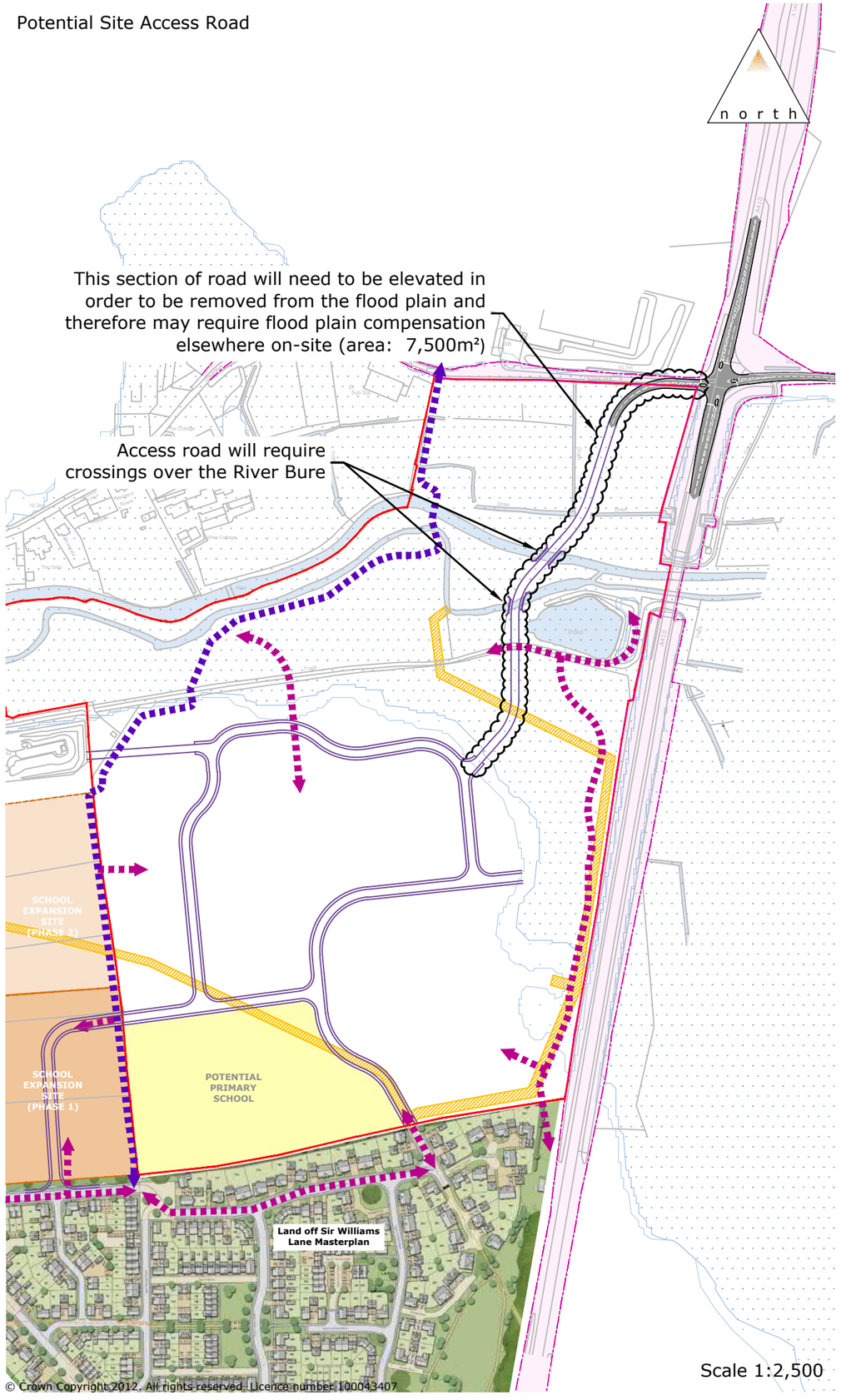
Appendix F

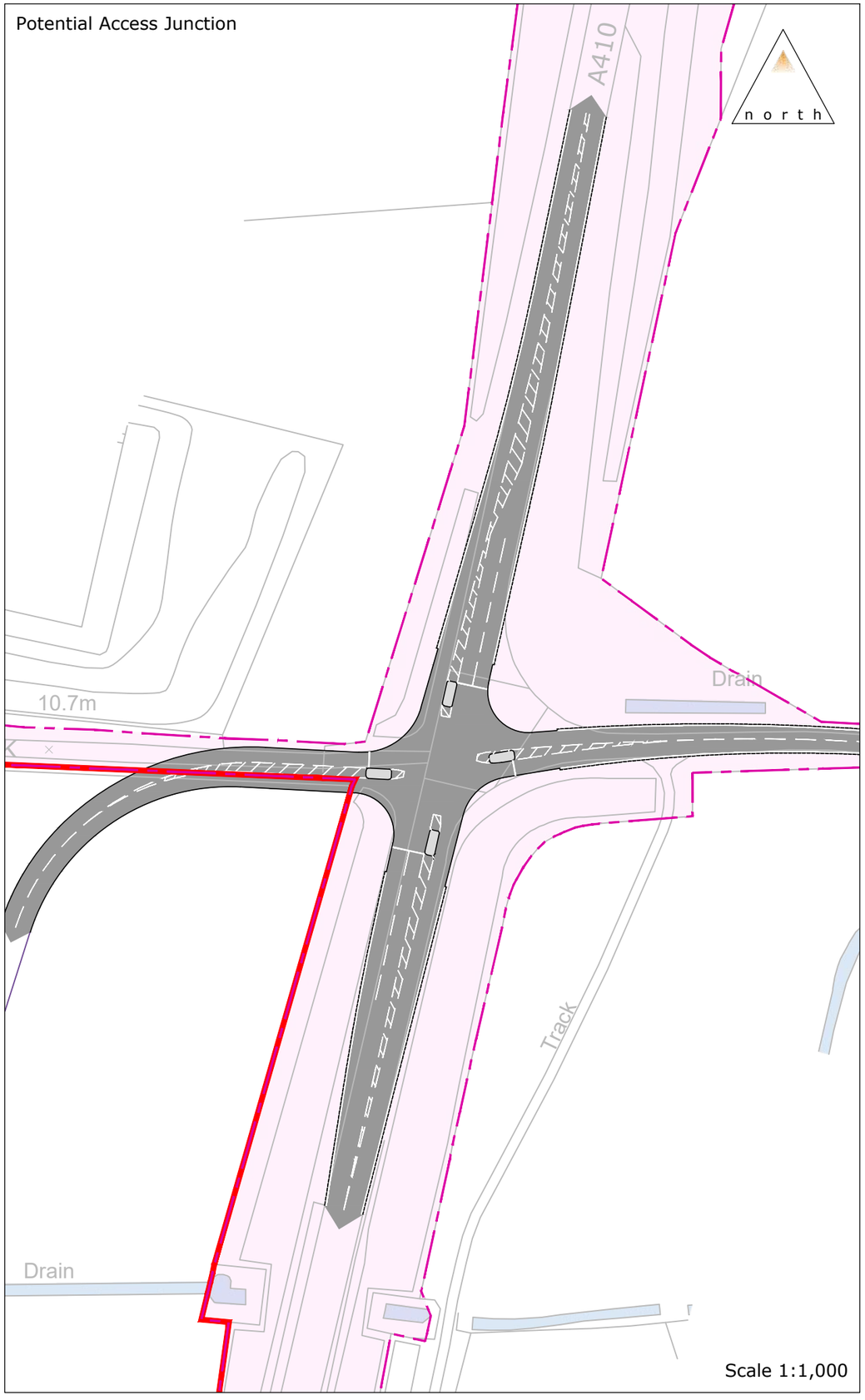
Alternative Vehicular Access Strategy

Potential Site Access Road



Scale 1:2,500

Potential Access Junction



Scale 1:1,000

Legend

- Site Boundary
- Highway Boundary (Based on INSPIRE Land Registry Boundaries, to be confirmed)
- School Expansion Area (Phase 1 and 2)
- Indicative Layout of Internal Access Road
- Flood Zone 2 (Based on EA Flood Maps)
- Flood Zone 3 (Based on EA Flood Maps)
- Potential Primary School
- Proposed Pedestrian / Cycle Links
- Land North of Sir Williams Lane Proposed Off-site Footpath Link (Based on Pegausus Drawing Bir:4413_20A dated 18/06/2015)
- Existing Easement (Based on Create Consulting Engineers Limited Drawing 500/068 dated 22/10/2014)

