b>129</b>	<b>17</b>	<b>20</b>	<b>39</b>		<b>1</b>	
15:00	- 15:15	8	3	6	7				37	13	8	6			
15:15	- 15:30	5	4	3	4				30	16	4	13			
15:30	- 15:45	9	6	3	3				51	20	5	7			
15:45	- 16:00	6		3	3				24	20	6	5		1	
<b>Hourly Total</b>		<b>28</b>	<b>13</b>	<b>15</b>	<b>17</b>				<b>142</b>	<b>69</b>	<b>23</b>	<b>31</b>		<b>1</b>	
16:00	- 16:15	12	6	2	6				48	12	6	4			
16:15	- 16:30	15			9				51	15	3	3		1	
16:30	- 16:45	13	2	1	5				88	13	2	9			
16:45	- 17:00	12	2		3				36	7	3	3		1	
<b>Hourly Total</b>		<b>52</b>	<b>10</b>	<b>3</b>	<b>23</b>				<b>223</b>	<b>47</b>	<b>14</b>	<b>19</b>		<b>2</b>	
17:00	- 17:15	3		1	4				48	9	1	9			
17:15	- 17:30	6	1	2	4				41	12	2	2			
17:30	- 17:45	20		1	6		1		64	4		8		1	
17:45	- 18:00	14			4				59	13	4	6			
<b>Hourly Total</b>		<b>43</b>	<b>1</b>	<b>4</b>	<b>18</b>		<b>1</b>		<b>212</b>	<b>38</b>	<b>7</b>	<b>25</b>		<b>1</b>	
18:00	- 18:15	15	2	1	5				72	13	1	5			
18:15	- 18:30	24	3		6		1		22	7		4		1	
18:30	- 18:45	33	4	1	7		1		22	5		5		1	
18:45	- 19:00	44	3	2	5		1		27	9	1	7			
<b>Hourly Total</b>		<b>116</b>	<b>12</b>		<b>23</b>		<b>3</b>		<b>143</b>	<b>34</b>	<b>2</b>	<b>21</b>		<b>2</b>	
19:00	- 19:15	7		1	4				29	1	1	5			
19:15	- 19:30	1			5				11			1			
19:30	- 19:45	5			6				6			3			
19:45	- 20:00	5			4				11			4			
<b>Hourly Total</b>		<b>18</b>		<b>1</b>	<b>19</b>				<b>57</b>	<b>1</b>	<b>1</b>	<b>13</b>			
20:00	- 20:15	7	1		5				2					1	
20:15	- 20:30	6			9				8			5			
20:30	- 20:45	2			4				13	1		6			
20:45	- 21:00	4	1		3				7			6			
<b>Hourly Total</b>		<b>19</b>	<b>2</b>		<b>21</b>				<b>30</b>	<b>1</b>		<b>17</b>		<b>1</b>	
21:00	- 21:15	4			1				7			4			
21:15	- 21:30	11			4				3	1		4			
21:30	- 21:45	16			4				3		1	9		1	
21:45	- 22:00	17			5				6	1		2			
<b>Hourly Total</b>		<b>48</b>			<b>14</b>				<b>19</b>	<b>2</b>	<b>1</b>	<b>19</b>		<b>1</b>	
22:00	- 22:15	1	1		3		1		21			6			
22:15	- 22:30	1			5				11			6		3	
22:30	- 22:45				4				2			1			
22:45	- 23:00	1					3					2			
<b>Hourly Total</b>		<b>3</b>	<b>1</b>		<b>12</b>		<b>3</b>	<b>1</b>	<b>34</b>			<b>15</b>		<b>3</b>	
23:00	- 23:15	1			5				2			4			
23:15	- 23:30	1			2				5		1	8			
23:30	- 23:45	1			3										
23:45	- 00:00				5				3			4			
<b>Hourly Total</b>		<b>3</b>			<b>15</b>				<b>10</b>		<b>1</b>	<b>16</b>			

		Movement C ENTERING SITE							Movement D LEAVING SITE						
Times		Cars	LGV	OGV1	OGV2	PSV	M/cycles	Cycles	Cars	LGV	OGV1	OGV2	PSV	M/cycles	Cycles
00:00	- 00:15														
00:15	- 00:30														
00:30	- 00:45														
00:45	- 01:00														
<b>Hourly Total</b>															
01:00	- 01:15														
01:15	- 01:30														
01:30	- 01:45														
01:45	- 02:00														
<b>Hourly Total</b>															
02:00	- 02:15									1					
02:15	- 02:30								3						
02:30	- 02:45														
02:45	- 03:00														
<b>Hourly Total</b>									3	1					
03:00	- 03:15														
03:15	- 03:30														
03:30	- 03:45														
03:45	- 04:00									1					
<b>Hourly Total</b>										1					
04:00	- 04:15														
04:15	- 04:30														
04:30	- 04:45														
04:45	- 05:00														
<b>Hourly Total</b>															
05:00	- 05:15														
05:15	- 05:30														
05:30	- 05:45	1		1											
05:45	- 06:00	5	1												
<b>Hourly Total</b>		6	1	1											
06:00	- 06:15	4													
06:15	- 06:30	5	1							1	1	3			
06:30	- 06:45	6	12	2	2										
06:45	- 07:00	18	22		1						1				
<b>Hourly Total</b>		33	35	2	3					1	2	3			
07:00	- 07:15	14	18	2	6				2	1		2			
07:15	- 07:30	19	26	2	2							3			
07:30	- 07:45	18	21	3	8				1	1		3			
07:45	- 08:00	18	17	3	5					2	2	2			
<b>Hourly Total</b>		69	82	10	21				3	4	2	10			
08:00	- 08:15	21	21	3	1				1	1	1	1			
08:15	- 08:30	18	12	4	6				2	4	1	6			
08:30	- 08:45	7	9	3	2				2		1	4			
08:45	- 09:00	7	4	1	3				2	2	4	5			
<b>Hourly Total</b>		53	46	11	12				7	7	7	16			
09:00	- 09:15	4	6	2	4				2	8	3	4			
09:15	- 09:30	5	3	1	3					4	2	8			
09:30	- 09:45	3	4	2	2				1	3		3			
09:45	- 10:00	4	5	2	6				4	1	1	3			
<b>Hourly Total</b>		16	18	7	15				7	16	6	18			
10:00	- 10:15	3	6	2	4				2	7	1				
10:15	- 10:30	2	9		4					6	1	3			
10:30	- 10:45	3	5		8				4	3		4			
10:45	- 11:00	6	4	1	4				2	5	3	5			
<b>Hourly Total</b>		14	24	3	20				8	21	5	12			
11:00	- 11:15		4	3	2				3	5	3	6			
11:15	- 11:30	3	4	2	5				3	4		2			
11:30	- 11:45	4	3	2	7				5	2	2	2			
11:45	- 12:00	3	9	2	10				3	3	1	7			
<b>Hourly Total</b>		10	20	9	24				14	14	6	17			

		Movement C ENTERING SITE							Movement D LEAVING SITE						
Times		Cars	LGV	OGV1	OGV2	PSV	M/cycles	Cycles	Cars	LGV	OGV1	OGV2	PSV	M/cycles	Cycles
12:00	- 12:15	2	2	1	2				1	5	1	12			
12:15	- 12:30	4	2	1	4				7	3	2	6			
12:30	- 12:45	7	2	2	7				2	2	1	3			
12:45	- 13:00	4	5	1	6					6		8			
<b>Hourly Total</b>		<b>17</b>	<b>11</b>	<b>5</b>	<b>19</b>				<b>10</b>	<b>16</b>	<b>4</b>	<b>29</b>			
13:00	- 13:15	1	2	2	3				2	7	2	4			
13:15	- 13:30	1	9	1	5				4	5	4	1			
13:30	- 13:45	7	7	1	5				4	5	2	4			
13:45	- 14:00	4	7	1	3				3	5	1	2			
<b>Hourly Total</b>		<b>13</b>	<b>25</b>	<b>5</b>	<b>16</b>				<b>13</b>	<b>22</b>	<b>9</b>	<b>11</b>			
14:00	- 14:15	3	9	3	8				3	2	1	3			
14:15	- 14:30	5	4	1	2				5	7	5	6			
14:30	- 14:45		5	1						8	1	3			
14:45	- 15:00	1	7		4				5	6	1				
<b>Hourly Total</b>		<b>9</b>	<b>25</b>	<b>5</b>	<b>14</b>				<b>13</b>	<b>23</b>	<b>8</b>	<b>12</b>			
15:00	- 15:15	3	5	1	8				6	10	2	4			
15:15	- 15:30	1	4		2				6	13	1	2			
15:30	- 15:45	1	8		1				7	12		3			
15:45	- 16:00	1	1		1				7	13	3	1			
<b>Hourly Total</b>		<b>6</b>	<b>18</b>	<b>1</b>	<b>12</b>				<b>26</b>	<b>48</b>	<b>6</b>	<b>10</b>			
16:00	- 16:15	1	2						13	9	3	3			
16:15	- 16:30	3							10	14	1	1			
16:30	- 16:45	1	1						13	8	1	1			
16:45	- 17:00	1	1						9	11					
<b>Hourly Total</b>		<b>6</b>	<b>4</b>						<b>45</b>	<b>42</b>	<b>5</b>	<b>5</b>			
17:00	- 17:15	1		1					10	7	1	1			
17:15	- 17:30	1							13	11	1	1			
17:30	- 17:45	5							12	4					
17:45	- 18:00								28	20	1	1			
<b>Hourly Total</b>		<b>7</b>		<b>1</b>					<b>63</b>	<b>42</b>	<b>3</b>	<b>3</b>			
18:00	- 18:15	2	1						17	13	1	1			
18:15	- 18:30	1	2						3	3	1	1			
18:30	- 18:45		1						5	2					
18:45	- 19:00	2			1				6	6					
<b>Hourly Total</b>		<b>5</b>	<b>4</b>		<b>1</b>				<b>31</b>	<b>24</b>	<b>2</b>	<b>2</b>			
19:00	- 19:15	1							3	4					
19:15	- 19:30								2	1					
19:30	- 19:45								1						
19:45	- 20:00								2						
<b>Hourly Total</b>		<b>1</b>							<b>8</b>	<b>5</b>					
20:00	- 20:15														
20:15	- 20:30								2						
20:30	- 20:45									2					
20:45	- 21:00								3						
<b>Hourly Total</b>									<b>5</b>	<b>2</b>					
21:00	- 21:15								1	3					
21:15	- 21:30				1										
21:30	- 21:45														
21:45	- 22:00														
<b>Hourly Total</b>					<b>1</b>				<b>1</b>	<b>3</b>					
22:00	- 22:15														
22:15	- 22:30														
22:30	- 22:45														
22:45	- 23:00														
<b>Hourly Total</b>															
23:00	- 23:15														
23:15	- 23:30														
23:30	- 23:45														
23:45	- 00:00														
<b>Hourly Total</b>															

## APPENDIX D

# 2011 CENSUS DISTRIBUTION

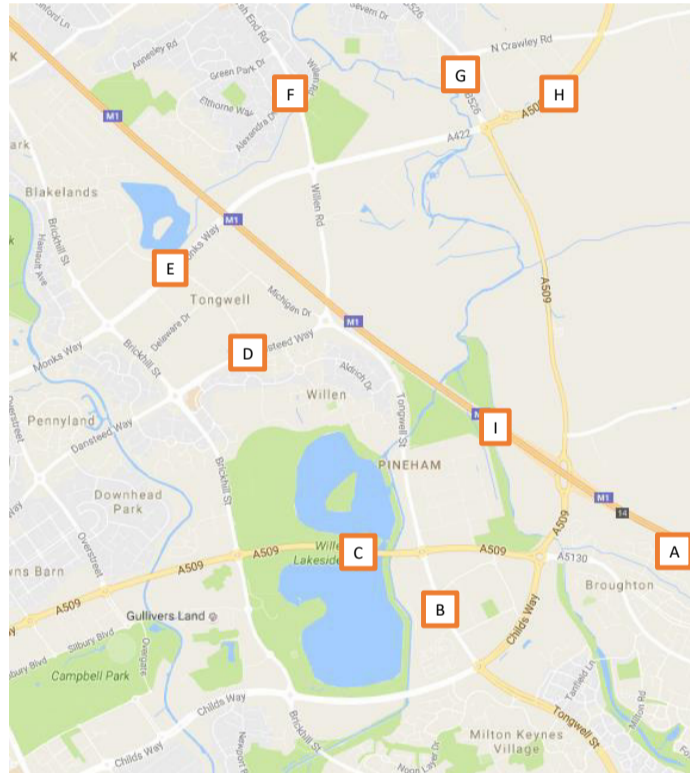
**WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)**

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population All usual residents aged 16 and over in employment the week before the census  
 units Persons  
 date 2011  
 method of travel to work Driving a car or van

usual residence	place of work E02003465 : Milton Keynes 007	Route				
Ashford	1 A	A	601	601	14.9%	
Babergh	1 A	B	396	396	9.8%	
Barnet	4 A	C		138.5	3.4%	
Barnsley	1 A	D	745	934	23.2%	
Basingstoke and Deane	1 A	E	581	815	20.2%	
Bournemouth	1 A	F	104	216	5.4%	
Bracknell Forest	1 A	G		56.5	1.4%	
Brent	3 A	H	249	263	6.5%	
Bridgend	2 A	I	464	605	15.0%	
Brighton and Hove	1 A	C/D	277	138.5		
Broadland	2 A	D/E	101	50.5		
Bromsgrove	3 A	E/F	111	55.5		
Cambridge	1 A	F/G	113	56.5		
Camden	3 A	H/I	27	13.5		
Canterbury	1 A	I/E	255	127.5		
Castle Point	1 A		4,024	442	4,024	1
Central Bedfordshire	277 A					
Chiltern	10 A					
Craven	2 A					
Croydon	1 A					
Dacorum	21 A					
Dover	1 A					
Ealing	4 A					
East Cambridgeshire	2 A					
East Hertfordshire	8 A					
Elmbridge	8 A					
Enfield	7 A					
Epping Forest	2 A					
Fareham	1 A					
Greenwich	1 A					
Hackney	2 A					
Halton	2 A					
Hammersmith and Fulham	3 A					
Haringey	6 A					
Harrow	5 A					
Havant	1 A					
Havering	2 A					
Hertsmere	3 A					
Hillingdon	3 A					
Horsham	1 A					
Hounslow	1 A					
Huntingdonshire	19 A					
Isle of Wight	1 A					
King's Lynn and West Norfolk	1 A					
Kingston upon Thames	1 A					
Luton	57 A					
Maidstone	1 A					
Maldon	3 A					
Medway	1 A					
Mid Suffolk	1 A					
Mole Valley	1 A					
North Hertfordshire	8 A					
North Somerset	3 A					
Norwich	1 A					
Peterborough	7 A					
Poole	2 A					
Portsmouth	1 A					
Redbridge	1 A					
Reigate and Banstead	1 A					
Richmond upon Thames	3 A					
Rochdale	2 A					
Ryedale	1 A					
Shepway	1 A					
South Bucks	2 A					
South Cambridgeshire	10 A					
South Hams	1 A					
Spelthorne	1 A					
St Albans	22 A					
Stevenage	2 A					
Tendring	1 A					
Three Rivers	7 A					
Tonbridge and Malling	1 A					
Tower Hamlets	1 A					
Tunbridge Wells	3 A					
Utlesford	2 A					
Vale of White Horse	4 A					
Waltham Forest	1 A					
Wandsworth	1 A					
Watford	4 A					
Waverley	1 A					
Welwyn Hatfield	9 A					
West Berkshire	2 A					
West Dorset	1 A					
Windsor and Maidenhead	6 A					
Worthing	1 A					
E02003474 : Milton Keynes 016	93 b					
E02003475 : Milton Keynes 017	164 b					
E02003480 : Milton Keynes 022	73 b					
E02003482 : Milton Keynes 024	53 b					
Wycombe	13 B					
E02003477 : Milton Keynes 019	120 c/d					
E02003483 : Milton Keynes 025	97 c/d					
E02003484 : Milton Keynes 026	60 c/d					
Aylesbury Vale	158 D					
E02003471 : Milton Keynes 013	64 d					
E02003472 : Milton Keynes 014	56 d					
E02003485 : Milton Keynes 027	55 d					
E02003486 : Milton Keynes 028	87 d					
E02003487 : Milton Keynes 029	39 d					
E02003488 : Milton Keynes 030	31 d					
E02003489 : Milton Keynes 031	38 d					
E02003490 : Milton Keynes 032	28 d					
E02003476 : Milton Keynes 018	41 d					
E02003478 : Milton Keynes 020	60 d					
E02003479 : Milton Keynes 021	55 d					
E02003481 : Milton Keynes 023	33 d					
E02003465 : Milton Keynes 007	101 D/E					
Bristol, City of	1 E					
Cheltenham	1 E					
Cherwell	30 E					

A	M1 (S)	14.9%
B	V11	9.8%
C	A509(W)	3.4%
D	Dansteed Way	23.2%
E	Monks Way	20.2%
F	Willen Rd (N)	5.4%
G	B526 (N)	1.4%
H	A509 (E)	6.5%
I	M1 (N)	15.0%



Cotswold	2 E
E02003463 : Milton Keynes 005	81 E
E02003464 : Milton Keynes 006	69 E
E02003466 : Milton Keynes 008	55 E
E02003467 : Milton Keynes 009	62 E
E02003468 : Milton Keynes 010	67 e
E02003469 : Milton Keynes 011	78 E
E02003470 : Milton Keynes 012	31 E
E02003473 : Milton Keynes 015	55 e
East Dorset	2 E
Eastleigh	2 E
Herefordshire, County of	4 E
Newport	1 E
Oxford	2 E
Sedgemoor	2 E
South Oxfordshire	5 E
South Somerset	3 E
Stratford-on-Avon	5 E
Stroud	4 E
Swale	2 E
Swansea	1 E
Swindon	2 E
Teignbridge	1 E
Telford and Wrekin	1 E
Test Valley	1 E
Tewkesbury	1 E
West Oxfordshire	5 E
Wiltshire	1 E
Winchester	1 E
Wychavon	3 E
E02003460 : Milton Keynes 002	111 e/f
E02003461 : Milton Keynes 003	104 F
E02003462 : Milton Keynes 004	113 F/G
Bedford	128 H
E02003459 : Milton Keynes 001	57 h
Wellingborough	64 H
Corby	8 H/I
Kettering	19 H/I
Allerdale	2 I
Amber Valley	4 I
Birmingham	6 I
Blaby	6 I
Blackburn with Darwen	1 I
Blackpool	1 I
Bolsover	1 I
Broxtowe	3 I
Cannock Chase	2 I
Charnwood	3 I
Cheshire East	6 I
Cheshire West and Chester	3 I
Chesterfield	1 I
Conwy	1 I
County Durham	2 I
Coventry	6 I
Daventry	39 I
Denbighshire	1 I
Derby	2 I
Derbyshire Dales	1 I
Doncaster	3 I
Dudley	3 I
East Northamptonshire	50 I
East Riding of Yorkshire	1 I
East Staffordshire	1 I
Flintshire	1 I
Fylde	1 I
Gateshead	1 I
Gedling	1 I
Hambleton	2 I
Harborough	8 I
High Peak	1 I
Hinckley and Bosworth	9 I
Kingston upon Hull, City of	2 I
Kirklees	9 I
Lancaster	1 I
Leeds	2 I
Leicester	5 I
Lichfield	4 I
Liverpool	1 I
Malvern Hills	1 I
Manchester	1 I
Melton	1 I
Newcastle upon Tyne	1 I
Newcastle-under-Lyme	1 I
North East Derbyshire	1 I
North East Lincolnshire	2 I
North Kesteven	1 I
North Tyneside	3 I
North Warwickshire	7 I
Northampton	165 I
Nottingham	4 I
Oadby and Wigston	1 I
Pendle	2 I
Rother	3 I
Rotherham	2 I
Rugby	9 I
Runnymede	2 I
Rushcliffe	1 I
Rutland	5 I
Salford	2 I
Sefton	3 I
Selby	1 I
Sevenoaks	2 I
Sheffield	2 I
Shropshire	2 I
Solihull	7 I
South Kesteven	5 I
St. Helens	2 I
Staffordshire Moorlands	2 I
Stockton-on-Tees	1 I
Stoke-on-Trent	2 I
Tamworth	3 I
Wakefield	1 I
Walsall	3 I
Warrington	1 I
Warwick	5 I
West Lindsey	6 I
Wigan	1 I
Wrexham	1 I
Wyre	1 I
Wyre Forest	1 I
South Northamptonshire	255 I/E

## APPENDIX E

# TRAFFIC FLOW DIAGRAMS



Total vehicles					
	A	B	C	D	
A	14	257	715	44	<b>1030</b>
B	252	0	35	605	<b>892</b>
C	1051	52	1	788	<b>1892</b>
D	12	243	257	0	<b>512</b>
	<b>1329</b>	<b>552</b>	<b>1008</b>	<b>1437</b>	<b>4326</b>

HGVs					
	A	B	C	D	
A	1	2	43	2	<b>48</b>
B	8	0	2	10	<b>20</b>
C	38	1	0	10	<b>49</b>
D	0	8	10	0	<b>18</b>
	<b>47</b>	<b>11</b>	<b>55</b>	<b>22</b>	<b>135</b>

% HGVs				
	A	B	C	D
A	7.1%	0.8%	6.0%	4.5%
B	3.2%	0.0%	5.7%	1.7%
C	3.6%	1.9%	0.0%	1.3%
D	0.0%	3.3%	3.9%	0.0%

Total vehicles				
	A	B	C	
A			533	<b>533</b>
B				<b>0</b>
C	1455			<b>1455</b>
	<b>1455</b>	<b>0</b>	<b>533</b>	<b>1988</b>

HGVs				
	A	B	C	
A			18	<b>18</b>
B				<b>0</b>
C	24			<b>24</b>
	<b>24</b>	<b>0</b>	<b>18</b>	<b>42</b>

% HGVs			
	A	B	C
A	0.0%	0.0%	3.4%
B	0.0%		0.0%
C	1.6%	0.0%	

Total vehicles					
	A	B	C	D	
A	1	519	901	34	<b>1455</b>
B	234	7	547	131	<b>919</b>
C	281	135	8	36	<b>460</b>
D	17	28	20	1	<b>66</b>
	<b>533</b>	<b>669</b>	<b>1476</b>	<b>202</b>	<b>2900</b>

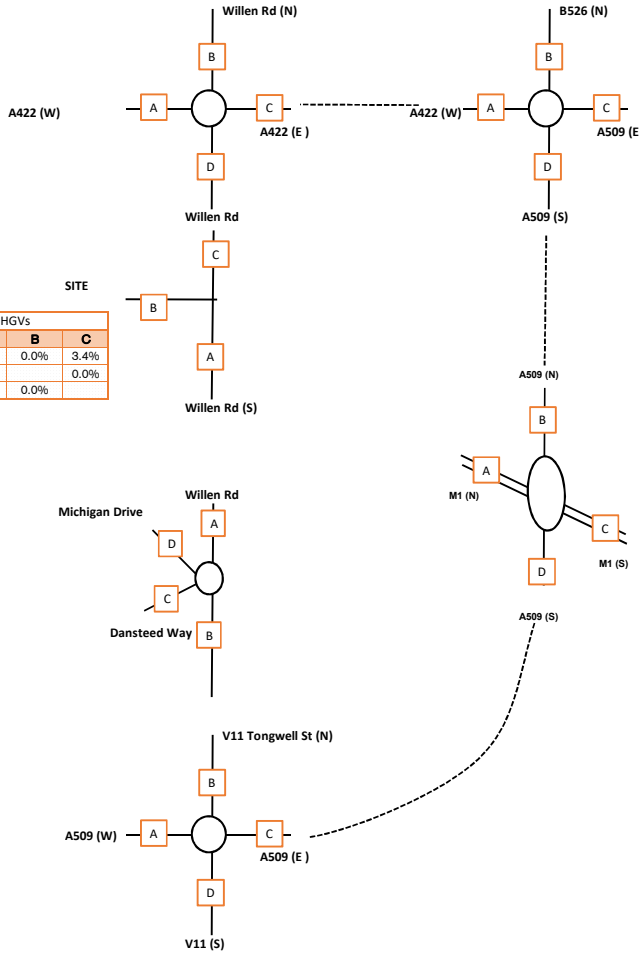
HGVs					
	A	B	C	D	
A	0	10	14	0	<b>24</b>
B	5	0	15	5	<b>25</b>
C	12	10	1	1	<b>24</b>
D	1	2	2	0	<b>5</b>
	<b>18</b>	<b>22</b>	<b>32</b>	<b>6</b>	<b>76</b>

% HGVs				
	A	B	C	D
A	0.0%	1.9%	1.6%	0.0%
B	2.1%	0.0%	2.7%	3.8%
C	4.3%	7.4%	12.5%	2.8%
D	5.9%	7.1%	10.0%	0.0%

Total vehicles					
	A	B	C	D	
A	1	22	576	268	<b>867</b>
B	32	2	176	578	<b>788</b>
C	1268	375	5	50	<b>1698</b>
D	194	518	48	3	<b>763</b>
	<b>1495</b>	<b>917</b>	<b>805</b>	<b>899</b>	<b>4116</b>

HGVs					
	A	B	C	D	
A	0	5	27	3	<b>35</b>
B	3	0	10	27	<b>40</b>
C	25	11	2	6	<b>44</b>
D	2	11	7	0	<b>20</b>
	<b>30</b>	<b>27</b>	<b>46</b>	<b>36</b>	<b>139</b>

% HGVs				
	A	B	C	D
A	0.0%	22.7%	4.7%	1.1%
B	9.4%	0.0%	5.7%	4.7%
C	2.0%	2.9%	40.0%	12.0%
D	1.0%	2.1%	14.6%	0.0%



Total vehicles					
	A	B	C	D	
A	1	294	593	116	<b>1004</b>
B	525	1	26	163	<b>715</b>
C	1264	23	0	360	<b>1647</b>
D	190	201	208	1	<b>600</b>
	<b>1980</b>	<b>519</b>	<b>827</b>	<b>640</b>	<b>3966</b>

