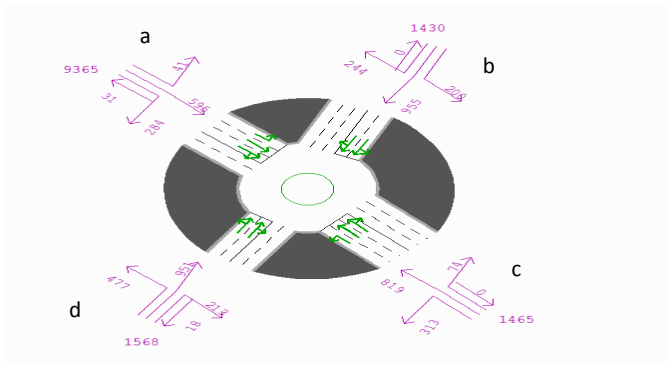
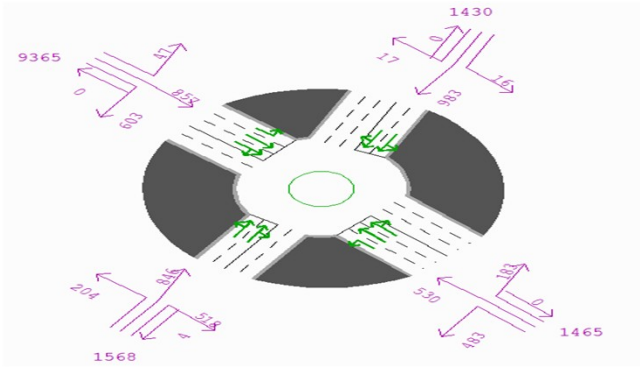
Bleak Hall Roundabout

Scenario 1 - AM Peak



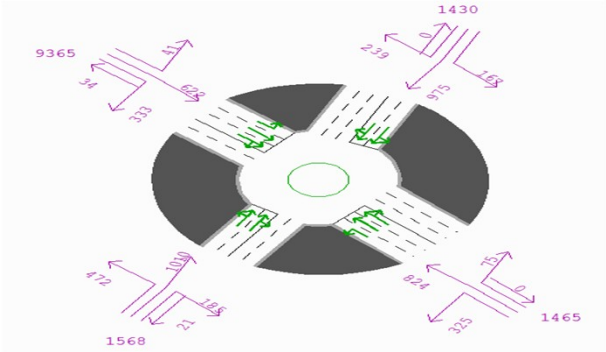
	A	B	C	D	Total
A	31	41	595	284	951
B	244	-	200	955	1399
C	819	74	-	313	1206
D	477	951	213	18	1659
Total In	1571	1066	1008	1570	

Scenario 1 - PM Peak



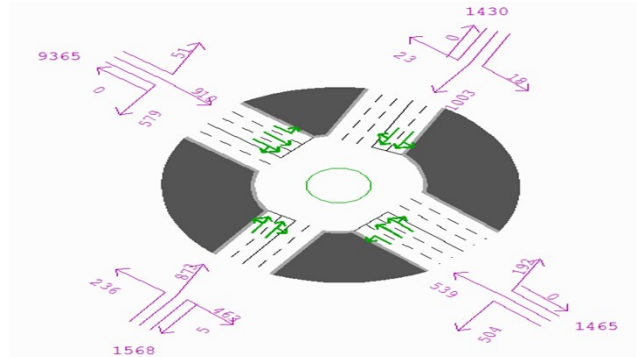
	A	B	C	D	Total
A	-	47	857	603	1507
B	17	-	17	983	1017
C	531	184	-	483	1198
D	204	846	518	4	1572
Total In	752	1077	1392	2073	

Scenario 2 - AM Peak



	A	B	C	D	Total
A	34	41	622	333	996
B	239	-	167	975	1381
C	824	75	-	325	1224
D	472	1010	185	21	1667
Total In	1535	1126	974	1633	

Scenario 2 - PM Peak



	A	B	C	D	Total
A	-	51	910	579	1540
B	23	-	18	1003	1044
C	539	192	-	504	1235
D	236	873	463	5	1572
Total In	798	1116	1391	2086	

ABBEY HILL ROUNDABOUT

Scenario S1

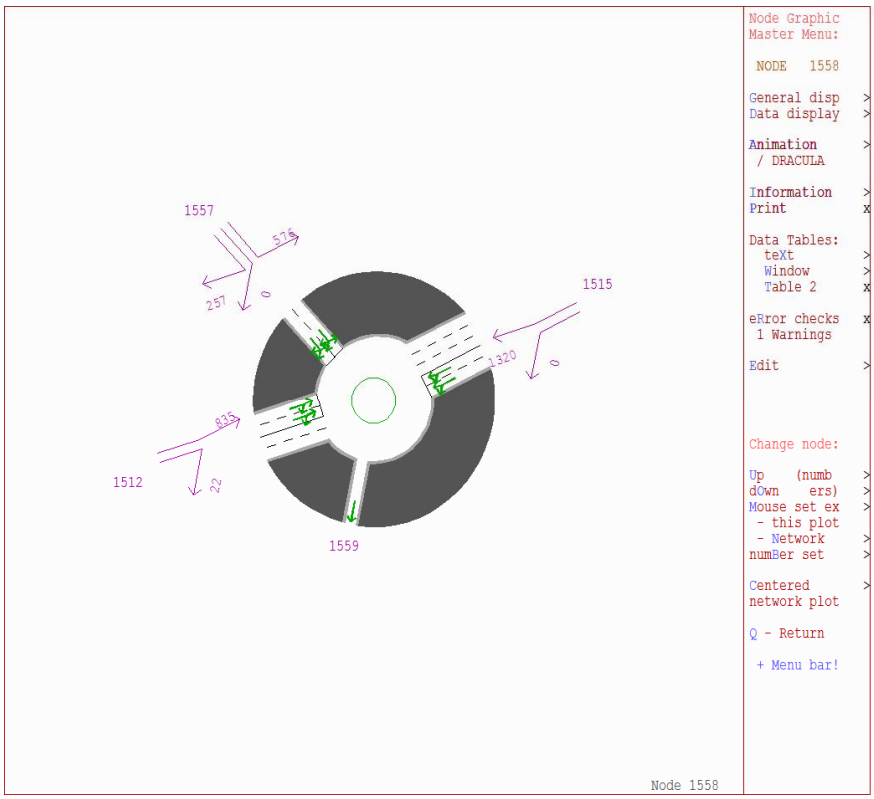
			AM peak			PM peak		
Arm		**Movement**	**Total Vehicles**	**HGV**	**HGV%**	**Total Vehicles**	**HGV**	**HGV%**
A5 northbound	1	first left	233	0	0.0%	320	0	0.0%
A5 northbound	1	second left	373	2	0.6%	215	1	0.6%
A5 northbound	1	ahead	1158	28	2.4%	2196	21	1.0%
A5 northbound	1	first right	671	5	0.8%	786	3	0.4%
A5 northbound	1	second right	146	0	0.3%	330	1	0.2%
Great Monks St Northbound	2	first left	102	3	3.1%	178	0	0.2%
Great Monks St Northbound	2	second left	167	3	1.6%	410	2	0.6%
Great Monks St Northbound	2	ahead	261	0	0.0%	208	0	0.0%
Great Monks St Northbound	2	first right	100	2	1.6%	144	0	0.3%
Great Monks St Northbound	2	second right	103	0	0.0%	132	0	0.0%
Monks Way Eastbound	3	first left	167	2	1.1%	97	0	0.4%
Monks Way Eastbound	3	second left	31	0	0.0%	6	0	0.0%
Monks Way Eastbound	3	ahead	364	1	0.3%	228	1	0.2%
Monks Way Eastbound	3	first right	65	0	0.1%	165	0	0.0%
Monks Way Eastbound	3	second right	9	0	0.0%	4	0	0.0%
A5 southbound	4	first left	25	1	4.6%	157	1	1.0%
A5 southbound	4	second left	206	4	1.8%	215	3	1.3%
A5 southbound	4	ahead	2755	21	0.8%	1038	15	1.4%
A5 southbound	4	first right	192	1	0.6%	155	1	0.4%
A5 southbound	4	second right	20	0	0.1%	22	1	4.9%
Great Monks St Southbound	5	first left	635	1	0.1%	133	0	0.0%
Great Monks St Southbound	5	second left	632	5	0.8%	484	3	0.7%
Great Monks St Southbound	5	ahead	310	0	0.0%	274	0	0.0%
Great Monks St Southbound	5	first right	72	0	0.0%	16	0	0.0%
Great Monks St Southbound	5	second right	2	0	0.0%	0	0	0.0%
A422 Monks Way Westbound	6	first left	552	12	2.2%	527	10	2.0%
A422 Monks Way Westbound	6	second left	220	0	0.1%	331	1	0.4%
A422 Monks Way Westbound	6	ahead	334	3	0.9%	382	1	0.4%
A422 Monks Way Westbound	6	first right	146	5	3.8%	92	2	1.8%
A422 Monks Way Westbound	6	second right	1	0	0.0%	4	0	0.0%
		Total	**3114**	**28**	**1%**	**2421**	**20**	**1%**

Scenario S2

			AM peak			PM peak		
Arm		**Movement**	**Total Vehicles**	**HGV**	**HGV%**	**Total Vehicles**	**HGV**	**HGV%**
A5 northbound	1	first left	236	0	0.0%	329	0	0.0%
A5 northbound	1	second left	371	2	0.6%	216	1	0.6%
A5 northbound	1	ahead	1148	29	2.5%	2216	22	1.0%
A5 northbound	1	first right	675	5	0.7%	786	3	0.4%
A5 northbound	1	second right	155	0	0.0%	337	1	0.2%
Great Monks St Northbound	2	first left	99	3	3.1%	170	0	0.2%
Great Monks St Northbound	2	second left	168	3	1.6%	424	3	0.6%
Great Monks St Northbound	2	ahead	261	0	0.0%	204	0	0.0%
Great Monks St Northbound	2	first right	101	2	1.7%	141	0	0.3%
Great Monks St Northbound	2	second right	102	0	0.0%	132	0	0.0%
Monks Way Eastbound	3	first left	167	2	1.0%	91	1	1.5%
Monks Way Eastbound	3	second left	29	0	0.0%	6	0	0.0%
Monks Way Eastbound	3	ahead	359	1	0.4%	223	1	0.4%
Monks Way Eastbound	3	first right	72	0	0.1%	164	0	0.0%
Monks Way Eastbound	3	second right	9	0	0.0%	3	0	0.0%
A5 southbound	4	first left	26	1	4.2%	160	2	0.9%
A5 southbound	4	second left	205	4	1.8%	222	3	1.3%
A5 southbound	4	ahead	2759	21	0.8%	1050	14	1.4%
A5 southbound	4	first right	190	1	0.6%	160	1	0.4%
A5 southbound	4	second right	16	0	0.1%	23	1	4.5%
Great Monks St Southbound	5	first left	636	0	0.1%	142	0	0.0%
Great Monks St Southbound	5	second left	628	5	0.8%	478	3	0.7%
Great Monks St Southbound	5	ahead	313	0	0.0%	264	0	0.0%
Great Monks St Southbound	5	first right	72	0	0.0%	18	0	0.0%
Great Monks St Southbound	5	second right	1	0	0.0%	0	0	0.0%
A422 Monks Way Westbound	6	first left	557	12	2.2%	571	11	1.8%
A422 Monks Way Westbound	6	second left	220	0	0.2%	308	1	0.4%
A422 Monks Way Westbound	6	ahead	332	3	1.0%	387	1	0.3%
A422 Monks Way Westbound	6	first right	143	6	3.9%	85	2	1.8%
A422 Monks Way Westbound	6	second right	1	0	0.0%	4	0	0.0%
		Total	**3111**	**28**	**1%**	**2441**	**20**	**1%**