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Project:
Land North East of Aylsham

Title:
Site Access Strategy
Signal Option at Dunkirk

Scale: As Shown @ A3)

Drawing: 1802070-01

Revision: B

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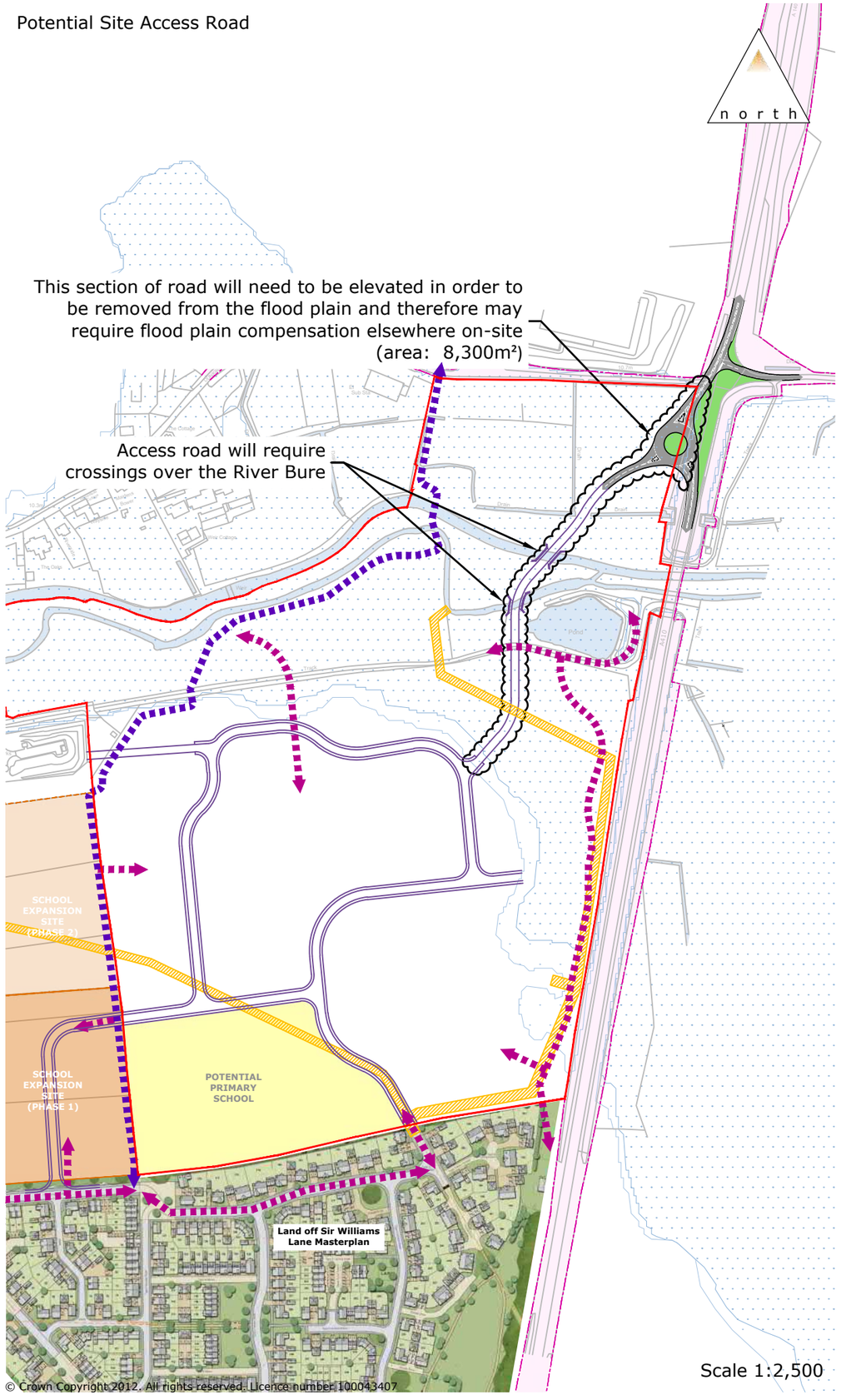
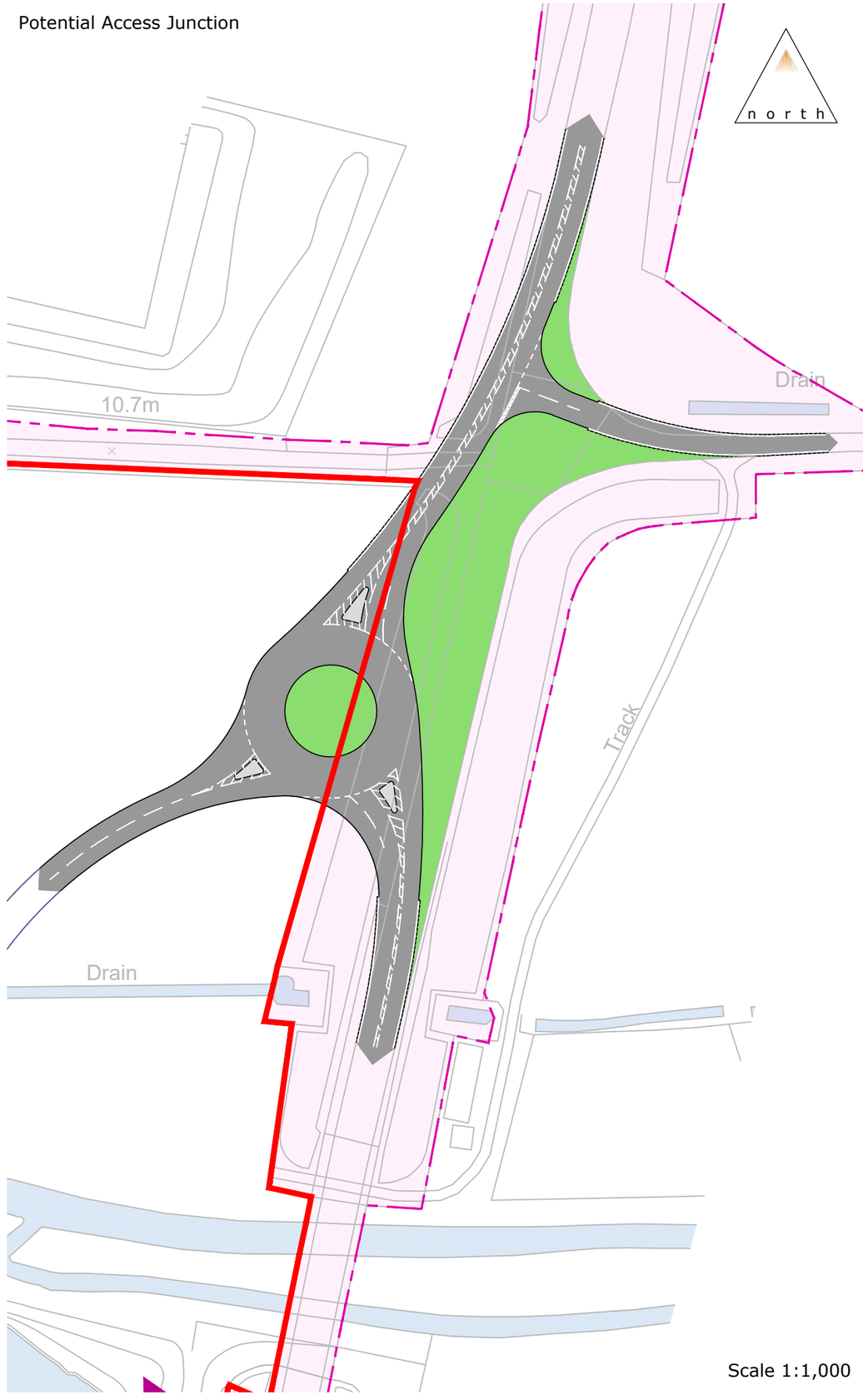
Potential Site Access Road