HGVs					
	A	B	C	D	
A	0	3	29	23	<b>55</b>
B	8	1	2	6	<b>17</b>
C	30	1	0	32	<b>63</b>
D	19	19	19	0	<b>57</b>
	<b>57</b>	<b>24</b>	<b>50</b>	<b>61</b>	<b>192</b>

% HGVs				
	A	B	C	D
A	0.0%	1.0%	4.9%	19.8%
B	1.5%	100.0%	7.7%	3.7%
C	2.4%	4.3%	0.0%	8.9%
D	10.0%	9.5%	9.1%	0.0%

Total vehicles					
	A	B	C	D	
A	11	423	1221	18	<b>1673</b>
B	189	0	106	250	<b>545</b>
C	824	179	0	231	<b>1234</b>
D	13	415	403	0	<b>831</b>
	<b>1037</b>	<b>1017</b>	<b>1730</b>	<b>499</b>	<b>4283</b>

HGVs					
	A	B	C	D	
A	1	3	21	0	<b>25</b>
B	3	0	2	3	<b>8</b>
C	26	0	0	5	<b>31</b>
D	1	3	2	0	<b>6</b>
	<b>31</b>	<b>6</b>	<b>25</b>	<b>8</b>	<b>70</b>

% HGVs					
	A	B	C	D	
A	9.1%	0.7%	1.7%	0.0%	
B	1.6%	0.0%	1.9%	1.2%	
C	3.2%	0.0%	0.0%	2.2%	
D	7.7%	0.7%	0.5%	0.0%	

Total vehicles				
	A	B	C	
A			814	<b>814</b>
B			0	<b>0</b>
C	493			<b>493</b>
	<b>493</b>	<b>0</b>	<b>814</b>	<b>1307</b>

HGVs				
	A	B	C	
A			4	<b>4</b>
B			0	<b>0</b>
C	7			<b>7</b>
	<b>7</b>	<b>0</b>	<b>4</b>	<b>11</b>

% HGVs				
	A	B	C	
A		0.0%	0.5%	
B		0.0%	0.0%	
C	1.4%	0.0%		

Total vehicles					
	A	B	C	D	
A	0	182	296	15	<b>493</b>
B	321	7	254	99	<b>681</b>
C	328	149	12	7	<b>496</b>
D	165	271	76	0	<b>512</b>
	<b>814</b>	<b>609</b>	<b>639</b>	<b>121</b>	<b>2182</b>

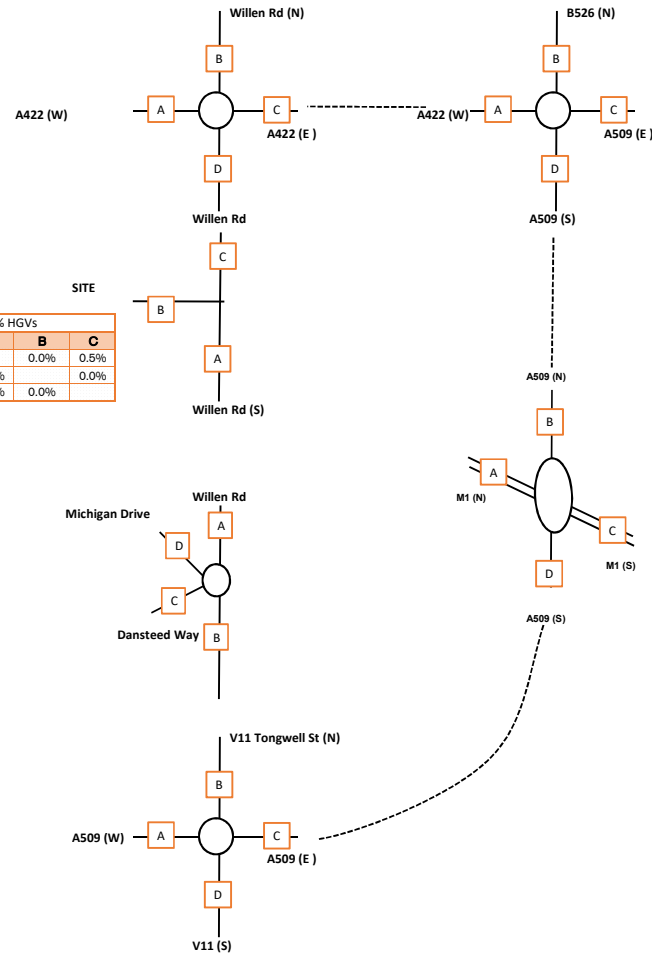
HGVs					
	A	B	C	D	
A	0	2	3	2	<b>7</b>
B	1	0	9	5	<b>15</b>
C	2	4	0	0	<b>6</b>
D	1	3	0	0	<b>4</b>
	<b>4</b>	<b>9</b>	<b>12</b>	<b>7</b>	<b>32</b>

% HGVs					
	A	B	C	D	
A	0.0%	1.1%	1.0%	13.3%	
B	0.3%	0.0%	3.5%	5.1%	
C	0.6%	2.7%	0.0%	0.0%	
D	0.6%	1.1%	0.0%	0.0%	

Total vehicles					
	A	B	C	D	
A	4	25	965	155	<b>1149</b>
B	22	1	287	414	<b>724</b>
C	733	155	7	22	<b>917</b>
D	307	506	96	2	<b>911</b>
	<b>1068</b>	<b>687</b>	<b>1365</b>	<b>593</b>	<b>3701</b>

HGVs					
	A	B	C	D	
A	0	0	22	7	<b>29</b>
B	0	0	6	3	<b>9</b>
C	20	10	0	2	<b>32</b>
D	2	6	2	0	<b>10</b>
	<b>22</b>	<b>16</b>	<b>30</b>	<b>12</b>	<b>80</b>

% HGVs					
	A	B	C	D	
A	0.0%	0.0%	2.3%	4.5%	
B	0.0%	0.0%	2.1%	0.7%	
C	2.7%	6.5%	0.0%	9.1%	
D	0.7%	1.2%	2.1%	0.0%	



Total vehicles					
	A	B	C	D	
A	1	401	1026	330	<b>1758</b>
B	229	0	25	167	<b>421</b>
C	721	47	0	341	<b>1109</b>
D	282	274	442	0	<b>998</b>
	<b>1293</b>	<b>722</b>	<b>1493</b>	<b>838</b>	<b>4286</b>

HGVs					
	A	B	C	D	
A	0	3	7	16	<b>26</b>
B	1	0	0	4	<b>5</b>
C	7	0	0	16	<b>23</b>
D	21	6	22	0	<b>49</b>
	<b>29</b>	<b>9</b>	<b>29</b>	<b>36</b>	<b>103</b>

% HGVs					
	A	B	C	D	
A	0.0%	0.7%	0.7%	4.8%	
B	0.4%	0.0%	0.0%	2.4%	
C	1.0%	0.0%	0.0%	4.7%	
D	7.4%	2.2%	5.0%	0.0%	



WILLEN ROAD, NEWPORT PAGNELL

DIAGRAM 2: 2016 OBSERVED TRAFFIC FLOWS - PM PEAK HOUR

Light vehicles				
	A	B	C	D
A				20.2%
B				5.4%
C				23.0%
D	20.2%	5.4%	23.0%	

HGVs				
	A	B	C	D
A				10.0%
B				
C				50.0%
D	10.0%		50.0%	

Light vehicles			
	A	B	C
A		51.4%	
B	51.4%		48.6%
C		48.6%	

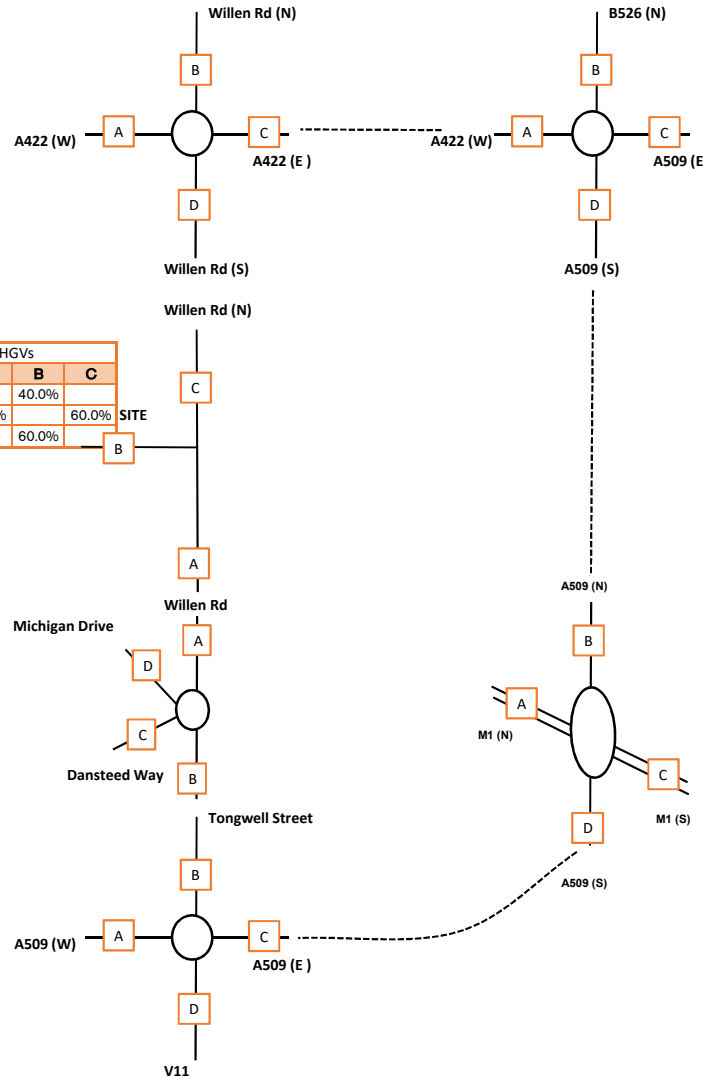
HGVs			
	A	B	C
A		40.0%	
B	40.0%		60.0%
C		60.0%	

Light vehicles				
	A	B	C	D
A		28.2%	23.2%	
B	28.2%			
C	23.2%			
D				

HGVs				
	A	B	C	D
A		40.0%		
B	40.0%			
C				
D				

Light vehicles				
	A	B	C	D
A		3.4%		
B	3.4%		14.9%	9.8%
C		14.9%		
D		9.8%		

HGVs				
	A	B	C	D
A				
B			40.0%	
C		40.0%		
D				



Light vehicles				
	A	B	C	D
A		1.4%	6.5%	15.0%
B	1.4%			
C	6.5%			
D	15.0%			

HGVs				
	A	B	C	D
A			10.0%	40.0%
B				
C	10.0%			
D	40.0%			

Light vehicles				
	A	B	C	D
A		15.0%		
B	15.0%			
C				14.9%
D			14.9%	

HGVs				
	A	B	C	D
A		40.0%		
B	40.0%			
C				40.0%
D			40.0%	

Light vehicles					
	A	B	C	D	
A				19	19
B				5	5
C				22	22
D	2	1	2		5
	2	1	2	46	51

HGVs					
	A	B	C	D	
A				2	2
B				0	0
C				10	10
D	2	0	9		11
	2	0	9	12	23

Light vehicles					
	A	B	C	D	
A		49			49
B	5		5		10
C		47			47
	5	96	5		106

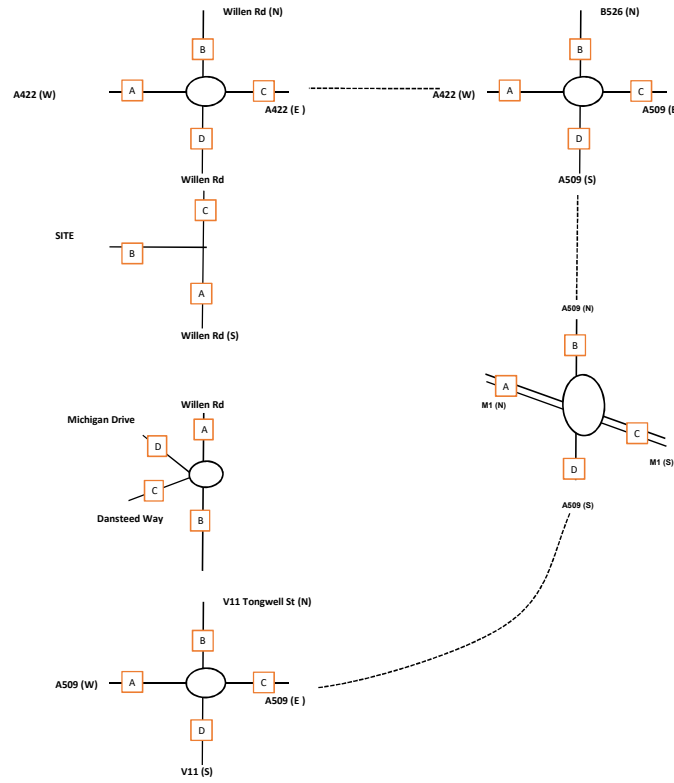
HGVs					
	A	B	C	D	
A		8			8
B	7		10		17
C		11		11	22
	7	19	10		36

Light vehicles					
	A	B	C	D	
A		3			3
B	27		2		29
C		22			22
D				0	0
	49	3	2	0	54

HGVs					
	A	B	C	D	
A		7			7
B	8				8
C					0
D				0	0
	8	7	0	0	15

Light vehicles					
	A	B	C	D	
A		3			3
B	0		2	1	3
C		14			14
D		0		0	0
	0	17	2	1	20

HGVs					
	A	B	C	D	
A					0
B			7		7
C		8			8
D				0	0
	0	8	7	0	15



Light vehicles					
	A	B	C	D	
A		0	1	2	3
B	1				1
C	6				6
D	14				14
	21	0	1	2	24

HGVs					
	A	B	C	D	
A			2	7	9
B					0
C	2				2
D	8				8
	10	0	2	7	19

Light vehicles					
	A	B	C	D	
A		14			14
B	2				2
C				14	14
D			2		2
	2	14	2	14	32

HGVs					
	A	B	C	D	
A		7			7
B	7				7
C				8	8
D			7		7
	7	7	7	8	29

Light vehicles					
	A	B	C	D	
A				6	6
B				2	2
C				7	7
D	22	6	25		53
	22	6	25	15	68

HGVs					
	A	B	C	D	
A				2	2
B				0	0
C				8	8
D	2	0	8		10
	2	0	8	10	20

Light vehicles					
	A	B	C	D	
A		16			16
B	57		54		111
C		15		16	31
	57	32	54	142	

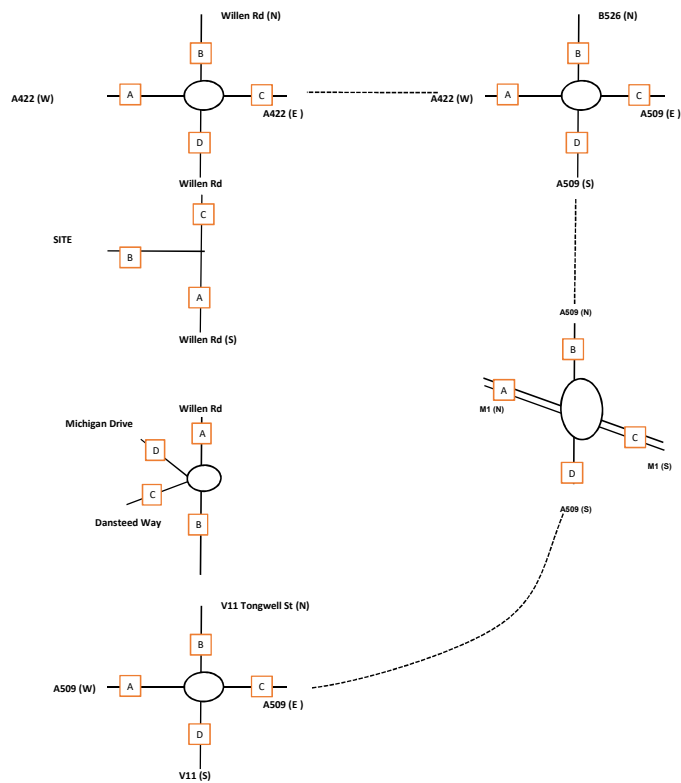
HGVs					
	A	B	C	D	
A		7			7
B	6		9		15
C			10	10	20
	6	17	9	32	

Light vehicles					
	A	B	C	D	
A				31	31
B	9			26	35
C	7				14
D					0
	16	31	26	0	73

HGVs					
	A	B	C	D	
A		6			6
B	7				13
C					0
D	7	6	0	0	13

Light vehicles					
	A	B	C	D	
A		1			1
B	4		17	11	32
C		5			5
D		3			3
	4	9	17	11	41

HGVs					
	A	B	C	D	
A					0
B			6		6
C		7			7
D	0	7	6	0	13



Light vehicles					
	A	B	C	D	
A				17	17
B	0	2	7		9
C	2				2
D	5				5
	7	2	7	17	33

HGVs					
	A	B	C	D	
A			2	6	8
B					0
C	2				2
D	7				7
	9	0	2	6	17

Light vehicles					
	A	B	C	D	
A		5			5
B	17				17
C				5	5
D			17		17
	17	5	17	5	44

HGVs					
	A	B	C	D	
A		6			6
B	6				6
C			7		7
D			6		6
	6	6	6	7	25

Total vehicles					
	A	B	C	D	
A	17	303	843	52	<b>1215</b>
B	297	0	41	714	<b>1052</b>
C	1240	61	1	930	<b>2232</b>
D	14	287	303	0	<b>604</b>
	<b>1668</b>	<b>651</b>	<b>1188</b>	<b>1096</b>	<b>5103</b>

HGVs					
	A	B	C	D	
A	1	2	51	2	<b>56</b>
B	9	0	2	12	<b>23</b>
C	45	1	0	12	<b>58</b>
D	0	9	12	0	<b>21</b>
	<b>55</b>	<b>12</b>	<b>65</b>	<b>26</b>	<b>158</b>

% HGVs				
	A	B	C	D
A	5.9%	0.7%	6.0%	3.8%
B	3.0%	0.0%	4.9%	1.7%
C	3.6%	1.6%	0.0%	1.3%
D	0.0%	3.1%	4.0%	0.0%

Total vehicles				
	A	B	C	
A			629	<b>629</b>
B				<b>0</b>
C	1716			<b>1716</b>
	<b>1716</b>	<b>0</b>	<b>629</b>	<b>2345</b>

HGVs				
	A	B	C	
A			21	<b>21</b>
B				<b>0</b>
C	28			<b>28</b>
	<b>28</b>	<b>0</b>	<b>21</b>	<b>49</b>

% HGVs			
	A	B	C
A			3.3%
B			
C	1.6%		

Total vehicles					
	A	B	C	D	
A	1	612	1063	40	<b>1716</b>
B	276	8	645	155	<b>1084</b>
C	331	159	9	42	<b>541</b>
D	20	33	24	1	<b>78</b>
	<b>628</b>	<b>812</b>	<b>1741</b>	<b>238</b>	<b>3419</b>

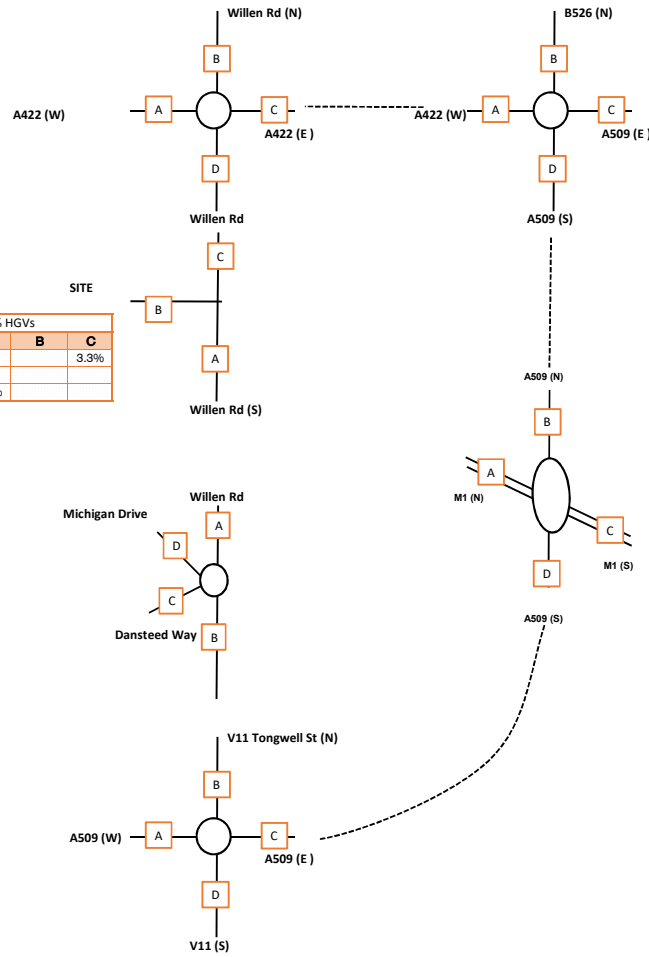
HGVs					
	A	B	C	D	
A	0	12	17	0	<b>29</b>
B	6	0	18	6	<b>30</b>
C	14	12	1	1	<b>28</b>
D	1	2	2	0	<b>5</b>
	<b>21</b>	<b>26</b>	<b>36</b>	<b>7</b>	<b>92</b>

% HGVs				
	A	B	C	D
A	0.0%	2.0%	1.6%	0.0%
B	2.2%	0.0%	2.8%	3.9%
C	4.2%	7.5%	11.1%	2.4%
D	5.0%	6.1%	8.3%	0.0%

Total vehicles					
	A	B	C	D	
A	1	26	680	316	<b>1023</b>
B	38	2	208	682	<b>930</b>
C	1496	442	6	59	<b>2003</b>
D	229	611	57	4	<b>901</b>
	<b>1764</b>	<b>1081</b>	<b>961</b>	<b>1061</b>	<b>4867</b>

HGVs					
	A	B	C	D	
A	0	6	32	4	<b>42</b>
B	4	0	12	32	<b>48</b>
C	29	13	2	7	<b>51</b>
D	2	13	8	0	<b>23</b>
	<b>35</b>	<b>32</b>	<b>54</b>	<b>43</b>	<b>164</b>

% HGVs				
	A	B	C	D
A	0.0%	23.1%	4.7%	1.3%
B	10.5%	0.0%	5.8%	4.7%
C	1.9%	2.9%	33.3%	11.9%
D	0.9%	2.1%	14.0%	0.0%



Total vehicles					
	A	B	C	D	
A	1	347	700	137	<b>1185</b>
B	619	1	31	192	<b>843</b>
C	1491	27	0	425	<b>1943</b>
D	224	237	245	1	<b>707</b>
	<b>2335</b>	<b>612</b>	<b>976</b>	<b>755</b>	<b>4078</b>

HGVs					
	A	B	C	D	
A	0	4	34	27	<b>65</b>
B	9	1	2	7	<b>19</b>
C	35	1	0	38	<b>74</b>
D	22	22	22	0	<b>66</b>
	<b>66</b>	<b>28</b>	<b>58</b>	<b>72</b>	<b>224</b>

% HGVs				
	A	B	C	D
A	0.0%	1.2%	4.9%	19.7%
B	1.5%	100.0%	6.5%	3.6%
C	2.3%	3.7%	0.0%	8.9%
D	9.8%	9.3%	9.0%	0.0%

Total vehicles					
	A	B	C	D	
A	13	498	1437	21	<b>1969</b>
B	223	0	125	294	<b>642</b>
C	970	211	0	272	<b>1453</b>
D	15	489	474	0	<b>978</b>
	<b>1221</b>	<b>1198</b>	<b>2036</b>	<b>587</b>	<b>5042</b>

HGVs					
	A	B	C	D	
A	1	4	25	0	<b>30</b>
B	4	0	2	4	<b>10</b>
C	31	0	0	6	<b>37</b>
D	1	4	2	0	<b>7</b>
	<b>37</b>	<b>8</b>	<b>29</b>	<b>10</b>	<b>84</b>

% HGVs					
	A	B	C	D	
A	7.7%	0.8%	1.7%	0.0%	
B	1.8%	0.0%	1.6%	1.4%	
C	3.2%	0.0%	0.0%	2.2%	
D	6.7%	0.8%	0.4%	0.0%	

Total vehicles					
	A	B	C	D	
A			958	969	
B				0	
C	580			580	
	<b>580</b>	<b>0</b>	<b>958</b>	<b>1538</b>	

HGVs					
	A	B	C	D	
A			5	5	
B				0	
C	8			8	
	<b>8</b>	<b>0</b>	<b>5</b>	<b>13</b>	

% HGVs					
	A	B	C	D	
A				0.5%	
B					
C	1.4%				

Total vehicles					
	A	B	C	D	
A	0	214	348	18	<b>580</b>
B	378	8	299	117	<b>902</b>
C	386	175	14	8	<b>583</b>
D	194	319	89	0	<b>602</b>
	<b>958</b>	<b>716</b>	<b>750</b>	<b>143</b>	<b>2567</b>

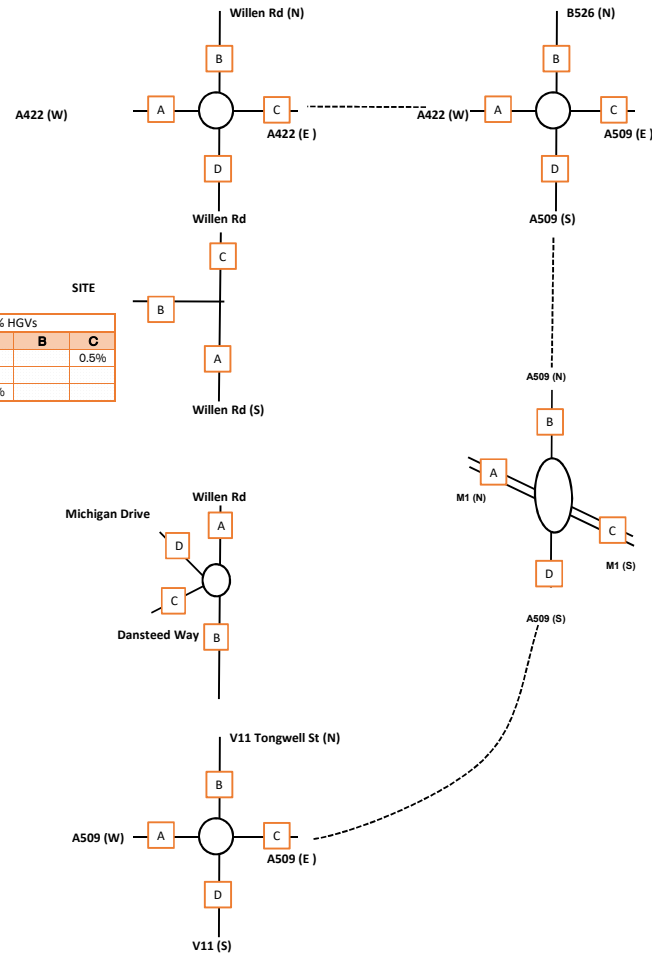
HGVs					
	A	B	C	D	
A	0	2	4	2	<b>8</b>
B	1	0	11	6	<b>18</b>
C	2	5	0	0	<b>7</b>
D	1	4	0	0	<b>5</b>
	<b>4</b>	<b>11</b>	<b>15</b>	<b>8</b>	<b>38</b>