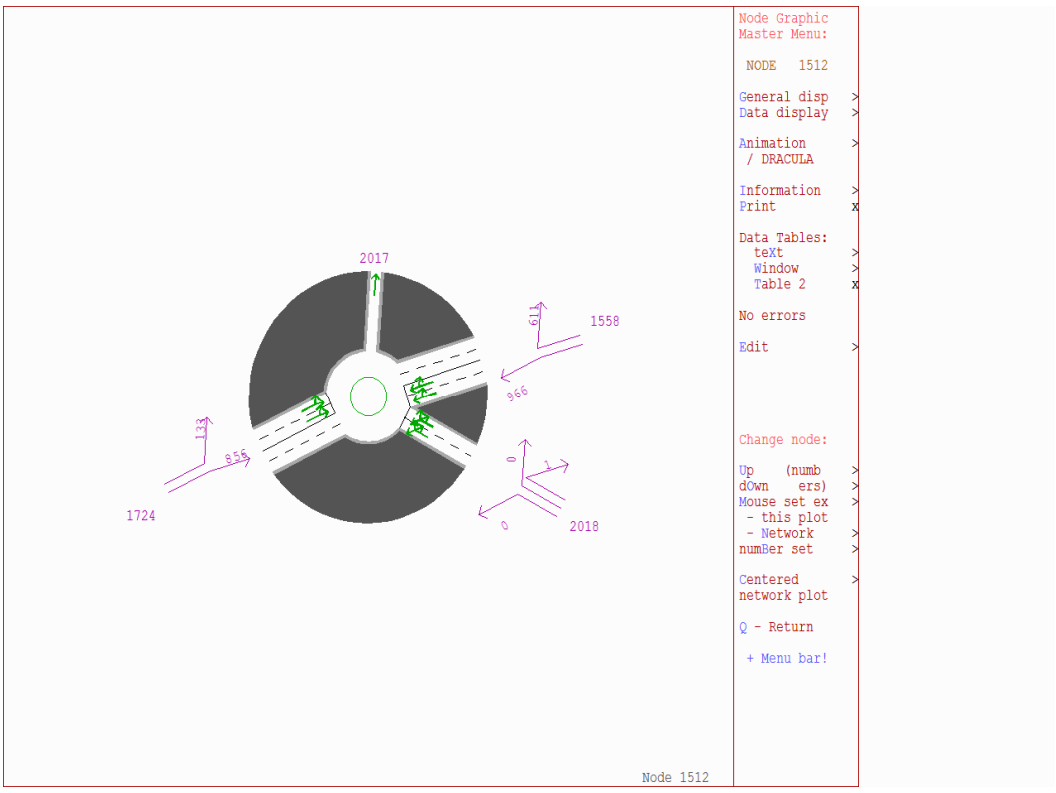
Caldecotte Roundabout

AM Do Minimum



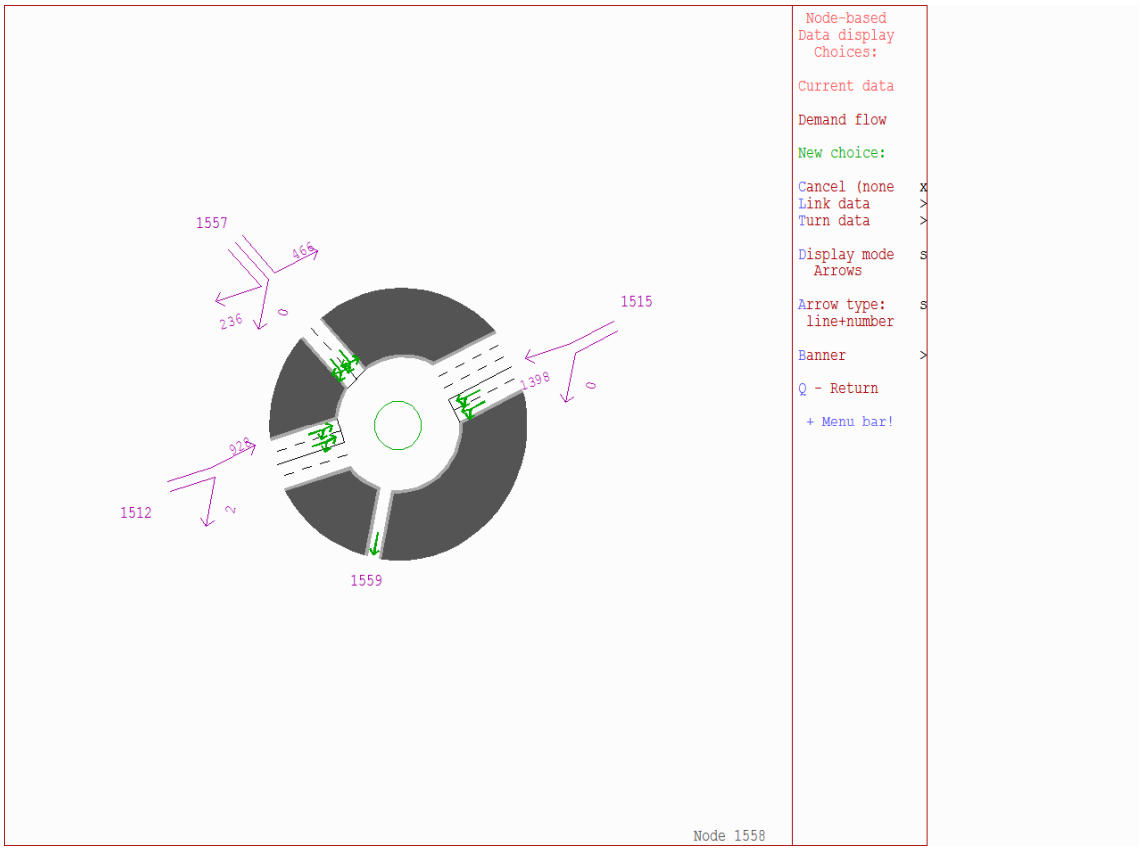
Bletcham Roundabout

AM Do Minimum



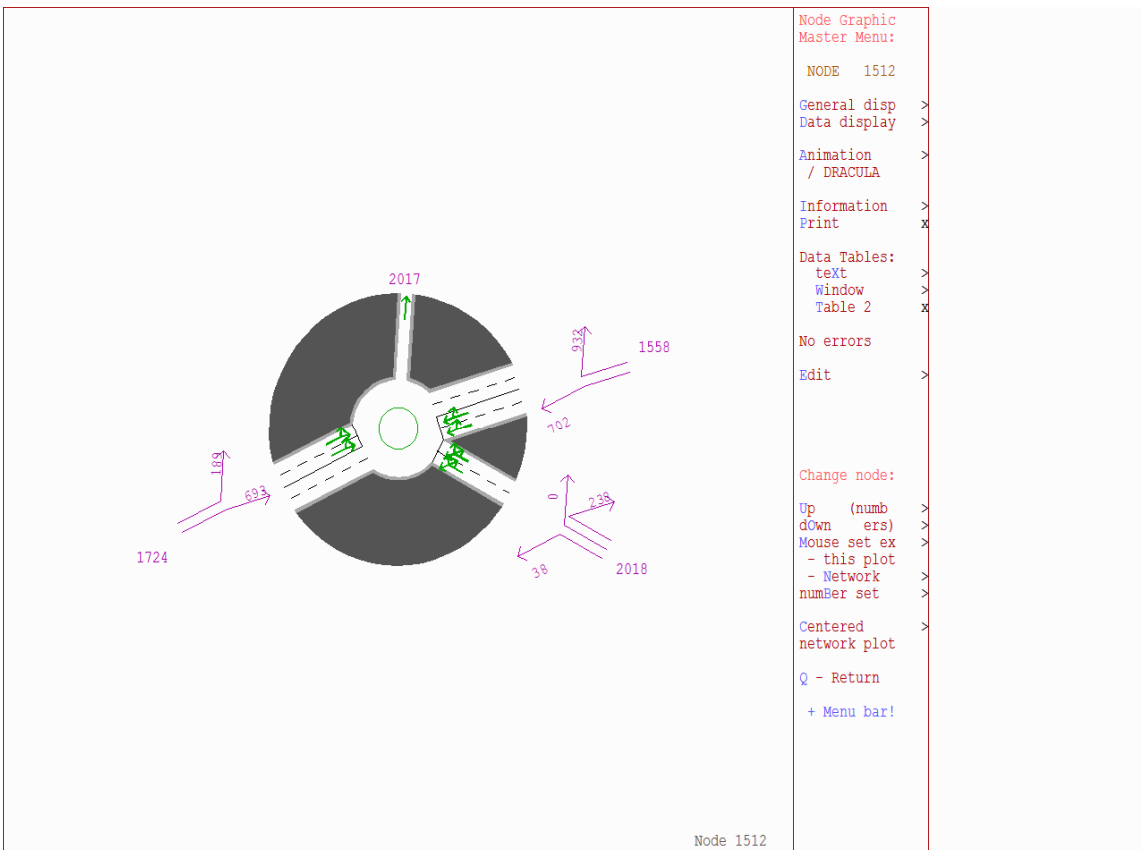
Caldecotte Roundabout

PM Do Minimum



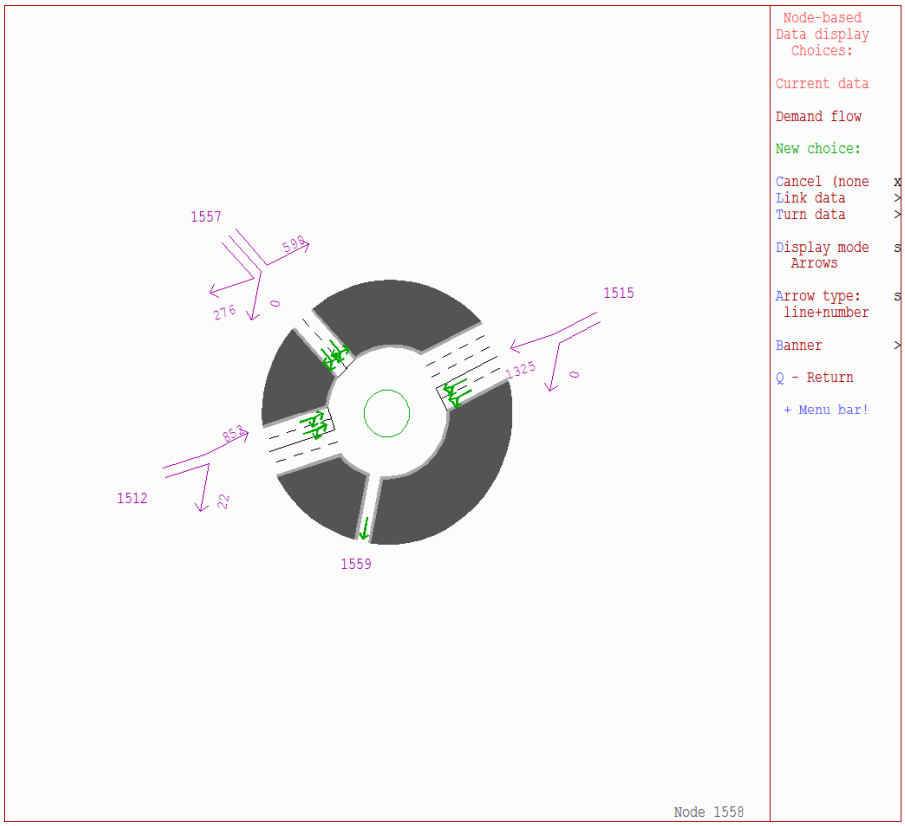
Bletcham Roundabout

PM Do Minimum



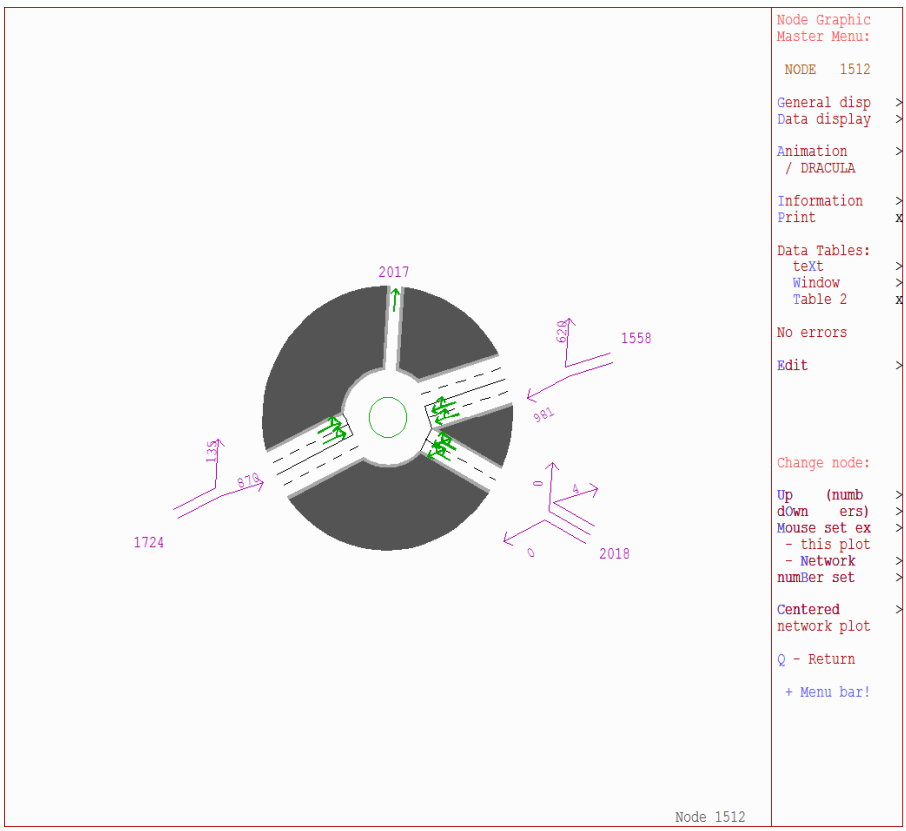
Caldecotte Roundabout

AM Do Something



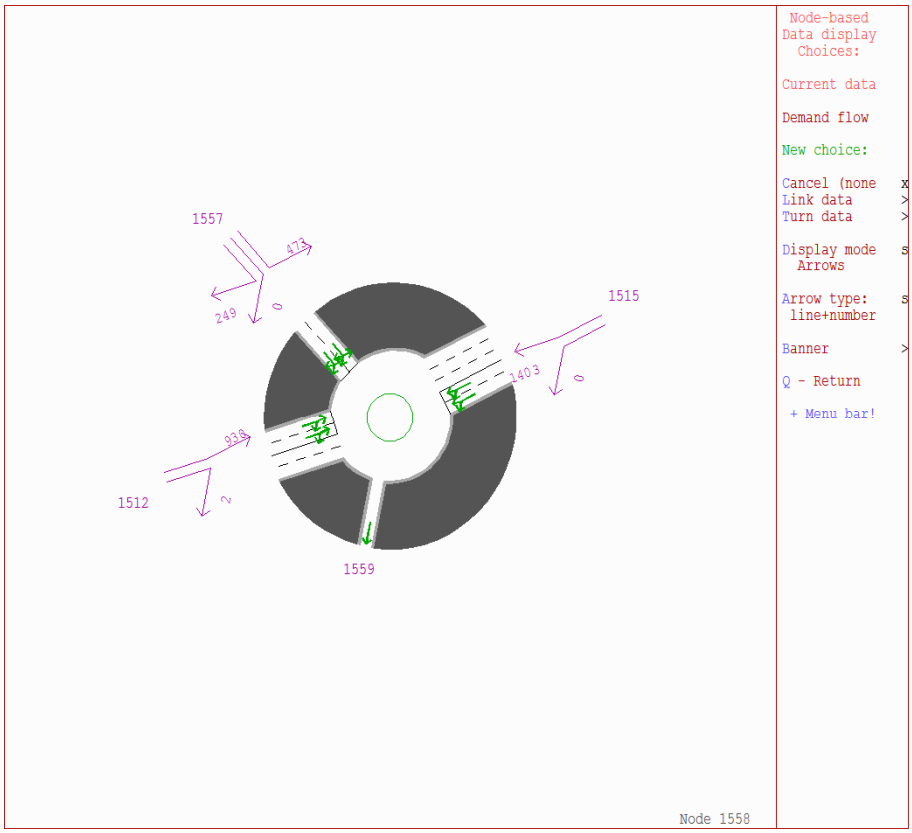
Bletcham Roundabout

AM Do Something



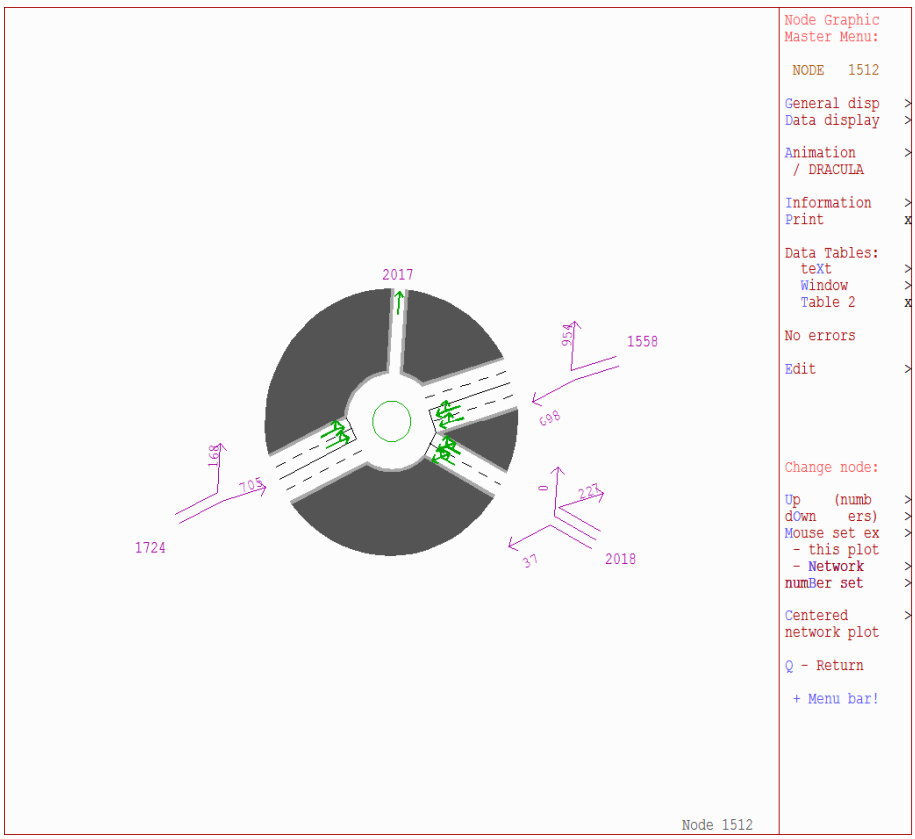
Caldecotte Roundabout

PM Do Something



Bletcham Roundabout

PM Do Something



PORTWAY ROUNDABOUT

Scenario S1

			AM peak			PM peak		
Arm		**Movement**	**Total Vehicles**	**HGV**	**HGV%**	**Total Vehicles**	**HGV**	**HGV%**
A5 northbound	1	left	287	0	0.0%	422	0	0.0%
A5 northbound	1	ahead	1884	31	1.6%	2510	26	1.0%
A5 northbound	1	right	1034	5	0.5%	345	1	0.2%
Portway Eastbound	2	left	335	0	0.0%	310	0	0.0%
Portway Eastbound	2	ahead	578	1	0.1%	384	0	0.0%
Portway Eastbound	2	right	392	0	0.0%	281	0	0.0%
A5 Southbound	3	left	1683	0	0.0%	430	0	0.0%
A5 Southbound	3	ahead	2083	0	0.0%	1727	0	0.0%
A5 Southbound	3	right	261	3	1.2%	138	2	1.2%
A509 Portway Westbound	4	left	370	0	0.0%	919	0	0.0%
A509 Portway Westbound	4	ahead	294	35	12.0%	869	26	3.0%
A509 Portway Westbound	4	right	343	0	0.1%	1065	0	0.0%
		Total	**9544**	**76**	**1%**	**9399**	**54**	**1%**

Scenario S2

			AM peak			PM peak		
Arm		**Movement**	**Total Vehicles**	**HGV**	**HGV%**	**Total Vehicles**	**HGV**	**HGV%**
A5 northbound	1	left	301	0	0.0%	438	0	0.0%
A5 northbound	1	ahead	1901	29	1.5%	2538	26	1.0%
A5 northbound	1	right	1035	6	0.6%	330	0	0.1%
Portway Eastbound	2	left	281	0	0.0%	317	0	0.0%
Portway Eastbound	2	ahead	600	1	0.1%	373	0	0.0%
Portway Eastbound	2	right	377	0	0.0%	293	0	0.0%
A5 Southbound	3	left	1686	0	0.0%	413	0	0.0%
A5 Southbound	3	ahead	2109	0	0.0%	1822	0	0.0%
A5 Southbound	3	right	253	3	1.4%	132	2	1.3%
A509 Portway Westbound	4	left	376	0	0.0%	927	0	0.0%
A509 Portway Westbound	4	ahead	294	35	11.8%	885	26	2.9%
A509 Portway Westbound	4	right	343	0	0.1%	1054	0	0.0%
		Total	**9557**	**75**	**1%**	**9522**	**54**	**1%**