Scale 1:2,500

Potential Access Junction



Scale 1:1,000

Legend

- Site Boundary
- Highway Boundary (Based on INSPIRE Land Registry Boundaries, to be confirmed)
- School Expansion Area (Phase 1 and 2)
- Indicative Layout of Internal Access Road
- Flood Zone 2 (Based on EA Flood Maps)
- Flood Zone 3 (Based on EA Flood Maps)
- Potential Primary School
- Proposed Pedestrian / Cycle Links
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Project:
Land North East of Aylsham

Title:
Site Access Strategy
Roundabout at Dunkirk (Option 2)

Scale: As Shown (@ A3)

Drawing: 1802070-03

Revision: B

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Appendix G

Highway Impact Appraisal

Technical Note 1: Highway Impact Assessment

Project:	Land North East of Aylsham
Prepared by:	Calum McGoff
Approved by:	James Bancroft
Date:	21st March 2018

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1.0 Introduction

1.1 In 2014, Broadland District Council, Norwich City Council and South Norfolk Council adopted a Joint Core Strategy (JCS) for the 'Greater Norwich Area' (GNA). The JCS plans for the growth requirements of the area to the 2026, which were predicated on the assumption a further 37,000 new homes would be delivered. However, in the time that has elapsed since the JCS was adopted the need for housing has grown. Indeed, the GNA now has a need to provide circa 43,000 homes by 2036.

1.2 In this regard, the Joint Councils have started to prepare a new local plan (i.e. Greater Norwich Local Plan) that will shape and control development up to and including 2036. As part of the development of this plan, a Regulation 18 Consultation was launched on the 8th January 2018. With this in mind, Westmere Homes, which controls land located to the North East of Aylsham, has appointed a design team to outline the opportunities and constraints associated with delivering a residential lead mixed use scheme in Aylsham.

1.3 As part of this design team, Motion has been instructed to provide highways and transportation advice with respect to the construction of up to 300 residential dwellings and a two form entry primary school. Following a review of the emerging Evidence Base for the GNLP it is evident that the suite of transport documents that normal support a Local Plan have not yet been published. To this end, Motion has prepared this Technical Note to summarise the outcome of an initial highway capacity assessment that has sought to establish the current and future capacity of the local highway network.

2.0 National Planning Policy Guidance

2.1 In March 2014 the Department for Communities and Local Government (DCLG) launched the National Planning Policy Guidance (NPPG) that supports the overarching aims of the National Planning Policy Framework (NPPF). Highways and transportation matters associated with the development of new Local Plans are dealt with at Section ID54 of the NPPG under the heading of "*Transport evidence bases in plan making and decision taking*".

2.2 Paragraph 3 of ID54 considers the following key issues should be considered when developing a transport evidence base, which is used to inform a new Local Plan:

- *assess the existing situation and likely generation of trips over time by all modes and the impact on the locality in economic, social and environmental terms*
- *assess the opportunities to support a pattern of development that, where reasonable to do so, facilitates the use of sustainable modes of transport*
- *highlight and promote opportunities to reduce the need for travel where appropriate*
- *identify opportunities to prioritise the use of alternative modes in both existing and new development locations if appropriate*
- *consider the cumulative impacts of existing and proposed development on transport networks*
- *assess the quality and capacity of transport infrastructure and its ability to meet forecast demands*
- *identify the short, medium and long-term transport proposals across all modes*

2.3 Given the early stage of the plan, it is understood that Strategic Transport Assessment has not yet been undertaken to inform the Greater Norwich Local Plan. Without prejudice to the results of the STA being made available, a detailed review of key junctions within Aylsham has been undertaken. A summary of this assessment is provided in the next Section.

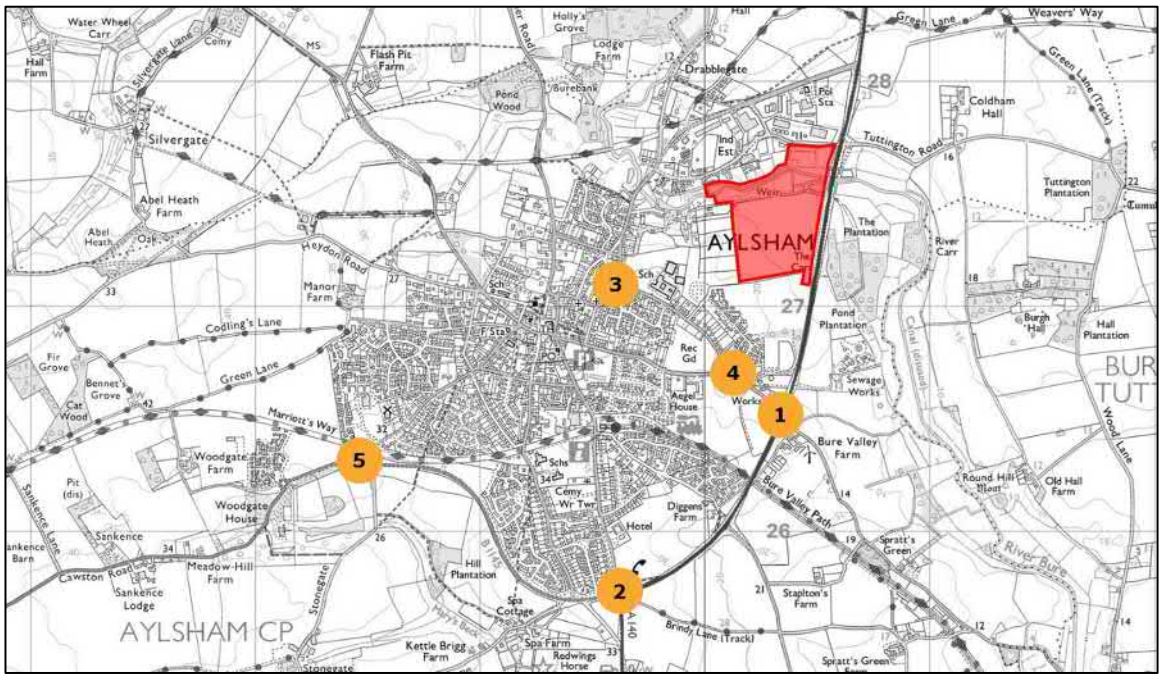
3.0 Baseline Traffic Data

3.1 When assessing the impacts of a strategic site allocation as that being considered for the Land North East of Aylsham site, it is generally accepted that the critical periods in terms of traffic impact are the weekday morning and evening peak hours. It is during these periods that traffic flows associated with the development, and those on the adjacent highway network are likely to be at their greatest.

3.2 So that baseline traffic conditions could be established, The reference was made to the Transport Assessments (TA) submitted in support of the Proposed Football Club Grounds and Associated Residential Development (ref:20110128) and Land off Sir William's Lane (ref: 20111453).Flows for the following junction were extracted.