% HGVs					
	A	B	C	D	
A	0.0%	0.9%	1.1%	11.1%	
B	0.3%	0.0%	3.7%	5.1%	
C	0.5%	2.9%	0.0%	0.0%	
D	0.5%	1.3%	0.0%	0.0%	

Total vehicles					
	A	B	C	D	
A	5	29	1136	182	<b>1352</b>
B	26	1	338	487	<b>852</b>
C	863	182	8	26	<b>1079</b>
D	361	596	113	2	<b>1072</b>
	<b>1255</b>	<b>808</b>	<b>1595</b>	<b>697</b>	<b>4355</b>

HGVs					
	A	B	C	D	
A	0	0	26	8	<b>34</b>
B	0	0	7	4	<b>11</b>
C	24	12	0	2	<b>38</b>
D	2	7	2	0	<b>11</b>
	<b>26</b>	<b>19</b>	<b>35</b>	<b>14</b>	<b>94</b>

% HGVs					
	A	B	C	D	
A	0.0%	0.0%	2.3%	4.4%	
B	0.0%	0.0%	2.1%	0.8%	
C	2.8%	6.6%	0.0%	7.7%	
D	0.6%	1.2%	1.8%	0.0%	



Total vehicles					
	A	B	C	D	
A	1	472	1208	389	<b>2070</b>
B	270	0	29	197	<b>496</b>
C	849	55	0	401	<b>1305</b>
D	332	323	520	0	<b>1175</b>
	<b>1462</b>	<b>850</b>	<b>1757</b>	<b>987</b>	<b>5046</b>

HGVs					
	A	B	C	D	
A	0	4	8	19	<b>31</b>
B	1	0	0	5	<b>6</b>
C	8	0	0	19	<b>27</b>
D	25	7	26	0	<b>58</b>
	<b>34</b>	<b>11</b>	<b>34</b>	<b>43</b>	<b>122</b>

% HGVs					
	A	B	C	D	
A	0.0%	0.8%	0.7%	4.9%	
B	0.4%	0.0%	0.0%	2.5%	
C	0.9%	0.0%	0.0%	4.7%	
D	7.5%	2.2%	5.0%	0.0%	

Total vehicles					
	A	B	C	D	
A	17	303	843	73	<b>1238</b>
B	297	0	41	719	<b>1057</b>
C	1240	61	1	962	<b>2264</b>
D	18	288	314	0	<b>620</b>
	<b>1572</b>	<b>652</b>	<b>1199</b>	<b>1754</b>	<b>5177</b>

HGVs					
	A	B	C	D	
A	1	2	51	4	<b>58</b>
B	9	0	2	12	<b>23</b>
C	45	1	0	22	<b>68</b>
D	2	9	21	0	<b>32</b>
	<b>57</b>	<b>12</b>	<b>74</b>	<b>38</b>	<b>181</b>

% HGVs					
	A	B	C	D	
A	5.9%	0.7%	6.0%	5.5%	
B	3.0%	0.0%	4.9%	1.7%	
C	3.6%	1.6%	0.0%	2.3%	
D	11.1%	3.1%	6.7%	0.0%	

Total vehicles				
	A	B	C	
A	57	629	<b>688</b>	
B	12	15	<b>27</b>	
C	1716	58	<b>1774</b>	
	<b>1728</b>	<b>115</b>	<b>644</b>	<b>2487</b>

HGVs				
	A	B	C	
A	8	21	<b>29</b>	
B	7	10	<b>17</b>	
C	28	11	<b>39</b>	
	<b>35</b>	<b>19</b>	<b>31</b>	<b>85</b>

% HGVs			
	A	B	C
A		14.0%	3.3%
B	58.3%		66.7%
C	1.6%	19.0%	

Total vehicles					
	A	B	C	D	
A	1	622	1065	40	<b>1728</b>
B	311	8	645	155	<b>1119</b>
C	353	159	9	42	<b>563</b>
D	20	33	24	1	<b>78</b>
	<b>685</b>	<b>822</b>	<b>1743</b>	<b>238</b>	<b>3488</b>

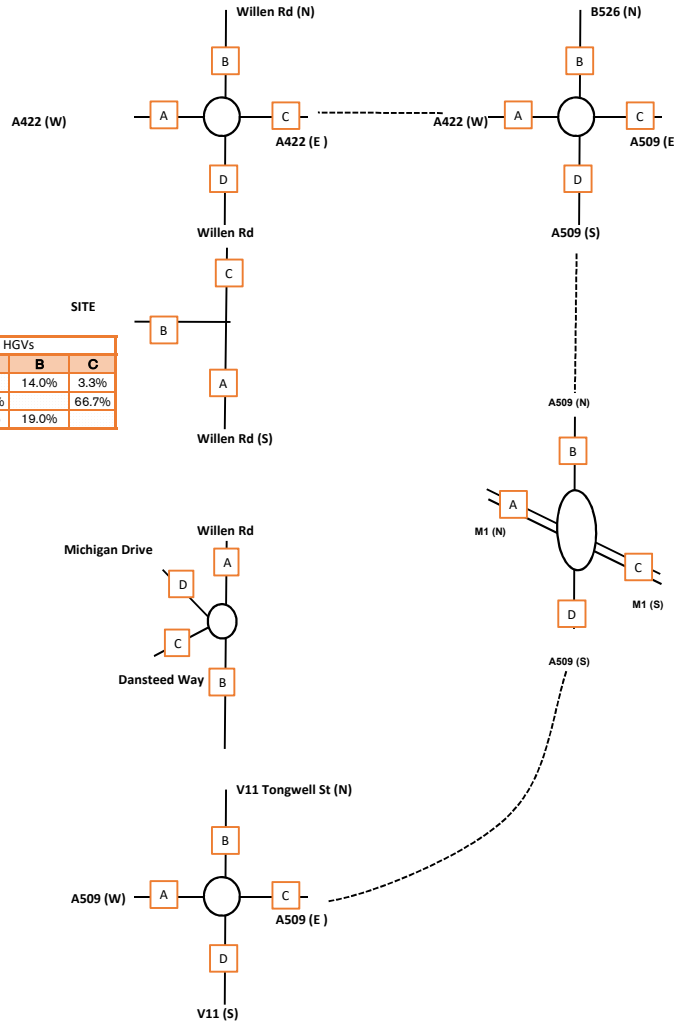
HGVs					
	A	B	C	D	
A	0	19	17	0	<b>36</b>
B	14	0	18	6	<b>38</b>
C	14	12	1	1	<b>28</b>
D	1	2	2	0	<b>5</b>
	<b>29</b>	<b>33</b>	<b>38</b>	<b>7</b>	<b>107</b>

% HGVs					
	A	B	C	D	
A	0.0%	3.1%	1.6%	0.0%	
B	4.5%	0.0%	2.8%	3.9%	
C	4.0%	7.5%	11.1%	2.4%	
D	5.0%	6.1%	8.3%	0.0%	

Total vehicles					
	A	B	C	D	
A	1	29	680	316	<b>1028</b>
B	38	2	217	683	<b>940</b>
C	1496	464	6	59	<b>2025</b>
D	229	620	57	4	<b>910</b>
	<b>1784</b>	<b>1115</b>	<b>860</b>	<b>1062</b>	<b>4901</b>

HGVs					
	A	B	C	D	
A	0	6	32	4	<b>42</b>
B	4	0	19	32	<b>55</b>
C	29	21	2	7	<b>59</b>
D	2	13	8	0	<b>23</b>
	<b>35</b>	<b>40</b>	<b>61</b>	<b>43</b>	<b>179</b>

% HGVs					
	A	B	C	D	
A	0.0%	20.7%	4.7%	1.3%	
B	10.5%	0.0%	8.8%	4.7%	
C	1.9%	4.5%	33.3%	11.9%	
D	0.9%	2.1%	14.0%	0.0%	



Total vehicles					
	A	B	C	D	
A	1	347	703	146	<b>1197</b>
B	620	1	31	192	<b>844</b>
C	1499	27	0	425	<b>1951</b>
D	246	237	245	1	<b>729</b>
	<b>2366</b>	<b>612</b>	<b>979</b>	<b>764</b>	<b>4721</b>

HGVs					
	A	B	C	D	
A	0	4	36	34	<b>74</b>
B	9	1	2	7	<b>19</b>
C	37	1	0	38	<b>76</b>
D	30	22	22	0	<b>74</b>
	<b>76</b>	<b>28</b>	<b>60</b>	<b>79</b>	<b>243</b>

% HGVs					
	A	B	C	D	
A	0.0%	1.2%	5.1%	23.3%	
B	1.5%	100.0%	6.5%	3.6%	
C	2.5%	3.7%	0.0%	8.9%	
D	12.2%	9.3%	9.0%	0.0%	



Total vehicles					
	A	B	C	D	
A	13	498	1437	29	<b>1977</b>
B	223	0	125	296	<b>644</b>
C	970	211	0	287	<b>1468</b>
D	39	495	507	0	<b>1041</b>
	<b>1245</b>	<b>1204</b>	<b>2069</b>	<b>612</b>	<b>5130</b>

HGVs					
	A	B	C	D	
A	1	4	25	2	<b>32</b>
B	4	0	2	4	<b>10</b>
C	31	0	0	14	<b>45</b>
D	3	4	10	0	<b>17</b>
	<b>39</b>	<b>8</b>	<b>37</b>	<b>20</b>	<b>104</b>

% HGVs				
	A	B	C	D
A	7.7%	0.8%	1.7%	6.9%
B	1.8%	0.0%	1.6%	1.4%
C	3.2%	0.0%	0.0%	4.9%
D	7.7%	0.8%	2.0%	0.0%

Total vehicles				
	A	B	C	
A	23	958		<b>981</b>
B	63	63		<b>126</b>
C	580	25		<b>605</b>
	<b>649</b>	<b>48</b>	<b>1021</b>	<b>1712</b>

HGVs				
	A	B	C	
A	7	5		<b>12</b>
B	6	9		<b>15</b>
C	8	10		<b>18</b>
	<b>14</b>	<b>17</b>	<b>14</b>	<b>45</b>

% HGVs				
	A	B	C	
A		30.4%	0.5%	
B	9.5%		14.3%	
C	1.4%	40.0%		

Total vehicles					
	A	B	C	D	
A	0	251	374	18	<b>643</b>
B	394	8	299	117	<b>818</b>
C	393	175	14	8	<b>590</b>
D	194	319	89	0	<b>602</b>
	<b>981</b>	<b>763</b>	<b>776</b>	<b>143</b>	<b>2663</b>

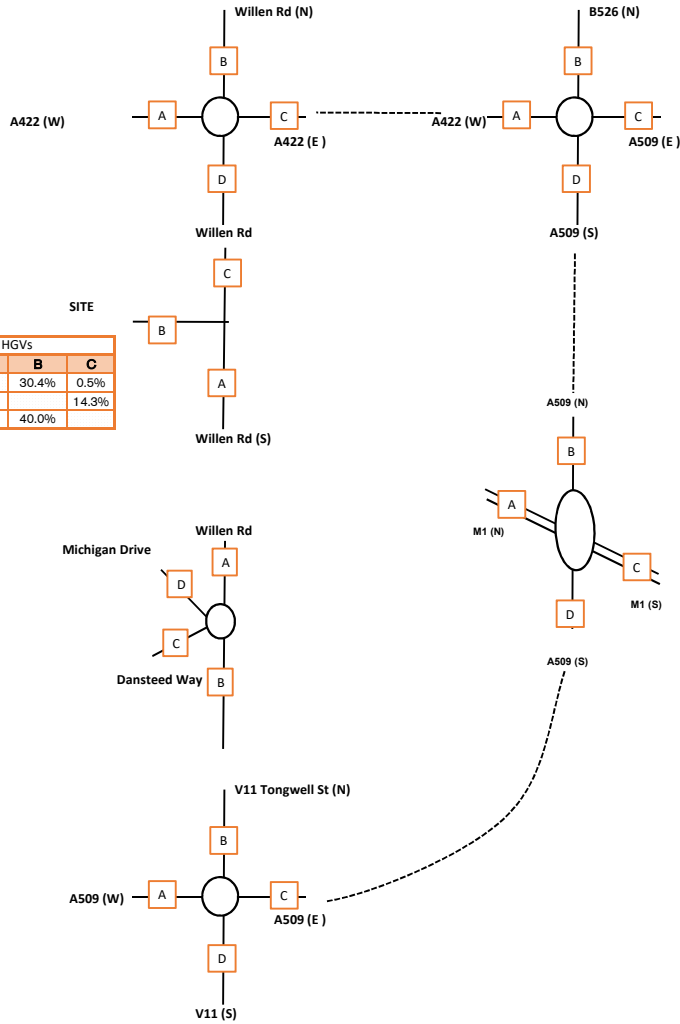
HGVs					
	A	B	C	D	
A	0	8	4	2	<b>14</b>
B	8	0	11	6	<b>25</b>
C	2	5	0	0	<b>7</b>
D	1	4	0	0	<b>5</b>
	<b>11</b>	<b>17</b>	<b>15</b>	<b>8</b>	<b>51</b>

% HGVs				
	A	B	C	D
A	0.0%	3.2%	1.1%	11.1%
B	2.0%	0.0%	3.7%	5.1%
C	0.5%	2.9%	0.0%	0.0%
D	0.5%	1.3%	0.0%	0.0%

Total vehicles					
	A	B	C	D	
A	5	30	1136	182	<b>1353</b>
B	30	1	361	498	<b>890</b>
C	863	194	8	26	<b>1091</b>
D	361	599	113	2	<b>1075</b>
	<b>1259</b>	<b>824</b>	<b>1618</b>	<b>708</b>	<b>4409</b>

HGVs					
	A	B	C	D	
A	0	0	26	8	<b>34</b>
B	0	0	13	4	<b>17</b>
C	24	19	0	2	<b>45</b>
D	2	7	2	0	<b>11</b>
	<b>26</b>	<b>26</b>	<b>41</b>	<b>14</b>	<b>107</b>

% HGVs				
	A	B	C	D
A	0.0%	0.0%	2.3%	4.4%
B	0.0%	0.0%	3.6%	0.8%
C	2.8%	9.8%	0.0%	7.7%
D	0.6%	1.2%	1.8%	0.0%



Total vehicles					
	A	B	C	D	
A	1	474	1217	412	<b>2104</b>
B	270	0	29	197	<b>496</b>
C	853	55	0	401	<b>1309</b>
D	344	323	520	0	<b>1187</b>
	<b>1468</b>	<b>852</b>	<b>1766</b>	<b>1010</b>	<b>5096</b>

HGVs					
	A	B	C	D	
A	0	4	10	25	<b>39</b>
B	1	0	0	5	<b>6</b>
C	10	0	0	19	<b>29</b>
D	32	7	26	0	<b>65</b>
	<b>43</b>	<b>11</b>	<b>36</b>	<b>49</b>	<b>139</b>

% HGVs				
	A	B	C	D
A	0.0%	0.8%	0.8%	6.1%
B	0.4%	0.0%	0.0%	2.5%
C	1.2%	0.0%	0.0%	4.7%
D	9.3%	2.2%	5.0%	0.0%

# APPENDIX F

## TRAFFIC COUNT RESULTS



Place: **Newport Pagnell**  
Date: **18.10.2016**

Weather: **Rain / Sunshine**  
Junction: **Pineham Roundabout**

Client: **ADC Infrastructure Ltd** Page: **1**  
Order no: **ADC1392** of: **1**

Time	Entering on: Tongwell Street Northbound										Entering on: Portway Eastbound										Entering on: Tongwell Street Southbound										Entering on: Portway Westbound										Grand Totals														
	Left turn to: Portway WB			Straight on to: Tongwell St NB			Right turn to: Portway EB			U-Turn to: Tongwell St SB			Total	Left turn to: Tongwell St NB			Straight over to: Portway EB			Right Turn to: Tongwell St SB			U-turn to: Portway WB			Total	Left turn to: Portway EB			Straight on to: Tongwell St SB			Right turn to: Portway WB			U-turn to: Tongwell St NB			Total	Left turn to: Tongwell St SB			Straight on to: Portway WB			Right turn to: Tongwell St NB			U-turn to: Portway EB			Total	Vehs	PCUs	
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Vehs	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Vehs	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy		Total	Light	Heavy	Total	Vehs	PCUs								
0730	24	0	24	87	3	90	8	2	10	1	0	1	125	3	0	3	158	10	168	41	0	41	0	0	0	212	31	2	33	98	3	101	7	0	7	0	0	0	141	6	0	6	260	12	272	36	5	41	0	2	2	321			
0745	25	1	26	102	2	104	15	1	16	0	0	0	146	8	1	9	156	9	165	57	1	58	0	0	0	232	42	3	45	132	4	136	10	0	10	1	0	1	192	9	1	10	318	5	323	75	2	77	2	1	3	413			
0800	49	0	49	117	3	120	14	0	14	1	0	1	184	3	1	4	148	4	152	68	0	68	0	0	0	224	42	4	46	160	6	166	9	0	9	1	0	1	222	6	2	8	321	5	326	86	2	88	0	1	1	423			
0815	62	0	62	145	3	148	5	2	7	1	0	1	218	5	2	7	120	5	125	76	1	77	0	0	0	209	43	2	45	140	8	148	5	2	7	0	0	0	200	11	2	13	310	5	315	94	3	97	0	0	0	425			
0830	56	1	57	143	3	146	7	4	11	1	0	1	215	1	1	2	125	9	134	64	1	65	1	0	1	202	39	1	40	119	9	128	5	1	6	0	0	0	174	18	1	19	294	10	304	109	4	113	1	0	1	437			
0845	49	0	49	123	2	125	5	1	6	1	0	1	181	4	0	4	111	10	121	71	1	72	1	0	1	198	34	4	38	140	3	143	13	1	14	0	0	0	195	13	0	13	323	9	332	103	2	105	0	0	0	450			
0900	37	2	39	64	5	69	9	0	9	0	0	0	117	3	1	4	106	14	120	53	0	53	2	0	2	179	29	4	33	113	3	116	4	1	5	0	0	0	154	11	3	14	300	19	319	74	5	79	0	1	1	413			
0915	39	6	45	53	4	57	5	1	6	0	0	0	108	3	0	3	88	11	99	32	1	33	1	0	1	136	24	5	29	80	6	86	6	1	7	0	0	0	122	8	0	8	210	14	224	38	7	45	0	0	0	277			
<b>Total</b>	<b>341</b>	<b>10</b>	<b>351</b>	<b>834</b>	<b>25</b>	<b>859</b>	<b>68</b>	<b>11</b>	<b>79</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>1294</b>	<b>30</b>	<b>6</b>	<b>36</b>	<b>###</b>	<b>72</b>	<b>###</b>	<b>462</b>	<b>5</b>	<b>467</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>1592</b>	<b>284</b>	<b>25</b>	<b>309</b>	<b>982</b>	<b>42</b>	<b>1024</b>	<b>59</b>	<b>6</b>	<b>65</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1400</b>	<b>82</b>	<b>9</b>	<b>91</b>	<b>###</b>	<b>79</b>	<b>###</b>	<b>615</b>	<b>30</b>	<b>645</b>	<b>3</b>	<b>5</b>	<b>8</b>	<b>3159</b>			
1600	48	0	48	99	3	102	9	0	9	0	0	0	159	10	0	10	208	8	216	27	1	28	0	0	0	254	27	6	33	76	3	79	5	0	5	0	0	0	117	3	0	3	115	5	120	28	5	33	0	1	1	157			
1615	47	1	48	112	4	116	12	1	13	2	0	2	179	8	0	8	264	9	273	40	2	42	2	0	2	325	35	3	38	70	2	72	2	0	2	0	0	0	112	4	0	4	157	8	165	36	7	43	2	0	2	214			
1630	69	1	70	94	2	96	20	0	20	0	0	0	186	7	1	8	219	6	225	34	1	35	0	0	0	268	53	1	54	75	4	79	4	0	4	0	0	0	137	4	1	5	167	0	167	41	4	45	0	3	3	220			
1645	47	2	49	104	5	109	15	0	15	0	0	0	173	3	0	3	259	2	261	28	2	30	0	0	0	294	47	2	49	76	2	78	6	0	6	1	0	1	134	3	1	4	165	7	172	33	2	35	1	0	1	212			
1700	84	0	84	133	3	136	29	2	31	1	0	1	252	10	0	10	229	6	235	41	2	43	1	0	1	289	76	3	79	122	1	123	8	0	8	1	0	1	211	7	1	8	169	6	175	35	0	35	3	0	3	221			
1715	65	0	65	138	1	139	14	0	14	0	0	0	218	6	0	6	259	9	268	28	2	30	3	0	3	307	70	0	70	94	1	95	7	0	7	0	0	0	172	3	1	4	186	6	192	30	5	35	2	0	2	233			
1730	96	0	96	102	1	103	27	0	27	0	0	0	226	4	0	4	221	2	223	42	2	44	0	0	0	271	71	2	73	96	1	97	4	0	4	0	0	0	174	3	0	3	181	4	185	44	3	47	1	0	1	236			
1745	60	2	62	127	1	128	24	0	24	1	0	1	215	5	0	5	234	5	239	37	1	38	0	0	0	282	64	1	65	99	0	99	3	0	3	0	0	0	167	7	0	7	177	4	181	36	2	38	1	0	1	227			
1800	64	1	65	98	2	100	24	0	24	0	0	0	189	4	0	4	209	4	213	28	2	30	2	0	2	249	59	2	61	87	2	89	7	0	7	0	0	0	157	2	1	3	169	3	172	42	1	43	3	0	3	221			
1815	56	2	58	85	0	85	16	1	17	1	0	1	161	6	0	6	202	6	208	26	5	31	1	0	1	246	40	2	42	61	0	61	3	0	3	0	0	0	106	6	3	9	180	3	183	37	1	38	5	0	5	235			
<b>Total</b>	<b>636</b>	<b>9</b>	<b>645</b>	<b>###</b>	<b>22</b>	<b>1114</b>	<b>190</b>	<b>4</b>	<b>194</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>1958</b>	<b>63</b>	<b>1</b>	<b>64</b>	<b>###</b>	<b>57</b>	<b>###</b>	<b>331</b>	<b>20</b>	<b>351</b>	<b>9</b>	<b>0</b>	<b>9</b>	<b>2785</b>	<b>542</b>	<b>22</b>	<b>564</b>	<b>856</b>	<b>16</b>	<b>872</b>	<b>49</b>	<b>0</b>	<b>49</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>1487</b>	<b>42</b>	<b>8</b>	<b>50</b>	<b>###</b>	<b>46</b>	<b>###</b>	<b>362</b>	<b>30</b>	<b>392</b>	<b>18</b>	<b>4</b>	<b>22</b>	<b>2176</b>			

0745-0845	2	194	11	518	7	48	0	3	5	22	27	576	3	268	0	1	10	176	27	578	3	32	0	2	6	50	25	###	11	375	2	5
1700-1800	2	307	6	506	2	96	0	2	0	25	22	965	7	155	0	4	6	287	3	414	0	22	0	1	2	22	20	733	10	155	0	7