REDMOOR ROUNDABOUT

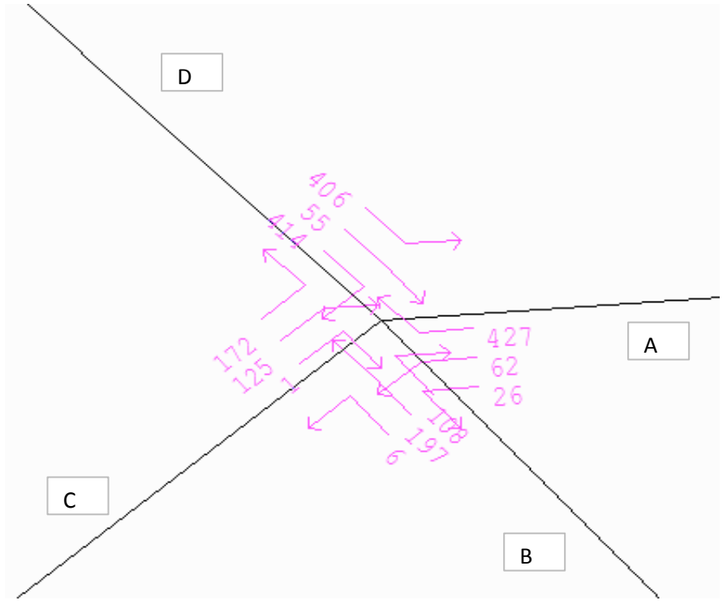
Scenario S1

			AM peak			PM peak		
Arm		**Movement**	**Total Vehicles**	**HGV**	**HGV%**	**Total Vehicles**	**HGV**	**HGV%**
A5 northbound	1	left	12	0	0%	59	0	0.0%
A5 northbound	1	ahead	2167	23	1%	1979	19	0.9%
A5 northbound	1	first right	357	1	0%	397	1	0.1%
A5 northbound	1	second right	0	0	0%	0	0	0.0%
V6 Grafton St northbound	2	left	667	6	1%	773	5	0.6%
V6 Grafton St northbound	2	ahead	278	0	0%	204	0	0.0%
V6 Grafton St northbound	2	first right	22	0	0%	22	0	0.0%
V6 Grafton St northbound	2	second right	4	0	0%	0	0	0.7%
A5 Southbound	3	first left	510	3	1%	444	2	0.4%
A5 Southbound	3	second left	440	3	1%	330	3	0.8%
A5 Southbound	3	ahead	1645	29	2%	1922	20	1.0%
A5 Southbound	3	right	217	1	1%	148	1	0.7%
V6 Grafton St southbound	4	first left	238	0	0%	434	3	0.8%
V6 Grafton St southbound	4	second left	554	6	1%	816	3	0.3%
V6 Grafton St southbound	4	ahead	217	0	0%	85	0	0.0%
V6 Grafton St southbound	4	right	120	4	4%	131	1	0.7%
Groveway	5	left	28	0	0%	43	0	0.1%
Groveway	5	ahead	93	0	0%	239	1	0.2%
Groveway	5	first right	276	2	1%	380	1	0.2%
Groveway	5	second right	6	0	2%	78	0	0.3%
		Total	**7853**	**78**	**1%**	**8487**	**58**	**1%**

Scenario S2

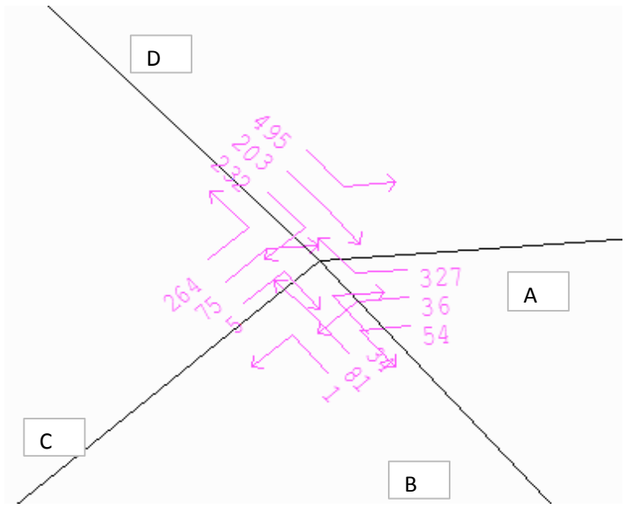
			AM peak			PM peak		
Arm		**Movement**	**Total Vehicles**	**HGV**	**HGV%**	**Total Vehicles**	**HGV**	**HGV%**
A5 northbound	1	left	47	0	0.0%	54	0	0.0%
A5 northbound	1	ahead	1189	51	4.3%	2000	19	0.9%
A5 northbound	1	first right	291	1	0.4%	408	1	0.1%
A5 northbound	1	second right	0	0	0.0%	0	0	0.0%
V6 Grafton St northbound	2	left	560	7	1.2%	764	5	0.6%
V6 Grafton St northbound	2	ahead	74	0	0.0%	215	0	0.0%
V6 Grafton St northbound	2	first right	12	0	0.0%	22	0	0.0%
V6 Grafton St northbound	2	second right	0	0	0.0%	1	0	0.4%
A5 Southbound	3	first left	370	3	0.9%	492	2	0.3%
A5 Southbound	3	second left	364	5	1.3%	328	2	0.7%
A5 Southbound	3	ahead	1586	40	2.5%	1953	19	1.0%
A5 Southbound	3	right	209	2	1.2%	148	1	1.0%
V6 Grafton St southbound	4	first left	385	5	1.2%	453	3	0.7%
V6 Grafton St southbound	4	second left	519	6	1.2%	785	3	0.4%
V6 Grafton St southbound	4	ahead	124	0	0.0%	88	0	0.0%
V6 Grafton St southbound	4	right	69	1	1.5%	140	1	0.8%
Groveway	5	left	66	0	0.0%	45	0	0.1%
Groveway	5	ahead	173	0	0.1%	225	1	0.3%
Groveway	5	first right	198	1	0.8%	398	1	0.2%
Groveway	5	second right	67	1	2.1%	59	0	0.1%
		Total	**6303**	**124**	**2%**	**8575**	**57**	**1%**

B4034 Buckingham Road Entrance



AM

	A	B	C	D	Total
A	-	26	62	427	515
B	108	-	6	197	203
C	125	1	-	172	173
D	406	55	414	-	469
Total	639	56	420	369	



PM

	A	B	C	D	Total
A	-	54	36	327	417
B	34	-	81	1	82
C	75	5	-	264	269
D	495	203	232	-	435
Total	604	208	313	265	

Appendix K

Appeal Decision APP/J0405/A/12/2177458

The Planning Inspectorate

Appeal Decision

Inquiry held on 27, 28 & 29 November 2012
Site visit made on 30 November 2012

by C A Newmarch BA(Hons) MRICS MRTPI

an Inspector appointed by the Secretary of State for Communities and Local Government

Decision date: 29 January 2013

Appeal Ref: APP/J0405/A/12/2177458
Land to the north of Manor Park Farm, Moreton Road, Buckingham MK18 1PW

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
- The appeal is made by Bellway Homes Limited, Bellcross Co Ltd & Fosbern Manufacturing Limited against the decision of Aylesbury Vale District Council.
- The application Ref 11/02724/APP, which is undated, was refused by notice dated 20 March 2012.
- The development proposed is the erection of 80 no residential units with associated access, parking and open space provision.

Decision

1. The appeal is allowed and planning permission is granted for the erection of 80 no residential units with associated access, parking and open space provision at Land to the north of Manor Park Farm, Moreton Road, Buckingham MK18 1PW in accordance with the terms of the application, Ref 11/02724/APP, subject to the conditions in the attached schedule.

Procedural matters

2. The Council's decision to refuse the planning application was based on, among other things, the Site Layout Plan Ref 1138/P/02 Rev B, but an amended drawing Ref 1138/P/02 Rev D was submitted with the appeal. Amendments 'C' and 'D' to the plan relate to minor matters, and do not significantly alter the proposal before me. I am satisfied, therefore, that neither natural justice nor the interests of any party would be harmed by considering the appeal on the basis of the amended plan, and so I have taken the plan Ref 1138/P/02 Rev D into consideration in determining the appeal.

3. The appellants have completed a unilateral planning obligation deed. This includes undertakings relating to affordable housing, a travel plan and framework travel plan, a transport contribution, and a sport and leisure contribution. It is discussed further below.

Main Issues

4. The main issues are:

   - whether the site is allocated for housing in the development plan;
   - if the site is not allocated for housing development, whether there is a 5 year supply of deliverable housing sites; and,

- if there is not, whether any adverse impacts of the proposal would significantly and demonstrably outweigh the benefits of the development. The considerations to be taken into account include:

  a) the effect on the character and identity of Buckingham and the effect on the surrounding countryside;

  b) whether there would be a severe impact on the highway network;

  c) the effect on the provision of green infrastructure in the area;

  d) whether the proposal makes adequate provision for public open space;

  e) whether the proposal makes adequate provision for affordable housing;

  f) whether the proposed design and layout would be satisfactory.

Reasons

Whether the site is allocated for housing in the development plan

5. The development plan includes the Aylesbury Vale Local Plan (LP), 2004, and the South East Plan (SEP), 2009.

6. There is significant disagreement between the parties as to whether the site is allocated for residential development in the LP. LP policy BU.1 proposes land at Moreton Road, Buckingham (as defined on the Proposals Map) to be developed for housing, subject to 13 criteria. The appeal site is within the BU.1 policy area identified on the Proposals Map. However, it is entirely to the north of Manor Park Farm. None of the appeal site is within the part of the site to the south of Manor Park Farm, to which the housing allocation is restricted by criterion (b) of LP policy BU.1.

7. Criterion (c) of LP policy BU.1 requires that proposals shall not prejudice possible development beyond 2011 on the remainder of the site. The criterion does not describe what 'possible development' could include, but since paragraph 6.4 of the LP explains that the site is capable of accommodating substantially more than the 200 houses required at Buckingham in the plan period, I accept that it refers to residential development. Nonetheless, this does not amount to an allocation. Moreover, in cross examination, the appellants' witness, Mr Armstrong, conceded that the LP is not capable of allocating land beyond 2011, which was the end of the plan period. Consequently, I am not persuaded that the site is allocated for residential development in the LP. The development plan does not include any other site allocation document. The site is not, therefore, allocated for residential development.

Whether there is a 5 year supply of deliverable housing sites

8. Policy MKAV1 of the SEP requires the provision of at least 26,890 dwellings in Aylesbury Vale District between 2006 and 2026. It includes a spatial strategy which disaggregates the required housing provision with 5,390 dwellings to be within an urban extension to the south west of Milton Keynes (SWMK), 16,800 to be located in and around the Aylesbury urban area, and 4,700 to be provided in the rest of the district (RoD). The appeal site is within the RoD, where the Council calculates that there is 8.2 years supply of available and deliverable housing sites. However, whether a disaggregated approach to the

supply of housing within Aylesbury Vale remains appropriate is a matter of contention between the parties.

9. Among other things, the appeal decisions addressing the spatial strategy in the SEP, which the parties have brought to my attention, are material considerations.

10. The decision (Ref APP/J0405/A/11/2152198) at Newton Leys gives little weight to the disaggregated approach to the 5 year housing supply, but it relates to a site on the boundary of the Milton Keynes urban area, where the benefits of addressing the overall shortfall in the District as a whole and the acute shortfall within the SWMK urban extension together outweighed the spatial strategy in SEP policy MKAV1. It has limited relevance to this appeal which does not adjoin Milton Keynes.

11. By contrast, the disaggregated approach to the housing land supply in the SEP policy was found to be acceptable in the appeal decisions at Soulbury (Refs APP/J0405/A/10/2143343, APP/J0405/A/11/2154252, APP/P0240/A/10/2143323, and APP/P2040/A/11/2154254), and at Aston Clinton (Ref APP/J0405/A/10/2131283), both of which are within the RoD.

12. The revocation of Regional Strategies came a step closer with the enactment of the Localism Act in November 2011, but the SEP remains in place. However, in accordance with the written statement made by Baroness Hanham CBE, Parliamentary Under Secretary of State, in July 2012, its proposed revocation is a material consideration which can be taken into account in determining planning appeals. The above appeal decisions and the older decision (Ref APP/J0405/A/09/2115860) at Winslow, which was also mentioned at the inquiry, all pre-date both the Framework and the statement referred to above.

13. The Framework places great emphasis on the delivery of a wide choice of quality homes and aims to boost significantly the supply of housing. In particular, paragraph 47 of the Framework requires local authorities to identify and update annually a supply of specific deliverable sites sufficient to provide 5 years worth of housing against their housing requirements, together with an additional buffer to ensure choice and competition in the market for land.

14. The Council is unable to demonstrate a 5 year supply of deliverable sites on a district-wide basis. The Council's Housing Land Supply March 2012 report indicates that the supply for the district for 2012-2017 amounts to 3.1 years supply, reducing to 2.7 years supply for the period 2013-2018. Furthermore, although the comprehensive development of land to the east of London Road, Buckingham, which is under construction, includes 700 dwellings, the persistent cumulative district-wide shortfall of housing completions since 2006-2007 amounted to 3,232 dwellings by 2011-2012.

15. The parties refer to the emerging Draft Vale of Aylesbury Plan, which allows for growth at Buckingham, but the plan is at an early stage of preparation, and I give it little weight.

16. Given that the Framework provides up to date Government planning policy, and the material weight which I am now able to give to the Government's intention to revoke the SEP, I consider that the pressing need to identify and deliver additional housing within Aylesbury Vale as a whole outweighs the SEP spatial strategy. As there is a significant shortfall in the supply of housing land paragraph 49 of the Framework provides that the relevant LP policies for the

supply of housing cannot be considered up to date. In such circumstances, paragraph 14 of the Framework indicates that development proposals are to be approved unless any adverse effects of doing so would significantly and demonstrably outweigh the benefits, when assessed against the Framework as a whole.

Whether any adverse impacts of the proposal would significantly and demonstrably outweigh the benefits

(a) The effect on the character and identity of Buckingham and the effect on the surrounding countryside

17. The site is an agricultural field. It is to the north of housing and an open space/play area which have recently been constructed following the approval of the development to the south of Manor Park Farm under LP policy BU.1. There is well-established housing on the opposite side of Moreton Road. Jarmans Lane and the pitches and premises of Buckingham Rugby Union Football Club (BRUFC) are to the north of the site.

18. The hedge along the western boundary of the site, which would be retained within a landscape buffer zone, would provide significant, though not complete, screening from the open countryside beyond. While glimpses of the development would be visible in some longer countryside views from the west, it would not project further west into the countryside than the existing housing. Although there may be very distant views of the site from the National Trust property at Stowe Landscape Gardens, the housing would be seen within the context of the existing development along, or accessed from, Moreton Road, the BRUFC, and the adjoining village of Maids Moreton. Moreover, the development would not be seen within the context of that heritage asset, due to the extent of the intervening countryside. It would not be harmful to its setting, and so would not conflict with LP policy GP.60, which resists proposals which would fail to protect the distinctive characteristics of parks and gardens of special historic interest.

19. Although Maids Moreton is a separate administrative parish, its built form is contiguous with residential development in Buckingham to the south. There is no separation between the settlements along the east side of Moreton Road, and the size of the limited gap referred to in paragraph 12.7.16 of the LP Inspector's Report has since been further reduced by the recent development to the south of the site. I, therefore, have no reason to disagree with my colleague's finding that coalescence of the settlements has already taken place.

20. The proposal exceeds the policy thresholds of LP policy RA.14, which provides criteria for limited development on the edges of settlements. However, I consider that, for the reasons given above, this policy is out of date. The proposal would not, therefore, have a materially harmful effect on the setting and identity of Buckingham or the surrounding countryside. As such, it does not conflict with the Framework, which has replaced Planning Policy Statements 3 and 7, which were referred to in the Council's refusal reasons.

(b) Whether there would be a severe impact on the highway network

21. The methodology and the TRICS (Trip Rate Information Computer System) site selection for the transport assessment are agreed between the appellants and Buckinghamshire County Council, as Highway Authority. These matters, together with the analysis, results and anticipated additional traffic generation

are set out in the Transport Statement of Common Ground. Although Dr Truscott challenges the particular TRICS datasets selected for the study, their choice derives from unchallenged criteria. While alternative TRICS datasets would have been available, Dr Truscott contends that a survey provides a better approach.

22. I accept that Dr Truscott has extensive experience of data analysis, but his conclusions rely heavily on the traffic survey carried out by Mr Moffat at the junction of Moreton Road and Moreton Drive (also known as Moreton Grange) between 08.00hours and 09.00hours on 11 September 2012. I have no reason to doubt the accuracy of Mr Moffat's traffic count, but it provides a snapshot view of the number of vehicles turning left into Moreton Road during a period of only 1 hour. No further information is available concerning the conditions under which the survey was carried out. As Mr Moffat did not attend the inquiry, his submission was not tested. Accordingly, I give it limited weight.

23. While the quantum of traffic generation is not an issue between the main parties, the Council and the appellants disagree on its impact on the highway network in the town centre, and particularly at the junction of Moreton Road with Market Square and High Street/Stratford Road (known as the Old Gaol roundabout) and at the West Street/Market Square/Bridge Street junction (Old Town Hall roundabout).