- Junction 1: A410/Burgh Road Roundabout.
- Junction 2: A140/B1145 Roundabout.
- Junction 3: Gashouse Hill/Sir William's Lane priority controlled junction.
- Junction 4: Sir William's Lane/ Burgh Road priority controlled junction.
- Junction 5: Henry Page Road/Cawston Road priority controlled junction.

3.3 The location of these junctions in relation to the application site are provided below. For consistency, the junction numbers introduced below are used in subsequent sections of this report.



Study Area

3.4 The data presented in support of these previous applications indicates that the weekday peak traffic flows associated with the local highway network occur between 08:00 to 09:00 in the morning and 17:00 to 18:00 in the evening. A summary of the traffic movements on the local highway network during these periods are shown at **Figure 1** at **Annex A**.

4.0 Committed Developments

4.1 When evaluating the impact of a proposed development it is normal practice to consider the cumulative effects associated with committed developments that are not yet fully operational. For the purposes of this assessment, the following developments have been be taken into consideration when assessing the cumulative impact of development on the Land North East of Aylsham site:

- 20110128: Cawston Road, Aylsham (*The Willows*).
- 20111453: Land off Sir William's Lane, Aylsham (*Bure Meadows*).

4.2 Details of traffic flows associated with the committed developments located within Aylsham area are shown at **Annex A** on **Figures 2** and **3**, whilst **Figure 4** shows the cumulative increases in traffic associated with these schemes. The information presented on these figures have been established having regard to the analyses contained within the Transport Assessments that are available for the above applications.

5.0 Traffic Generation and Traffic Distribution

5.1 For the purposes of this assessment reference has been made to The TRICS database in order to obtain trip rates for residential sites considered similar in terms of car ownership, geography and location to public transport provision as well as the wider strategic highway network. **Annex B** provides the details of TRICS sites selected and the resulting trip generating potential of 300 residential units. The information presented at **Annex B** also sets out the trips that will be completed by other modes of transport, which have been established having regard to 2011 Census data for the local area. A summary of the results are provided in Table 5.1.

Mode	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
Rail	0	0	0	0
Bus	2	8	5	3
Taxi	0	0	0	0
Motorcycle	0	2	1	1
Car/van driver	44	172	125	61
Car/van passenger	2	9	7	3
Pedal Cycle	4	17	12	6
On foot	8	32	23	11
Other	1	4	3	1
TOTAL	**63**	**244**	**177**	**87**

Table 5.1 –Land North East of Aylsham Trip Generation

5.2 Table 5.1 demonstrates that the Land North East of Aylsham site has the potential to generate circa 220 and 190 vehicle trips in the morning and evening peak hours respectively. Increases of this magnitude are equivalent to 3.6 and 3.1 vehicles per minute on average during the peak periods.

5.3 Whilst there is an intention to provide a primary school within the site, it has been assumed that the primary school would solely cater for the future residents of the Land North of Aylsham and Bure Meadows sites. In this regard, the trip attracting potential of this aspect of the emerging masterplan will be largely self-contained and will thus not have any impact on the external highway network.

5.4 When establishing the distribution of development traffic, it is considered best practice to have regard to analyses of census data, gravity models and/or existing flows. For the purposes of this assessment, it is assumed that traffic will be distributed in accordance with data extracted from the *Nomis* website. Copies of the data extracted are provided at **Annex C**, whilst a summary of the distribution profiles are presented at **Figure 5** at **Annex A**.

5.5 **Figure 8** at **Annex A** details the routes that development related trips are likely to follow. A summary of the increases in traffic at the junctions that were surveyed within the study area is provided at Table 5.2.

Junction	Morning Peak	Evening Peak
1	+151	+130
2	+151	+130
3	+7	+6
4	-	-
5	+15	+13

Table 5.2 – Summary of Traffic Increases (Proposed Development)

5.6 When considering the above, it is worthy to note that it is generally accepted detailed capacity modelling is only normally required at those junctions that are expected to experience increases of more than 30 vehicles in any hour. However, the highway impact assessments presented below have considered all of the above junctions for robustness.

6.0 Highway Impact Assessment Scenarios

6.1 For the purposes of this assessment, the above junctions have been assessed using the following scenarios:

- Scenario 1: 2036 Forecast Baseline.
- Scenario 2: 2036 Forecast Baseline with Land North East of Aylsham.

6.2 Vehicular activity associated with the 2036 Without Development flows are shown on **Figure 7** at **Annex A**. When establishing the 'without development' flows it has been necessary to:

- Have regard to the committed development traffic shown on **Figures 2** and **3** at **Annex A**;
- Take into account the potential redistributing effects of the emerging access strategy, which is shown on **Figure 9** at **Annex A**.
- Apply the growth rates extracted from the TEMPRO database to the 2036 Baseline data shown on **Figure 6** at **Annex A**;

6.3 It should also be noted that the current version of TEMPRO assumes that 1,420 households and 209 new jobs will be delivered in the Aylsham area between 2018 and 2036. This compares to the 550 new homes that will be delivered by committed development outlined in Section 4. It is also worthy to note that the number of units that can be accommodated on the Land North of Aylsham site is up to 300.

6.4 On this basis, it is appropriate to adjust the planning assumptions included within the TEMPRO database to avoid any double counting of traffic. For completeness, copies of the calculations undertaken are provided at **Annex D** with Table 6.1 summarising the growth rates that have been used for the purposes of this assessment.

Assessment Period	AM Peak	PM Peak
2017 to 2036	1.1884	1.1871

Table 6.1 – TEMPRO Growth rates for the Land North East of Aylsham Study Area

6.5 So that the effects of the proposed development can be considered, the following calculations have been undertaken:

- Scenario 2: 2036 Forecast Baseline with Land North East of Aylsham (**Figure 11**)
    - Development trips shown on **Figure 10** at **Annex A** have been combined with the corresponding 'without development' traffic flows shown on **Figure 7**

7.0 Highway Impact

7.1 The traffic flows associated with the 'Without Development' scenario have been compared with the corresponding values associated with the traffic conditions in the 'With Development' scenarios in order to establish how traffic flows will change at the assessment junctions in the future. The results of this comparison are provided in Tables 7.1 and 7.2.

Junction	Morning Peak		Evening Peak	
	Scenario 1	Scenario 2	Scenario 1	Scenario 2
1	1841	1960 (*+6.5%*)	2011	2110 (*+4.9%*)
2	2124	2275 (*+7.1%*)	2184	2314 (*+6.0%*)
3	559	566 (*+1.3%*)	328	334 (*+1.8%*)
4	664	632 (-4.8%)	549	518 (-5.6%)
5	812	827 (*+1.8%*)	737	750 (*+1.8%*)

Table 7.1 – Junction Impacts (Morning Peak)

7.2 The above tables indicate the junctions that comprise the study area will experience relatively large net increases in vehicular activity when compared to the base situation. However, it is considered that this is an inevitable consequence of BDC meeting its identified housing need.

7.3 In order to evaluate whether or not the anticipated increases in traffic is likely to have a severe impact upon the junctions that make up the study area, reference has been made to the industry standard computer modelling software Junctions 9, which includes the current versions of ARCADY and PICADY. The results of these analyses are summarised in Sections 8 and 9.

7.4 Both ARCADY and PICADY, which are produced by the Transport Research Laboratory (TRL), express the relationship between traffic flow and capacity of roundabouts and priority controlled junctions as a ratio, referred to as the Ratio of Flow to Capacity (RFC). Based upon these results it also predicts the anticipated queue lengths (Q) and delays that are likely to occur at the junction. Junctions 9 also provides a further performance measurement, which correlates the length of the delay experienced by arriving vehicles to a scale that is referred to as the 'Level of Service' (LoS).