Place: **Newport Pagnell**  
Date: **18.10.2016**

Weather: **Rain / Sunshine**  
Junction: **Tongwell Roundabout**

Client: **ADC Infrastructure Ltd** Page: **1**  
Order no: **ADC1392** of: **1**

Time Begin	Entering on: Dansteed Way Northbound										Entering on: Michigan Drive Eastbound										Entering on: Willen Road Southbound										Entering on: Tongwell Street Westbound										Grand Totals												
	Left turn to: Michigan Dr WB			Straight on to: Willen Rd NB			Right turn to: Tongwell St EB			U-Turn to: Dansteed Way SB			Total Vehs PCUs	Left turn to: Willen Rd NB			Straight over to: Tongwell St EB			Right Turn to: Dansteed Way SB			U-turn to: Michigan Dr WB			Total Vehs PCUs	Left turn to: Tongwell St EB			Straight on to: Dansteed Way SB			Right turn to: Michigan Dr WB			U-turn to: Willen Rd NB			Total Vehs PCUs	Left turn to: Dansteed Way SB			Straight on to: Michigan Dr WB			Right turn to: Willen Rd NB			U-turn to: Tongwell St EB			Total Vehs PCUs	
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total		Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total		Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total		Light		Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy		Total
0730	9	2	11	55	3	58	23	1	24	2	0	2	95	3	0	3	5	1	6	1	0	1	0	0	0	10	117	2	119	181	3	184	7	0	7	0	0	0	310	58	2	60	16	1	17	42	2	44	0	0	0	121	536
0745	9	1	10	70	5	75	25	1	26	1	0	1	112	6	0	6	9	1	10	4	0	4	0	0	0	20	134	2	136	206	3	209	8	0	8	0	0	0	353	94	4	98	28	1	29	55	1	56	1	0	1	184	669
0800	7	0	7	67	3	70	16	1	17	0	1	1	95	6	0	6	8	0	8	2	2	4	0	0	0	18	141	2	143	216	5	221	2	0	2	1	0	1	367	134	4	138	37	2	39	45	0	45	1	0	1	223	703
0815	9	0	9	70	3	73	53	7	60	2	0	2	144	1	0	1	6	1	7	4	0	4	0	0	0	12	121	1	122	221	5	226	12	0	12	0	0	0	360	152	4	156	23	0	23	72	2	74	3	0	3	256	772
0830	10	0	10	62	1	63	31	1	32	4	0	4	109	3	1	4	3	0	3	8	0	8	1	0	1	16	113	5	118	244	1	245	12	0	12	0	0	0	375	152	3	155	38	2	40	57	2	59	2	0	2	256	756
0845	20	0	20	48	2	50	29	8	37	4	2	6	113	5	0	5	5	1	6	5	0	5	0	0	0	16	137	0	137	225	4	229	13	0	13	0	0	0	379	170	0	170	34	1	35	41	1	42	1	0	1	248	756
0900	9	0	9	39	4	43	25	5	30	0	1	1	83	1	0	1	4	1	5	3	0	3	0	0	0	9	119	6	125	215	3	218	8	0	8	1	0	1	352	83	9	92	19	0	19	36	0	36	1	2	3	150	594
0915	5	0	5	33	3	36	20	4	24	2	0	2	67	3	0	3	3	1	4	2	1	3	1	0	1	11	64	6	70	114	5	119	7	0	7	0	0	0	196	50	7	57	10	2	12	36	1	37	1	3	4	110	384
Total	78	3	81	444	24	468	222	28	250	15	4	19	818	28	1	29	43	6	49	29	3	32	2	0	2	112	946	24	970	1622	29	1651	69	0	69	2	0	2	2692	893	33	926	205	9	214	384	9	393	10	5	15	1548	5170
1600	2	0	2	120	2	122	33	2	35	1	0	1	160	5	0	5	14	2	16	7	1	8	0	0	0	29	39	3	42	61	3	64	1	1	2	0	0	0	108	41	5	46	12	1	13	82	0	82	1	0	1	142	439
1615	5	0	5	105	0	105	38	3	41	2	0	2	153	13	1	14	14	2	16	11	0	11	0	0	0	41	52	1	53	59	4	63	3	1	4	0	0	0	120	44	7	51	8	0	8	94	3	97	4	0	4	160	474
1630	0	0	0	136	3	139	57	1	58	4	1	5	202	10	0	10	16	0	16	16	0	16	0	0	0	42	41	1	42	69	4	73	2	0	2	0	0	0	117	45	1	46	3	2	5	88	1	89	1	0	1	141	502
1645	3	0	3	112	1	113	52	1	53	4	0	4	173	10	1	11	16	1	17	8	0	8	0	0	0	36	37	1	38	69	5	74	5	0	5	0	0	0	117	35	5	40	8	0	8	94	2	96	0	0	0	144	470
1700	5	0	5	98	0	98	63	3	66	8	0	8	177	52	0	52	89	1	90	42	0	42	0	0	0	184	50	0	50	80	0	80	6	0	6	0	0	0	136	55	1	56	24	1	25	85	1	86	3	0	3	170	667
1715	1	0	1	47	1	48	20	0	20	2	0	2	71	44	1	45	64	0	64	5	0	5	0	0	0	114	48	1	49	82	2	84	2	2	4	0	0	0	137	64	4	68	27	2	29	84	0	84	0	0	0	181	503
1730	1	0	1	93	1	94	40	1	41	1	0	1	137	45	0	45	72	1	73	17	0	17	0	0	0	135	41	1	42	69	0	69	2	0	2	0	0	0	113	62	3	65	16	0	16	80	0	80	2	0	2	163	548
1745	0	0	0	88	0	88	22	0	22	1	0	1	111	23	0	23	43	1	44	12	0	12	0	0	0	79	41	0	41	62	1	63	3	0	3	0	0	0	107	64	1	65	27	2	29	71	0	71	2	0	2	167	464
1800	2	0	2	134	3	137	48	1	49	3	0	3	191	19	0	19	22	2	24	5	0	5	1	0	1	49	41	1	42	72	1	73	1	0	1	0	0	0	116	52	1	53	10	1	11	65	1	66	6	0	6	136	492
1815	0	1	1	90	3	93	32	2	34	1	0	1	129	10	1	11	18	0	18	1	0	1	1	0	1	31	39	1	40	46	2	48	1	0	1	0	0	0	89	48	1	49	3	0	3	75	0	75	3	0	3	130	379
Total	19	1	20	###	14	1037	405	14	419	27	1	28	1504	231	4	235	368	10	378	124	1	125	2	0	2	740	429	10	439	669	22	691	26	4	30	0	0	0	1160	510	29	539	138	9	147	818	8	826	22	0	22	1534	4938

0745-0845	1	36	12	281	10	135	1	8	1	17	2	28	2	20	0	1	10	519	14	901	0	34	0	1	15	547	5	131	5	234	0	7
1700-1800	0	7	2	328	4	149	0	12	1	165	3	271	0	76	0	0	2	182	3	296	2	15	0	0	9	254	5	99	1	321	0	7



Place: **Newport Pagnell**  
Date: **18.10.2016**

Weather: **Rain / Sunshine**  
Junction: **Marsh End Roundabout**

Client: **ADC Infrastructure Ltd** Page: **1**  
Order no: **ADC1392** of: **1**

Time Begin	Entering on: Willen Road Northbound										Entering on: Monks Way Eastbound										Entering on: Marsh End Road Southbound										Entering on: Monks Way Westbound										Grand Totals																		
	Left turn to: Monks way WB			Straight on to: Marsh End Rd NB			Right turn to: Monks Way EB			U-Turn to: Willen Rd SB			Total Vehs	PCUs	Left turn to: Marsh End Rd NB			Straight over to: Monks Way EB			Right Turn to: Willen Rd SB			U-turn to: Monks way WB			Total Vehs	PCUs	Left turn to: Monks Way EB			Straight on to: Willen Rd SB			Right turn to: Monks way WB			U-turn to: Marsh End Rd NB				Total Vehs	PCUs	Left turn to: Willen Rd SB			Straight on to: Monks way WB			Right turn to: Marsh End Rd NB			U-turn to: Monks Way EB			Total Vehs	PCUs		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total				Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			Light	Heavy
0730	1	1	2	28	3	31	61	0	61	0	0	0	94		39	0	39	174	11	185	11	1	12	5	2	7	243		27	0	27	129	2	131	79	0	79	0	0	0	237		185	2	187	246	8	254	9	1	10	0	0	0	451		1025		
0745	4	0	4	42	2	44	62	3	65	0	0	0	113		52	0	52	170	15	185	13	1	14	7	0	7	258		12	0	12	127	2	129	60	4	64	0	0	0	205		203	0	203	265	10	275	18	0	18	1	0	1	497		1073		
0800	3	0	3	63	1	64	62	2	64	0	0	0	131		46	1	47	178	10	188	13	1	14	3	0	3	252		9	0	9	144	2	146	67	1	68	0	0	0	223		196	4	200	256	6	262	10	0	10	0	0	0	472		1078		
0815	4	0	4	62	3	65	64	2	66	0	0	0	135		70	0	70	175	6	181	9	0	9	1	1	2	262		9	2	11	153	3	156	59	1	60	0	0	0	227		184	3	187	239	15	254	14	0	14	0	0	0	455		1079		
0830	1	0	1	68	2	70	59	3	62	0	0	0	133		87	1	88	149	12	161	7	0	7	2	0	2	258		3	0	3	171	3	174	58	2	60	0	0	0	237		195	3	198	253	7	260	9	1	10	0	0	0	468		1096		
0845	5	0	5	43	1	44	36	2	38	0	0	0	87		43	1	44	177	10	187	9	0	9	1	0	1	241		16	1	17	175	0	175	74	2	76	0	0	0	268		185	4	189	214	15	229	23	1	24	0	0	0	442		1038		
0900	8	1	9	44	3	47	30	1	31	0	0	0	87		52	2	54	160	15	175	6	0	6	5	1	6	241		37	2	39	130	6	136	65	2	67	0	0	0	242		205	2	207	250	11	261	8	2	10	0	0	0	478		1048		
0915	6	0	6	44	3	47	30	1	31	0	0	0	84		46	0	46	100	15	115	4	2	6	2	0	2	169		27	2	29	91	7	98	40	2	42	0	0	0	169		92	2	94	214	10	224	23	2	25	0	0	0	343		765		
<b>Total</b>	<b>32</b>	<b>2</b>	<b>34</b>	<b>394</b>	<b>18</b>	<b>412</b>	<b>404</b>	<b>14</b>	<b>418</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>864</b>		<b>435</b>	<b>5</b>	<b>440</b>	<b>###</b>	<b>94</b>	<b>###</b>	<b>72</b>	<b>5</b>	<b>77</b>	<b>26</b>	<b>4</b>	<b>30</b>	<b>1924</b>		<b>140</b>	<b>7</b>	<b>147</b>	<b>1120</b>	<b>25</b>	<b>1145</b>	<b>502</b>	<b>14</b>	<b>516</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1808</b>		<b>###</b>	<b>20</b>	<b>###</b>	<b>###</b>	<b>82</b>	<b>###</b>	<b>114</b>	<b>7</b>	<b>121</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>3606</b>		<b>8202</b>		
1600	7	0	7	81	0	81	101	1	102	0	0	0	190		50	0	50	259	12	271	4	1	5	7	1	8	334		29	0	29	59	2	61	54	0	54	0	0	0	144		36	4	40	132	14	146	30	1	31	0	0	0	217		885		
1615	8	0	8	101	2	103	96	1	97	0	0	0	208		71	1	72	306	9	315	8	0	8	2	0	2	397		30	1	31	64	3	67	33	1	34	0	0	0	132		37	2	39	121	12	133	29	1	30	0	0	0	202		939		
1630	6	0	6	108	2	110	101	1	102	0	0	0	218		81	1	82	289	9	298	5	0	5	5	0	5	390		32	0	32	60	0	60	46	0	46	1	0	1	139		51	5	56	169	7	176	34	2	36	0	0	0	268		1015		
1645	4	0	4	106	1	107	90	4	94	0	0	0	205		96	6	102	315	8	323	0	0	0	3	0	3	428		30	1	31	63	1	64	45	0	45	0	0	0	140		52	3	55	179	1	180	41	1	42	0	0	0	277		1050		
1700	4	0	4	95	1	96	107	1	108	0	0	0	208		92	1	93	308	5	313	2	0	2	2	0	2	410		36	2	38	72	0	72	52	1	53	0	0	0	163		60	0	60	191	10	201	39	0	39	0	0	0	300		1081		
1715	3	1	4	102	0	102	92	1	93	0	0	0	199		104	0	104	330	7	337	10	0	10	1	0	1	452		22	0	22	67	2	69	46	0	46	0	0	0	137		56	3	59	182	10	192	45	0	45	0	0	0	296		1084		
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1745	4	0	4	103	0	103	103	0	103	0	0	0	210		101	1	102	292	6	298	4	0	4	1	1	2	406		22	0	22	53	0	53	37	1	38	0	0	0	113		55	1	56	214	3	217	54	0	54	0	0	0	327		1056		
1800	2	1	3	110	0	110	110	1	111	0	0	0	224		113	0	113	270	11	281	8	1	9	6	0	6	409		28	0	28	59	1	60	46	0	46	0	0	0	134		47	0	47	167	6	173	46	1	47	2	0	2	269		1036		
1815	2	0	2	92	3	95	92	2	94	0	0	0	191		99	0	99	280	6	286	2	1	3	1	0	1	389		23	1	24	47	1	48	41	3	44	0	0	0	116		38	1	39	141	7	148	55	2	57	0	0	0	244		940		
<b>Total</b>	<b>41</b>	<b>2</b>	<b>43</b>	<b>###</b>	<b>11</b>	<b>1021</b>	<b>991</b>	<b>12</b>	<b>###</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2067</b>		<b>930</b>	<b>11</b>	<b>941</b>	<b>###</b>	<b>76</b>	<b>###</b>	<b>45</b>	<b>3</b>	<b>48</b>	<b>34</b>	<b>2</b>	<b>36</b>	<b>4020</b>		<b>276</b>	<b>5</b>	<b>281</b>	<b>599</b>	<b>11</b>	<b>610</b>	<b>451</b>	<b>7</b>	<b>458</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1350</b>		<b>487</b>	<b>20</b>	<b>507</b>	<b>###</b>	<b>73</b>	<b>###</b>	<b>414</b>	<b>8</b>	<b>422</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>2711</b>		<b>10148</b>		

0745-0845	0	12	8	243	10	257	0	0	2	257	43	715	2	44	1	14	2	35	10	605	8	252	0	0	10	788	38	###	1	52	0	1
1700-1800	1	13	3	415	2	403	0	0	3	423	21	###	0	18	1	11	2	106	3	250	3	189	0	0	5	231	26	824	0	179	0	0



Place: **Newport Pagnell**  
Date: **18.10.2016**

Weather: **Rain / Sunshine**  
Junction: **Tickford Roundabout**

Client: **ADC Infrastructure Ltd** Page: **1**  
Order no: **ADC1392** of: **1**

Time	Entering on: London Road Northbound										Entering on: Monks Way Eastbound										Entering on: London Road Southbound										Entering on: A509 Westbound										Grand Totals																								
	Left turn to: Monks Way WB			Straight on to: London Rd NB			Right turn to: A509 EB			U-Turn to: London Rd SB			Total			Left turn to: London Rd NB			Straight over to: A509 EB			Right Turn to: London Rd SB			U-turn to: Monks Way WB			Total			Left turn to: A509 EB			Straight on to: London Rd SB			Right turn to: Monks Way WB			U-turn to: London Rd NB			Total			Left turn to: London Rd SB			Straight on to: Monks Way WB			Right turn to: London Rd NB			U-turn to: A509 EB			Total			Vehs		PCUs		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Vehs	PCUs	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Vehs	PCUs	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total		Light	Heavy	Total	Light	Heavy	Total	Vehs	PCUs	Vehs	PCUs														
0730	35	5	40	52	2	54	50	8	58	0	0	0	152		47	3	50	178	6	184	39	3	42	1	0	1	277		6	1	7	30	4	34	124	0	124	0	0	0	165		91	4	95	346	7	353	1	1	2	0	0	0	450		1044								
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0800	50	5	55	45	12	57	53	3	56	0	0	0	168		67	0	67	152	6	158	25	5	30	0	0	0	255		8	0	8	46	1	47	133	2	135	0	0	0	190		84	6	90	284	7	291	3	1	4	0	0	0	385		998								
0815	29	5	34	45	1	46	48	6	54	0	0	0	134		81	1	82	144	6	150	24	5	29	0	0	0	261		3	1	4	38	1	39	125	3	128	0	1	1	172		91	7	98	321	9	330	8	0	8	0	0	0	436		1003								
0830	42	5	47	44	1	45	38	6	44	1	0	1	137		71	1	72	128	7	135	10	7	17	0	0	0	224		7	0	7	25	2	27	114	2	116	0	0	0	150		80	14	94	290	8	298	8	0	8	0	0	0	400		911								
0845	61	8	69	51	2	53	56	6	62	0	0	0	184		85	1	86	124	6	130	18	5	23	0	0	0	239		12	1	13	14	4	18	105	4	109	1	0	1	141		61	10	71	245	6	251	7	0	7	0	0	0	329		893								
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<b>Total</b>	<b>340</b>	<b>39</b>	<b>379</b>	<b>399</b>	<b>28</b>	<b>427</b>	<b>380</b>	<b>54</b>	<b>434</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>1244</b>		<b>529</b>	<b>10</b>	<b>539</b>	<b>###</b>	<b>60</b>	<b>###</b>	<b>243</b>	<b>44</b>	<b>287</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>1939</b>		<b>50</b>	<b>4</b>	<b>54</b>	<b>277</b>	<b>17</b>	<b>294</b>	<b>883</b>	<b>14</b>	<b>897</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1247</b>		<b>699</b>	<b>63</b>	<b>762</b>	<b>###</b>	<b>59</b>	<b>###</b>	<b>42</b>	<b>2</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3182</b>		<b>7612</b>								
1600	44	12	56	58	6	64	76	11	87	0	0	0	207		83	0	83	213	9	222	86	3	89	0	0	0	394		7	0	7	31	0	31	47	0	47	0	0	0	85		75	6	81	107	8	115	9	0	9	0	0	0	205		891								
1615	29	5	34	68	2	70	97	8	105	0	0	0	209		76	0	76	285	5	290	64	7	71	1	0	1	438		6	1	7	51	1	52	49	1	50	0	0	0	109		60	10	70	121	7	128	9	0	9	0	0	0	207		963								
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1645	58	5	63	76	1	77	116	5	121	0	0	0	261		106	1	107	240	4	244	78	6	84	0	0	0	435		5	0	5	59	1	60	67	0	67	0	0	0	132		95	6	101	152	2	154	12	0	12	0	0	0	267		1095								
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1715	63	7	70	70	1	71	117	4	121	0	0	0	262		90	0	90	240	3	243	86	5	91	0	0	0	424		5	0	5	38	0	38	48	0	48	0	0	0	91		81	3	84	164	3	167	13	0	13	0	0	0	264		1041								
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1745	62	2	64	68	0	68	117	4	121	0	0	0	253		112	1	113	253	2	255	63	2	65	0	0	0	433		9	0	9	37	1	38	66	0	66	0	0	0	113		80	2	82	184	2	186	11	0	11	0	0	0	279		1078								
1800	74	7	81	65	2	67	100	3	103	0	0	0	251		96	1	97	257	5	262	64	5	69	0	0	0	428		11	0	11	40	2	42	50	0	50	0	0	0	103		66	2	68	153	1	154	5	0	5	0	0	0	227		1009								
1815	60	8	68	58	2	60	112	6	118	0	0	0	246		93	2	95	233	2	235	58	6	64	1	0	1	395		9	0	9	48	1	49	47	0	47	0	0	0	105		68	2	70	108	2	110	6	0	6	0	0	0	186		932								
<b>Total</b>	<b>560</b>	<b>66</b>	<b>626</b>	<b>676</b>	<b>22</b>	<b>698</b>	<b>##</b>	<b>66</b>	<b>###</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2404</b>		<b>947</b>	<b>8</b>	<b>955</b>	<b>###</b>	<b>38</b>	<b>###</b>	<b>757</b>	<b>46</b>	<b>803</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>4264</b>		<b>71</b>	<b>1</b>	<b>72</b>	<b>448</b>	<b>11</b>	<b>459</b>	<b>545</b>	<b>2</b>	<b>547</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1078</b>		<b>761</b>	<b>52</b>	<b>813</b>	<b>###</b>	<b>31</b>	<b>###</b>	<b>95</b>	<b>2</b>	<b>97</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2465</b>		<b>10211</b>								

0745-0845	19	190	19	201	19	208	0	1	3	294	29	593	23	116	0	1	2	26	6	163	8	525	1	1	32	360	30	####	1	23	0	0
1700-1800	21	282	6	274	22	442	0	0	3	401	7	####	16	330	0	1	0	25	4	167	1	229	0	0	16	341	7	721	0	47	0	0

# APPENDIX G

## TEMPRO

<b>Dataset Version:</b>	72			
<b>Result Type:</b>	Trip ends by time period			
<b>Base Year:</b>	2016			
<b>Future Year:</b>	2026			
<b>Trip Purpose Group:</b>	All purposes			
<b>Time Period:</b>	Weekday AM peak period (0700 - 0959)			
<b>Trip End Type:</b>	Origin/Destination			
<b>Alternative Assumptions Applied:</b>	No			
<b>Growth Factor</b>				
	Area Description		All purposes	
	Level	Name	Origin	Destination
E02003465		Milton Keynes 007	1.1500	1.1144
<b>Future Year - Base Year</b>				
	Area Description		All purposes	
	Level	Name	Origin	Destination
E02003465		Milton Keynes 007	343	383
<b>Base Year</b>				
	Area Description		All purposes	
	Level	Name	Origin	Destination
E02003465		Milton Keynes 007	2,286	3,348
<b>Future Year</b>				
	Area Description		All purposes	
	Level	Name	Origin	Destination
E02003465		Milton Keynes 007	2,629	3,731
ALL ROADS			1.1797	

<b>Dataset Version:</b>	72			
<b>Result Type:</b>	Trip ends by time period			
<b>Base Year:</b>	2016			
<b>Future Year:</b>	2026			
<b>Trip Purpose Group:</b>	All purposes			
<b>Time Period:</b>	Weekday PM peak period (1600 - 1859)			
<b>Trip End Type:</b>	Origin/Destination			
<b>Alternative Assumptions Applied:</b>	No			
<b>Growth Factor</b>				
	Area Description		All purposes	
	Level	Name	Origin	Destination
E02003465		Milton Keynes 007	1.1180	1.1417
<b>Future Year - Base Year</b>				
	Area Description		All purposes	
	Level	Name	Origin	Destination
E02003465		Milton Keynes 007	412	380
<b>Base Year</b>				
	Area Description		All purposes	
	Level	Name	Origin	Destination
E02003465		Milton Keynes 007	3,488	2,682
<b>Future Year</b>				
	Area Description		All purposes	
	Level	Name	Origin	Destination
E02003465		Milton Keynes 007	3,899	3,061
ALL ROADS			1.1773	



ROXHILL DEVELOPMENTS LTD

PROPOSED EMPLOYMENT DEVELOPMENT ON LAND WEST OF  
WILLEN ROAD, NEWPORT PAGNELL, MILTON KEYNES

TECHNICAL NOTE: RESPONSE TO MKC COMMENTS ON THE  
TRANSPORT ASSESSMENT SCOPING REPORT

ADC Infrastructure Limited  
Western House  
Western Street  
Nottingham  
NG1 3AZ

[www.ADCinfrastructure.com](http://www.ADCinfrastructure.com)

project number: ADC1392			report reference: ADC1392 SR TN
version	date	author	comments
2	9/11/2017	R Leconte	issued to MKC
3	10/11/2017	R Leconte	updated and issued to MKC

## Introduction

1. Roxhill Developments Ltd commissioned ADC Infrastructure Ltd to produce a Transport Assessment and Travel Plan to support an outline planning application for employment development on land west of Willen Road, in Newport Pagnell.
2. As part of this, a Transport Assessment Scoping Report was prepared by ADC Infrastructure Ltd and issued to Milton Keynes Council (MKC) on 13 September 2017. Following a request from MKC, this was a 'slimmed down' version of a scoping report that was originally issued to MKC in March 2017. It presented the: development proposals including the vehicle access junction; the forecast trip rates and resultant traffic generation; the forecast vehicle distribution and assignment; the proposed study area for further assessment; and the proposed future year assessment traffic flows for 2026 including growth rates and committed development.
3. Comments on the Scoping Report were received from MKC on 20 October 2017. A copy of the comments is shown in **Appendix A**.
4. A meeting was subsequently held with MKC and their consultant, ADC Infrastructure and Roxhill Developments on 3 November 2017 to discuss the comments. As agreed at the meeting, this Technical Note has been prepared to reflect the discussions, and present the parameters for use in the Transport Assessment.

## MKC comments

5. The following sections present MKC's comments and ADC's response, in the same order as presented in the original MKC comments.

### *Sustainable travel*

6. **MKC comment:** a footway/cycleway (Redway) should be provided along Willen Road to connect to the existing infrastructure to the south, and along Willen Road and Marsh End Road to connect to the existing infrastructure in Newport Pagnell further north.
7. **ADC response:** this is agreed, and the opportunity to provide this will be investigated further, and incorporated in the Transport Assessment and Travel Plan. As discussed at the meeting, due to land constraints at the Marsh End Roundabout, the 3m wide footway/cycleway may have to cross Willen Road and the A422 (E), and run along the eastern side of Marsh End Road (N). This was accepted by MKC.
8. MKC confirmed that the footway/cycleway should be separated from the carriageway by a grass verge, but they accepted that there may need to be relaxations on where there is limited land (for example on the bridge over the M1 and along Marsh End Road around the roundabout). Nevertheless, the design will include a 2m grass verge between the edge of the carriageway and the Redway where achievable.
9. **MKC comment:** a contribution will be required towards public transport improvements.
10. **ADC response:** this is agreed. Stuart Simmons at MKC has been contacted to determine what is required, and this will be incorporated in the Transport Assessment and Travel Plan.

### *HGV parking*

11. **MKC comment:** the provision for Unit 1 is below the required HGV parking standards (60 proposed vs 163 required) and further explanation on this provision is required.

12. ADC response: as discussed at the meeting, the provision was led by the requirements of a potential end occupier at the time that the masterplan was drawn up. The masterplan does now reflect a shortfall in parking, and may be updated. Alternatively, the Transport Assessment will acknowledge that this is an outline application for speculative development, and refer to the parking standards.

*Access onto Willen Road and off-site mitigation*

13. MKC comment: the principle of access onto Willen Road is agreed. However, the type and form of the junction(s) requires further explanation and justification before access can be agreed. At the meeting, MKC also suggested that the speed limit on Willen Road would need to be reduced from national to 40mph.
14. MKC also stated that the proposed signalisation of the Marsh End Roundabout is not accepted and that non-signalised options should be examined. At the meeting, MKC explained that traffic signals would not be favourable just as a strategy to serve the development, and that they would need to provide a wider highway benefit to be considered acceptable.
15. ADC response: the Scoping Report presented a single access, in the form of a traffic signal controlled crossroads. It also presented a comprehensive mitigation strategy that enlarged and signalised the Marsh End Roundabout. It did not propose to change the speed limit.
16. At the meeting, ADC explained that several access options had already been investigated before the signal controlled crossroads access option was promoted. This included:
- a) a simple priority-controlled all moves T-junction with ghost island right turn lane
  - b) two simple priority-controlled all moves T-junctions with ghost island right turn lane
  - c) a restricted movements T-junction (banned right turn out)
  - d) a four arm roundabout
  - e) a traffic signal controlled T-junction
  - f) a traffic signal controlled crossroads.
17. At the meeting, ADC explained that options A and B were dismissed on the basis that the modelling forecast that long delays (approx. 125 seconds) would form on the site access arm, as vehicles would struggle to exit in the morning peak hour due to the high southbound flow on Willen Road. Although the number of vehicles attempting to exit is low in the morning peak hour, and the forecast queue length is minimal, ADC considered that this delay would nevertheless lead to drivers pushing out during inappropriate gaps in the traffic and potentially lead to road safety issues. MKC accepted this point, and MKC also accepted that a single point of access is appropriate.
18. It was discussed that Option C (banned right turn out) remains possible, but that this is less ideal from an end occupier operational perspective, and it would result in extra traffic at the Marsh End Roundabout. ADC explained that a potential layout could be similar to the nearby A509/Newport Road junction, and MKC agreed to provide any details on known operational/safety issues at that junction.
19. Option D (roundabout) was dismissed as it was not a logical solution for the traffic flows, which are not balanced, and is land hungry. Furthermore, and more importantly, a roundabout does not provide the best solution to cater for the convenient and safe crossing of pedestrians, cyclists, and those walking to and from the bus stops on the eastern side of the carriageway. MKC accepted these points.
20. Options E and F remain possible, subject the findings in the Transport Assessment. As discussed at the meeting, the benefit of a signal controlled layout is that it will allow pedestrians and cyclists to easily and safely cross Willen Road along the new Redway, and it will also allow

pedestrians to safely cross to the southbound bus stops on the eastern side of Willen Road. This benefit is not possible in the priority-controlled options A to E. This point was accepted by MKC.