24. The Old Gaol roundabout was operating marginally below its practical reserve capacity in 2010, and with predicted and committed growth would operate above this capacity by 2016. The additional traffic which would be generated by the proposed development would slightly increase the ratio to flow capacity figures for the junction. The worst effect on this junction would be to increase the length of the traffic queue on the Market Square arm of the roundabout by an average of 1.6 vehicles in the evening peak hour.

25. At the Old Town Hall roundabout the worst impact would occur on the Bridge Street arm during the morning peak hour, where an average queue increase of 1.6 vehicles would be directly attributable to the proposal.

26. While the industry-standard ARCADY programme predicts high levels of queuing on West Street and Bridge Street arms of the Old Town Hall roundabout, from 2016, this largely derives from theoretical and predicted traffic growth rather than the appeal proposal. Furthermore, the parties agree that ARCADY predictions become unreliable at junctions which are operating at capacity.

27. I inspected the Old Gaol and Old Town Hall roundabouts during an evening and a morning peak hour at the time of the inquiry. I observed some queuing along High Street/Stratford Road and West Street on both occasions, and accept that some delays do occur.

28. The appellants' unilateral undertaking makes provision for a 'framework travel plan' to apply to both the appeal site and the adjoining housing site to the south of Manor Park Farm, (Ref 06/01809/APP). As such, it would act as a trip crediting measure, and so free up capacity to offset against the scheme before me. The objectives of the 'framework travel plan' are to provide an area wide travel plan, to be agreed with the Highway Authority, to support a local sustainable transport bid, improvements to local bus infrastructure including shelters with accessible kerbing near the site and in the town centre,

improvements to local footpaths, cycle infrastructure including 'on road' advisory cycle lanes or signed routes and secure cycle storage facilities within the town centre.

29. The transport contribution for these purposes of £153,120 has been calculated in discussion with the Highway Authority. It relates directly to the agreed trip generation of the development and the Council's supplementary planning guidance 'Transport contributions from non-MDA developments at Aylesbury', 2004 (SPG). Although the SPG is not recent, this approach identifies a contribution which is fairly and reasonably related in scale and kind to the development. There would be a further annual payment of £1,000 for 5 years to cover the costs of an annual review of the travel plan, and as such would be necessary and directly related to the proposal.

30. The Highway Authority welcomes the 'framework travel plan' as a mitigation measure, but does not accept that it would deliver the 10% reduction in car trips which is anticipated by the appellants. It refers to appeals at Haywards Heath (Refs APP/D3830/A/05/1195898, APP/D3830/05/1195897, APP/D3830/A/06/1198282, and APP/D3830/A/06/1198283), where the Inspector considered that a saving of 10% rather than 25% car trips could be delivered by a travel plan in the particular local circumstances. However, the use of residential travel plans was acknowledged to be relatively recent at that time. While Buckingham, unlike Haywards Heath, does not have the benefit of a railway station, this does not, in itself, demonstrate that the travel plan would not reduce the car trips from both sites by 10%. Given the impact, albeit limited, on the queues at the Old Gaol and Old Town Hall roundabouts, I am satisfied that the proposed measures, including the appointment of a travel plan co-ordinator and the submission of an annual travel plan performance report, are necessary to provide sufficient mitigation of the effects of the proposed development. It would be in keeping with the vision of the Highway Authority's Local Transport Plan 2011-2016 to tackle congestion hotspots in Buckingham.

31. The Highway Authority draws attention to the poor visibility splays for both pedestrians and vehicles at the Old Gaol and West Street junctions, and to the poor geometry at these junctions. However, since the capacity and geometry of the junctions combine to reduce traffic speeds, I give these matters limited weight.

32. Local residents have raised concerns regarding highway safety at the proposed site entrance in Moreton Road. I do not agree that the curve in Moreton Road amounts to a sharp bend, but, in any event, as 2.4m x 70m visibility splays could be provided, it has not been demonstrated that it would be materially detrimental to highway safety. I note the submissions that motorists do not observe the 30mph speed limit along Moreton Road, but its enforcement is not a matter for me in considering the appeal.

33. The development could give rise to a marginal increase in the number of car journeys through Maids Moreton. While I accept that some roads in Maids Moreton already serve as short-cuts to Stratford Road, no evidence has been submitted to demonstrate capacity problems at junctions to the north of the site.

34. I have considered the representations concerning the effect on the highway network. However, the very limited residual effect of the additional traffic, as

mitigated by the travel plan and the framework travel plan, would not have a severe impact on the highway network. As such, it would not conflict with the Framework, which has replaced Planning Policy Guidance 13.

(c) The effect on the provision of green infrastructure in the area

35. Green infrastructure is a strategically planned network of high quality multi-functional green spaces, interconnecting links and other environmental features. The Aylesbury Vale Green Infrastructure Strategy (AVGIS), 2011-2026, includes the Natural England Accessible Green Space Standard (ANGSt). ANGSt provides, among other things, that no person should live more than 300m from their nearest area of natural green space of at least 2ha in size, and that there should be at least 2ha of accessible natural green space per 1000 population.

36. By contrast, the appellants' Accessible Green Space Report submits that areas 9, 10, 11 and 12 on drawing Ref BELL18303-05a, all of which are within 300m of the site, amount to some 50,358sqm, with a further 6,988sqm of open space proposed within the site itself, and that these would be proxies for natural green space. However, part of area 11 is leased by the BRUFC, and although it is crossed by a public footpath, the entire site is not available for general walking. Moreover, the appellants' approach relies on calculating the cumulative area of various small open areas.

37. The Council has adopted the AVGIS, but conceded at the inquiry that it is not planning policy. Its implementation, where growth occurs in association with unspecified 'flagship' projects, is to be through an action plan, which is to be co-ordinated by the Council in the future.

38. For these reasons, the effect of the proposal on green infrastructure provision would be broadly neutral, and, as such, would not have a significantly harmful effect on the provision of green infrastructure in the area.

(d) Whether the proposal makes adequate provision for public open space

39. There is some dispute as to whether the site is reserved for open space. Criterion (h) of LP policy BU.1 requires the provision of land for sports pitches and associated changing rooms, but is clearly related to the proposed residential development to the south of Manor Park Farm. The Development Brief required by BU.1 criterion (b) reserved the land to the north of Manor Park Farm as an area of formal open space to include full size and junior sports pitches suitable for either football or rugby, a changing room and adjacent car park, a floodlit multi use games area, and a neighbourhood equipped children's play area.

40. Accordingly, many local people object to the appeal on the basis that the site should be used for these purposes. However, notwithstanding the BU.1 development brief, when approving the application (Ref 06/01809/APP) for 200 dwellings on land to the south of Manor Park Farm, the Council did not require the land to the north to be laid out as described above. Instead, it entered into a S106 agreement with the developers, relating to various matters including the provision of an equipped children's play area on the site and the payment of a Sport and Leisure contribution of £510,367 for sports facilities to be determined by the Council. The commuted sum has been paid to the Council in accordance with the agreement. It fully addresses the sport and recreation requirement set out in LP policy BU.1 and the development brief. The site is

neither allocated for sport or public open space on the LP Proposals Map, nor reserved for such uses by the development brief.

41. The appeal proposal initially included a play area, but following discussions with the Council, it was deleted as it would duplicate the existing play facilities to the south of the site. Nonetheless, the Council's fourth refusal reason considers that a commuted sum is necessary in lieu of public open space provision on the site. The appellants have addressed this through a contribution for a sport and leisure in its unilateral undertaking.

42. The Council's 2009/10 audit of sports and leisure facilities identifies quantitative and qualitative deficiencies in provision throughout the district, and its Playing Pitch Strategy, 2010, addresses the future development of sport, culture and open space. In Buckingham it identifies the need for an additional youth and mini/midi combined rugby training pitch, a new changing block and additional floodlighting. However, more rugby pitches are now available in the area than when the Pitch Strategy was compiled, and the appellants challenge the necessity for the contribution.

43. BRUFC concedes that it declined the opportunity to acquire additional pitches on the appeal site when the application for housing to the south of Manor Park Farm was under consideration, due to the proximity of the land to the housing. Nevertheless, I give greater weight to the clear evidence given by the BRUFC concerning the current demand on pitches, and the need to avoid over-playing them, than to the appellants' estimated demand model. In any event, I accept that the proposed development would increase the demand for sports and leisure facilities, and that, in accordance with LP policy GP.88, a contribution in lieu of on-site provision is necessary.

44. The appellants' unilateral undertaking includes a sport and leisure contribution of £313,482, which has been calculated on the basis of the Council's Sports and Leisure Facilities SPG Companion Document: Ready Reckoner. Although the Ready Reckoner has not been updated since 2005, its formulaic approach is fairly related to the scale of the development.

45. There is considerable local support for on-site provision rather than a commuted sum. I accept that the Council has used only a small proportion of the sport and leisure contribution made in connection with the development to the south of Manor Park Farm. However, as a period of 10 years was agreed for its use, I do not take this to demonstrate that further facilities are not required in the locality. Similarly, sports and leisure provision to be made from the contribution made in connection with the development of 700 dwellings on the south side of Buckingham is to meet the needs arising from that scheme. The appellants' sport and leisure contribution is, therefore, necessary in lieu of the provision of public open space on the site. Therefore, the proposal makes adequate provision for public open space, and does not conflict with the LP policies BU.1 or GP.88.

(e) Whether the proposal makes adequate provision for affordable housing

46. The unilateral undertaking includes an obligation to provide 28 units of affordable housing within the development. This would be 35% of the overall housing provision. It is a matter of common ground that the number of units, their sizes, and proposed mix of tenures would accord with LP policy GP.2 and would reflect local needs. In the absence of evidence to the contrary, I have

no reason to disagree, and consider that the affordable housing is necessary to make the development acceptable in planning terms. The proposal, therefore, makes adequate provision for affordable housing.

(f) Whether the proposed design and layout would be satisfactory

47. The footways at each side of the single vehicular access do not continue along Moreton Road. Manual for Streets, 2007, and other advice from English Partnerships and CABE, each encourage greater connectivity with adjacent street networks, but the proposed layout would minimise the loss to the existing hedge. It is agreed that there is good internal permeability within the site as well as a footpath connection with the housing to the south, which would provide a pedestrian route towards the town centre. A condition could require the provision of a further pedestrian route through the existing open space/play area to the south of the site, as shown as on drawing 1138/P/02/D. This would greatly improve the pedestrian connectivity of the site with Moreton Road. I consider, therefore, that the benefit to the character and appearance of the street scene of retaining the hedge outweighs the limited harm to pedestrian connectivity. The width and surface finish of the footpath is a matter which could also be controlled by a landscaping condition. The width of the kissing-gate, at the point where the footpath enters the land to the south of Manor Park Farm, is satisfactory for pedestrian use.

48. The natural surveillance of the landscape buffer strip would be limited along much of the northern edge of the site as there would be few comings and goings except from users of the footpath to Jarmans Lane. However, the orientation of the dwellings on plots 61, 62 and 70 would provide some sense of enclosure and ownership of the space around the cul-de-sac, as shown on drawing Ref 1138/P/35. This would be replicated in the neighbouring cul-de-sacs, and some protection would also be provided by the tall netting, discussed further below. Furthermore, the first floor bedroom windows, which overlook the buffer strip would provide some natural surveillance.

49. A similar concern arises regarding the limited natural surveillance of the landscape buffer to the west of plots 45-51, where the rear gardens of the dwellings would abut the buffer strip. However, the strip would be overlooked by first floor bedroom windows, and the rear garden walls, topped with 0.3m high trellis, as shown on the submitted drawings, would provide a clear delineation between public and private space. While greater natural surveillance would be preferable to physical barriers, the proposed measures would not be materially harmful to the living conditions of future occupiers. Furthermore, the appellants accept that a further condition could require 'Secured by Design' windows, doors and glazing to be incorporated into the development. This is not, therefore, a determinative matter.

50. Triple on-plot parking spaces are proposed for plots 1-6, 27, 37, 40, 43 and 45-47. The Council concedes that, while inconvenient and likely to lead to some on-street parking, it is not a policy issue. There is no evidence that it would be materially harmful to highway safety, and, accordingly, it is not a determinative matter.

51. The extent to which the development would reflect the built character of the area is a matter of disagreement between the parties. The plots along the eastern edge of the site would be set back from Moreton Road behind a landscape buffer strip. This would generally reflect the predominance of the

hedges which enclose the front gardens of the well-established, but varied, homes on the opposite side of Moreton Road. To my mind the relationship of the site with the street scene in The Avenue is limited. The proposal does not include tree-lined avenues along its main roads, but makes provision for a significant quantity of new trees and shrubs to be planted in the street scene and within private gardens on the Landscape Masterplan drawing, Ref 4804/ASP2D. Chimneys have been included on 5 additional houses on the amended drawings submitted at the appeal stage, and these would improve the appearance of the street scene.

52. There is no consistency of style within the surrounding area, and I am satisfied that the proposed design and layout would be satisfactory. It would not be materially harmful to the character and appearance of the area, and would not harm local distinctiveness. As such, it does not conflict with LP policy GP.35, which is the most relevant design policy to which I have been referred.

Conclusion on the third main issue

53. For the reasons explained above, I find that the effects on the character and identity of Buckingham would not be materially harmful, the effect on the highway network would be limited and could be mitigated, that a contribution towards sport and leisure facilities would address the Council's concerns regarding public open space, and that the design and layout would be satisfactory. The development would not meet the ANGSt, but occupiers would have access to a network of smaller open spaces. The impacts would not, therefore, significantly or demonstrably outweigh the benefits when assessed against the need for additional housing, including affordable housing, in the district.

Other matters

54. The appeal site adjoins the Maids Moreton Conservation Area. The Council has not objected on the basis of any effect on the setting of the Conservation Area, but it is a matter of concern to local objectors. To my mind the character and appearance of the Conservation Area derives principally from the built forms, materials and juxtapositions of the traditional buildings in the heart of Maids Moreton around the parish church, Maids Moreton Hall and Main Street. Twentieth century buildings contribute to the setting of the Conservation Area. Due to the trees along Avenue Road between its junctions with Scotts Lane and Duck Lane, and the evergreen screen planting along the boundary of the BRUFC with Duck Lane, there would be no significant intervisibility between the Conservation Area and the site. As such, the proposal would have a neutral effect on the setting of the Conservation Area, and thus its character and appearance would be preserved. It would not conflict with LP policy GP.53 which precludes development which would harm the setting or associated views of or from a Conservation Area.

55. The BRUFC is a well-established private club, which contends that the proximity of the appeal site could result in disturbance to the new residents, complaints, and a risk to the longer term future of the club. It is separated from the appeal site by Jarmans Lane, where some parking associated with the club takes place. While the BRUFC pitches contribute to the open character of the area, the land is not public open space. The club operates each weekday evening and on Saturday and Sunday mornings and afternoons throughout

August to April. Large numbers of children attend at weekends. I inspected the BRUFC at the time of my site visit.

56. At the inquiry Mr Gemmell referred to annotated photographs (within Document 14), which had first been submitted at the application stage by a local resident and landscape architect, Susannah Smith, to demonstrate the proximity of the proposed houses to the playing pitches. Ms Smith was not present at the inquiry, and in the absence of information defining the point where the photographs were taken, the lens used, and how the superimposed images had been constructed, the Council and the appellants agreed that it was not possible to verify the submissions. I, therefore, give the annotated photographs limited weight.

57. The houses proposed along the northern edge of the site would, however, be less than the Sport England advisory distance of 30m from the main playing pitch and the floodlit training pitch at BRUFC. Nonetheless, there would be a landscape buffer, generally some 10m deep, between the new houses and Jarmans Lane, which would help to ameliorate the effects of sound and the floodlighting on the training pitch. It would also incorporate netting to prevent ingress of rugby balls into homes, gardens and parking areas. This could be required by a condition, and would be maintained by means of a landscape management plan condition. The clubhouse is well separated from the appeal site by the main pitch, and it is therefore unlikely that social functions would unduly disturb residents.

58. There is local concern that, due to the slope across the site, the development would increase the risk of flooding of the highway and the nearby dwellings along Moreton Road. The site is, however, categorised as being within a Flood Zone 1 by the Environment Agency, which is the lowest risk category for flooding, where the annual flood risk is less than 1 in 1000. Moreover, the details and provision of an on-site sustainable drainage system and measures for the disposal of surface water from the highway could be required by a condition. The development would not, therefore, materially increase the risk of local flooding.

59. Written submissions contend that the recently-built housing to the south of Manor Park Farm has given rise to anti-social behaviour and litter. However, these have not been supported by detailed evidence. While I accept that local residents have a genuine fear that the proposed development could result in additional crime and disorder, no substantive basis for such concern has been demonstrated, and I give it little weight.