7.5 The LoS is determined having regard to the banding system set out in the Highway Capacity Manual approach to traffic capacity. The following summarises the definitions that are provided within Highway Traffic Analysis and Design (Salter & Hounsell, 1996) for the various bandings that are predicted in Junctions 9:

- LoS A: Free Flow - Primarily free-flow operation with vehicles having almost complete freedom to manoeuvre;
- LoS B: Reasonably Free Flow - Reasonable free-flow conditions with vehicles having slightly restricted freedom to manoeuvre;
- LoS C: Stable Flow - Stable operation but freedom to manoeuvre is restricted;
- LoS D: Approaching Unstable Flow - Borders on unstable flow with freedom to manoeuvre severely limited;
- LoS E: Unstable Flow - Traffic flow is very unstable and approaching capacity; and,
- LoS F: Forced or Breakdown Flow - The point at which demand exceeds capacity.

8.0 Scenario 1: 2036 Forecast Baseline

8.1 The traffic flows presented at **Figure 7** have been assessed using the junction models that were developed to review the operation of the assessment junctions under baseline conditions. The results of detailed modelling analyses that take into account the increases in traffic associated with the forecasted year are provided at **Annex E**, with summaries provided below in Table 8.1.

Assessment Junction	Morning Peak			Evening Peak		
	Max RFC	LoS	Delay (secs)	Max RFC	LoS	Delay (secs)
1	0.53	A	5.04	0.73	A	6.78
2	0.55	A	4.98	0.68	A	6.04
3	0.36	A	4.87	0.18	A	4.21
4	0.36	A	5.94	0.40	A	6.01
5	0.17	A	2.26	0.22	A	2.29

Table 8.1 –Scenario 1 Junction Modelling Summary

8.2 When considering the above results it should be noted that the IHT indicates that RFC values of 0.85 to 0.90 have historically been considered to reflect uncongested design thresholds, whilst an RFC of 1 indicates that a junction is operating at capacity. Against this background, it is evident that all of the junctions that have been assessed would operate with residual capacity in the future.

9.0 Scenario 2: 2036 Forecast Baseline with Land North East of Aylsham

9.1 Scenario 2 demonstrates the future operational capacity of the local highway network for the end year of the draft local plan (2036) with the development of the Land North of Aylsham site. The traffic flows presented at **Figure 11** have been assessed using the junction models that were developed to review the operation of the assessment junctions under forecast conditions. It should be noted that the results generated for the site access roundabout are based upon the geometric characteristics of the access designs contained within the TFA.

9.2 The results of detailed modelling analyses that take into account the increases in traffic associated with this potential development site are provided at **Annex E**, with summaries provided below in Table 9.1.

Assessment Junction	Morning Peak			Evening Peak		
	Max RFC	LoS	Delay (secs)	Max RFC	LoS	Delay (secs)
1	0.61	A	5.59	0.78	A	7.87
2	0.56	A	5.27	0.74	A	7.07
3	0.37	A	5.04	0.19	A	4.24
4	0.35	A	5.53	0.36	A	5.50
5	0.17	A	2.22	0.22	A	2.27
Site Access Roundabout	0.59	A	4.90	0.61	A	5.63

Table 9.1 – Scenario 2 Junction Modelling Summary

9.3 As with Scenario 1, Table 9.1 indicates that all of the assessment junctions will operate with residual capacity in the future. Notably this includes the emerging site access junctions as this confirms that they will not have an adverse effect upon the free-flow of traffic and/or introduce any prolonged delays during the peak travel periods.

Summary

9.4 In summary, it has been shown that the proposed site access and the junctions that comprise the study area will not be subject to capacity constraints that are likely to lead to unacceptable periods of delay. On this basis, it is concluded that the traffic associated with a residential development at the Land North East of Aylsham site would not result in a severe impact upon the local highway network, which is the test indicated in the NPPF as being a justifiable reason to prevent the delivery of a potential development.

10.0 Summary and Conclusions

10.1 As the emerging Greater Norwich Local Plan does not yet appear to be supported by a Startegic Transport Assessment, a detailed highway impact assessment has been undertaken to consider the impact that development of at the Land North East of Aylsham site could have upon the local highway network. On the basis of the analyses presented above it has been shown that:

- The junctions that comprise the study area are expected to operate within capacity once traffic associated with the level of development being considered at the Land North East of Aylsham site is introduced to the local highway network.
- Any increases in delays associated with development at the Land North East of Aylsham site would be negligible, and certainly not representative of the severe impact referred to in the NPPF.
- There is thus no need to provide any off-site mitigation in order to make the quantum of development that is being considered by Westmere Homes.

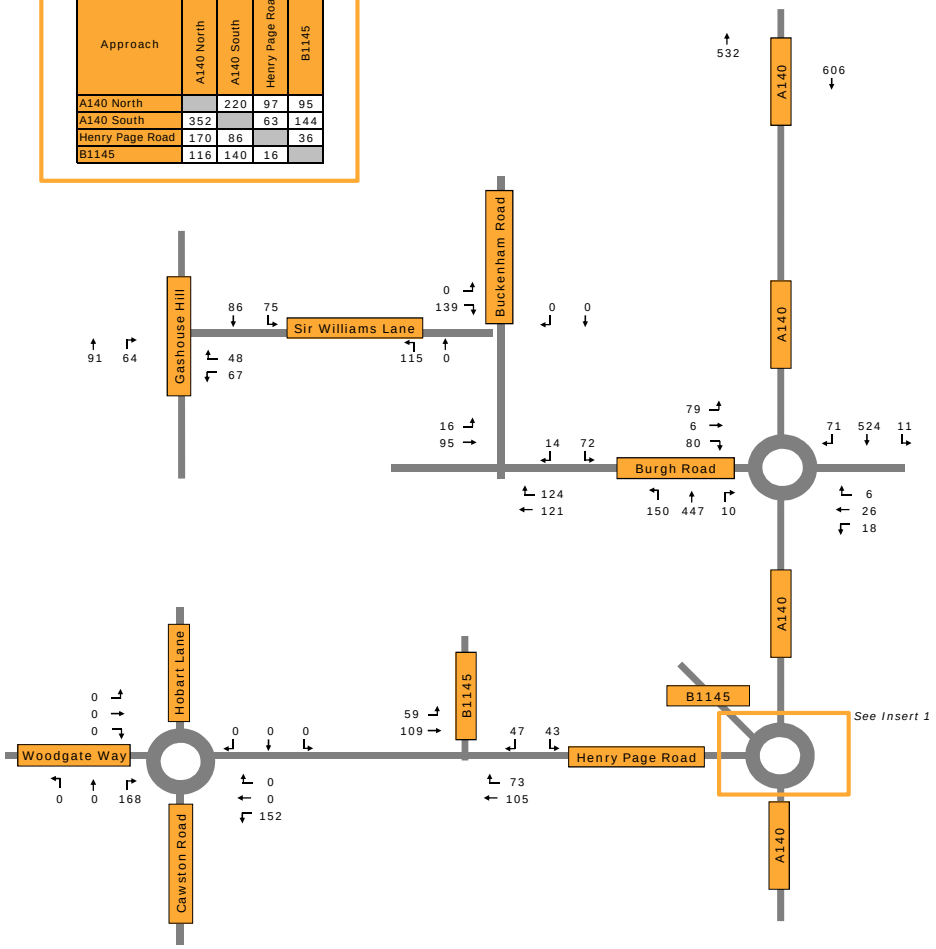
10.2 It is therefore evidence that the local highway network is not subject to any capacity constraints that would justify the exclusion of the Land North East of Aylsham site from the emerging Local Plan. Notwithstanding this, it is acknowledged that any future planning application will require more detailed analyses to be undertaken. We therefore look forward to having the opportunity to work with NCC as the Local Plan evolves to refine the analyses we have undertaken on behalf of Westmere Homes to date.