21. Furthermore, it was discussed that whilst the introduction of traffic signals would introduce a delay to vehicles travelling northbound and southbound on Willen Road, where currently they do not have to stop, the benefit is that the signal controlled layout would be designed to work in conjunction with the improved layout at the Marsh End Roundabout. This includes signalling the Marsh End Roundabout and dualling the southbound flow on Willen Road, to reduce queue lengths and improve journey times overall. This point was accepted by MKC, subject to an explanation and presentation of the modelling results in the Transport Assessment.
22. The Transport Assessment will therefore present each of the options, and the modelling results for each, to allow MKC to fully understand the reasoning for and benefits of the proposed signal controlled crossroads arrangement. The Transport Assessment will include a reduction in the speed limit to 40mph.

#### *Trip rates and traffic generation*

23. MKC comment: the proposed peak hour trip rates are accepted. However, the Transport Assessment should also look at interpeak periods, and the early morning period (5am-8am). At the meeting, MKC explained that traffic starts to build up early in the morning, and thus that there may be a crossover with development traffic and highway network traffic at 6am.
24. ADC response: At the meeting, ADC explained that the proposed trip rates and daily profile are from a comparable site that has some employees working on a two-shift pattern (7am-7pm, then 7pm-7am), some working on a three-shift pattern (6am-2pm, 2pm-10pm, 10pm-6am), and some office staff working typical hours (9am-5pm). This allows a robust assessment of the potential operation, given the outline application for speculative development.
25. ADC explained that the results of ATCs, currently being undertaken on Willen Road and the surrounding road network, will be used to identify any peak periods outside of the proposed morning and evening peak hour, and the Transport Assessment will examine the worst-case periods (where development traffic coincides with highway network traffic). It is expected this will demonstrate that outside the peak hours the background traffic is lower and therefore that there is additional highway capacity at these times.

#### *Distribution and assignment*

26. MKC comment: the proposed distribution and assignment will change depending on the ultimate access strategy. A more logical distribution to/from the M1 Junction 14 was suggested based on local experience.
27. ADC response: this is agreed, and the distribution and resultant assignment will be revised in the Transport Assessment.

#### *Study area*

28. MKC comment: the study area should be expanded to include the H5 (Portway) / H6 (Childs Way) junction (Northfield Roundabout), and the M1 Junction 14. At the meeting, MKC explained that both junctions have known capacity issues, and it is necessary to demonstrate that the impact has been assessed.
29. ADC response: this is agreed. At the meeting, ADC explained that junction modelling would be used to assess and quantify the impact of the development traffic at each of the study area

junctions. However, ADC's preferred approach was to provide a single comprehensive mitigation package at the most affected Marsh End Roundabout junction, instead of proposing more modest minor junction improvements at each of the study area junctions. This approach was agreed by MKC.

30. MKC confirmed that the principle of traffic signal control at the Marsh End roundabout was acceptable and in keeping with the findings of an earlier study of the A422 corridor undertaken by White Young Green on behalf of MKC. MKC agreed to share the WYG study with ADC.
31. ADC explained that Highways England have been issued with the Scoping Report, and have requested that the M1 Junction 14 is assessed. ADC are still awaiting confirmation that Highways England approve the parameters for use in the assessment.

#### *Opening year*

32. MKC comment: the 2026 assessment year is accepted, but MKC also wish to see the percentage impacts determined in the opening year.
33. ADC response: this is agreed, and the Transport Assessment will quantify the percentage impacts in the 2019 opening year. As discussed at the meeting, only the percentage impacts will be presented, and it is not necessary (with the exception of M1 Junction 14, see below) to model the 2019 with development traffic flows. This is on the basis that the 2026 with development traffic flows present a worst case due to background growth.
34. Highways England will require M1 Junction 14 to be examined in accordance with the requirements set out in DfT Circular 02/2013.

#### *Summary*

35. This Technical Note has been prepared to reflect the discussions with MKC at the meeting on 3 November 2017. Once the Technical Note has been agreed, the Transport Assessment and Travel Plan will be prepared to evidence and justify the access strategy, and the impact of the development traffic on the highway network.

## APPENDIX A

# MKC COMMENTS ON TRANSPORT ASSESSMENT SCOPING REPORT

## HIGHWAY OBSERVATIONS

DATE: 19<sup>th</sup> Oct 2017  
CONTACT: A Swannell  
TEL: 01908 252047

**PLANNING PROPOSAL: Employment Development on land at Willen Road, Milton Keynes – Transport Assessment Scoping Note Submitted by ADC Infrastructure.**

---

These comments relate to Scoping Report ADC1392 SR (V4) prepared by R Leconte and S Dunhill at ADC Infrastructure. **Highlighted text** indicates issues that will need to be addressed.

**Section 1** provides a brief introduction and there are no comments regarding this section of the report.

**Section 2** describes the development proposals, parking and access arrangements.

The development comprises two main units:

- Unit 1 is 46,822m<sup>2</sup> of B8 with 3,344m<sup>2</sup> of B1; and
- Unit 2 is 27,871m<sup>2</sup> of B8 with 1,115m<sup>2</sup> of B1.

Total 74,693m<sup>2</sup> of B8 with 4,459m<sup>2</sup> of B1

It is disappointing to note that non-vehicle modes of transport are hardly mentioned in section 2; only briefly in 2.14 and 2.22. A new “footway/cycleway” along Willen Road is referred to but looking at the description of it and the drawings submitted, it seems that this only connects to the Redway at the northern end of V11 and does not connect the site to Newport Pagnell.

**This is not acceptable; provision should be made to the north and a Redway connection should be provided from the site across the A422 junction and north to the junction of Tongwell Lane.**

With regard to public transport, the new bus stops are welcomed and the contribution to services is noted. However, the phrase “*if this is identified as necessary within the Transport Assessment*” is unhelpful; services on this route could have been assessed at this stage, which would have shown that provision is poor – **a contribution will be required.**

Parking is dealt with in paragraphs 2.6-2.13 of this section. A summary of the requirements of the MKC standards versus the proposed provision is included below.

Unit	Car	HGV	Cycle	EV	PTW
1	579 (580)	163 (60)	153 (150)	7 (6)	8 (9)
2	316 (316)	95 (85)	83 (87)	4 (6)	5 (5)

Main Figures are MKC standards, figures in brackets are proposed provision

The comparison shows that for categories other than HGV parking, the proposals are in line with the requirements of the parking standards. However, further explanation of HGV parking and operation is required to support the potentially serious shortfall in HGV provision for Unit 1.

Paragraphs 2.14-2.24 deal with the access proposals and particularly the format of the junction of the site access with Willen Road.

The comments regarding the Highway Authority normally resisting access to this type of road and one where the national speed limit applies are noted; However, the principle of access to Willen Road is accepted in this instance due to the site's location.

Paragraph 2.17 refers to a preference for a single point of access, this is not accepted until the further work requested in these comments is carried out.

Paragraph 2.18 refers to the testing of a priority controlled junction and states that this option was dismissed on the grounds of excessive queuing within the site. In order for this to be accepted the test results and input parameters will need to be submitted to and verified by, MKC. It is essential that this critical part of the network, which the report's author acknowledges is subject to heavy traffic, is protected.

The proposal for a signal controlled junction is not accepted at this stage and will require further consideration after receiving the information regarding the priority junction. This includes consideration of two priority controlled access points, which would reduce on-site queuing. NB. Queuing within a private site is preferable to queuing on the highway network and the Council will need to make a judgement as to which option is best for the operation of the network as a whole.

Similarly, the proposed alterations to the A422 / Willen Road junction are not accepted at this stage and the investigation of non-signalised options will need to be provided to ensure the optimum solution for the network is provided. This also includes a part-time signal option, as employed elsewhere in MK. (Also note the comments above regarding cycle provision across this junction)

The proposed internal site layout appears to be acceptable in principle but this will clearly be the subject of discussion through the application process (as well as the consideration of the access strategy). Therefore, whilst the contents of all the submitted drawings are noted, they are not yet accepted.



Paragraphs 2.3-2.5 describe potential employee density and look to compare the site to similar operations. However, it is not made clear what use has been made of the figure as trip rate profiles are then referred to. Furthermore, although the report states that not all of the estimated 1,028 employees will be on site at the same time, it does not state how this conclusion was reached.

The HCA Employment Density Guide does not reduce densities due to shift patterns and therefore one would assume that the HCA study would anticipate all 1,028 employees on site at one time.

In addition to this, the scoping report does not refer to the impact of shift changeover periods when, for a short time, on-site parking will peak and trips in and out of the facility will both peak and conflict with each other. This is not evident from the TRICS data (just peak hour information from 3 sites) or the trip profiles from the submitted surveys. The data submitted also fails to show a recognisable peak at 10pm.

This could clearly have a major impact on parking provision and therefore the number of employees on site in each of the two units needs to be described in more detail. This then needs relating to car park provision and expected car park occupancy. **A breakdown of employee numbers, including the split between shift staff and office staff, should be made to provide a clear picture of who is likely to be on site and at what times.**

**Section 3** continues to investigate likely trip generation and provides data from comparable sites (included in the appendices).

My investigation of TRICS shows that typical peak hour rates for B8 warehousing are slightly below those proposed for use and therefore for the network peak hours, the proposed rates are acceptable. **However, as stated above, the site peaks should be clarified and potentially used as a test of the operation of the junction(s) between Willen Road and the site access(es) in the 5am-8am period.**

**Section 4** deals with traffic assignment and distribution. Paragraph 4.4 makes some assumptions that appear to have no basis, in particular the routes to/from the M1. It might be more reasonable to suppose that traffic entering/leaving the M1 northbound carriageway (i.e. on the western side of the M1) would use Tongwell St and that traffic entering/leaving the southbound carriageway (i.e. on the eastern side of the M1) would use the A509/A422.

However, this also depends to some extent on the site access junction format as a priority junction would favour a 'left-in / left-out' approach for ease of movement. **This will need further consideration in the TA.**

This also applies to HGV movements referred to in paragraphs 4.6 and 4.7. Consequently, **Diagrams 3, 4 and 5 in Appendix E are not yet accepted.**

**Section 5** refers to data collection via surveys at four junctions. The survey data does not appear to include inter-peak periods, nor the period up to the morning peak (as referred to above). It is not clear whether that data is unavailable, or has just not been provided; **either way, this data is required.**

Notwithstanding the estimated impact of development traffic, an additional survey is required at the H5 (Portway) / H6 (Childs Way) junction (Northfield Roundabout). This junction is a critical piece of the network and its operation is crucial to the operation of Junction 14 of the M1.

There is also no mention of the M1 junction itself, which I would be surprised if HE did not require investigating as part of the TA. Evidence of HE's views on the junction should be included in the TA.

The provided TEMPRO growth assumptions are reasonable as is the future year of 2026; however, there is no mention or testing of a Year of Opening, which I would expect to be somewhere between 2019-2021.

Paragraph 5.6 refers to committed development and although the assertion that the Eastern Expansion Area is largely complete is incorrect, the use of 10 years of growth to the future year is accepted in lieu.

Paragraphs 5.9-5.14 deal with the study area and the potential development impacts as a percentage of 2026 traffic. I would expect to see a Year of Opening comparison carried out as well. Furthermore, given the nature of the local network and the development, the percentage impact in the 7am-8am period for Year of Opening and 2026 should also be made. This exercise should be extended to the two additional junctions (Northfield and M1 J14) referred to above.

**Section 6** provides a summary of the report and its conclusions. Paragraph 6.5 asserts that the parking standards have been met, but this is not the case for the HGV parking proposed for Unit 1.

Paragraph 6.6 refers to a preference for a single point of access, this is not accepted until the further work requested is carried out.

Paragraphs 6.7-6.10 are subject to further work as outlined above and future agreement and therefore cannot be accepted at this stage.

A Swannell  
Senior Engineer – Transport Development Management

## Stuart Dunhill

---

**From:**  
**Sent:**  
**To:**  
**Cc:**



**Subject:** RE: Caldecote Farm, Newport Pagnell - Proposed Highway Improvements  
**Attachments:** 38748-100-008 DRAFT.PDF

Dear Andy,

Further to your email below, unfortunately I have been unable to contact you by telephone to discuss some of these issues further, however, we have amended the scheme proposals as follows:-

Having discussed the issues of principle with my road safety colleague we have concluded that the Road Restraint Systems (RRS) is required. We are unsure why such a system hasn't been fully installed to date but it is clear that the consequences of not having a fully compliant RSS is not something that could be defended in a scenario where a vehicle may stray across the central reserve strip.

The scheme proposals have been updated to include RRS within the central reserve of the H3 Monks Way dual carriageway. The RRS has been indicated from the proposed Marsh End Road Signalised Roundabout to the existing RRS within the vicinity of the existing M1 overbridge, a length of 500m (approx.).

---

If I understand you correctly this will invoke the need for a 50mph speed limit on the approach to Marsh End roundabout. Whilst a high mast signal could overcome the visibility issue I feel that the approach speeds will need to be controlled.

Our scheme proposals retain the existing national speed limit (70mph) on the H3 Monks Way dual carriageway. We consider the appropriate Design Speed for the H3 Monks Way to be 120kph, as per the previously supplied scheme proposals.

Have speed surveys been carried out on all approaches to the roundabout? I can't remember seeing any but obviously the current 85%ile approach speeds will have a bearing on what is feasible at the roundabout.

A speed survey has been undertaken by ADC on the A422 and Willen Road (Northern and Southern) Arms of the existing Marsh End Road Roundabout. Speeds have not been recorded on the H3 Monks Way. However, the 85<sup>th</sup> percentile speed on the A422 westbound approach was recorded at 64mph approximately 250m (approx.) from the Marsh End Road Roundabout. It is considered likely that similar speeds would be recorded on the eastbound H3 Monks Way approach, the equivalent distance back from the junction (potentially lower due to the horizontal radii of this approach). This would reinforce the 120kph Design Speed specified by PBA for this approach.

There is a concern regarding how traffic travelling east and getting a green signal at the roundabout then perceives a red signal for the cycle crossing and if there is sufficient SSD to allow safe approach / stop. Thames Valley Police will need to be involved in the assessment of your final scheme to ensure they have no objections.

The phasing and staging diagram provided on the previously supplied Drawing 38748/100/008 – 'Proposed Marsh End Signalised Roundabout General Arrangement' (attached) indicates that:-

- When H3 Monks Way (A) is presented with a green light (Stage 2);
- The corresponding Internal Approach (D) is on Red (Stage 2);

Therefore, a motorist travelling along the H3 Monks Way cannot be provided with a green light all the way up to the controlled crossing on the A422 exit (I). Please note that the controlled crossing on the A422 exit has been located in accordance with Para 5.7 and 5.8 of TD 16/17 – 'Geometric Design Of Roundabouts'.

During the detailed design stage of the scheme, appropriate design features such as:-

- Advanced Directional Signage;
- Lane dedication signage and road markings;
- Warning signs (Diag 543 – Traffic signals ahead);

- High level traffic signals and / or alignment of signal heads (need for cowling);
- Speed detection systems;
- PSV on approach;
- Etc.;

Will be developed and specified in order to remove / reduce / mitigate against the common road safety concerns which are known to occur at signalised roundabout on high speed roads. However, and further to our discussions at the meeting (dated 14<sup>th</sup> June 2018), we have now been able to review the vertical profile of H3 Monks Way on the immediate approach to the proposed junction (i.e. over a distance of 1.5 x SSD), and can confirm that forward visibility of 295m (appropriate for a 120kph Design Speed) is not restricted to the 'object height' by the proposed RRS. Therefore, a Departure from Standard is not required to be provided by MKC associated with visibility on the approach to the signalised roundabout.

Any required liaison with Thames Valley Police will be undertaken as required.

---

I confirm that the existing laybys will not need to be replaced.

Noted and thank you for providing this confirmation. The existing lay-bys on the H3 Monks Way and A442 approaches will be removed in order to accommodate the proposed additional lanes on these arms, and will not be replaced.

---

We would be happy to enter into an easement agreement with the owner of the western arm signal approach road in order that as local highway authority, we are able to maintain the induction loops.

Noted.

I trust the above is clear, however, please contact me to discuss further as required.

Kind regards,

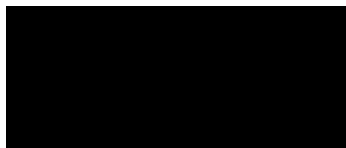
**James Horne**

Principal Engineer

For and on behalf of Peter Brett Associates LLP - [Northampton](#)



t  
m  
e  
w



[peterbrett.com](http://peterbrett.com)

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**From:** Swannell, Andy [mailto:Andy.Swannell@Milton-keynes.gov.uk]

**Sent:**

**To:** J

<Sar

**Cc:** la

<Mar

rob

stuar

<Nic

<Pau

.com>;

**Subject:** RE: Caldecote Farm, Newport Pagnell - Proposed Highway Improvements

Good morning James,

Having discussed the issues of principle with my road safety colleague we have concluded that the Road Restraint Systems (RRS) is required. We are unsure why such a system hasn't been fully installed to date but it is clear that the consequences of not having a fully compliant RSS is not something that could be defended in a scenario where a vehicle may stray across the central reserve strip.

If I understand you correctly this will invoke the need for a 50mph speed limit on the approach to Marsh End roundabout. Whilst a high mast signal could overcome the visibility issue I feel that the approach speeds will need to be controlled.

Have speed surveys been carried out on all approaches to the roundabout? I can't remember seeing any but obviously the current 85%ile approach speeds will have a bearing on what is feasible at the roundabout.

There is a concern regarding how traffic travelling east and getting a green signal at the roundabout then perceives a red signal for the cycle crossing and if there is sufficient SSD to allow safe approach/stop. Thames Valley Police will need to be involved in the assessment of your final scheme to ensure they have no objections.

I confirm that the existing laybys will not need to be replaced.

We would be happy to enter into an easement agreement with the owner of the western arm signal approach road in order that as local highway authority, we are able to maintain the induction loops.

Kind regards,

Andy Swannell  
Senior Engineer – (Transport Development Management)  
T: 01908 252047  
E: [Andy.Swannell@milton-keynes.gov.uk](mailto:Andy.Swannell@milton-keynes.gov.uk)  
Web <http://www.milton-keynes.gov.uk>  
Milton Keynes Council | Public Realm Services Group | Synergy Park | Chesney Wold | Milton Keynes MK9 3EJ

Please note my working days are Tuesday – Thursday inclusive.

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**From:** [REDACTED]  
**Sent:** 1 [REDACTED]  
**To:** Sw [REDACTED]  
**Cc:** Ian [REDACTED]  
[matt.m](mailto:matt.m)  
[ben@ox](mailto:ben@ox)  
**Subjec** [REDACTED]

Dear All,

Thanks for meeting us on the 14<sup>th</sup> June 2018 in order to discuss the above draft proposals. In terms of actions, please can you review and response to the following list:-

- 1, MKC to confirm if Road Restraint Systems (RRS) are required on the H3 Monks Way arm. If so, are MKC willing to accept Stopping Sight Distance (SSD), measured to the 'object height' on this approach to the proposed junction, potentially being restricted due to the height of the RRS, based on 295m SSD / 120kph Design Speed. Please note that SSD would have to be reduced to 160m (85kph Design Speed / 50mph Speed Limit) in order for SSD to be unrestricted by any RRS within the central reserve on this approach;
- 2, MKC to confirm whether the existing lay-bys on the H3 Monks Way and A422 approaches to the Marsh End Road Junction can be removed by the scheme proposals and not relocated;
- 3, ADC are to review the current arrangement of Willen Road North in order to reduce the lengths of this proposed 3 lane approach to the Marsh End Road Junction. Following this review, PBA will look to alter the geometric layout of this arm in order to provide a wider footway / cycle track (Redway) at the current pinch point (located 80m north of the Marsh End Road Junction). Thank you for confirming that the traffic capacity currently being provided on this arm could be reduced in order to provide greater priority to NMUs, and a Redway of greater width on Willen Road North. However, it should be noted that any proposals are limited by the constraint of the existing highway boundary;
- 4, With regards to the western arm of the proposed development signalised junction i.e. the access road serving the development, MKC to confirm that induction loops associated with this junction, which would extend no more than 80m into the development access, can be located beyond the extent of the proposed highway boundary. An agreement would need to be entered into with the landowner regarding access rights to these items of infrastructure;

5, ADC to review the location of the Toucan style controlled crossing point on the northern arm of the proposed development signalised junction. ADC to determine any capacity issues should this controlled crossing be relocated to the southern arm of this junction. PBA to identify any design / operational / road safety risks associated with this proposal;

I trust the above is clear, however, please contact myself or Stuart to discuss further as required.

Kind regards,

**James Horne**

Principal Engineer

For and on behalf of Peter Brett Associates LLP - [Northampton](#)



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Project:	<b>Highways England Spatial Planning Arrangement</b>	Job No:	<b>60506522 DM012.001</b>
Subject:	<b>Land West of Willen Road Scoping Review</b>		
Prepared by:	<b>John Paul Hipkin</b>	Date:	<b>29/11/2017</b>
Checked by:	<b>Liz Judson</b>	Date:	<b>30/11/2017</b>
Verified & Approved by:	<b>John Alderman</b>	Date:	<b>4/12/2017</b>

---

## 1. Introduction

1.1. This Technical Note (TN) has been prepared by AECOM, on behalf of Highways England (HE), to review the 'Transport Assessment Scoping Report' prepared by ADC Infrastructure (ADC), the developer's transport consultant, for a large employment development. The development site is located on Land West of Willen Road, Newport Pagnell. The purpose of this TN is to review the scoping report's highway impact methodology and consider whether this is appropriate for the forthcoming TA in order to inform HE as to the potential impact of the proposed development on the strategic road network (SRN).

1.2. The development proposals comprise two large B8 warehouse and distribution units with ancillary B1 office use, totalling 74,693sqm GFA of B8 land use and 4,459sqm GFA of B1 land use. The site is located north east of Milton Keynes, to the east of the M1. The nearest point of access to the SRN is M1 Junction 14, located 2.25km away from the site. The review will focus on the developments' potential impact on the strategic road network, with particular focus on M1 J14 where this development could have its greatest impact.

1.3. This TN will review the following aspects of the scoping report:

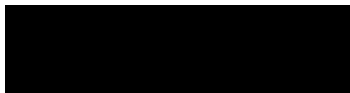
- Proposed trip rates/traffic generation;
- Proposed distribution/assignment;
- Future year assessment flows (including traffic growth and committed developments); and
- The potential increase in trips on the strategic road network as a result of development traffic, particularly at M1 Junction 14.

1.4. It should be noted that this TN will not review the car parking or access proposals outlined within the Scoping Report. Furthermore, AECOM will not comment on expected aspects of a forthcoming TA that have not been included within the Scoping Report (such as existing transport conditions or travel plan proposals).

## 2. Development Proposals

2.1. The development proposals comprise two large B8 warehouse and distribution units with ancillary B1 office use:

- Unit 1 comprises 46,822sqm of B8 warehousing and 3,344sqm of ancillary B1 office. The warehouse will be constructed in two phases, with 31,029sqm in Phase One and 15,793sqm in Phase Two.
- Unit Two comprises 27,871sqm of B8 warehousing and 1,115sqm of ancillary office use.





### 3. Policy Context

- 3.1. The SR has not outlined the policy documents that would be considered and reviewed within the forthcoming TA. In addition to relevant national, regional and local planning and guidance documentation, it is also recommended that reference is made to DfT Circular 02/2013, which provides guidance regarding how the impact of the proposed development on the SRN should be assessed together with 'The strategic road network: Planning for the future (A guide to working with Highways England on planning matters)'.
- 3.2. AECOM note that ADC make reference throughout the note to the currently adopted Core Strategy 2013, however Milton Keynes have recently released the proposed submission version of the emerging local Plan – Plan:MK. Although this document is not yet adopted, it is recommended that the emerging local plan is considered alongside the existing Core Strategy within the forthcoming TA. If Plan:MK is adopted before a planning application is submitted then reference to the Core Strategy is not required.
- 3.3. AECOM also understand that the development has been included within the Plan:MK Emerging Plan as part of a wider mixed-use Strategic Urban Extension (Policy SD6 - Eastern Expansion Area). It should be noted that this document is at submission stage and is not yet adopted.

### 4. Trip Generation

- 4.1. The developers, Roxhill Developments Ltd, have built a number of large scale B8 developments. These sites have been surveyed and the data stored for re-use on future projects. ADC has identified the Swan Valley development as the most comparable site to the proposed development. Swan Valley is located south of Northampton within close proximity to M1 J15a.
- 4.2. The Swan Valley site was surveyed in 2007 and the Scoping Report states that there are a number of similar attributes to the proposed development (i.e. size, location, shift patterns and typical employment density for B8 warehousing).
- 4.3. ADC undertook a comparison of Swan Valley trip rates with an average of some similar TRICS sites and other Roxhill developments Ltd surveyed sites. The resulting comparison showed that for light vehicle trip rates, Swan Valley trip rates were greater than the average while for HGV trip rates the TRICS trip rates were greater. In order to be robust, ADC has used the highest trip rates from the two data sets for vehicle types (Swan Valley for Light Vehicle trip rates and TRICS for HGV trip rates).
- 4.4. Furthermore, ADC has identified that the shoulder peak of 1600-1700 in the PM peak period generates more vehicle trips than the peak hour 1700-1800. ADC has used the trip rates for this shoulder peak for robustness, an approach AECOM welcome.
- 4.5. In order to determine whether the trip rates presented within the Scoping Report are considered reasonable, AECOM have undertaken their own trip generation assessment using TRICs and the following comparison tables present the differences between the findings.