60. Local objectors refer to the impact of the development on local services including doctors, schools and car parking in Buckingham town centre. However, no detailed information has been submitted, and I am not persuaded that this is a substantive matter.

61. Buckingham Town Council is preparing a Neighbourhood Plan, but it is at an early stage of preparation, and so I afford it little weight. Although its questionnaire has identified a perceived local need for additional playing fields, a Neighbourhood Plan should be in general conformity with strategic policies and should not promote less development than is required to meet the housing needs of the area.

62. The site is within 1.2km of Buckingham town centre. Although Moreton Road slopes uphill from the town centre towards the site, it is within walking and cycling distance of the town centre, and buses run along Moreton Road. A range of travel modes is available, and so the site is in a reasonably sustainable location. The development would have an economic role in contributing to the supply of available and deliverable housing land. It would also have a social role in adding to the supply of affordable housing in the locality. It would have an environmental role through including the existing housing to the south of Manor Park Farm in the travel plan arrangements and reducing car trips. It would be a sustainable development, which would accord with paragraph 7 of the Framework.

Unilateral undertaking

63. Each of the contributions in the unilateral undertaking has been discussed above, and found to be necessary to make the development acceptable in planning terms, directly related to the development, and fairly and reasonably related in scale and kind to the development. As such, the obligations accord with the Community Infrastructure Levy Regulation 122, and I have taken them into account in reaching my decision.

64. The unilateral undertaking includes the sum of £3,500 to cover the Council's costs of administering and monitoring the obligations in the deed. Given the complexity of the obligations, which go beyond the Council's statutory duty in enforcing planning controls, the fee is justified.

Conditions

65. I have considered the conditions which were suggested by the parties and discussed at the inquiry. In addition to the usual time limiting condition, I agree that conditions are necessary to control the following matters:

66. Conditions requiring the submission of the details of the external materials and boundary treatments, the protection of the retained trees, and the implementation and management of the landscaping are all necessary in the interests of the character and appearance of the development. Details of the junction with Moreton Road, the estate roads, footways and footpath, their implementation, and the protection of the visibility splays are necessary in the interests of highway safety. A condition to control the details of, and a maintenance plan for, a sustainable drainage system are necessary in the interests of good drainage. A condition to control the details and provision of street lighting and street furniture is necessary in the interests of public safety and amenity. A condition requiring the provision of a safety net along the northern boundary of the site is necessary in the interests of the living conditions of residents and the viability of the BRUFC. A condition requiring windows, doors and glazing to meet 'Secured by Design' standards is necessary in the interests of the living conditions of the occupiers. A condition requiring the details and provision of a gated access from the site to the adjoining play area is necessary to increase pedestrian connectivity to and from the site. A condition requiring the provision and implementation of a Habitat Management Plan is necessary in the interests of biodiversity. A condition requiring the provision of the off street parking to be provided is necessary in the interests of the convenience of residents and highway safety.

67. Otherwise than as set out in this decision and conditions, it is necessary for the development to be carried out in accordance with the approved plans, for avoidance of doubt and in the interests of proper planning.

Conclusions

68. While the 80 dwellings proposed on the appeal site would not overcome the identified shortfall in Aylesbury Vale, they would make a worthwhile contribution towards the supply of deliverable housing land. The development would additionally assist towards meeting the area's affordable housing needs. Notwithstanding representations that there are vacant homes elsewhere in Buckingham, these are clear benefits to be considered against the likely adverse impacts of development, and the other considerations which have been raised in the evidence. These have been considered, but it has not been demonstrated that they would significantly or demonstrably outweigh the benefits identifed. Furthermore, I have found that the development would be sustainable in economic, social and environmental terms.

69. I have taken account of the strong local feelings regarding the proposal which have been expressed in the submitted letters, including from the Rt Hon John Bercow MP, the petition and the appearances at the inquiry. I have considered all other matters raised, but they do not alter my decision that the appeal should succeed.

C A Newmarch

INSPECTOR

APPEARANCES

FOR THE LOCAL PLANNING AUTHORITY:

Mr Richard Turney	of Counsel
He called	
Mr Ian Marshall HNC, IHE	Buckinghamshire County Council – Highway Authority
Mr Paul Acton BA(Hons), MA, Dip Urban Design	Design, Conservation & Engineering Manager
Mr Richard Garnett Dip Aboriculture	Senior Green Spaces Officer (Strategy)
Mr Mark Aughterlony BA(Hons) MRTPI	Senior Planning Officer
Ms Katherine Stubbs	Solicitor

FOR THE APPELLANTS:

Ms Mary Cook	of Counsel
She called	
Mr Paddle BSc, CEng, CWEM, MICE, FIHT, MCIWEM	Divisional Director, Mouchel Ltd
Mr Armstrong BA(Hons), MRTPI	Director, Armstrong Rigg Planning
Ms Elaine Connolly	Bellway Homes Limited
Mr Roger Welchman	Armstrong Rigg Planning

INTERESTED PERSONS:

Cllr Timothy Mills	Buckingham North Ward member
Cllr Ian Smith	Maids Moreton Parish Council Chair
Dr W S Truscott	Local resident
Mr Finlay Gemmell	Buckingham Rugby Club Hon Secretary
Mr David Child	Local resident

DOCUMENTS

1 Letters to the Council dated 13 February 2012 and 29 February 2012 regarding amended plans
2 Appellants' suggested draft planning conditions
3 LP extract – policies RA.13 & RA.14
4 Officer report on application Ref 06/01809/APP
5 Extract from Planning Policy Guidance 12
6 Inspector's report and Secretary of State's decision relating to APP/D3830/A/05/1195898, APP/D3830/A/05/1195897, APP/D3830/06/1198282 & APP/S3830/06/1198283
7 Buckinghamshire County Council Travel Plan Assessment
8 Draft Unilateral Planning Obligation
9 Council's Inquiry arrangements notification letter and distribution list
10 Aylesbury Vale Sport and Leisure Facilities SPG Companion Document: Ready Reckoner
11 Aylesbury Vale Pitch Strategy, final, July 2010

12 Statement from Cllr Ian Smith, Chair
13 Statement and attachments from Dr W S Truscott
14 Statement from Mr Finlay Gemmell
15 Statement from Cllr Timothy Mills
16 Council's Cabinet resolution of 18 January 2011
17 Council's decision notice Ref 05.00270/APP
18 Statement from Mr David Child
19 Appellants' unilateral planning obligation
20 E-mail from Glen Sutcliffe regarding photographs with ridge heights
21 E-mail from Elaine Connolly regarding expenditure of S106 contributions for land south of Manor Park Farm
22 Extract from the South East Plan
23 On/Off site provision for planning permission Ref 06/01809/APP

PLANS

A Parking space plan
B LP Proposals map
C 1138/P/103 View from existing track, Nov 2012

Schedule of conditions

1) The development hereby permitted shall begin not later than three years from the date of this decision.

2) No development shall take place until details of the materials to be used in the construction of the external surfaces of the building hereby permitted have been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved details and retained as such thereafter.

3) No development shall take place until details of all screen and boundary walls, fences and any other means of enclosure shown on the approved drawing Ref 0038/P/02/D have been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved details before the buildings are occupied, and shall be retained as such thereafter.

4) In this condition "retained tree" means an existing tree which is to be retained in accordance with the approved plans and particulars. The erection of fencing for the protection of any retained tree shall be undertaken in accordance with British Standard 5837: 2012, as indicated on the approved Tree Protection Plan Ref AA TPP 04, before any equipment, machinery or materials are brought on to the site for the purposes of the development. It shall be maintained as such until all equipment, machinery and surplus materials have been removed from the site. Nothing shall be stored or placed in any area fenced in accordance with this condition and the ground levels within those areas shall not be altered, nor shall any excavation be made.

5) All hard and soft landscape works shall be carried out in accordance with the approved landscape plans listed in condition 18 below. The approved landscape details shall be carried out not later than the first planting season following the first occupation of the last dwelling to be occupied or the completion of the development whichever is the sooner.

6) If within a period of five years from the date of the planting of any tree that tree, or any tree planted in replacement for it, is removed, uprooted or destroyed or dies, another tree of the same species and size as that originally planted shall be planted at the same place.

7) A landscape management plan, including a timetable for its implementation, long term design objectives, management responsibilities, and the maintenance schedules for all landscape areas, other than small, privately owned, domestic gardens, and for the safety net, which is the subject of condition 13, and the gated access referred to condition 15, shall be submitted to and approved in writing by the local planning authority prior to the occupation of any phase of the development. The landscape management plan shall be carried out as approved.

8) Development shall not begin until details of the junction between the proposed estate road and the highway have been submitted to and approved in writing by the local planning authority. The dwellings shall not be occupied until that junction has been constructed in accordance with the approved details. It shall be retained as such thereafter.

9) No structure or erection exceeding 0.6 metres in height shall be placed within the sight lines referred to in Condition 8.

10) No development shall take place until details of the estate roads and footways and the existing footpath which is to be retained in accordance with drawing Ref 1138/P/02/D, have been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved details, and retained as such thereafter. No dwelling shall be occupied until that part of the service road which provides access to it has been constructed in accordance with the approved plans.

11) No development shall take place until details of the implementation, maintenance and management of a sustainable surface water drainage scheme have been submitted to and approved in writing by the local planning authority. The scheme shall be implemented and thereafter managed and maintained in accordance with the approved details. Those details shall include: a timetable for its implementation, and a management and maintenance plan for the lifetime of the development which shall include the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime. None of the dwellings shall be occupied until the drainage works have been completed in accordance with the submitted plans.

12) No development shall take place until details of the design, appearance and location of street lighting apparatus and all street furniture, together with the phasing of its provision, have been submitted to and approved in writing by the local planning authority. The installation of the lighting and street furniture shall be carried out in accordance with the approved details and timetable, and shall be retained as such thereafter.

13) No development shall take place until details of a safety net to protect the site from rugby balls entering from the Buckingham Rugby Union Football Club have been submitted to and approved in writing by the local planning authority. The safety net shall be installed in accordance with

the approved details before the occupation of the dwellings along the northern edge of the site, and shall be retained as such thereafter.

14) No development shall take place until details of windows, doors and glazing with 'Secured by Design' accreditation have been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved details and retained as such thereafter.

15) No development shall take place until details of the location and design of a gated access between the existing open space/play area and the housing development hereby approved have been submitted and approved in writing by the local planning authority. The gated access shall be provided in accordance with the approved details prior to first occupation of the development, and retained as such thereafter.

16) No development shall take place until a Habitat Management Plan, in accordance with the Ecological Assessment Ref ECO2698.EcoAs.vf, dated November 2011, has been submitted to and approved in writing by the local planning authority. The Habitat Management Plan shall include a timetable for works. No site clearance shall take place during the bird nesting season. Development shall be carried out in accordance with the approved details.

17) No dwelling shall be occupied until space has been laid out within the site in accordance with the approved drawings for cars to be parked. The garages hereby permitted and car spaces to be provided shall be kept available for the parking of motor vehicles at all times, and permanently retained as such thereafter.

18) The development hereby permitted shall be carried out in accordance with the approved plans listed in following schedule:

Drawing No.	Description	Revision
Architectural		
1138/P/01	Location Plan	
1138/P/02	Site Layout	D
1138/P/03	Type MR1 (Trent) – Plans and Elevations	A
1138/P/04	Type MR2 (Welland) –Plans and Elevations	A
1138/P/05	Type MR3 (Misbourne) – Plans and Elevations	A
1138/P/06	Type MR4 (Cam) – Plans and Elevations	A
1138/P/07	Type MR5 (Nene) – Plans and Elevations	A
1138/P/08	Type MR5 (v) (Nene) – Plans and Elevations	A
1138/P/09	Type MR6 (Potton) – Plans and Elevations	A
1138/P/10	Type MR7 (Standbridge) – Plans and Elevations	A
1138/P/11	Type MR15 (Rad) – Plans and Elevations	A
1138/P/12	Type MR8 (E6) – Plans and Elevations	A
1138/P/13	Type MR9 (E29) – Plans and Elevations	A
1138/P/14	Type MR10 (E9) – Plans and Elevations	A
1138/P/15	Type MR11 (C13) – Plans and Elevations	A
1138/P/16	Type MR12 (E19 Midhurst) – Plans and Elevations	A
1138/P/17	Type MR13 (E15) – Plans and Elevations	B

1138/P/18	Type MR14 (E19G) – Plans and Elevations	A
1138/P/19	Type AF1 – Plans and Elevations	A
1138/P/20	Type AF2 – Plans and Elevations	A
1138/P/21	Type AF2 (v) – Plans and Elevations	A
1138/P/22	Type AF3 – Plans and Elevations	A
1138/P/23	Type AF3 (v) – Plans and Elevations	A
1138/P/24	Type AF4 – Plans and Elevations	A
1138/P/25	Garages – Plans and Elevations	A
1138/P/26	Garages/Carports – Plans and Elevations	A
1138/P/27	Double Garage plot 51 – Plans and Elevations	A
1138/P/28	Car Ports plots 48-49 – Plans and Elevations	A
1138/P/29	Enclosures	A
1138/P/30	Street scenes A-C	C
1138/P/31	Street scenes D-F	C
1138/P/32	Street scenes G-J	C
1138/P/33	Street scenes K-M	C
1138/P/34	Type AF5 – Plans and Elevations	-
1138/P/35	Drawing to demonstrate surveillance	-
Landscape		
4804/ASP2	Landscape Masterplan	D
4804/ASP4	Planting Plan Overview	B
4804/ASP5	Planting Plan 1 of 4	B
4804/ASP6	Planting Plan 2 of 4	B
4804/ASP7	Planting Plan 3 of 4	B
4804/ASP8	Planting Plan 4 of 4	B
AA TPP	Tree Protection Plan	04

Appendix L

PICADY Output

PICADY
GUI Version: 5.1 AE Analysis Program Release: 5.0 (MAY 2010)
For sales and distribution information, program advice and maintenance, contact:
TRL Limited Crowthorne House Nine Mile Ride Wokingham, Berks. RG40 3GA, UK Tel: +44 (0)1344 770758 Fax:+44 (0)1344 770864 E-mail: software@trl.co.uk Web: www.trlsoftware.co.uk
The user of this computer program for the solution of an engineering problem is in no way relieved of their responsibility for the correctness of the solution

Run Analysis

Parameter	Values
File Run	P:\..\Whaddon Road Access Junction\Whaddon Road Access Junction AM.vpi
Date Run	12 June 2014
Time Run	09:21:30
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	Whaddon Road (S)	100
Arm B	Development Access Road	100
Arm C	Whaddon Road (N)	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	Whaddon Road Access Junction
Location	Milton Keynes
Date	21 November 2012
Enumerator	astubbs [PC-11-Q02]
Job Number	M53295
Status	-
Client	-
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data

Geometric Parameters

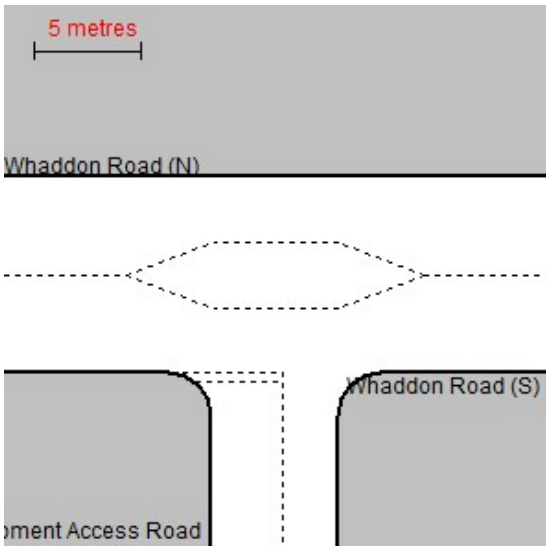
Parameter	Minor Arm B
Major Road Carriageway Width (m)	6.00
Major Road Kerbed Central Reserve Width (m)	0.00
Major Road Right Turning Lane Width (m)	3.00
Minor Road First Lane Width (m)	3.20
Minor Road Visibility To Right (m)	100
Minor Road Visibility To Left (m)	100
Major Road Right Turn Visibility (m)	100
Major Road Right Turn Blocks Traffic	No

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	571.979	0.104	0.263	0.166	0.376
B-C	700.644	0.107	0.271	-	-
C-B	686.890	0.266	0.266	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	07:45-09:15	90	15

ODTAB Turning Counts

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	30.0	205.0
Arm B	2.0	0.0	382.0
Arm C	253.0	31.0	0.0

ODTAB Synthesised Flows

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	08:00	2.938	08:30	4.406	09:00	2.938
Arm B	08:00	4.800	08:30	7.200	09:00	4.800
Arm C	08:00	3.550	08:30	5.325	09:00	3.550