Annex A

Traffic Flows

Insert 1: A140/B1145 Roundabout

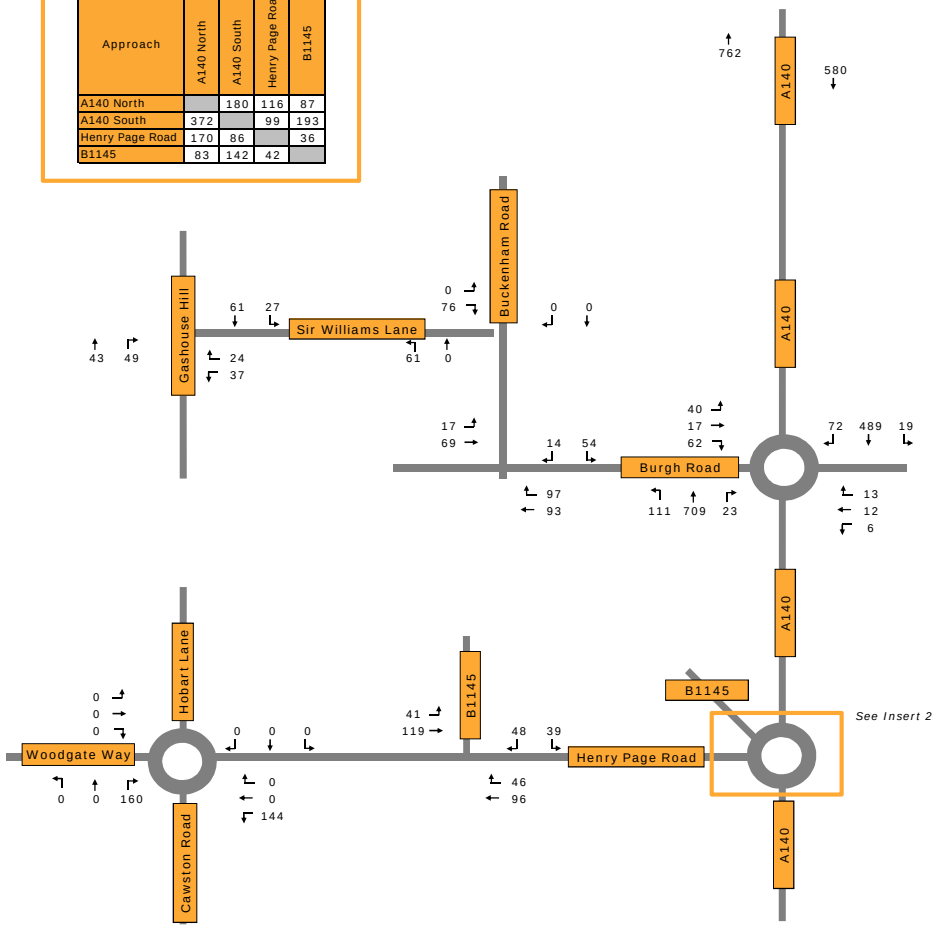
Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		220	97	95
A140 South	352		63	144
Henry Page Road	170	86		36
B1145	116	140	16	



AM PEAK HOUR (08:00-09:00)

Insert 2: A140/B1145 Roundabout

Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		180	116	87
A140 South	372		99	193
Henry Page Road	170	86		36
B1145	83	142	42	



PM PEAK HOUR (17:00-18:00)

Key:

123 Passenger Car Units

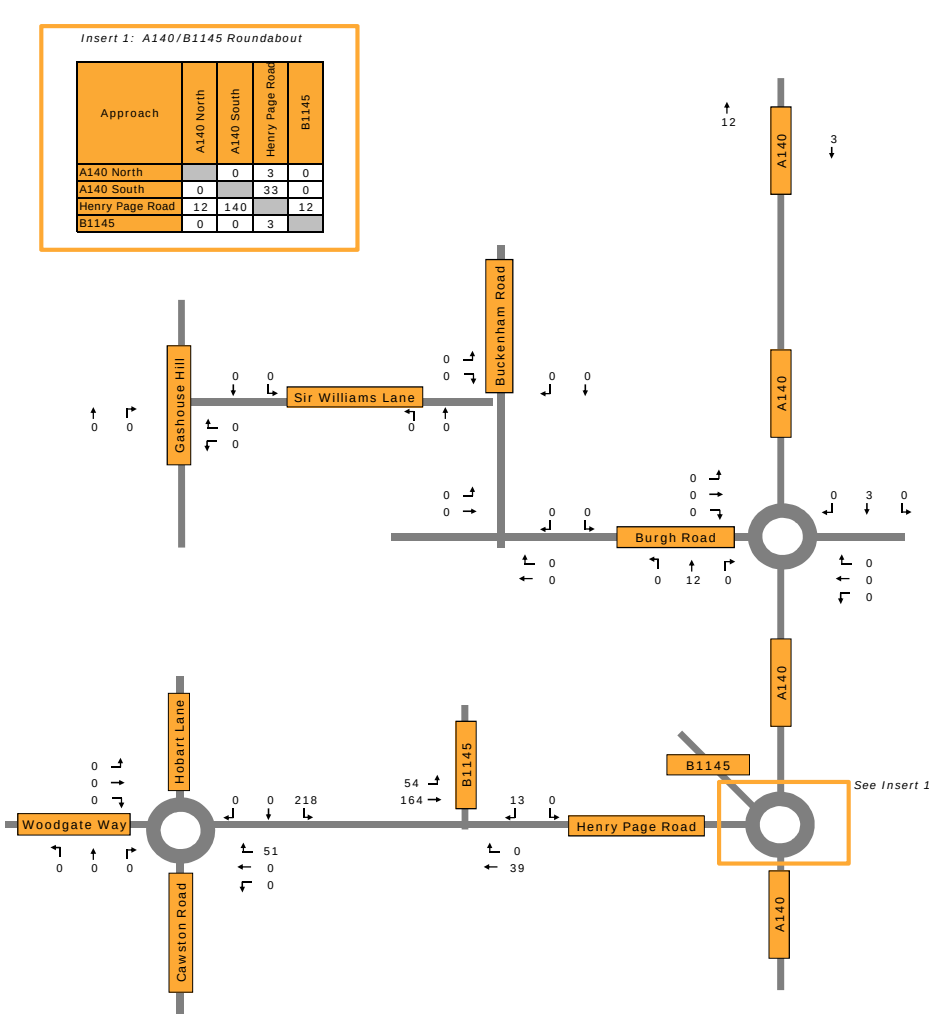
Notes:

Based on traffic data taken from the Transport Assessments submitted in support of application 20110128 and 20111453.