**Table 1: AM Peak Development Trip Comparison**

Vehicle Type	ADC			AECOM			Comparison		
	arrive	depart	two-way	Arrive	depart	two-way	arrive	depart	two-way
Light Vehicles	96	10	106	82	44	125	-14	34	20
HGV	19	17	36	27	24	51	8	7	15
Total	115	27	142	109	67	176	-6	41	34

**Table 2: PM Peak Development Trip Comparison**

Vehicle Type	ADC			AECOM			Comparison		
	arrive	depart	two-way	arrive	depart	two-way	arrive	depart	two-way
Light Vehicles	32	111	142	31	72	103	-1	-39	-39
HGV	17	15	32	15	26	41	-2	11	9
Total	49	126	174	46	98	144	-3	-28	-30

+20 Vehicles	ADC's forecast higher than AECOM's forecast
-20 Vehicles	AECOM's forecast higher than ADC's forecast

4.6. and Table 2 suggest that ADC figures may be slightly underestimating total vehicle trips in the AM peak and slightly overestimating in the PM peak by around 30 vehicles in both scenarios.

4.7. The Scoping Report states that the proposed development is for B8 warehouse and distribution units. It is unclear exactly what type of B8 unit will be provided. The trip rates outlined above are based on the 'Warehousing (Commercial)' category. If the end user is a parcel distribution centre (falling into the 'Parcel Distribution Centres' category in TRICS) the AECOM consider that the trip rate could be significantly higher. Whilst it appears that the intention is for this site to operate in a similar way to Swan Valley, with similar trip rates, clarification should be provided on this by ADC.

## 5. Trip Distribution and Assignment

### Light vehicles (staff and visitors)

5.1. ADC state that they have used employment distribution derived from the 2011 Census Journey to Work (JTW) data for the distribution of light vehicles. Although the development site is located within the Milton Keynes 002 MSOA, ADC has used the Milton Keynes 007 MSOA as it includes the employment estate adjacent to the proposed development site. As the majority of Milton Keynes 002 MSOA is both sparsely populated and predominantly rural, AECOM believe that the chosen MSOA 007 would be more representative of work travel distribution for the proposed site and therefore agree with this approach.

5.2. AECOM have undertaken checks on this vehicle distribution by interrogating the 2011 JTW data. Although AECOM found some small discrepancies between the two data sets, AECOM broadly consider that ADC's distribution values are reasonable.

### Heavy vehicles

5.3. For HGV distribution values ADC have applied the following values:

**Table 3: ADC HGV Distribution**

Route	Percentage
M1 (S)	40.00%
M1 (N)	40.00%
A509 (E)	10.00%
A422 (W)	10.00%

5.4. Although there isn't a clear evidence base for this HGV distribution AECOM consider that, the assumptions appear reasonable. Following a review of the ADC spreadsheet assessments in Appendix E of the SR, AECOM consider that vehicle distribution has been assigned appropriately to the network. It was noted that the HGV assignment is split 50/50 for HGVs routing through M1 J14. ADC anticipate that 50% of HGV trips to/from site wishing to use the SRN will route south via Willen Road/Tongwell Street, while the other 50% are anticipated to route to the M1 J14 via the A422/A509. Due to the large number of HGV trips associated with a B8 development, it is recommended that a HGV route plan for HGVs entering/leaving site is established that will accommodate the anticipated distribution of HGVs to and from the site. The routing and assignment selected has the potential to reduce the impact upon the operation of M1 Junction 14 by minimising right turn movements, although this does not appear to be the approach taken within the Scoping Report, however consideration may need to be given to the operation of the A509/Childs Way, Northfield Roundabout. A potential concern from Highways England's perspective could be the potential for the development to adversely affect the operation of the A509 Northfield Roundabout such that the queues that develop, extend back to, and impact upon, the operation of M1 Junction 14.

## 6. Observed Traffic Flows

6.1. ADC state that the observed traffic counts were undertaken at the following four junctions located on the local road network near the proposed development site:

- Marsh End Roundabout;
- Tickford Roundabout;
- Tongwell Roundabout; and
- Pineham Roundabout.

6.2. The SR states that the observed traffic counts were undertaken on Tuesday 18<sup>th</sup> October 2016 during both the AM and PM peak periods. No traffic counts were undertaken at M1 junction 14. The impact of proposed development is discussed within the Highway Impact Assessment chapter of this note.

6.3. Although the observed data was undertaken during a neutral time period, it is unclear within the scoping report if any other days were analysed during the survey period to understand if the traffic that day was typical. If further assessment is required of M1 Junction 14 and traffic counts are obtained then it is recommended that evidence is provided to determine whether traffic flows were typical during that period.

## 7. Traffic Growth

7.1. ADC states that future year (2026) growth factors were obtained using TEMPro v7.2 for 'all roads' in the Milton Keynes 007 area. AECOM undertook their own assessment of growth factors for the Milton Keynes MSOA 007 and were able to replicate the figures produced in the SR for 'all roads'. AECOM also undertook an assessment of growth figures for the surrounding MSOAs and at district

level for motorway and principal roads, the differences between values were insignificant and therefore AECOM broadly consider that the use of 'all roads' is reasonable.

## 8. Committed Developments

- 8.1. Figure 5 of the SR identifies the major development sites within Milton Keynes. Of these developments, the SR has identified Milton Keynes North Expansion Area and the Eastern Expansion Area as major developments that could generate traffic through the study area, however, ADC state that large parts of these developments have already been built out and therefore would have been incorporated within the base year observed flows. ADC therefore state that any flows associated with the remaining committed development will be accounted for within the growth factors and therefore to avoid double counting the trips associated with the development still to be built out these have not been included in the forecast year flows.
- 8.2. Whilst AECOM consider that there is no requirement for double counting flows, there is the potential that flows associated with the remaining build out could have a specific point impact at junctions (including M1 Junction 14). It is recommended that the forthcoming TA clarifies how much of the committed development was built out prior to the traffic surveys (or any further surveys undertaken on M1 Junction 14) and how much is still to be built out. Depending on the remainder to be built out further consideration of the point impact of the committed developments on individual junctions may need to be undertaken.
- 8.3. Figure 6 within the SR identifies Tickford Fields Farm Strategic Reserve Site, a large residential led extension within close proximity to the site (within 1 mile). The development proposals for this site contain around 1,280 homes, a primary school and a local centre, however, at the time of writing no planning permissions had been submitted. AECOM understand that this proposed development has been identified within Milton Keynes emerging plan and the Newport Pagnell Neighbourhood Plan. Furthermore, AECOM understand that a screening option request (17/00340/EIASCR) was submitted in 09/02/2017 deciding that an Environmental Impact Assessment (EIA) is required. The identification of this development the emerging local plan in addition to a screening option request suggests that the development may be coming forward in the future. However, as the site does not yet have planning permission then AECOM consider that it is reasonable for ADC to exclude its specific impact from the committed development assumptions.

## 9. Highway Impact Assessment

- 9.1. ADC has forecast that a total of 61 development trips (32 light vehicles, 29 HGVs) are expected to route through M1 junction 14 in the AM peak and 69 development trips (44 light vehicles, 25 HGVs) in the PM peak. ADC state that this is unlikely to have a material impact on the junction as the traffic will likely be spread over all arms. Following our own review of the site's potential trip generation, AECOM forecast that a further 16 vehicles (4 lights, 12 heavies) could route through M1 J14 in the AM peak, totalling approximately 76 vehicles. AECOM calculate that the total number of trips predicted by ADC to route through the junction in the PM peak is robust.
- 9.2. AECOM consider that this impact could be material and therefore recommend that assessment of the impact of development on the junction is undertaken. AECOM are concerned that the M1 J14 already experiences congestion on all approach arms in both the AM and PM peaks, particularly on the M1 offslips. It is therefore recommended that a junction assessment is undertaken to determine whether the impact of development traffic, over and above the forecast year reference case, is considered to be severe and if so, whether measures would be required to mitigate the impact. If mitigation measures are required, the details of these measures should be presented to ensure that the junction(s) operate effectively following development.

9.3. ADC has identified 2026 as the only future year assessment for the proposed development site, in line with the end of the Current Core Strategy. DfT Circular 02/2013 indicates that an opening year assessment should be undertaken (including full development) and that any mitigation measures that are identified for the SRN should be based on this opening year assessment. It is unclear when the proposed development is anticipated to be built out, however, once this is clarified, ADC should base their opening year assessment and any mitigation measures on this.

9.4. The DfT Circular 02/2013 also indicates that a future year 'review period' assessment should be undertaken (10 years after the planning application is submitted or at the end of the Local Plan period, whichever is later). The Milton Keynes Emerging Local Plan period ends in 2031. If this plan is adopted prior to the submission of a planning application for this development site then it is recommended that the 'review' period forecast year of 2031 is adopted.

## 10. Summary

10.1. This technical note has been prepared by AECOM on behalf of Highways England to document a review of a Transport Scoping Report associated with the Land West of Willen Road, Newport Pagnell.

10.2. AECOM have raised a number of recommendations throughout this note, which are underlined for ease of reference. It is recommended that these comments and recommendations are taken forward by ADC when they are preparing the forthcoming TA to fully assess the impact of the proposed development on the operation of the strategic road network. AECOM have summarised the recommendations below:

- The SR has not outlined the policy documents that would be considered and reviewed within the forthcoming TA. In addition to relevant national, regional and local planning and guidance documentation, it is also recommended that reference is made to DfT Circular 02/2013, which provides guidance regarding how the impact of the proposed development on the SRN should be assessed together with 'The strategic road network: Planning for the future (A guide to working with Highways England on planning matters)'.
- AECOM consider that the trip rates outlined within the Scoping Report may be underestimating the potential trip generation in the AM peak. When these trips are distributed across the network there is the potential that ADC are underestimating the number of AM peak trips at M1 Junction 14.
- AECOM broadly agree with the PM peak trip generation
- AECOM broadly agree with the proposed light and heavy vehicle trip distribution.
- The Scoping Report states that the proposed development is for B8 warehouse and distribution units. It is unclear exactly what type of B8 unit will be provided, which could affect the trip generation of the site. Whilst it appears that the intention is for this site to operate in a similar way to the Swan Valley warehouse, with similar trip rates, clarification should be provided on this by ADC.
- Due to the large number of HGV trips associated with a B8 development, it is recommended that a HGV route plan for HGVs entering/leaving site is established that will accommodate the anticipated distribution and assignment of HGVs to/from the site. The routing and assignment selected has the potential to minimise the impact upon the operation of M1

Junction 14, although this does not appear to be the approach taken within the Scoping Report, however consideration may need to be given to the operation of the A509/Childs Way Northfield Roundabout and its consequential impact on M1 Junction 14.

- Although the observed data was undertaken during a neutral time period, it is unclear within the scoping report if any other days were analysed during the survey period to understand if the traffic that day was typical. As further assessment is required of M1 Junction 14 and traffic counts are obtained then it is recommended that evidence is provided to determine whether traffic flows were typical during that period.
- ADC state that large parts of the identified committed developments have already been built out and therefore would have been incorporated within the base year observed flows. It is recommended that the forthcoming TA clarifies how much of the committed development was built out prior to the traffic surveys (or any further surveys undertaken on M1 Junction 14) and how much is still to be built out. Depending on the remainder to be built out further consideration of the point impact of the committed developments on individual junctions may need to be undertaken.
- AECOM consider that the impact of the proposed development on M1 Junction 14 would be material and it is recommended that junction capacity assessments should be undertaken to understand the impact of the development on the operation of the SRN and establish whether mitigation measures are required. If mitigation measures are required, the details of these measures should be presented to ensure that the junction operate effectively following development.
- ADC has identified 2026 as the only future year assessment for the proposed development site and has not identified an opening year assessment. The DfT Circular 02/2013 indicates that an opening year assessment (including full development) and a 'review period' should be undertaken and that any mitigation measures that are identified for the SRN should be based on this opening year assessment. It is unclear when the proposed development is anticipated to be built out, however, once this is clarified, ADC should base their opening year assessment and any mitigation measures on this. The 'review period' assessment should be undertaken (10 years after the planning application is submitted or at the end of the Local Plan period, whichever is later). The Milton Keynes Emerging Local Plan period ends in 2031 and therefore it is recommended that the 'review period' assessment should be based on this.

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**HIGHWAY OBSERVATIONS FOR: 18/01719/FUL**

**DATE: 10/8/2018**  
**CONTACT: SMT**  
**TEL: 01908 690463**

**APPLICATION FOR: Hybrid application comprising: Full application for one storage and distribution unit (Class B8) and Outline application for the creation of an enterprise park (Class B1b, B1c and B2) on land at Caldecote Farm, Willen Road, Newport Pagnell.**

**Summary of advice from Transport Development Management**

- |  |                                     |
|--|-------------------------------------|
| No objection   | <input type="checkbox"/>            |
| No objection subject to condition(s)                           | <input checked="" type="checkbox"/> |
| Object to the Planning Application                             | <input type="checkbox"/>            |
| Application needs amending and/or further information required | <input type="checkbox"/>            |

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This a part detailed and part outline planning application for industrial / employment uses. The outline element has all matter reserved for subsequent approval except for access. These comments are based on the following information for the "Zone 1" (Full Application) element:

B8 – 45,505m<sup>2</sup> GFA (Masterplan / Application form)  
B1 element 3,392m<sup>2</sup> (TA)  
Net B8 42,113m<sup>2</sup>

Parking comprising:  
8 EV spaces  
23 Disabled car spaces  
523 standard car spaces  
136 HGV spaces  
110 cycle spaces  
9 PTW spaces

The application is accompanied by a Transport Assessment, including information relating to off-site highway works in the form of junction improvements and cycle provision. The TA considers and assesses the impacts of both the 'Full' and 'Outline' parts of the proposal.

## **General**

The principle of employment development on this site is acceptable in highway terms.

The proposals incorporate a single means of access to the site, which is proposed as a signalised junction. This has been considered in the TA and is deemed appropriate as it will minimise the impact on traffic on Willen Road and provides a crossing point for pedestrians and cyclists.

The internal site layout for the Full application element appears to be satisfactory, although parking provision is covered below. Tracking diagrams are provided within the TA.

It is noted that the Outline application element does not indicate any HGV parking, EV parking, PTW parking or cycle parking. Whilst approval of the layout for this part of the scheme is not sought, it would be advisable to impose a condition on any consent issued requiring the Reserved Matters to include these types of parking in accordance with the Council's standards.

## **Parking**

The site is in Zone 4 for the purposes of calculating the parking standards. For car parking, the relevant standards require 422 spaces for the B8 element and 113 for the B1 office, making 535 spaces. Additionally, the standards require 8 EV spaces; 3 for the first 100 standard spaces and 1 per 100 spaces thereafter. This makes the total requirement 543 spaces (of which 5%, 27 spaces, should be for disabled use).

The site is providing 554 spaces, comprising 523 standard bays, 23 bays for disabled use and 8 EV bays. This provision matches or exceeds the Council's standards in overall terms; however, the disabled provision is slightly low (23 vs 27 spaces).

The PTW provision (9 spaces) matches the requirement in the standards.

Cycle parking for 110 cycles is proposed. The TA estimates a cycle parking requirement of 146 spaces, but there is some double counting and the estimate is based on floorspace rather employee numbers, which results in a higher figure. The standards require 2 spaces for visitors, which is for the whole unit. In addition, the standards require 1 space per 500m<sup>2</sup> for B1 and 1 per 1000m<sup>2</sup> for B8; 6.8 spaces and 42.1 spaces respectively. This gives a total casual provision of 51 (50.9) spaces.

The standards also require 1 space per 10 FTE staff; based on 205 FTE staff (Application Form) the requirement for staff parking is 20.5 spaces. This gives a total cycle parking requirement of 72 spaces (50.9 + 20.5), which seems more appropriate to the proposed use.

The cycle parking should be secure, covered and conveniently located. However, no details of the parking type and any covering have been provided and the Masterplan seems to show it located remote from the main staff entrance.



The requirement for HGV parking (1:300m<sup>2</sup>) is 141 spaces, based on the nett area of 42,113m<sup>2</sup> of B8. The provision indicated on the Masterplan is 136 spaces, which is considered to be acceptable.

## **Transport Assessment**

The Transport Assessment has been prepared following scoping discussions and meetings with the Council. The scope and methodology of the TA is acceptable.

As expected the TA assesses the existing situation with regard to the transport network in the area. Traffic counts have been undertaken at various locations close to the site and this data is presented in the TA. An assessment of the accessibility of the site by non-car modes has also been undertaken.

The TA acknowledges that there is currently no pedestrian provision to the site, that cycling is on carriageway and that bus services are not ideal, particularly for evenings and weekends.

The proposals include the provision of a Redway link between Tongwell Roundabout, to the south, and the junction of Marsh End Road and Willen Road to the north. This provision was requested by the Council and is welcomed as part of the off-site highway works proposed by the applicant.

The TA also acknowledges that a contribution towards the improvement of local bus services would be appropriate. Again, this is welcomed; however, the figure of £650,000 proposed in the TA will need further discussion as part of the s.106 negotiation.

With regard to traffic impact, the TA has assessed the situation on local roads in 2026 with the development completed. The junctions assessed were Tickford, Marsh End, Tongwell, Pineham and Northfield roundabouts. The peak hour impacts at these junctions are approximately 60, 110, 110, 65 and 40 two-way movements respectively.

The assessment shows that some arms of some of these junctions are at or over capacity. Therefore, the development traffic will add some additional vehicles to the queues at these junctions; however, in lieu of small mitigation schemes at selected arms of these junctions, the comprehensive scheme at the Marsh End roundabout has been accepted.

To meet the requirements of Highways England, an assessment of Junction 14 was carried out. HE required a future year test for the junction, which has been carried out for 2031.

While there are some minor issues to note about the assessment method (as described in the note attached as Annex A) the TA conclusions are accepted. The TA proposes a comprehensive improvement of the Marsh End roundabout with a signalised roundabout. The capacity assessment shows that a traffic signal solution is required.

It was agreed at the scoping stage that improvements to other local junctions would not be sought in order that the full scheme for the Marsh End roundabout would be provided by the developer rather than just a contribution.

## **Summary**

This hybrid application is for the erection of a large B8 unit (Full) and a business park (Outline); it is accompanied by a TA, which has reviewed the transport impacts of the development.

The TA is acceptable and it has been agreed that the applicant should provide:

- A contribution to public transport (bus) services;
- A comprehensive improvement scheme (signalised roundabout) at the Marsh End roundabout;
- A new Redway linking the Tongwell roundabout (H4) to the junction of Willen Road and Marsh End Road in Newport Pagnell (approx. 1.2km).

The internal site layout is acceptable in highway terms and the parking provision for vehicles is also acceptable. Cycle provision needs further clarification regarding the location, security and weatherproof nature of the facilities.

There is a proposed (indicative) layout for the Outline element of the application, which does not show adequate parking provision.

Consequently, subject to securing the 3 bulleted items above via a s.106 agreement and the conditions listed below, there is no objection to planning consent being issued.

## **Conditions**

1. Development shall not commence until such time as details of the proposed cycle parking provision for the B8/B1 unit in "Zone 1" have been submitted to and approved in writing by the LPA and the unit shall not be occupied until the cycle parking has been provided in accordance with the approved details. The cycle parking shall be retained thereafter.

Reason: To ensure a satisfactory standard of cycle parking for the proposed development.

2. The proposed parking and manoeuvring areas shown on the Masterplan for "Zone 1" shall be laid out prior to the occupation of the B8/B1 unit and shall be retained thereafter.

Reason: To ensure that satisfactory parking and manoeuvring provision is made and retained.

3. Development shall not commence until such time as details of the proposed improvements to Marsh End Roundabout have been submitted to and approved in writing by the LPA and no part of the development shall be occupied until the improvements works have been implemented in accordance with the approved plans.

Reason: to ensure that the required highway works are implemented prior to the development being brought into use.

4. Development shall not commence until such time as details of the proposed Redway linking Tongwell Roundabout and the junction of Marsh End Road with Willen Road have been submitted to and approved in writing by the LPA and no part of the development shall be occupied until the Redway has been constructed in accordance with the approved details.

Reason: To ensure that the proposed Redway is available for use prior to the development being brought into use.

5. Notwithstanding the details shown on the plans submitted with this application, the Reserved Matters submitted for approval pursuant to Outline permission shall include parking for EVs, PTWs, Cycles and HGVs in accordance with the Council's Parking Standards.

Reason: To ensure a satisfactory parking provision and for the avoidance of doubt.

Stirling Maynard Transportation  
for  
Milton Keynes Council – Transport Development Management

# ANNEX A

## **Review of the traffic impact assessment within the Transport Assessment for Caldecote Farm, Willen Road, Newport Pagnell 18/01719/FUL**

### **Introduction**

ADC Infrastructure Ltd has prepared a Transport Assessment for a proposed development on land at Willen Road, Newport Pagnell. The development assessed in the TA comprises:

- 47,530 sqm B8 warehouse (Makita unit)
- 28,520 sqm B1(b)/B1(c)/B2 Enterprise Park

The traffic impact assessment includes analysis of the following junctions:

1. A422/A509 (Tickford roundabout)
2. A422/Willen Road (Marsh End roundabout)
3. Willen Road/Dansteed Way (Tongwell roundabout)
4. A509/Tongwell Street/V11 (Pineham roundabout)
5. A509/H6 Childs Way/A5130 Fen Street (Northfield roundabout)
6. M1 Junction 14

### **Traffic Counts**

Turning counts were carried out for junctions 1-4 in October 2016 and junctions 5 and 6 in May 2018. From the counts the AM & PM peak hours were identified as 08.00-09.00 and 17.00-18.00 respectively. Traffic flows past the proposed site access on Willen Road have been derived from the Willen Road arm of the Marsh End roundabout.

### **Traffic Generation**

Trip rates for the Makita unit have been agreed with MKC and Highways England and are appropriate. For the enterprise park, the TRICS database has been interrogated to find a site closest in composition/site location, accessibility etc & their trip rates have been used. The selected site is in an edge of town location, close to the M6 and has a total GFA 23,480m<sup>2</sup>, comprising 10% B1(a) and 90% B1(b).

## **Distribution**

Distribution of non-HGV development traffic has been carried out using 2011 Census journey-to-work data. Trips at the middle layer super output area (MSOA) have been used and although the site is located in Milton Keynes 002 MSOA, this covers a wide area including several villages and would not give a sensible distribution for a large employment area. The adjoining MK 007 MSOA has similar characteristics as the development site and has been used for distribution; this is acceptable.

Distribution of HGV development traffic was agreed at the scoping stage. MKC & Highways England have also agreed the assignment of traffic to/from the M1.

## **Traffic Growth**

Junction analysis with & without development has been carried out on junctions 1-5 for 2026 and junction 6 for 2031.

The observed traffic flows have been factored to 2026 and 2031 using TEMPRO with growth rates for 'all roads' in MK 007 MSOA. Whilst this area was acceptable to assess distribution, the area containing the site (MK 002 MSOA) should have been used for traffic growth.

However, the table below shows only small differences (slightly lower in the AM peak and slightly higher in the PM) when comparing the TEMPRO factors for the 2 MSOAs. Therefore, the difference in the junction assessments would be minimal and no reassessment is required as a result.

<b>From</b>	<b>To</b>	<b>Time</b>	<b>MK 007</b>	<b>MK 002</b>	<b>Difference</b>
<b>2016</b>	<b>2026</b>	AM	1.1797	1.1721	-0.076
		PM	1.1773	1.1796	+0.023
<b>2018</b>	<b>2031</b>	AM	1.1935	1.1867	-0.068
		PM	1.1945	1.1999	+0.054

## **Junction Analyses**

### **Tickford roundabout**

The input geometry is acceptable. Without development, the roundabout is well over capacity with queues on the A422-West and A509-South arms in the evening and morning peaks respectively. With 27 extra development trips (3.8%), A509-South PM queues increase from 106 to 125. With 43 extra development trips (2.1%), A422-West PM queues rise from 250 to 278. ADC argue that with the modest increases, no mitigation is required; improvements to the Marsh End roundabout have been agreed in lieu of a contribution to improve this junction.

### **Marsh End Roundabout**

Without development the roundabout is already over capacity and the additional development traffic will have a significant impact. Therefore, a comprehensive improvement scheme has been designed to signalise Marsh End roundabout and install signals at the site access.

This has been modelled in LINSIG for 2026 with development traffic. The turning flows for the two junctions have been used to create one matrix where: A = Tickford Road N, B = A422 E, C= A422 W, D = Willen Road S, E = Site Access, F = Glenfield Access.

When checking the turning flows, the development distribution appears to have gone askew. The corrected flows are shown in the tables below (with the incorrect flows in brackets):

#### **2026 AM with development (PCUs)**

<b>From/To</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>Total</b>
<b>A</b>	0	43	306	726 (697)	8 (35)	0	<b>1083</b>
<b>B</b>	62	1	1285	942 (941)	48	0	<b>2338</b>
<b>C</b>	305	894	18	54 (83)	31 (4)	0	<b>1302</b>
<b>D</b>	296 (279)	315 (320)	14 (26)	0	86	0	<b>711</b>
<b>E</b>	2 (17)	26 (19)	10 (2)	36	0	0	<b>74</b>
<b>F</b>	0	0	0	0	0	0	<b>0</b>
<b>Total</b>	<b>665</b>	<b>1279</b>	<b>1633</b>	<b>1758</b>	<b>173</b>	<b>0</b>	

### 2026 PM with development (PCUs)

<b>From/To</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>Total</b>
<b>A</b>	0	127	227	298 (285)	2 (16)	0	<b>654</b>
<b>B</b>	211	0	1001	278 (284)	21 (16)	0	<b>1511</b>
<b>C</b>	502	1462	14	21 (27)	11 (2)	0	<b>2010</b>
<b>D</b>	493 (459)	476 (480)	16 (46)	0	28	0	<b>1013</b>
<b>E</b>	9 (43)	49 (45)	35 (4)	95	0	0	<b>74</b>
<b>F</b>	0	0	0	0	0	0	<b>0</b>
<b>Total</b>	<b>1215</b>	<b>2114</b>	<b>1293</b>	<b>692</b>	<b>62</b>	<b>0</b>	

Apart from these incorrect flows, the remaining LINSIG inputs are acceptable. Checking the LINSIG assessment with the corrected flows actually makes very little difference to the overall results. The scheme significantly improves the performance of Marsh End roundabout.