Heavy Vehicles Percentages

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

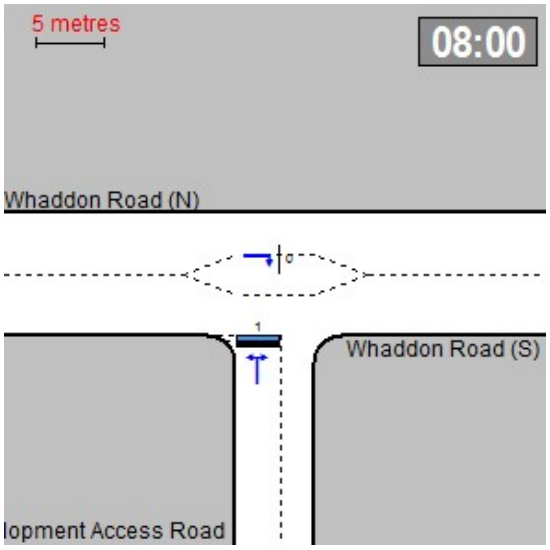
From/To	Arm A	Arm B	Arm C
Arm A	-	10.0	10.0
Arm B	10.0	-	10.0
Arm C	10.0	10.0	-

Default proportions of heavy vehicles are used

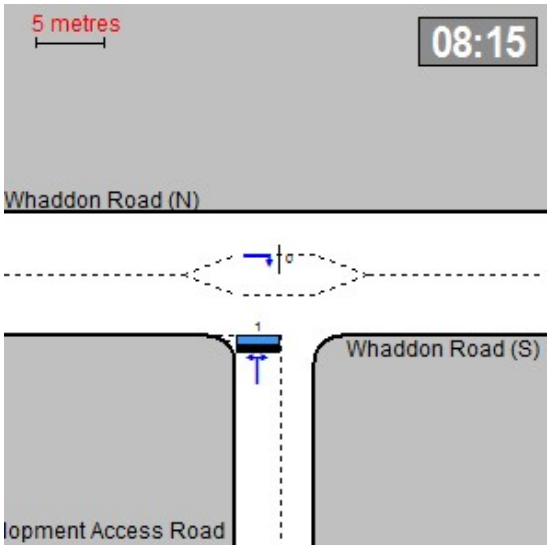
Queue Diagrams

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15
View Extent: 40m

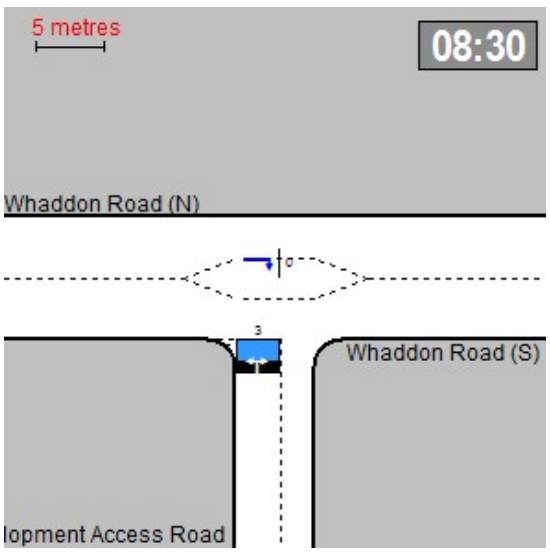
Queue Interval 1: 07:45-08:00



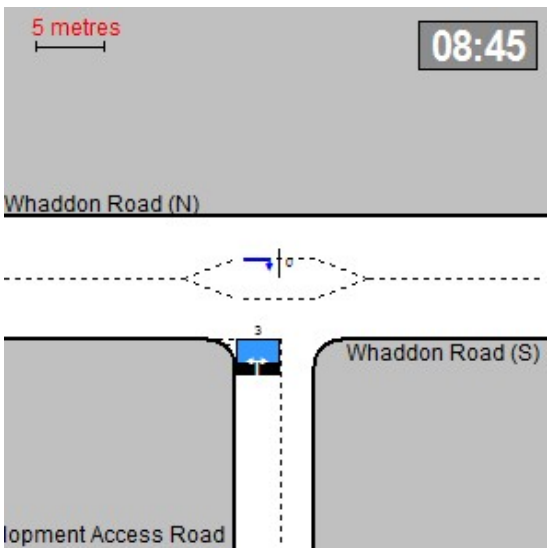
Queue Interval 2: 08:00-08:15



Queue Interval 3: 08:15-08:30

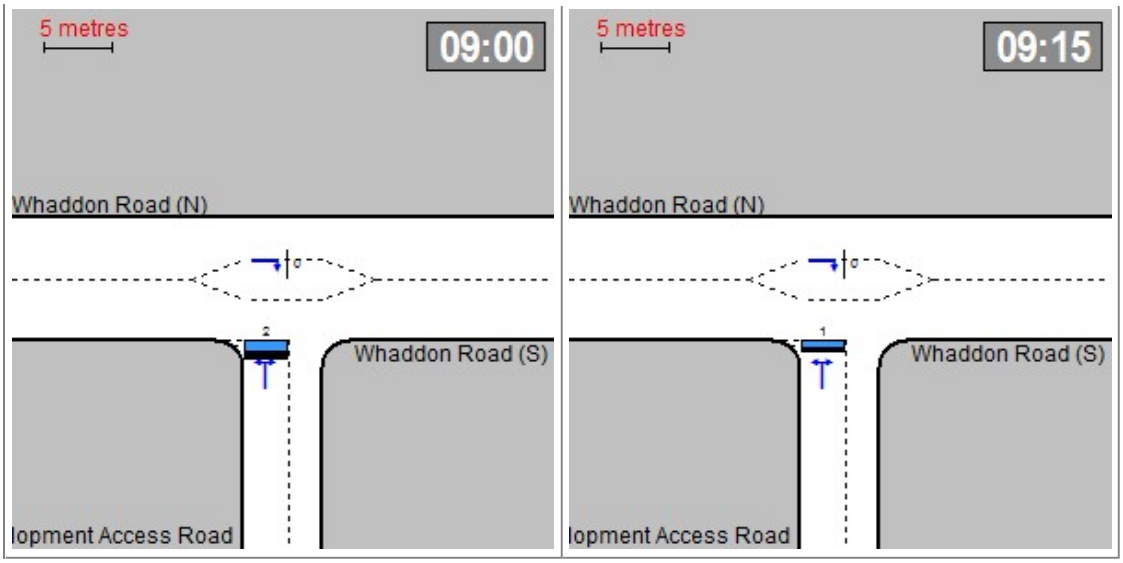


Queue Interval 4: 08:30-08:45



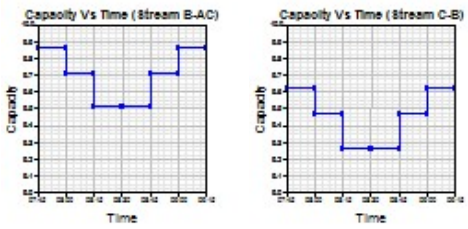
Queue Interval 5: 08:45-09:00

Queue Interval 6: 09:00-09:15


5 metres
09:00
Whaddon Road (N)
Whaddon Road (S)
lopment Access Road
5 metres
09:15
Whaddon Road (N)
Whaddon Road (S)
lopment Access Road

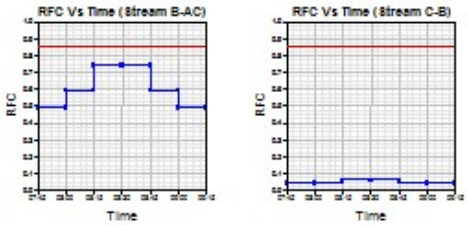
Capacity Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



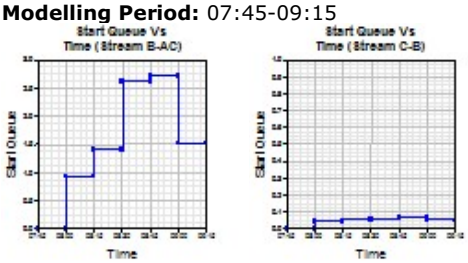
RFC Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



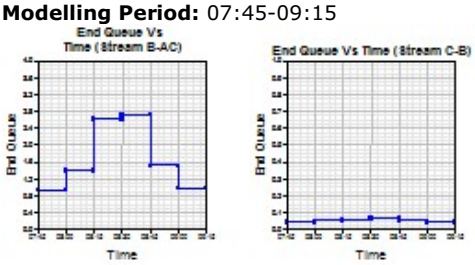
Start Queue Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



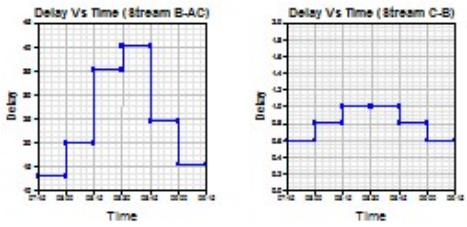
End Queue Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



Delay Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



Queues & Delays

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
07:45-08:00	B-AC	4.82	9.86	0.489	-	0.00	0.93	-	13.1	0.19
	C-A	3.17	-	-	-	-	-	-	-	-
	C-B	0.39	9.62	0.040	-	0.00	0.04	-	0.6	0.11
	A-B	0.38	-	-	-	-	-	-	-	-
	A-C	2.57	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:00-08:15	B-AC	5.75	9.71	0.592	-	0.93	1.40	-	19.8	0.25
	C-A	3.79	-	-	-	-	-	-	-	-
	C-B	0.46	9.47	0.049	-	0.04	0.05	-	0.8	0.11
	A-B	0.45	-	-	-	-	-	-	-	-
	A-C	3.07	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:15-08:30	B-AC	7.05	9.51	0.741	-	1.40	2.62	-	35.2	0.38
	C-A	4.64	-	-	-	-	-	-	-	-
	C-B	0.57	9.26	0.061	-	0.05	0.06	-	1.0	0.11
	A-B	0.55	-	-	-	-	-	-	-	-
	A-C	3.76	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:30-08:45	B-AC	7.05	9.51	0.741	-	2.62	2.72	-	40.2	0.40
	C-A	4.64	-	-	-	-	-	-	-	-
	C-B	0.57	9.26	0.061	-	0.06	0.07	-	1.0	0.11
	A-B	0.55	-	-	-	-	-	-	-	-
	A-C	3.76	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:45-09:00	B-AC	5.75	9.71	0.592	-	2.72	1.51	-	24.4	0.26
	C-A	3.79	-	-	-	-	-	-	-	-
	C-B	0.46	9.47	0.049	-	0.07	0.05	-	0.8	0.11
	A-B	0.45	-	-	-	-	-	-	-	-
	A-C	3.07	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
09:00-09:15	B-AC	4.82	9.86	0.489	-	1.51	0.98	-	15.5	0.20
	C-A	3.17	-	-	-	-	-	-	-	-
	C-B	0.39	9.62	0.040	-	0.05	0.04	-	0.6	0.11
	A-B	0.38	-	-	-	-	-	-	-	-
	A-C	2.57	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.
In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.
Delays marked with '##' could not be calculated.

Overall Queues & Delays

Queueing Delay Information Over Whole Period

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-AC	528.5	352.4	148.1	0.3	148.2	0.3
C-A	348.2	232.2	-	-	-	-
C-B	42.7	28.4	4.7	0.1	4.7	0.1
A-B	41.3	27.5	-	-	-	-
A-C	282.2	188.1	-	-	-	-
All	**1242.9**	**828.6**	**152.9**	**0.1**	**152.9**	**0.1**

Delay is that occurring only within the time period.
Inclusive delay includes delay suffered by vehicles which are still queuing after the end of the time period.
These will only be significantly different if there is a large queue remaining at the end of the time period.

PICADY 5 Run Successful

PICADY

GUI Version: 5.1 AE
Analysis Program Release: 5.0 (MAY 2010)

For sales and distribution information, program advice and maintenance, contact:

TRL Limited
Crowthorne House
Nine Mile Ride
Wokingham, Berks.
RG40 3GA, UK

Tel: +44 (0)1344 770758
Fax:+44 (0)1344 770864
E-mail: software@trl.co.uk
Web: www.trlsoftware.co.uk

Run Analysis

Parameter	Values
File Run	P:\..\Whaddon Road Access Junction\Whaddon Road Access Junction PM.vpi
Date Run	12 June 2014
Time Run	09:13:29
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	Whaddon Road (S)	100
Arm B	Development Access Road	100
Arm C	Whaddon Road (N)	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	Whaddon Road Access Junction
Location	Milton Keynes
Date	21 November 2012
Enumerator	astubbs [PC-11-Q02]
Job Number	M53295
Status	-
Client	-
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data

Geometric Parameters

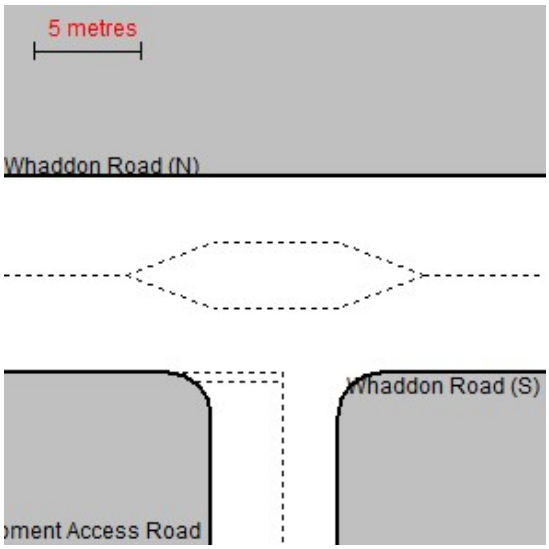
Parameter	Minor Arm B
Major Road Carriageway Width (m)	6.00
Major Road Kerbed Central Reserve Width (m)	0.00
Major Road Right Turning Lane Width (m)	3.00
Minor Road First Lane Width (m)	3.20
Minor Road Visibility To Right (m)	100
Minor Road Visibility To Left (m)	100
Major Road Right Turn Visibility (m)	100
Major Road Right Turn Blocks Traffic	No

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	571.979	0.104	0.263	0.166	0.376
B-C	700.644	0.107	0.271	-	-
C-B	686.890	0.266	0.266	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	16:45-18:15	90	15

ODTAB Turning Counts

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	57.0	195.0
Arm B	2.0	0.0	125.0
Arm C	290.0	103.0	0.0

ODTAB Synthesised Flows

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	17:00	3.150	17:30	4.725	18:00	3.150
Arm B	17:00	1.587	17:30	2.381	18:00	1.587
Arm C	17:00	4.912	17:30	7.369	18:00	4.912

Heavy Vehicles Percentages

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15

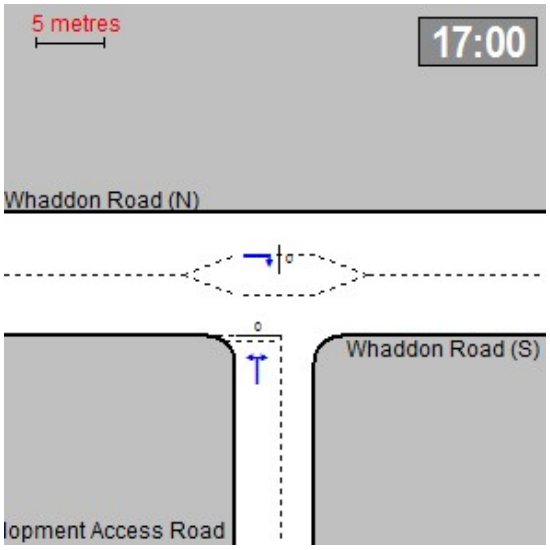
From/To	Arm A	Arm B	Arm C
Arm A	-	10.0	10.0
Arm B	10.0	-	10.0
Arm C	10.0	10.0	-