Land North East of Aylsham

Baseline Traffic Data

Motion Figure No. 1.0



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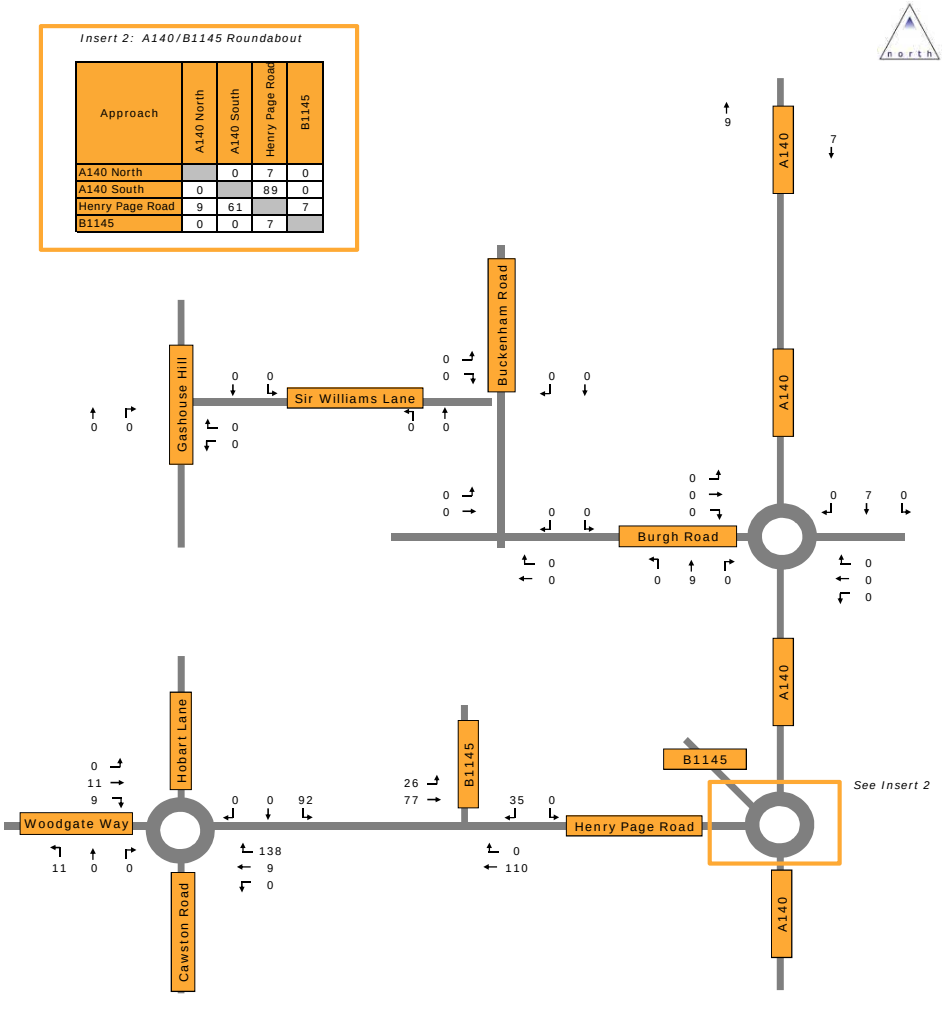


PM PEAK HOUR (17:00-18:00)

Key:

123 Passenger Car Units

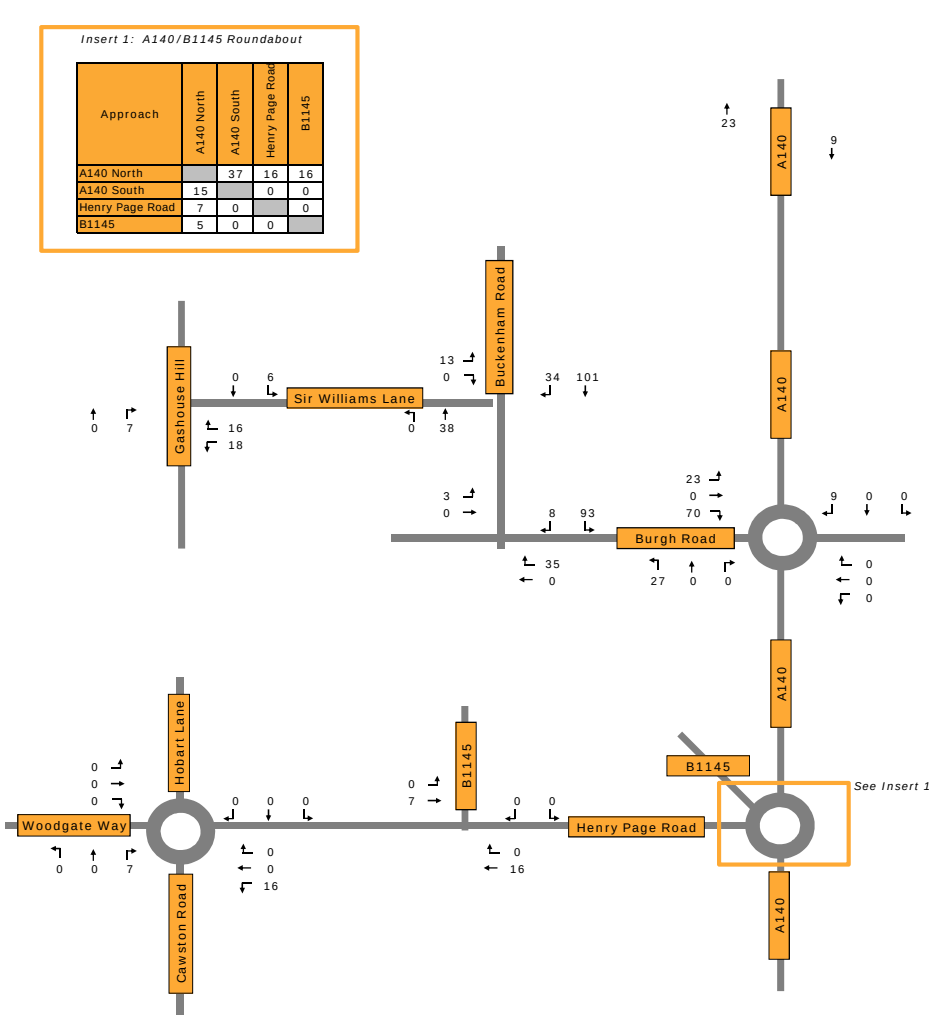
Notes:

Based on Drawing 60145998_007 of the Transport Assessments submitted in support of application 20110128

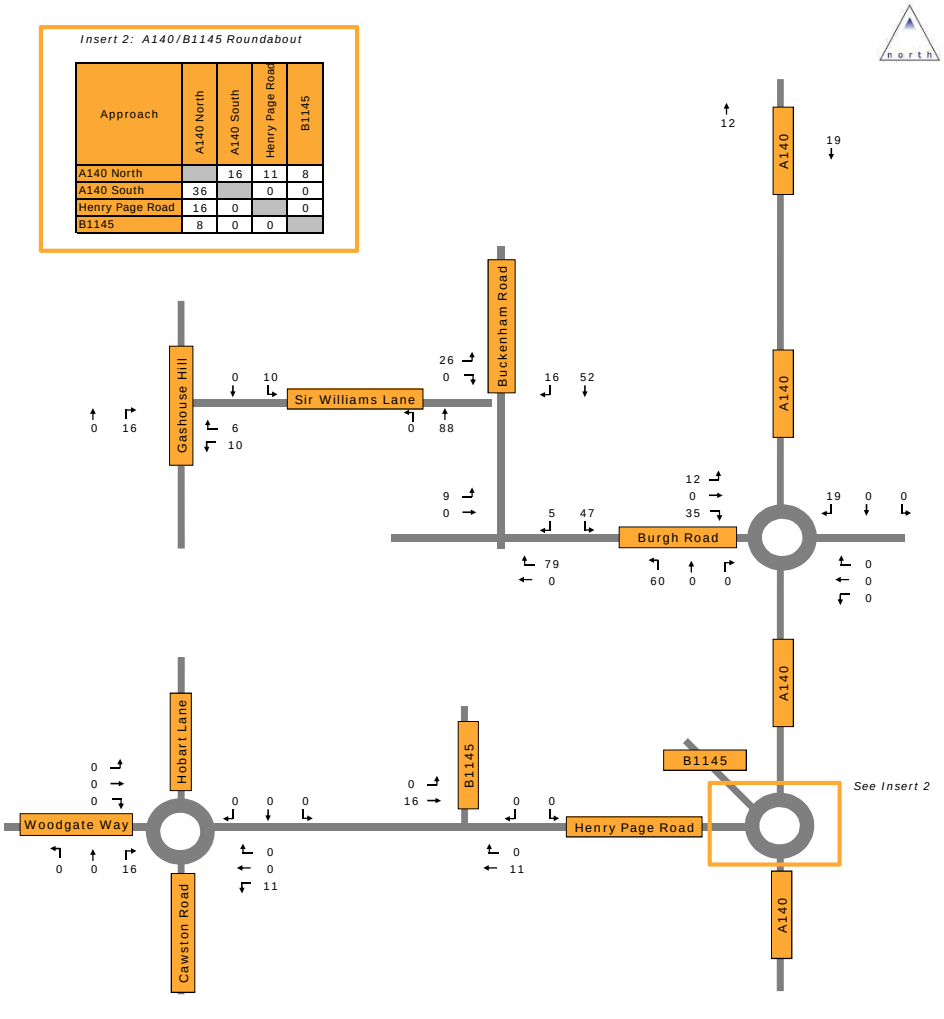
Land North East of Aylsham

Committed Development Traffic Flows: Aylsham Football Club Site

Motion Figure No. 2.0



AM PEAK HOUR (08:00-09:00)