### **Tongwell roundabout**

The input geometry is acceptable. Whilst there are no problems in the evening peak, the roundabout is just at capacity in the morning peak. With development, the queue at Willen Road arm increases from 27 to 43 vehicles; the Tongwell Street queue increases from 9 to 15 vehicles.

The junction was then tested with an increased flare length at the Willen Road arm. Whilst this improves the Willen Road arm, it makes the Tongwell Street arm slightly worse. (NB. Para 7.38 is not accepted; the fact that the junction operates well outside the AM peak is not a reason to suggest no mitigation is required.) Improvements to the Marsh End roundabout have been agreed in lieu of a contribution to improve this junction.

### **Pineham roundabout**

Like Tongwell roundabout, there are no capacity issues in the evening, but it is at capacity in the morning. The extra 27 development trips on A509-East cause queues to increase from 26 to 36 vehicles. ADC argue that this is not a severe impact & with part-time traffic signals already there, these could be used to manage future peak hour traffic. Improvements to the Marsh End roundabout have been agreed in lieu of a contribution to improve this junction.



## **Northfield Roundabout and M1 Junction 14**

Both junctions have been tested together in LINSIG. The TA demonstrates that the development makes little difference to the performance of either junction. Therefore, no mitigation is required.

### **Summary**

The traffic impact of the proposed development has been assessed at 6 key junctions surrounding the site. The impact methodology has some minor issues; however, these do not materially affect the results and should not affect the conclusions in the TA.

The full improvement of Marsh End roundabout in lieu of several smaller schemes is proposed as part of the TA, which appears appropriate given the nature and distribution of the impacts.

The traffic impact assessment is accepted.

## PublicAccessEDRMS

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**From:** Adkins, Connor <[REDACTED]>  
**Sent:** 28 September 2018 10:26  
**To:** [REDACTED]@si.gov.uk'  
**Subject:** [EXT] planning application 18/01719/FUL  
**Attachments:** 18-01719-FUL Rec.pdf; Town and Country Planning - Development Affecting Trunk Roads - Direction 2018 (3).pdf

**Importance:** High

**Categories:** To index

Dear Ms Thompson

Please find the attached Highways England comments on the above planning application.

Yours sincerely  
Connor Adkins

**Connor Adkins**

Highways England | Woodlands | Manton Lane | Bedford | MK41 7LW  
[REDACTED]

Web: <http://www.highways.gov.uk>

GTN: 0300 470 4744

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## Developments Affecting Trunk Roads and Special Roads

### Highways England Planning Response (HEPR 16-01)

### Formal Recommendation to an Application for Planning Permission

From: Martin Fellows  
Operations (East)  
[planningee@highwaysengland.co.uk](mailto:planningee@highwaysengland.co.uk)

To: Milton Keynes Council

CC: [transportplanning@dft.gsi.gov.uk](mailto:transportplanning@dft.gsi.gov.uk)  
[growthandplanning@highwaysengland.co.uk](mailto:growthandplanning@highwaysengland.co.uk)

Council's Reference: 18/01719/FUL

Referring to the Hybrid planning application referenced above, dated 12 September 2018, comprising: a) Full application for one storage and distribution unit (Class B8) with associated car parking, servicing, landscaping, earth bunding and on & off-site drainage; b) Outline application for the creation of an enterprise park providing units within Class B1b, B1c and B2 (all matters reserved other than site access) at Caldecote Farm, Willen Road, Newport Pagnell, MK16 0JJ, notice is hereby given that Highways England's formal recommendation is that we:

- ~~a) offer no objection;~~
- b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A – Highways England recommended Planning Conditions);
- ~~e) recommend that planning permission not be granted for a specified period (see Annex A – further assessment required);~~
- ~~d) recommend that the application be refused (see Annex A – Reasons for recommending Refusal).~~

Highways Act Section 175B is / is not relevant to this application.<sup>1</sup>

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<sup>1</sup> Where relevant, further information will be provided within Annex A.

This represents Highways England formal recommendation and is copied to the Department for Transport as per the terms of our Licence.

Should you disagree with this recommendation you should consult the Secretary of State for Transport, as per the Town and Country Planning (Development Affecting Trunk Roads) Direction 2018, via [transportplanning@dft.gsi.gov.uk](mailto:transportplanning@dft.gsi.gov.uk).

<b>Signature:</b> [REDACTED]	<b>Date:</b> 28 September 2018
<b>Name:</b> Shamsul Hoque	<b>Position:</b> Spatial Planning Manager
<b>Highways England:</b> Woodlands, Manton Lane Bedford MK41 7LW	
[REDACTED]	

#### Annex A Highways England recommended Planning Conditions

HIGHWAYS ENGLAND has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). The SRN is a critical national asset and as such we work to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its long-term operation and integrity.

This response represents our formal recommendations with regards to 18/01719/FUL and has been prepared by Shamsul Hoque.

#### **Development Proposal**

Caldecote Farm at Willen Road, Newport Pagnell is a hybrid application consisting of a detailed full application (i.e.; B8 warehouse and B1 office use) and an outline application (i.e.; B1b, B1c and B2 consisting of 13 individual units). The proposed site is strategically located approximately 2.5km north west of strategic road network of M1 junction 14.

#### **Highways England's Review of Transport Assessment & Travel Plan**

AECOM have undertaken the technical review of the Transport Assessment for Highways England (HE). AECOM's Technical Note 02, dated 21/09/2018 has already been forwarded to the Council. The review noted that all vehicular trip generation, distribution and assignment, routing via M1 junction 14, were considered

as previously agreed at the scoping stage. Future year and forecasting years -2026 and 2031 were assessed in the TA, as agreed with Highways England.

Within the TA five local highway road junctions and M1 junction 14 were assessed, which lead to a signalized capacity improvement at Marsh End Roundabout, Willen Road. As a result of this mitigation the traffic from the proposed development does not appear to have a significant traffic impact on the M1 junction 14.

Assessment of the proposed Travel Plan showed that there are limited sustainable transport modes in the location currently. Highways England are therefore requesting that the Council imposes the following planning condition on any grant of planning permission.

### **Planning Condition**

The following Framework Travel Plan condition should be included in any grant of planning permission.

A Framework Travel Plan shall be approved in writing by the Local Planning Authority in conjunction with the Highways England. The Travel Plan shall include the following:

- The identification of targets for trip reduction and modal shift;
- The methods to be employed to meet these targets;
- The mechanisms for monitoring and review;
- The mechanisms for reporting;
- The penalties to be applied in the event that targets are not met;
- The mechanisms for mitigation;
- Implementation of the travel plan to be agreed timescale or timescale and its operation thereafter;
- Mechanisms to secure variations to the travel plan following monitoring and reviews.

The completed development shall be occupied in accordance with the approved travel plan which shall be retained in place thereafter unless otherwise amended in accordance with a review to be agreed in writing by the Local Planning Authority in conjunction with the Highways England

Before the development is brought into use the Framework Travel Plan is to be reviewed by the planning authority in consultation with the Highways England to take on board conditions prevailing at the time and adjustments made to accommodate them.

**REASON:** To ensure the M1 motorway continues to serve its purpose as part of a national system of routes for through traffic, to satisfy the reasonable requirements of road safety on the M1 motorway and connecting roads in accordance with section 10 of the Highways Act 1980.

## THE TOWN AND COUNTRY PLANNING (DEVELOPMENT AFFECTING TRUNK ROADS) DIRECTION 2018

The Secretary of State, in exercise of the powers conferred by articles 18(4), 31(1) and 45 of the Town and Country Planning (Development Management Procedure) (England) Order 2015<sup>1</sup> (“the Order”), directs as follows;

1. This Direction shall come into force on the 23<sup>rd</sup> February 2018
2. In this Direction “strategic highways company” means a company for the time being appointed under Part 1 of the Infrastructure Act 2015.
3. This Direction applies where—
  - (a) A local planning authority consults a strategic highways company under article 18 or 20 of the Order before granting planning permission;
  - (b) The strategic highways company makes a recommendation as to the determination of the application for planning permission; and
  - (c) The local planning authority does not propose to determine the application in accordance with that recommendation.
4. The local planning authority must consult the Secretary of State and, for that purpose, must as soon as practicable send to the Secretary of State—
  - (a) A copy of the application together with any accompanying plans and drawings;
  - (b) A copy of any representations made to the local planning authority in respect of the application (including those made by the company); and
  - (c) The reasons why the local planning authority does not propose to determine the application in accordance with the strategic highways company’s recommendation.
5. The local planning authority must not determine the application unless—
  - (a) The Secretary of State gives a direction under article 31 of the Order in respect of the application (and the authority must then determine the application in accordance with the terms of the direction); or
  - (b) The authority receives notification by or on behalf of the Secretary of State that the Secretary of State does not propose to give any such direction in respect of the application; or
  - (c) A period of 21 days beginning with the date which the Secretary of State tells the authority in writing is the date the Secretary of State received the material specified in paragraph 4, has elapsed without the Secretary of State giving such a direction.
6. The Town and Country Planning (Development Affecting Trunk Roads) Direction 2015 is cancelled.

Signed on behalf of the Secretary of State for Transport



Director General  
Department for Transport

Date 23<sup>rd</sup> February 2018

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<sup>1</sup> S.I. 2015/595, amended by S.I. 2017/402 and S.I. 2017/571.

## APPENDIX B

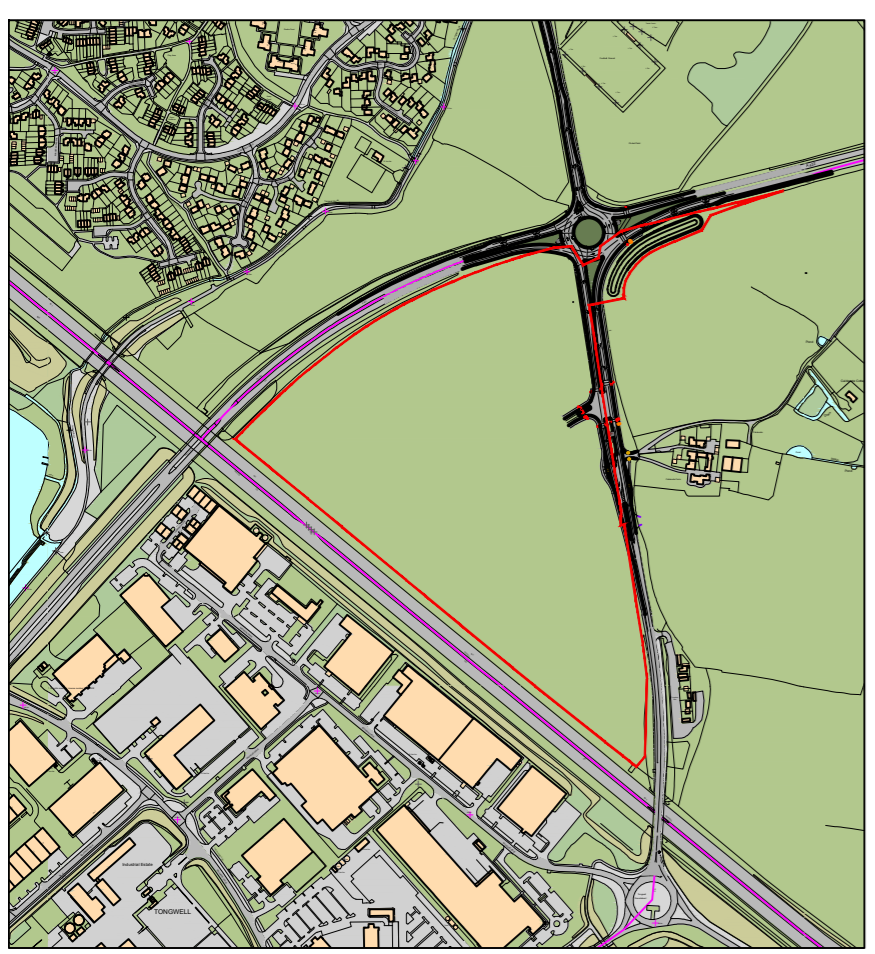
# DEVELOPMENT MASTERPLAN



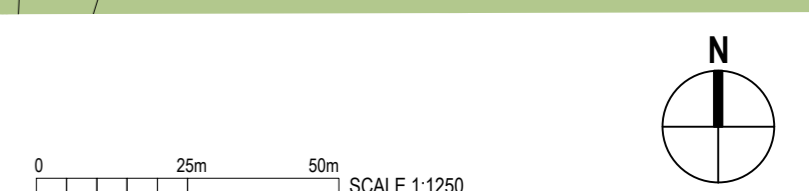


UNIT 1 Gross Internal Areas		
Warehouse	480,005 ft <sup>2</sup>	44,594 m <sup>2</sup>
Office (3 floors)	24,340 ft <sup>2</sup>	2,261 m <sup>2</sup>
Hub Office (2 floors)	2,000 ft <sup>2</sup>	186 m <sup>2</sup>
<b>TOTAL</b>	<b>506,345 ft<sup>2</sup></b>	<b>47,041 m<sup>2</sup></b>
Gatehouse	366 ft <sup>2</sup>	34 m <sup>2</sup>
<b>TOTAL</b>	<b>506,711 ft<sup>2</sup></b>	<b>47,075 m<sup>2</sup></b>
10.04 ha (24.82 acres)		

UNIT 2 Gross Internal Areas		
Warehouse	345,000 ft <sup>2</sup>	32,116 m <sup>2</sup>
Office (3 floors)	21,000 ft <sup>2</sup>	1,950 m <sup>2</sup>
Hub Office (2 floors)	2,000 ft <sup>2</sup>	186 m <sup>2</sup>
<b>SUB TOTAL</b>	<b>368,000 ft<sup>2</sup></b>	<b>34,252 m<sup>2</sup></b>
Gatehouse	366 ft <sup>2</sup>	34 m <sup>2</sup>
<b>TOTAL</b>	<b>368,366 ft<sup>2</sup></b>	<b>34,286 m<sup>2</sup></b>
8.68 ha (21.45 acres)		



LOCATION PLAN SCALE 1:10000



**LAND AT CALDECOTE FARM  
NEWPORT PAGNELL**

**SEGRO NEWPORT  
PAGNELL LTD**

**pHp Architects**  
www.peter-haddon.com

**PROPOSED MASTERPLAN**

Drawing Status:	PRELIMINARY
CAD Reference:	4179 - SK015
Drawn:	CW
Date:	JUNE 2018
Scale:	1: @ A1 1:1250

Project No:	Drawing No:	Rev:
4179-01	SK015	P36



# APPENDIX C

## TRAFFIC COUNTS





Place: **Newport Pagnell**  
Date: **15.05.2018**

Weather: **Sunny**  
Junction: **M1 J14**

Client: **ADC Infrastructure Ltd**  
Order no: **ADC1392**

Page: **2**  
of: **2**

Time Begin	Entering on: M1 Eastbound												Total Vehs	PCUs	Entering on: M1 Westbound												Total Vehs	PCUs	Grand Totals
	Left turn to: London Road NB			Straight over to: M1 EB			Right Turn to: A509 SB			U-turn to: M1 WB					Left turn to: A509 SB			Straight on to: M1 WB			Right turn to: London Road NB			U-turn to: M1 EB					
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
0730	59	8	67	0	0	0	0	0	0	0	0	0	67		335	14	349	0	0	0	0	0	0	0	0	0	349		349
0745	65	1	66	0	0	0	0	0	0	0	0	0	66		353	5	358	0	0	0	0	0	0	0	0	0	358		358
0800	33	2	35	0	0	0	0	0	0	0	0	0	35		310	6	316	0	0	0	0	0	0	0	0	0	316		316
0815	40	6	46	0	0	0	0	0	0	0	0	0	46		350	10	360	0	0	0	0	0	0	0	0	0	360		360
0830	45	5	50	0	0	0	0	0	0	0	0	0	50		334	16	350	0	0	0	0	0	0	0	0	0	350		350
0845	52	5	57	0	0	0	0	0	0	0	0	0	57		330	12	342	0	0	0	0	0	0	0	0	0	342		342
0900	46	8	54	0	0	0	0	0	0	0	0	0	54		240	11	251	0	0	0	0	0	0	0	0	0	251		251
0915	25	4	29	0	0	0	0	0	0	0	0	0	29		199	12	211	0	0	0	0	0	0	0	0	0	211		211
<b>Total</b>	<b>365</b>	<b>39</b>	<b>404</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>404</b>		<b>2451</b>	<b>86</b>	<b>2537</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2537</b>		<b>2537</b>
1630	31	3	34	0	0	0	0	0	0	0	0	0	34		128	6	134	0	0	0	0	0	0	0	0	0	134		134
1645	48	8	56	0	0	0	0	0	0	0	0	0	56		142	3	145	0	0	0	0	0	0	0	0	0	145		145
1700	49	5	54	0	0	0	0	0	0	0	0	0	54		157	5	162	0	0	0	0	0	0	0	0	0	162		162
1715	46	4	50	0	0	0	0	0	0	0	0	0	50		149	11	160	0	0	0	0	0	0	0	0	0	160		160
1730	57	2	59	0	0	0	0	0	0	0	0	0	59		158	4	162	0	0	0	0	0	0	0	0	0	162		162
1745	61	6	67	0	0	0	0	0	0	0	0	0	67		151	4	155	0	0	0	0	0	0	0	0	0	155		155
1800	44	1	45	0	0	0	0	0	0	0	0	0	45		172	7	179	0	0	0	0	0	0	0	0	0	179		179
1815	51	1	52	0	0	0	0	0	0	0	0	0	52		135	7	142	0	0	0	0	0	0	0	0	0	142		142
<b>Total</b>	<b>387</b>	<b>30</b>	<b>417</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>417</b>		<b>1192</b>	<b>47</b>	<b>1239</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1239</b>		<b>1239</b>



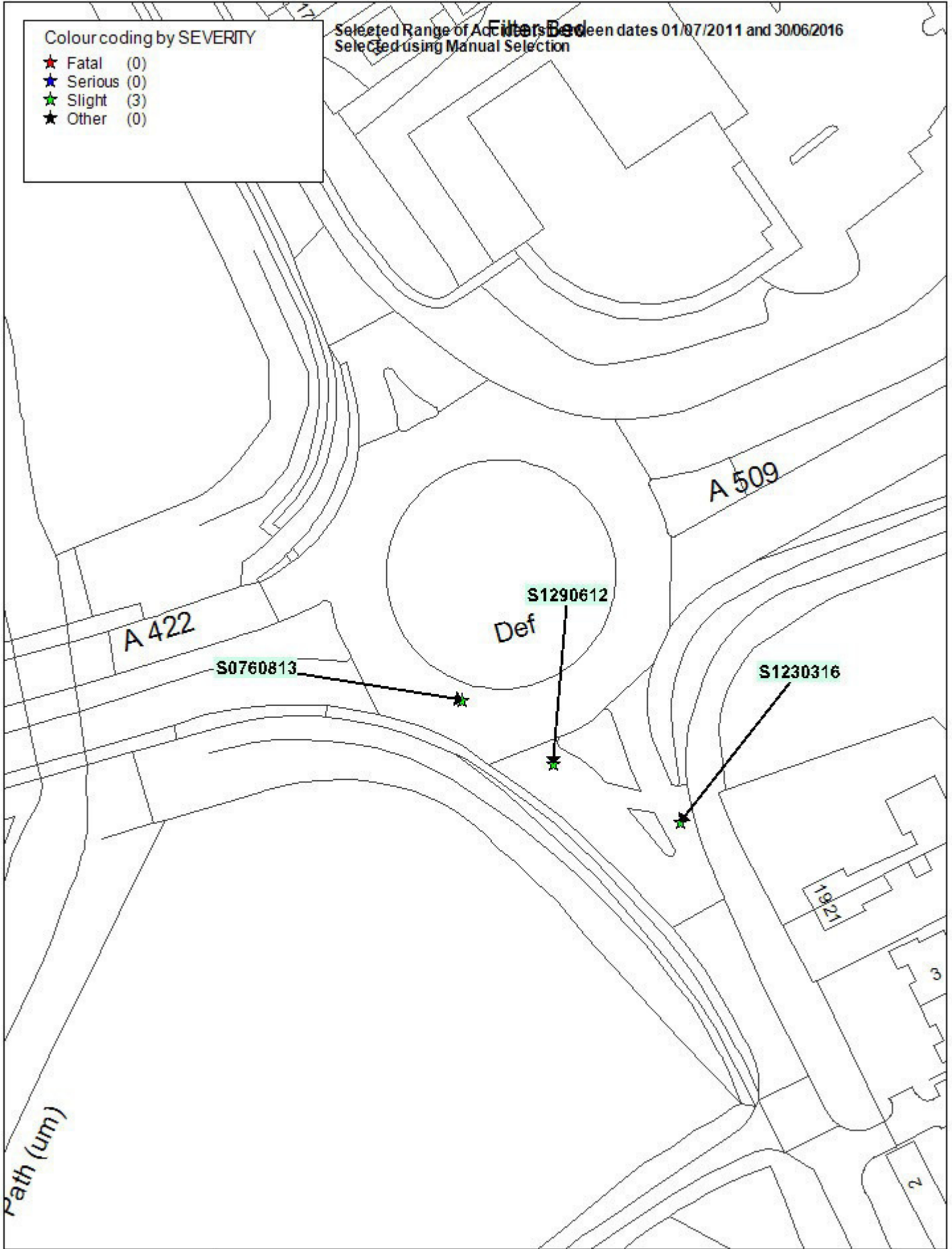
## APPENDIX D

### PIA DATA

Colour coding by SEVERITY

- ★ Fatal (0)
- ★ Serious (0)
- ★ Slight (3)
- ★ Other (0)

Selected Range of Accident Dates between dates 01/07/2011 and 30/06/2016  
 Selected using Manual Selection



Selected map area

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SCALE	1 : 870
DATE	20/10/2016
DRAWING No.	
DRAWN BY	

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Thursday 07/06/2012 Time 2213 Slight at A422 JNC A509 TICKFORD ROUNDABOUT, NEWPORT PAGNELL, MILTON KEYNES

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Darkness: street lights present and lit

C2 TRAV NORTH ON A509 STAT AT RBT ENTRY, C1 STAT BEHIND C2, DRVR C1 THOUGHT C2 WOULD MOVE OFF SO C1 MOVED OFF & HIT REAR C2. C2 STILL STAT.

Road Type Single carriageway Vehicles 2 Casualties 1 Police Ref. S1290612 Speed limit 60

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 162 Accident Type(s) NB

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from SE to N Starting

Not foreign registered vehicle

On main carriageway No skidding, jack-knifing or overturning

First point of impact Front Parts damaged: 0 0 0 Age of Driver 62 Sex of Driver Female Breath test Negative

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference	2	Car		Moving from	SE	to	N		Going ahead but held up
Not foreign registered vehicle									
On main carriageway									
First point of impact	Back	Parts damaged:	0 0 0	Age of Driver	26	Sex of Driver	Male	No skidding, jack-knifing or overturning	Breath test Negative
Casualty Reference:	1	Age:	26	Male	Driver/rider	Severity:	Slight	Injured by vehicle:	2
Cycle helmet Not a cyclist									
Ped. Location	Ped. Movement	Ped. Direction	Ped. Injury	0	School pupil:	0			



Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Monday 12/08/2013 Time 1618 Slight at LONDON ROAD JNC A422 TICKFORD ROUNDABOUT, NEWPORT PAGNELL, MILTON KEYNES

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Daylight

C2 TRAV N ON LONDON RD ENTERD RBT FROM LN 3 TO TURN RIGHT, GV1 TRAV SAME DIR ENTERED RBT FROM LN 1 & CROSSED INTO PATH C2 COLL WITH C2.

Road Type Roundabout Vehicles 2 Casualties 1 Police Ref. S0760813 Speed limit 70

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 162 Accident Type(s) CO

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoeuvre	Vehicle 1	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Goods vehicle - unknown weight Moving from S to N Starting Left hand drive: No

On main carriageway No skidding, jack-knifing or overturning  
First point of impact Offside Parts damaged: 0 0 0 Age of Driver 46 Sex of Driver Male Breath test Negative

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference 2 Car Moving from S to N Starting Left hand drive: No

On main carriageway  
First point of impact Nearside Parts damaged: 0 0 0 Age of Driver 67 Sex of Driver Male No skidding, jack-knifing or overturning  
Breath test Negative

Casualty Reference: 1 Age: 67 Male Driver/rider Severity: Slight Injured by vehicle: 2

Seatbelt: Not Applicable

Cycle helmet Not a cyclist

Ped. Location

Ped. Movement

Ped. Direction

Ped. Injury

School pupil: 0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Wednesday 23/03/2016 Time 1726 Slight at LONDON ROAD, JUST SOUTH OF TICKFORD ROUNDABOUT, NEWPORT PAGNELL, MK

E: N: Junction Detail: 8 Control 4

Fine without high winds Road surface Dry Daylight

GV3 (VAN) BROKEN DOWN & PUSHED ONTO DRIVEWAY SOUTH OF RBT, C4 PARKED & DRVR ASSISTING, C2 TRAV S  
EXITED RBT & SLOWING TO TURN LEFT INTO DRIVEWAY, C1 EXITED RBT & COLL WITH REAR C2, C1 THEN HIT GV3 &  
C4.