Default proportions of heavy vehicles are used

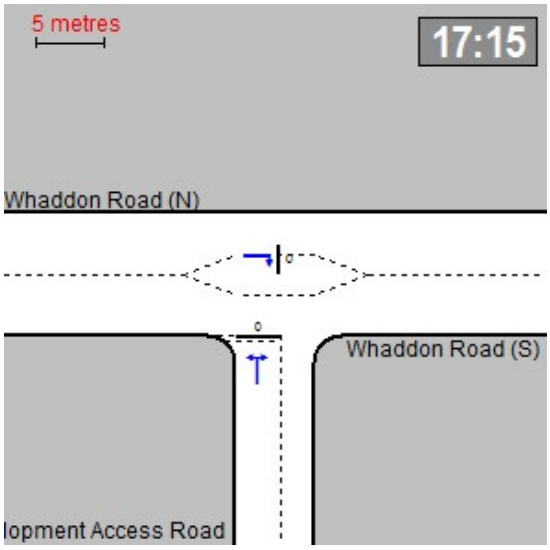
Queue Diagrams

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15
View Extent: 40m

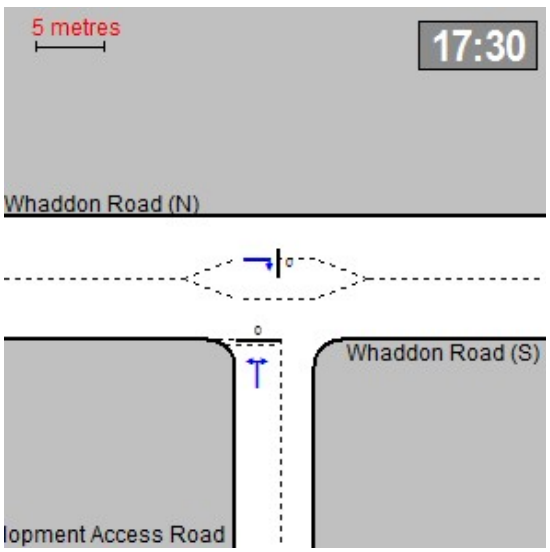
Queue Interval 1: 16:45-17:00



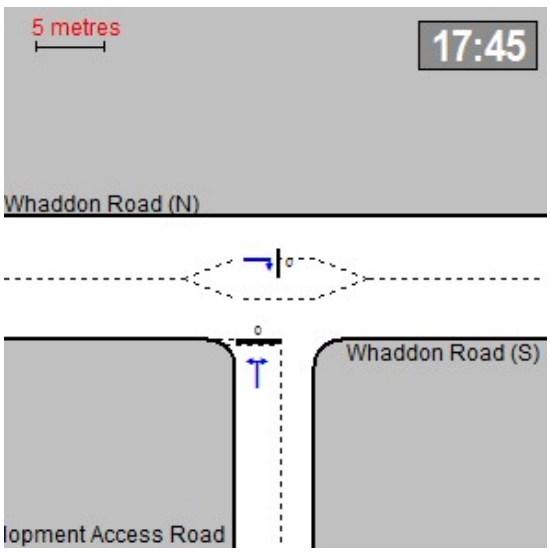
Queue Interval 2: 17:00-17:15



Queue Interval 3: 17:15-17:30

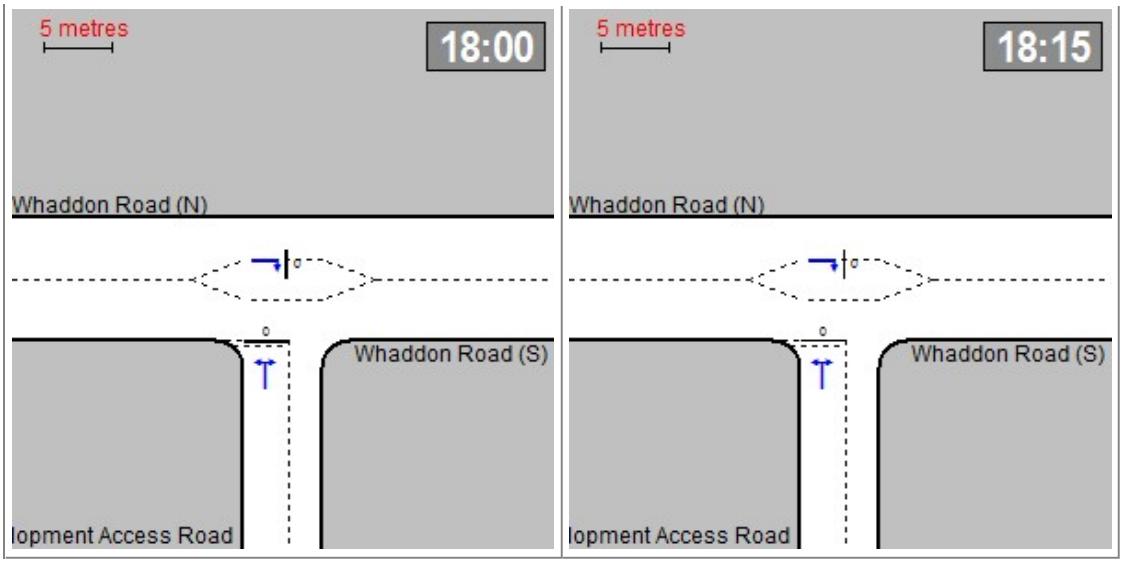


Queue Interval 4: 17:30-17:45



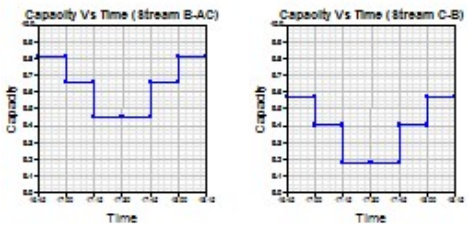
Queue Interval 5: 17:45-18:00

Queue Interval 6: 18:00-18:15


5 metres
18:00
Whaddon Road (N)
Whaddon Road (S)
lopment Access Road
5 metres
18:15
Whaddon Road (N)
Whaddon Road (S)
lopment Access Road

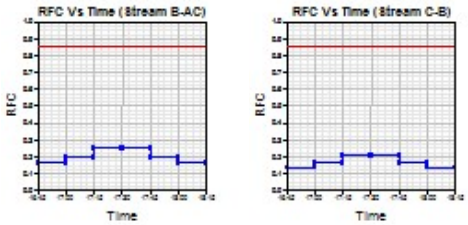
Capacity Graph

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15



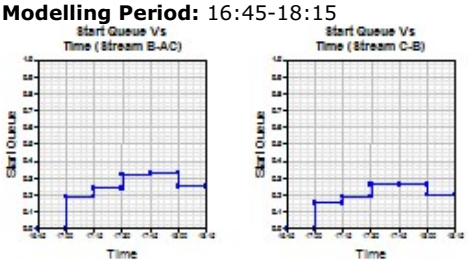
RFC Graph

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15



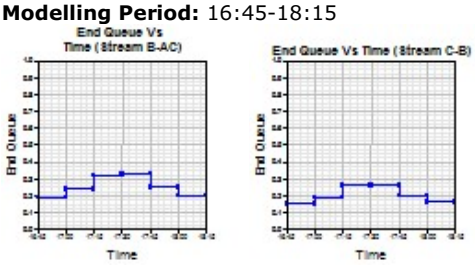
Start Queue Graph

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15



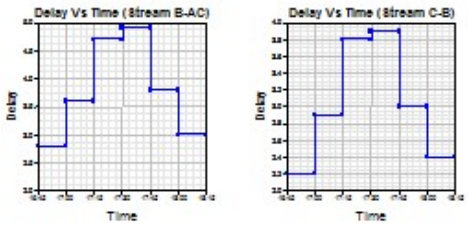
End Queue Graph

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15



Delay Graph

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15



Queues & Delays

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
16:45-17:00	B-AC	1.59	9.81	0.162	-	0.00	0.19	-	2.8	0.12
	C-A	3.64	-	-	-	-	-	-	-	-
	C-B	1.29	9.57	0.135	-	0.00	0.15	-	2.2	0.12
	A-B	0.72	-	-	-	-	-	-	-	-
	A-C	2.45	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:00-17:15	B-AC	1.90	9.66	0.197	-	0.19	0.24	-	3.6	0.13
	C-A	4.35	-	-	-	-	-	-	-	-
	C-B	1.54	9.40	0.164	-	0.15	0.19	-	2.9	0.13
	A-B	0.85	-	-	-	-	-	-	-	-
	A-C	2.92	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:15-17:30	B-AC	2.33	9.45	0.247	-	0.24	0.32	-	4.7	0.14
	C-A	5.32	-	-	-	-	-	-	-	-
	C-B	1.89	9.18	0.206	-	0.19	0.26	-	3.8	0.14
	A-B	1.05	-	-	-	-	-	-	-	-
	A-C	3.58	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:30-17:45	B-AC	2.33	9.45	0.247	-	0.32	0.33	-	4.9	0.14
	C-A	5.32	-	-	-	-	-	-	-	-
	C-B	1.89	9.18	0.206	-	0.26	0.26	-	3.9	0.14
	A-B	1.05	-	-	-	-	-	-	-	-
	A-C	3.58	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:45-18:00	B-AC	1.90	9.66	0.197	-	0.33	0.25	-	3.8	0.13
	C-A	4.35	-	-	-	-	-	-	-	-
	C-B	1.54	9.40	0.164	-	0.26	0.20	-	3.0	0.13
	A-B	0.85	-	-	-	-	-	-	-	-
	A-C	2.92	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
18:00-18:15	B-AC	1.59	9.81	0.162	-	0.25	0.20	-	3.0	0.12
	C-A	3.64	-	-	-	-	-	-	-	-
	C-B	1.29	9.57	0.135	-	0.20	0.16	-	2.4	0.12
	A-B	0.72	-	-	-	-	-	-	-	-
	A-C	2.45	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.
In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.
Delays marked with '##' could not be calculated.

Overall Queues & Delays

Queueing Delay Information Over Whole Period

Demand Set: Whaddon Road Access Junction S1 PM
Modelling Period: 16:45-18:15

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-AC	174.8	116.5	22.8	0.1	22.8	0.1
C-A	399.2	266.1	-	-	-	-
C-B	141.8	94.5	18.2	0.1	18.2	0.1
A-B	78.5	52.3	-	-	-	-
A-C	268.4	178.9	-	-	-	-
All	**1062.6**	**708.4**	**40.9**	**0.0**	**40.9**	**0.0**

Delay is that occurring only within the time period.
Inclusive delay includes delay suffered by vehicles which are still queuing after the end of the time period.
These will only be significantly different if there is a large queue remaining at the end of the time period.

PICADY 5 Run Successful

PICADY

GUI Version: 5.1 AE
Analysis Program Release: 5.0 (MAY 2010)

For sales and distribution information, program advice and maintenance, contact:

TRL Limited
Crowthorne House
Nine Mile Ride
Wokingham, Berks.
RG40 3GA, UK

Tel: +44 (0)1344 770758
Fax:+44 (0)1344 770864
E-mail: software@trl.co.uk
Web: www.trlsoftware.co.uk

Run Analysis

Parameter	Values
File Run	P:\..\A421 LILO Access\A421 LILO Access AM.vpi
Date Run	05 November 2014
Time Run	13:34:18
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	A421 E	100
Arm B	Development Access	100
Arm C	A421 W	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	A421 LILO Access
Location	Milton Keynes
Date	05 November 2014
Enumerator	APatel [PC-11-Q02]
Job Number	M53295
Status	-
Client	-
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data

Geometric Parameters

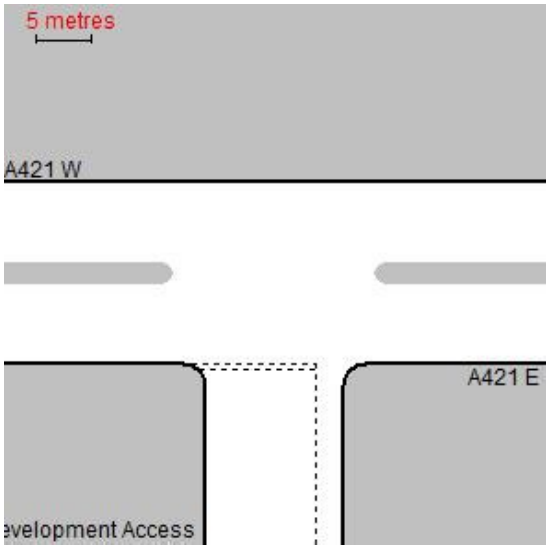
Parameter	Minor Arm B
Major Road Carriageway Width (m)	14.60
Major Road Kerbed Central Reserve Width (m)	4.76
Major Road Right Turning Lane Width (m)	2.20
Minor Road Width 0m Back from Junction (m)	10.00
Minor Road Width 5m Back from Junction (m)	10.00
Minor Road Width 10m Back from Junction (m)	8.40
Minor Road Width 15m Back from Junction (m)	6.50
Minor Road Width 20m Back from Junction (m)	5.30
Minor Road Flare Length (veh)	19
Minor Road Visibility To Right (m)	60
Minor Road Visibility To Left (m)	145
Major Road Right Turn Visibility (m)	100
Major Road Right Turn Blocks Traffic	No

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	0.000	0.000	0.000	0.000	0.000
B-C	0.000	0.000	0.000	-	-
C-B	631.874	0.153	0.153	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	07:45-09:15	90	15

ODTAB Turning Counts

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	26.0	1231.0
Arm B	0.0	0.0	301.0
Arm C	0.0	0.0	0.0

ODTAB Synthesised Flows

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	08:00	15.712	08:30	23.569	09:00	15.712
Arm B	08:00	3.763	08:30	5.644	09:00	3.763
Arm C	08:00	0.000	08:30	0.000	09:00	0.000

Heavy Vehicles Percentages

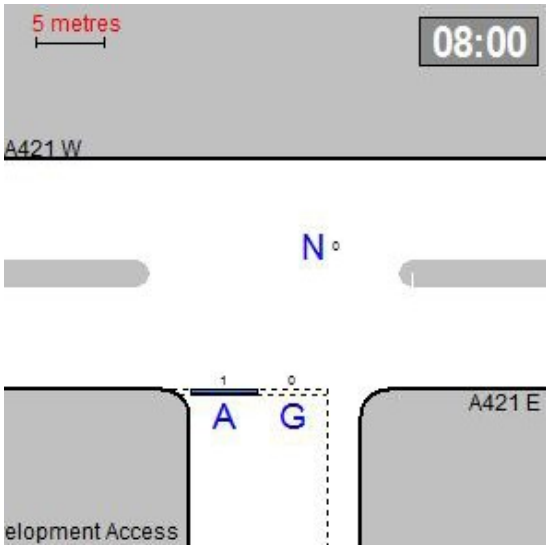
Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

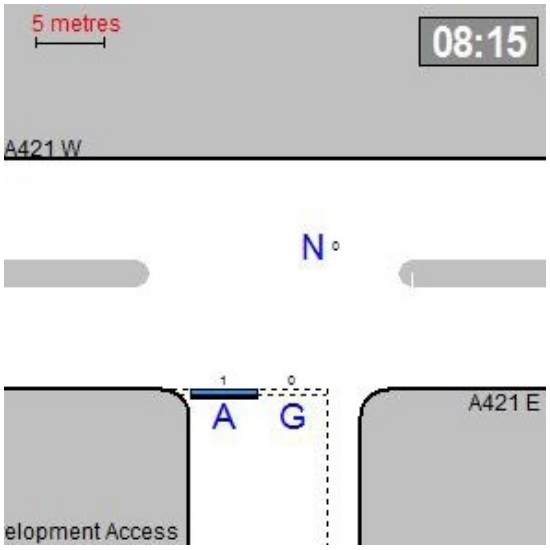
Queue Diagrams

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15
View Extent: 40m

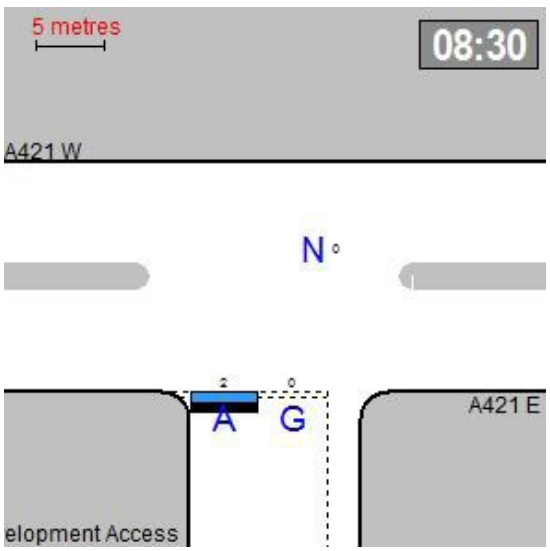
Queue Interval 1: 07:45-08:00



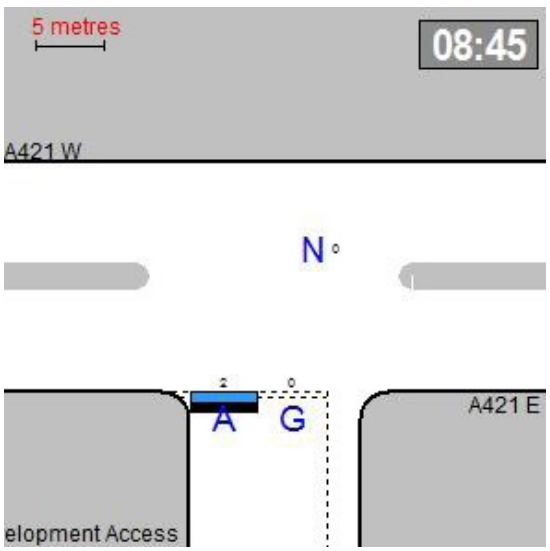
Queue Interval 2: 08:00-08:15



Queue Interval 3: 08:15-08:30

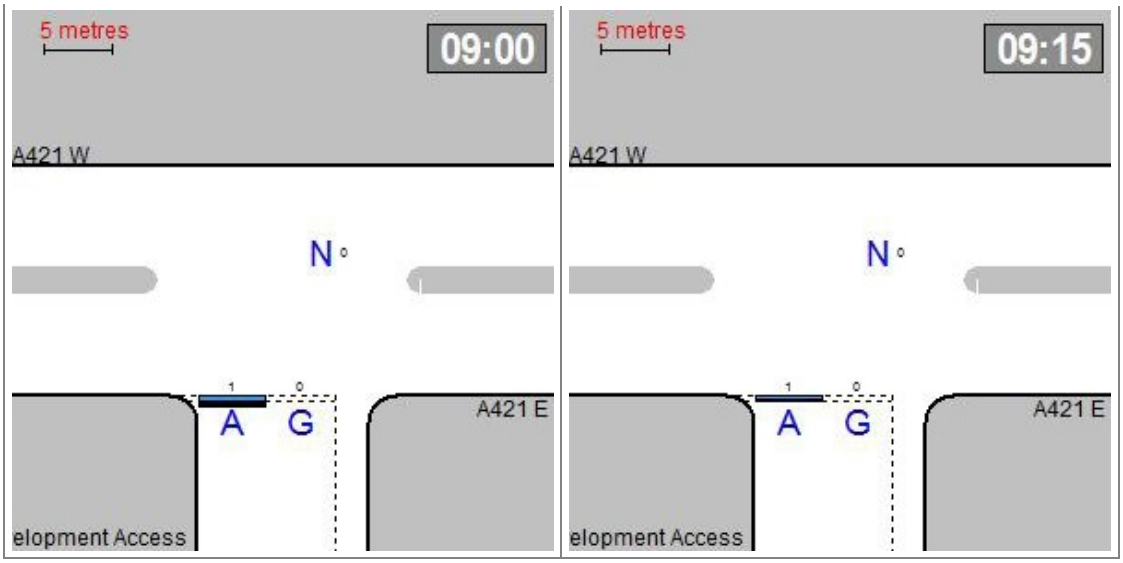


Queue Interval 4: 08:30-08:45



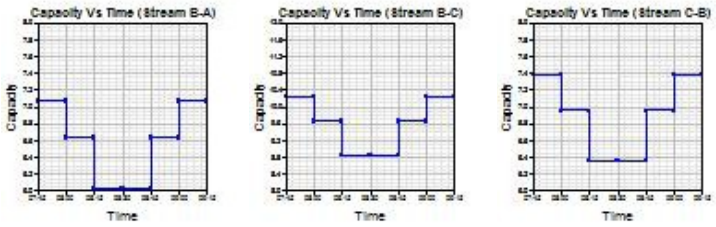
Queue Interval 5: 08:45-09:00

Queue Interval 6: 09:00-09:15


5 metres
09:00
A421 W
N
A421 E
A
G
elopment Access
5 metres
09:15
A421 W
N
A421 E
A
G
elopment Access

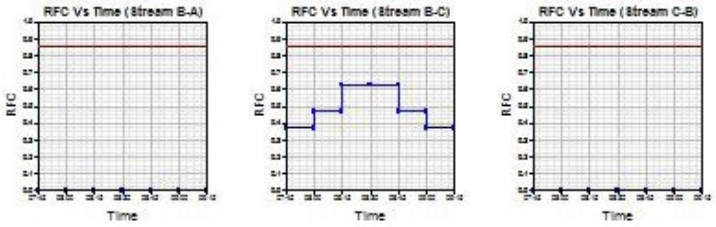
Capacity Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



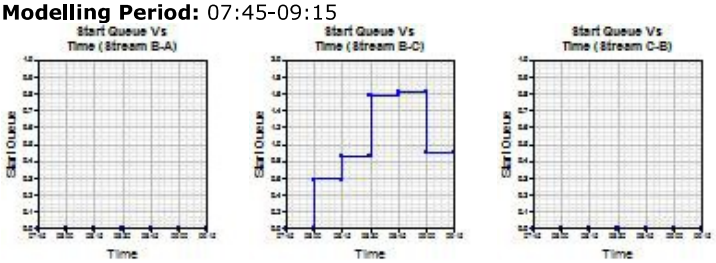
RFC Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



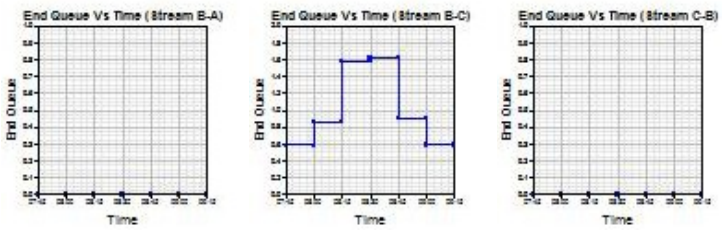
Start Queue Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



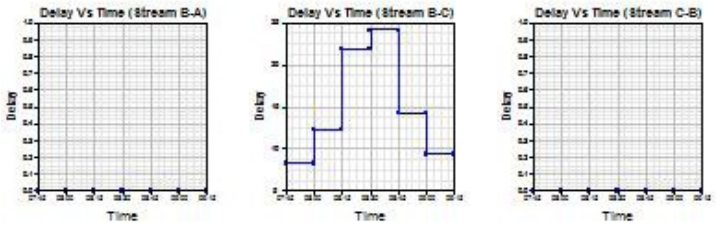
End Queue Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



Delay Graph

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15



Queues & Delays

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
07:45-08:00	B-A	0.00	7.07	0.000	-	0.00	0.00	-	0.0	0.00
	B-C	3.78	10.24	0.369	-	0.00	0.58	-	8.2	0.15
	C-A	0.00	-	-	-	-	-	-	-	-
	C-B	0.00	7.38	0.000	-	0.00	0.00	-	0.0	0.00
	A-B	0.33	-	-	-	-	-	-	-	-
	A-C	15.45	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:00-08:15	B-A	0.00	6.63	0.000	-	0.00	0.00	-	0.0	0.00
	B-C	4.51	9.66	0.467	-	0.58	0.86	-	12.3	0.19
	C-A	0.00	-	-	-	-	-	-	-	-
	C-B	0.00	6.95	0.000	-	0.00	0.00	-	0.0	0.00
	A-B	0.39	-	-	-	-	-	-	-	-
	A-C	18.44	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:15-08:30	B-A	0.00	6.02	0.000	-	0.00	0.00	-	0.0	0.00
	B-C	5.52	8.85	0.624	-	0.86	1.58	-	21.9	0.29
	C-A	0.00	-	-	-	-	-	-	-	-
	C-B	0.00	6.36	0.000	-	0.00	0.00	-	0.0	0.00
	A-B	0.48	-	-	-	-	-	-	-	-
	A-C	22.59	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:30-08:45	B-A	0.00	6.02	0.000	-	0.00	0.00	-	0.0	0.00
	B-C	5.52	8.85	0.624	-	1.58	1.62	-	24.1	0.30
	C-A	0.00	-	-	-	-	-	-	-	-
	C-B	0.00	6.36	0.000	-	0.00	0.00	-	0.0	0.00
	A-B	0.48	-	-	-	-	-	-	-	-
	A-C	22.59	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:45-09:00	B-A	0.00	6.63	0.000	-	0.00	0.00	-	0.0	0.00
	B-C	4.51	9.66	0.467	-	1.62	0.90	-	14.2	0.20
	C-A	0.00	-	-	-	-	-	-	-	-
	C-B	0.00	6.95	0.000	-	0.00	0.00	-	0.0	0.00
	A-B	0.39	-	-	-	-	-	-	-	-
	A-C	18.44	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
09:00-09:15	B-A	0.00	7.07	0.000	-	0.00	0.00	-	0.0	0.00
	B-C	3.78	10.24	0.369	-	0.90	0.59	-	9.3	0.16
	C-A	0.00	-	-	-	-	-	-	-	-
	C-B	0.00	7.38	0.000	-	0.00	0.00	-	0.0	0.00
	A-B	0.33	-	-	-	-	-	-	-	-
	A-C	15.45	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.
In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.
Delays marked with '##' could not be calculated.

Overall Queues & Delays

Queueing Delay Information Over Whole Period

Demand Set: Whaddon Road Access Junction S2 AM
Modelling Period: 07:45-09:15

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-A	0.0	0.0	0.0	0.0	0.0	0.0
B-C	414.3	276.2	90.0	0.2	90.0	0.2
C-A	0.0	0.0	-	-	-	-
C-B	0.0	0.0	0.0	0.0	0.0	0.0
A-B	35.8	23.9	-	-	-	-
A-C	1694.4	1129.6	-	-	-	-
All	**2144.5**	**1429.6**	**90.0**	**0.0**	**90.0**	**0.0**

Delay is that occurring only within the time period.
Inclusive delay includes delay suffered by vehicles which are still queuing after the end of the time period.
These will only be significantly different if there is a large queue remaining at the end of the time period.

PICADY 5 Run Successful

PICADY

GUI Version: 5.1 AE
Analysis Program Release: 5.0 (MAY 2010)

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Run Analysis

Parameter	Values
File Run	P:\..\A421 LILO Access\A421 LILO Access PM.vpi
Date Run	05 November 2014
Time Run	13:51:23
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	A421 E	100
Arm B	Development Access	100
Arm C	A421 W	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	A421 LILO Access
Location	Milton Keynes
Date	05 November 2014
Enumerator	APatel [PC-11-Q02]
Job Number	M53295
Status	-
Client	-
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data

Geometric Parameters

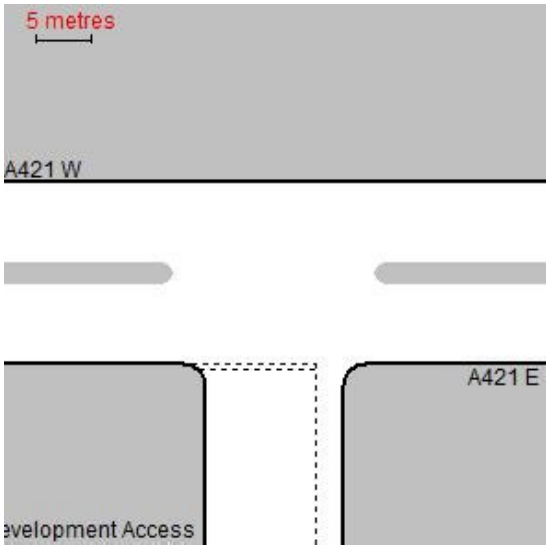
Parameter	Minor Arm B
Major Road Carriageway Width (m)	14.60
Major Road Kerbed Central Reserve Width (m)	4.76
Major Road Right Turning Lane Width (m)	2.20
Minor Road Width 0m Back from Junction (m)	10.00
Minor Road Width 5m Back from Junction (m)	10.00
Minor Road Width 10m Back from Junction (m)	8.40
Minor Road Width 15m Back from Junction (m)	6.50
Minor Road Width 20m Back from Junction (m)	5.30
Minor Road Flare Length (veh)	19
Minor Road Visibility To Right (m)	60
Minor Road Visibility To Left (m)	145
Major Road Right Turn Visibility (m)	100
Major Road Right Turn Blocks Traffic	No

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	0.000	0.000	0.000	0.000	0.000
B-C	0.000	0.000	0.000	-	-
C-B	631.874	0.153	0.153	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	16:45-18:15	90	15

ODTAB Turning Counts

Demand Set: Whaddon Road Access Junction S2 PM
Modelling Period: 16:45-18:15

From/To	Arm A	Arm B	Arm C
Arm A	0.0	119.0	1131.0
Arm B	0.0	0.0	55.0
Arm C	0.0	0.0	0.0

ODTAB Synthesised Flows

Demand Set: Whaddon Road Access Junction S2 PM
Modelling Period: 16:45-18:15

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	17:00	15.625	17:30	23.438	18:00	15.625
Arm B	17:00	0.688	17:30	1.031	18:00	0.688
Arm C	17:00	0.000	17:30	0.000	18:00	0.000

Heavy Vehicles Percentages

Demand Set: Whaddon Road Access Junction S2 PM
Modelling Period: 16:45-18:15

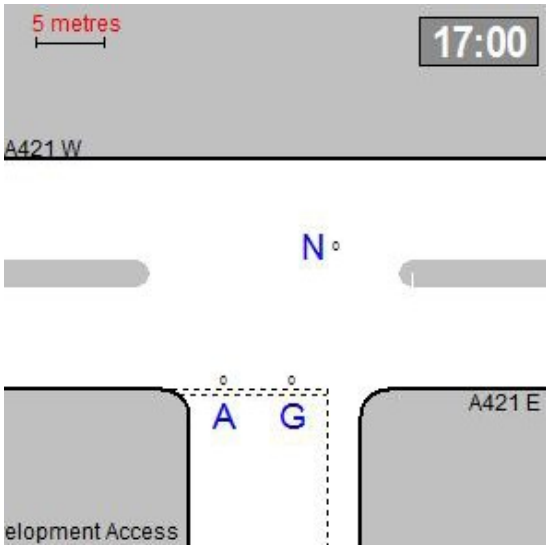
From/To	Arm A	Arm B	Arm C
Arm A	-	10.0	10.0
Arm B	10.0	-	10.0
Arm C	10.0	10.0	-

Default proportions of heavy vehicles are used

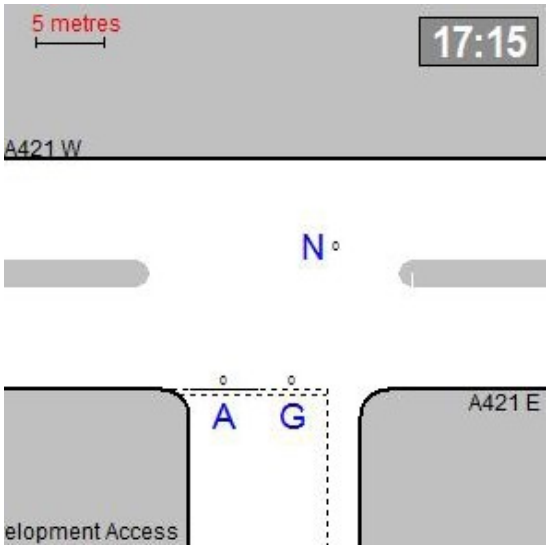
Queue Diagrams

Demand Set: Whaddon Road Access Junction S2 PM
Modelling Period: 16:45-18:15
View Extent: 40m

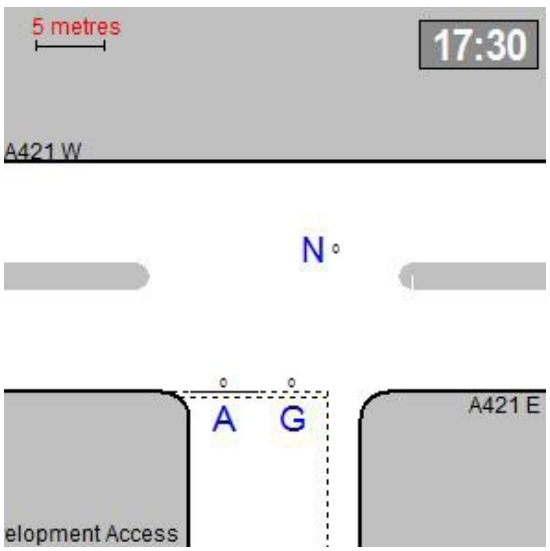
Queue Interval 1: 16:45-17:00



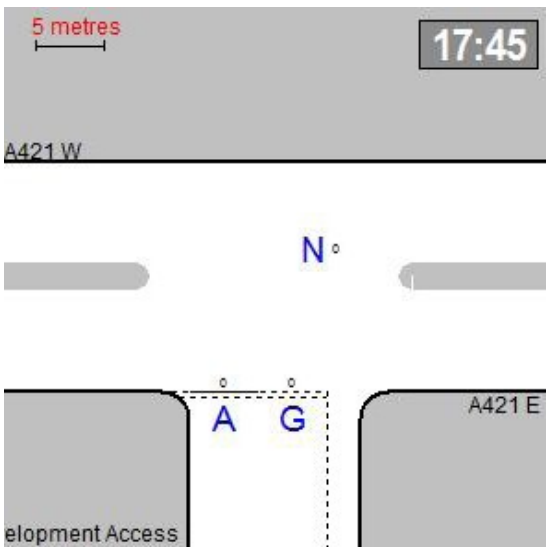
Queue Interval 2: 17:00-17:15



Queue Interval 3: 17:15-17:30



Queue Interval 4: 17:30-17:45



Queue Interval 5: 17:45-18:00

Queue Interval 6: 18:00-18:15