Road Type Single carriageway Vehicles 4 Casualties 1 Police Ref. S1230316 Speed limit 60

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 201 Accident Type(s) NB

Causation

	Factor:	Participant:	Confidence:
1st:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:	Loss of control	Vehicle 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from N to S Going ahead other Left hand drive: No

On main carriageway  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 25 Sex of Driver Male No skidding, jack-knifing or overturning  
Breath test Negative

Vehicle Reference 2 Car Moving from N to E Turning left Left hand drive: No

On main carriageway  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 32 Sex of Driver Male No skidding, jack-knifing or overturning  
Breath test Negative

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference 3 Van or Goods 3.5 tonnes mgw and under Moving from to Parked Left hand drive: No

On main carriageway  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 30 Sex of Driver Male No skidding, jack-knifing or overturning  
Breath test Not requested

Casualty Reference: 1 Age: 30 Male Driver/rider Severity: Slight Injured by vehicle: 3

Seatbelt: Unknown

Cycle helmet Not a cyclist

Ped. Location Ped. Movement Ped. Direction Ped. Injury School pupil: 0

Vehicle Reference 4 Car Moving from to Parked Left hand drive: No

On main carriageway  
First point of impact Offside Parts damaged: 0 0 0 Age of Driver 60 Sex of Driver Male No skidding, jack-knifing or overturning  
Breath test Not requested

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	0	3	3
2-wheeled motor vehicles	0	0	0	0
Pedal cycles	0	0	0	0
Horses & other	0	0	0	0
Total	0	0	3	3

Casualties:

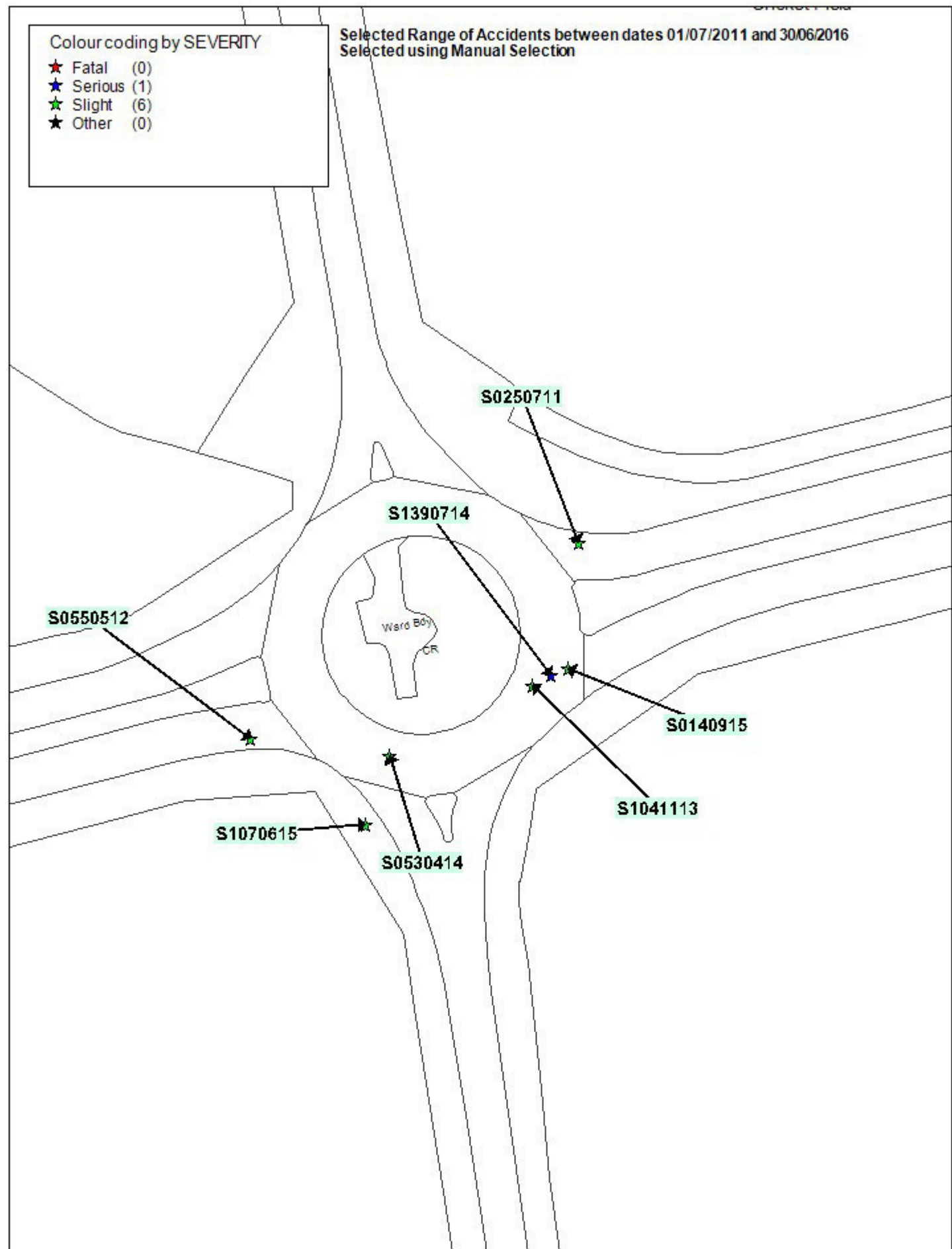
	Fatal	Serious	Slight	Total
Vehicle driver	0	0	3	3
Passenger	0	0	0	0
Motorcycle rider	0	0	0	0
Cyclist	0	0	0	0
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	0	3	3

Number of casualties meeting the criteria: 3

Colour coding by SEVERITY

- ★ Fatal (0)
- ★ Serious (1)
- ★ Slight (6)
- ★ Other (0)

Selected Range of Accidents between dates 01/07/2011 and 30/06/2016  
Selected using Manual Selection



Selected map area

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SCALE	1 : 870
DATE	20/10/2016
DRAWING No.	
DRAWN BY	

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Wednesday 06/07/2011 Time 0925 Slight at A422 JNC WILLEN ROAD ROUNDABOUT, NEWPORT PAGNELL, MILTON KEYNES

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Daylight:street lights present

C2 TRAV EAST ON A422 NEG RBT IN OUTSIDE LN, GV1 TRAV SAME DIR ALONGSIDE C2 NEG RBT IN INSIDE LN, AT EASTBND EXIT FROM RBT GV1 MOVED ACROSS PATH C2 INTO NEARSIDE LN, SIDE SWIPE COLL OCC, C2 PUSHED ONTO N/S VERGE.

Road Type Roundabout Vehicles 2 Casualties 1 Police Ref. S0250711 Speed limit 70

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 208 Accident Type(s) CN

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoeuvre	Vehicle 1	Very Likely
2nd:	Failed to signal/Misleading signal	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Goods 7.5 tonnes mgw and over Moving from W to E Changing lane to left

Not foreign registered vehicle

On main carriageway No skidding, jack-knifing or overturning

First point of impact Nearside Parts damaged: 0 0 0 Age of Driver 63 Sex of Driver Male Breath test Not requested

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference	2	Car		Moving from	W	to	E		Going ahead other				
Not foreign registered vehicle													
On main carriageway													
First point of impact		Offside	Parts damaged:	0	0	0	Age of Driver	37	Sex of Driver	Female	No skidding, jack-knifing or overturning	Breath test	Not requested
Casualty Reference:	1	Age:	37	Female	Driver/rider	Severity:	Slight	Injured by vehicle:	2				
Ped. Location		Ped. Movement		Cycle helmet	Not a cyclist	Ped. Direction		Ped. Injury	0	School pupil:	0		



Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Sunday 13/05/2012 Time 2019 Slight at A422 JNC WILLEN ROAD, MARSH END ROUNDABOUT, NEWPORT PAGNELL, MILTON KEYNES

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Daylight:street lights present

C1 TRAV WEST ON A422, AS C1 EXIT RBT DRVR LOST CONTROL, C1 LEFT C/WAY TO N/SIDE ENTERING DITCH. PROB EXCESS SPEED.

Road Type Dual carriageway Vehicles 1 Casualties 2 Police Ref. S0550512 Speed limit 70

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 208 Accident Type(s) SG

Causation

	Factor:	Participant:	Confidence:
1st:	Travelling too fast for conditions	Vehicle 1	Very Likely
2nd:	Loss of control	Vehicle 1	Very Likely
3rd:	Careless/Reckless/In a hurry	Vehicle 1	
4th:			
5th:			
6th:			

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference	1	Car		Moving from	E	to	W	Going ahead other	
Not foreign registered vehicle									
On main carriageway									
First point of impact	Front	Parts damaged:	0 0 0	Age of Driver	19	Sex of Driver	Male	Skidded	Breath test Negative
Casualty Reference:	1	Age:	18	Female	Passenger	Severity:	Slight	Injured by vehicle:	1
Ped. Location		Ped. Movement		Cycle helmet	Not a cyclist	Ped. Direction		Ped. Injury	0
								School pupil:	0
Casualty Reference:	2	Age:	18	Female	Passenger	Severity:	Slight	Injured by vehicle:	1
Ped. Location		Ped. Movement		Cycle helmet	Not a cyclist	Ped. Direction		Ped. Injury	0
								School pupil:	0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Tuesday 19/11/2013 Time 1625 Slight at A422 JNC WILLEN ROAD, MARSH END ROUNDABOUT, NEWPORT PAGNELL, MK

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Darkness: street lights present and lit

C2 TRAV W ON A422 ENTERD RBT TO EXIT N ONTO WILLEN RD, C1 TRAV ALONGSIDE HIT N/SIDE REAR C2. C1 FAIL TO STOP.

Road Type Dual carriageway Vehicles 2 Casualties 1 Police Ref. S1041113 Speed limit 70

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 208 Accident Type(s) CO

Causation

	Factor:	Participant:	Confidence:
1st:	Following too close	Vehicle 1	Possible
2nd:	Failed to judge other persons path or speed	Vehicle 1	Possible
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from E to W Going ahead other Left hand drive: No

On main carriageway No skidding, jack-knifing or overturning  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 36 Sex of Driver Male Breath test Driver not contacted

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference 2 Car Moving from E to N Turning right Left hand drive: No

On main carriageway  
First point of impact Nearside Parts damaged: 0 0 0 Age of Driver 42 Sex of Driver Female No skidding, jack-knifing or overturning  
Breath test Negative

Casualty Reference: 1 Age: 42 Female Driver/rider Severity: Slight Injured by vehicle: 2

Seatbelt: Unknown

Cycle helmet Not a cyclist

Ped. Location

Ped. Movement

Ped. Direction

Ped. Injury

School pupil: 0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Sunday 13/04/2014 Time 1638 Slight at A422 JNC WILLEN ROAD, MARSH END ROUNDABOUT, NEWPORT PAGNELL, MK

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Daylight

C2 TRAV W ON A422 NEG RBT, C1 TRAV N ON WILLEN RD FAILS TO GIVE WAY & ENTERS RBT (INTND TO TURN LEFT) & COLL WITH N/SIDE C2.

Road Type Dual carriageway Vehicles 2 Casualties 2 Police Ref. S0530414 Speed limit 70

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 208 Accident Type(s) CM

Causation

	Factor:	Participant:	Confidence:
1st:	Inexperienced or learner driver/rider	Vehicle 1	Very Likely
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from S to W Turning left Left hand drive: No

On main carriageway Skidded  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 18 Sex of Driver Female Breath test Negative

Casualty Reference: 1 Age: 42 Female Passenger Severity: Slight Injured by vehicle: 1

Seatbelt: Worn and independently confirmed Cycle helmet Not a cyclist  
Ped. Location Ped. Movement Ped. Direction Ped. Injury School pupil: 0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference 2 Car Moving from E to W Going ahead other Left hand drive: No

On main carriageway No skidding, jack-knifing or overturning  
First point of impact Nearside Parts damaged: 0 0 0 Age of Driver 27 Sex of Driver Female Breath test Negative

Casualty Reference: 2 Age: 6 Male Passenger Severity: Slight Injured by vehicle: 2

Seatbelt: Worn and independently confirmed

Cycle helmet Not a cyclist

Ped. Location Ped. Movement

Ped. Direction Ped. Injury

School pupil: 0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Wednesday 30/07/2014 Time 1900 Serious at A422 JNC WILLEN ROAD, MARSH END ROUNDABOUT, NEWPORT PAGNELL, MK

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Daylight

PC2 TRAV S NEG RBT, C1 TRAV W ON A422 ENTERED RBT FROM O/S LN, DRVR C1 DID NOT SEE PC2 ON RBT, C1 COLL WITH PC2.

Road Type Dual carriageway Vehicles 2 Casualties 1 Police Ref. S1390714 Speed limit 70

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 208 Accident Type(s) CM

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Failed to judge other persons path or speed	Vehicle 1	Very Likely
3rd:	Poor turn or manoeuvre	Vehicle 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from E to W Going ahead other Left hand drive: No

On main carriageway No skidding, jack-knifing or overturning  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 49 Sex of Driver Female Breath test Negative

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference 2 Pedal Cycle Moving from N to S Going ahead other Left hand drive: No

On main carriageway No skidding, jack-knifing or overturning

First point of impact Nearside Parts damaged: 0 0 0 Age of Driver 55 Sex of Driver Male Breath test Not requested

Casualty Reference: 1 Age: 55 Male Driver/rider Severity: Serious Injured by vehicle: 2

Seatbelt: Not Applicable Cycle helmet Yes

Ped. Location Ped. Movement Ped. Direction Ped. Injury School pupil: 0



Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Tuesday 23/06/2015 Time 1002 Slight at A422 JNC WILLEN ROAD, MARSH END ROUNDABOUT, NEWPORT PAGNELL, MK

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Daylight

C1 TRAV W ON A422 AT EXCESS SPEED, DRVR LOST CONTRL ON RBT, C1 HIT CENT ISLAND & LEFT C/WAY AHEAD INTO DITCH. DRVR C1 POS B. TEST.

Road Type Dual carriageway Vehicles 1 Casualties 1 Police Ref. S1070615 Speed limit 70

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 208 Accident Type(s) SG

Causation

	Factor:	Participant:	Confidence:
1st:	Impaired by alcohol	Vehicle 1	Very Likely
2nd:	Loss of control	Vehicle 1	Very Likely
3rd:	Exceeding speed limit	Vehicle 1	
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from E to W Going ahead other Left hand drive: No

On main carriageway No skidding, jack-knifing or overturning  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 41 Sex of Driver Male Breath test Not provided (medical reasons)

Casualty Reference: 1 Age: 41 Male Driver/rider Severity: Slight Injured by vehicle: 1

Seatbelt: Unknown Cycle helmet Not a cyclist

Ped. Location Ped. Movement Ped. Direction Ped. Injury School pupil: 0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Thursday 03/09/2015 Time 0611 Slight at A422 JNC WILLEN ROAD, MARSH END ROUNDABOUT, NEWPORT PAGNELL, MK

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Darkness: street lights present and lit

PC2 TRAV S NEG RBT, C1 TRAV W ON A422 ENTERD RBT INTO PATH PC2, C1 COLL WITH PC2.

Road Type Dual carriageway Vehicles 2 Casualties 1 Police Ref. S0140915 Speed limit 70

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1938 Road Section: 208 Accident Type(s) CM

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Careless/Reckless/In a hurry	Vehicle 1	Very Likely
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from E to W Going ahead other Left hand drive: No

On main carriageway No skidding, jack-knifing or overturning  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 42 Sex of Driver Male Breath test Negative

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference 2 Pedal Cycle Moving from N to S Going ahead other Left hand drive: No

On main carriageway  
First point of impact Back Parts damaged: 0 0 0 Age of Driver 58 Sex of Driver Male No skidding, jack-knifing or overturning  
Breath test Not requested

Casualty Reference: 1 Age: 58 Male Driver/rider Severity: Slight Injured by vehicle: 2

Seatbelt: Not Applicable

Cycle helmet Yes

Ped. Location

Ped. Movement

Ped. Direction

Ped. Injury

School pupil: 0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only (excluding 2-wheels)	0	0	5	5
2-wheeled motor vehicles	0	0	0	0
Pedal cycles	0	1	1	2
Horses & other	0	0	0	0
Total	0	1	6	7

Casualties:

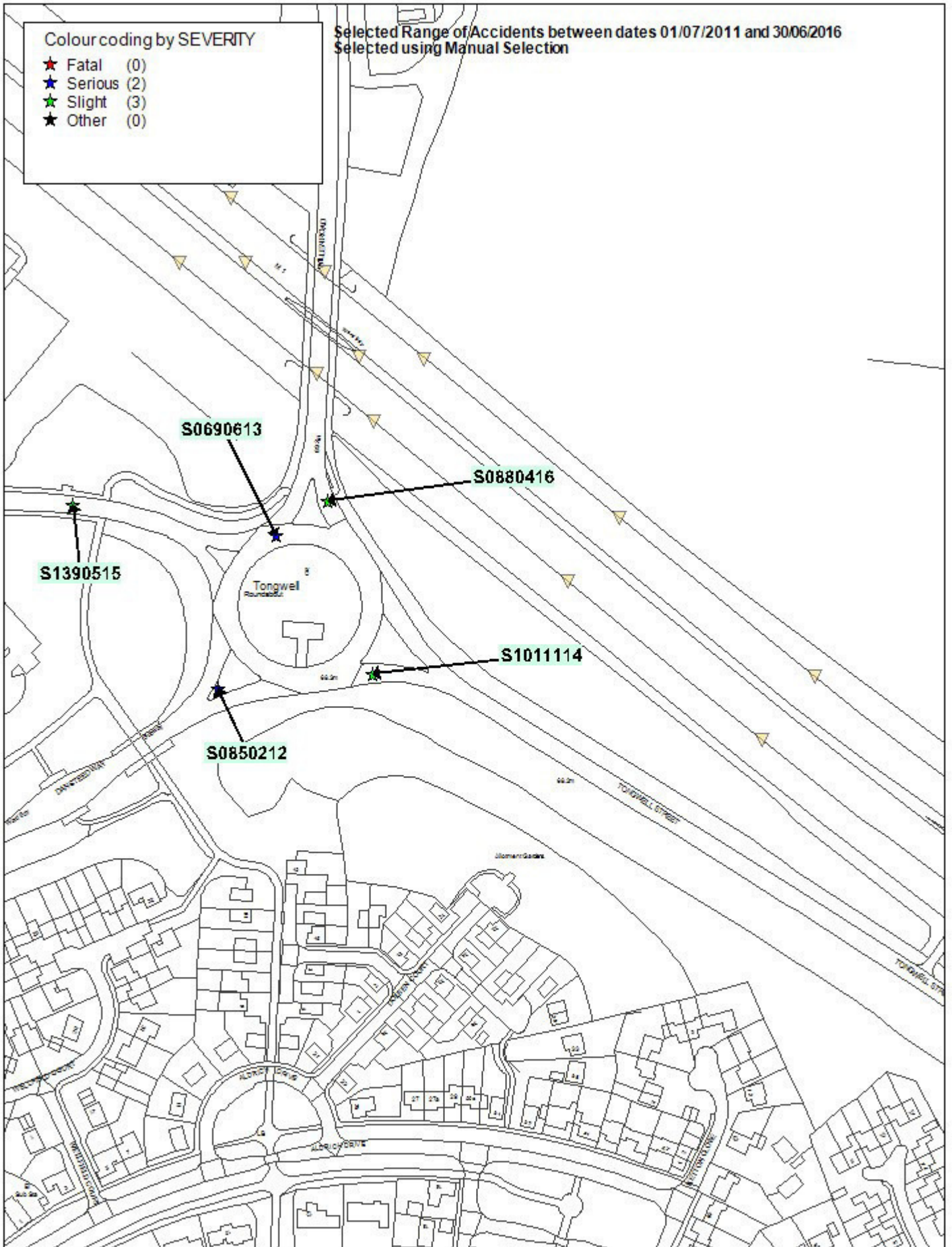
	Fatal	Serious	Slight	Total
Vehicle driver	0	0	3	3
Passenger	0	0	4	4
Motorcycle rider	0	0	0	0
Cyclist	0	1	1	2
Pedestrian	0	0	0	0
Other	0	0	0	0
Total	0	1	8	9

Number of casualties meeting the criteria: 9

Colour coding by SEVERITY

- ★ Fatal (0)
- ★ Serious (2)
- ★ Slight (3)
- ★ Other (0)

Selected Range of Accidents between dates 01/07/2011 and 30/06/2016  
 Selected using Manual Selection



Selected map area

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SCALE	1 : 2020
DATE	20/10/2016
DRAWING No.	
DRAWN BY	

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Friday 24/02/2012 Time 0429 Serious at H4 JNC MICHIGAN DRIVE, TONGWELL ROUNDABOUT, TONGWELL, MK

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Wet/Damp Darkness: street lights present and lit

C1 (STOLEN VEH) TRAV N/EAST ON H4 APPR RBT AT HIGH SPEED, DRVR FAILS TO NEG RBT, C1 COLL WITH SPLITTER ISLAND THEN MOUNTS RBT CENTRAL ISLAND. DRVR POS B. TEST (& DRUGS?).

Road Type Roundabout Vehicles 1 Casualties 3 Police Ref. S0850212 Speed limit 60

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1983 Road Section: 8 Accident Type(s) SG

Causation

	Factor:	Participant:	Confidence:
1st:	Exceeding speed limit	Vehicle 1	Possible
2nd:	Junction overshoot	Vehicle 1	Very Likely
3rd:	Impaired by alcohol	Vehicle 1	Very Likely
4th:	Impaired by drugs (illicit or medicinal)	Vehicle 1	Very Likely
5th:	Aggressive driving	Vehicle 1	Very Likely
6th:	Stolen vehicle	Vehicle 1	Very Likely

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference	1	Car		Moving from	S	to	NE	Going ahead other
Not foreign registered vehicle								
On main carriageway								
First point of impact	Front	Parts damaged:	0 0 0	Age of Driver	18	Sex of Driver	Male	No skidding, jack-knifing or overturning Breath test Positive
Casualty Reference:	1	Age:	18	Male	Driver/rider	Severity:	Serious	Injured by vehicle: 1
Ped. Location		Ped. Movement		Cycle helmet	Not a cyclist	Ped. Direction		Ped. Injury
							0	School pupil: 0
Casualty Reference:	2	Age:	19	Female	Passenger	Severity:	Slight	Injured by vehicle: 1
Ped. Location		Ped. Movement		Cycle helmet	Not a cyclist	Ped. Direction		Ped. Injury
							0	School pupil: 0
Casualty Reference:	3	Age:	19	Female	Passenger	Severity:	Serious	Injured by vehicle: 1
Ped. Location		Ped. Movement		Cycle helmet	Not a cyclist	Ped. Direction		Ped. Injury
							0	School pupil: 0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Wednesday 19/06/2013 Time 1710 Serious at V11 JNC MICHIGAN DRIVE, TONGWELL ROUNDABOUT, TONGWELL, MK

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Daylight

C1 STAT ON MICHIGAN DR AT ENTRY TO RBT, MC2 TRAV N ACROSS RBT, C1 PULLED OUT INTO PATH MC2, MC2 HIT O/SIDE FRONT C1 CAUSING RIDER TO FALL.

Road Type Roundabout Vehicles 2 Casualties 1 Police Ref. S0690613 Speed limit 60

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1983 Road Section: 8 Accident Type(s) CO

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Very Likely
2nd:	Travelling too fast for conditions	Vehicle 2	Possible
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from N to SE Going ahead other Left hand drive: No

On main carriageway No skidding, jack-knifing or overturning  
First point of impact Offside Parts damaged: 0 0 0 Age of Driver 39 Sex of Driver Male Breath test Negative



Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference 2 Motorcycle over 500cc Moving from S to NE Going ahead other Left hand drive: No

On main carriageway  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 43 Sex of Driver Male No skidding, jack-knifing or overturning  
Breath test Negative

Casualty Reference: 1 Age: 43 Male Driver/rider Severity: Serious Injured by vehicle: 2

Seatbelt: Not Applicable

Cycle helmet Not a cyclist

Ped. Location

Ped. Movement

Ped. Direction

Ped. Injury

School pupil: 0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Tuesday 18/11/2014 Time 1745 Slight at V11 JNC H4 TONGWELL ROUNDABOUT, WILLEN, MK

E: N: Junction Detail: 1 Control 4

Fine without high winds Road surface Dry Darkness: street lights present and lit

C2 & C1 TRAV N/WEST ON V11 STAT AT RBT, C2 MOVED OFF THEN STOPPED FOR APPR VEH, C1 MOVED OFF & HIT REAR C2.

Road Type Single carriageway Vehicles 2 Casualties 1 Police Ref. S1011114 Speed limit 60

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1983 Road Section: 8 Accident Type(s) NB

Causation

	Factor:	Participant:	Confidence:
1st:	Failed to look properly	Vehicle 1	Possible
2nd:	Sudden braking	Vehicle 2	Possible
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from SE to S Starting Left hand drive: No

On main carriageway No skidding, jack-knifing or overturning  
First point of impact Front Parts damaged: 0 0 0 Age of Driver 29 Sex of Driver Female Breath test Driver not contacted

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Vehicle Reference 2 Car Moving from SE to S Stopping Left hand drive: No

On main carriageway  
First point of impact Back Parts damaged: 0 0 0 Age of Driver 59 Sex of Driver Female No skidding, jack-knifing or overturning  
Breath test Driver not contacted

Casualty Reference: 1 Age: 26 Female Passenger Severity: Slight Injured by vehicle: 2

Seatbelt: Unknown

Cycle helmet Not a cyclist

Ped. Location

Ped. Movement

Ped. Direction

Ped. Injury

School pupil: 0

Accidents between dates 01/07/2011 and 30/06/2016 (60) months

Selection: Notes:

Selected using Pre-defined Query :

**CONFIDENTIAL ROAD ACCIDENT INFORMATION: NOT TO BE TRANSMITTED TO THIRD PARTIES**

Wednesday 27/05/2015 Time 1715 Slight at MICHIGAN DRIVE, NEAR DANSTEED WAY, TONGWELL, MK

E: N: Junction Detail: 0 Control

Fine without high winds Road surface Dry Daylight

C1 TRAV S/EAST ON MICHIGAN DR OVR TK OTHER VEH ON APPR TO RBT & HIT REAR C2 STAT AHEAD.

Road Type Single carriageway Vehicles 2 Casualties 1 Police Ref. S1390515 Speed limit 30

Crossing: Control 0 Facilities 0 Local Authority: E06000042 Parish: 1983 Road Section: 3 Accident Type(s) OO

Causation

	Factor:	Participant:	Confidence:
1st:	Poor turn or manoevre	Vehicle 1	Possible
2nd:			
3rd:			
4th:			
5th:			
6th:			

Vehicle Reference 1 Car Moving from N to SE Overtaking moving vehicle ~~On~~ hand drive: No

On main carriageway No skidding, jack-knifing or overturning  
 First point of impact Front Parts damaged: 0 0 0 Age of Driver 35 Sex of Driver Male Breath test Negative