PM PEAK HOUR (17:00-18:00)

Key:

123 Passenger Car Units

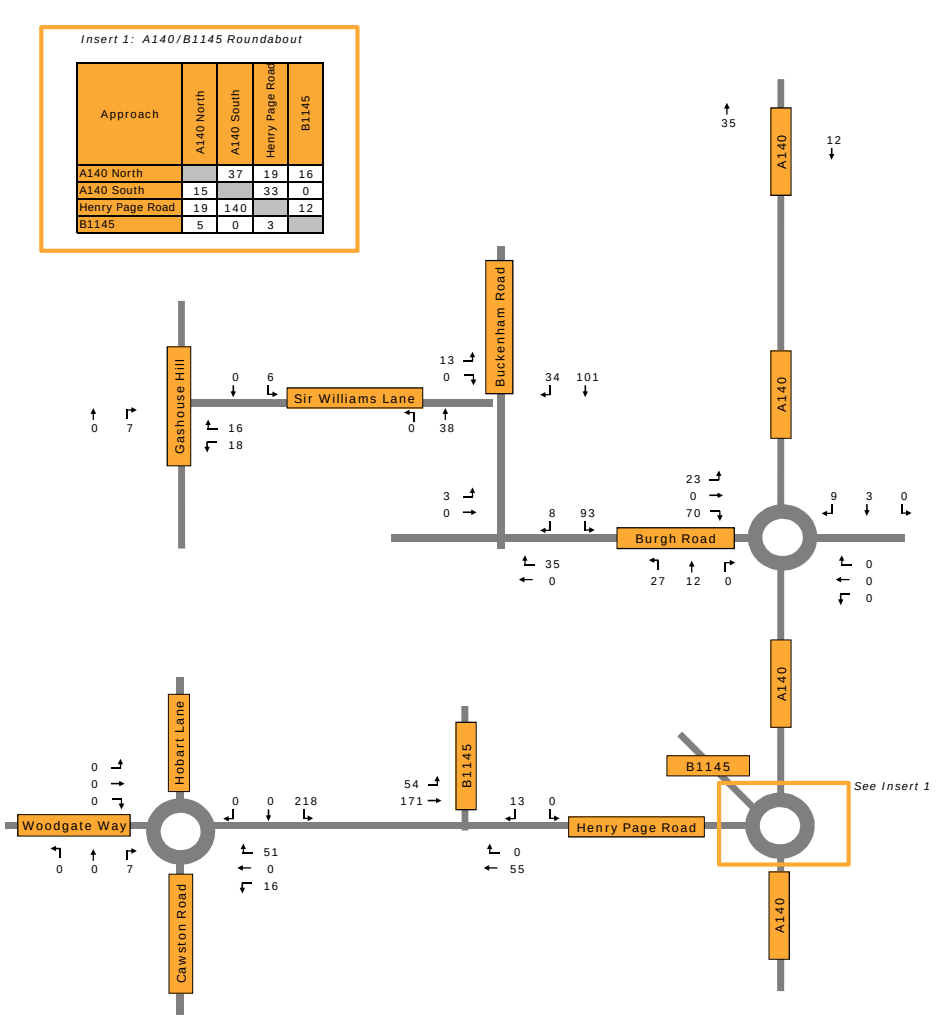
Notes:

Based on Figures 8.5 and 8.6 of the Transport Assessments submitted in support of application 20111453.

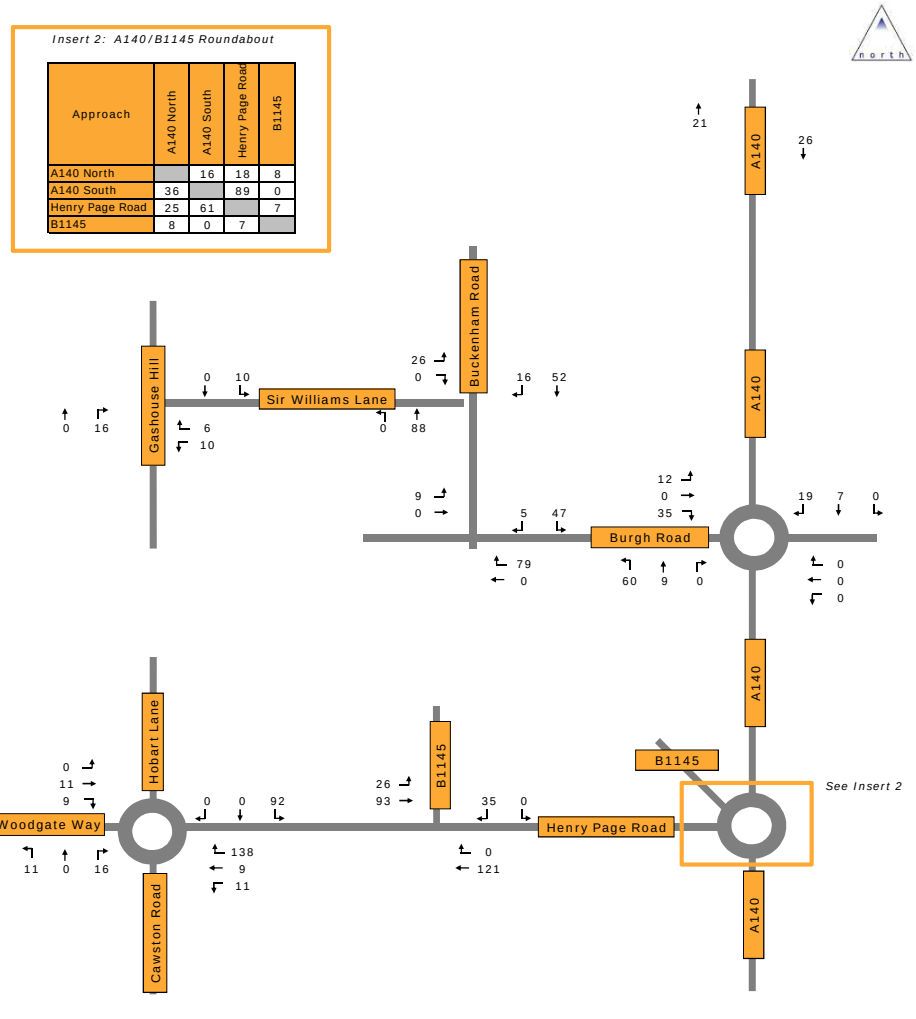
Land North East of Aylsham

Committed Development Traffic Flows: Land off Sir William's Lane Site

Motion Figure No. 3.0



AM PEAK HOUR (08:00-09:00)



PM PEAK HOUR (17:00-18:00)

motion

Land North East of Aylsham

Committed Development Traffic Flows: TOTAL

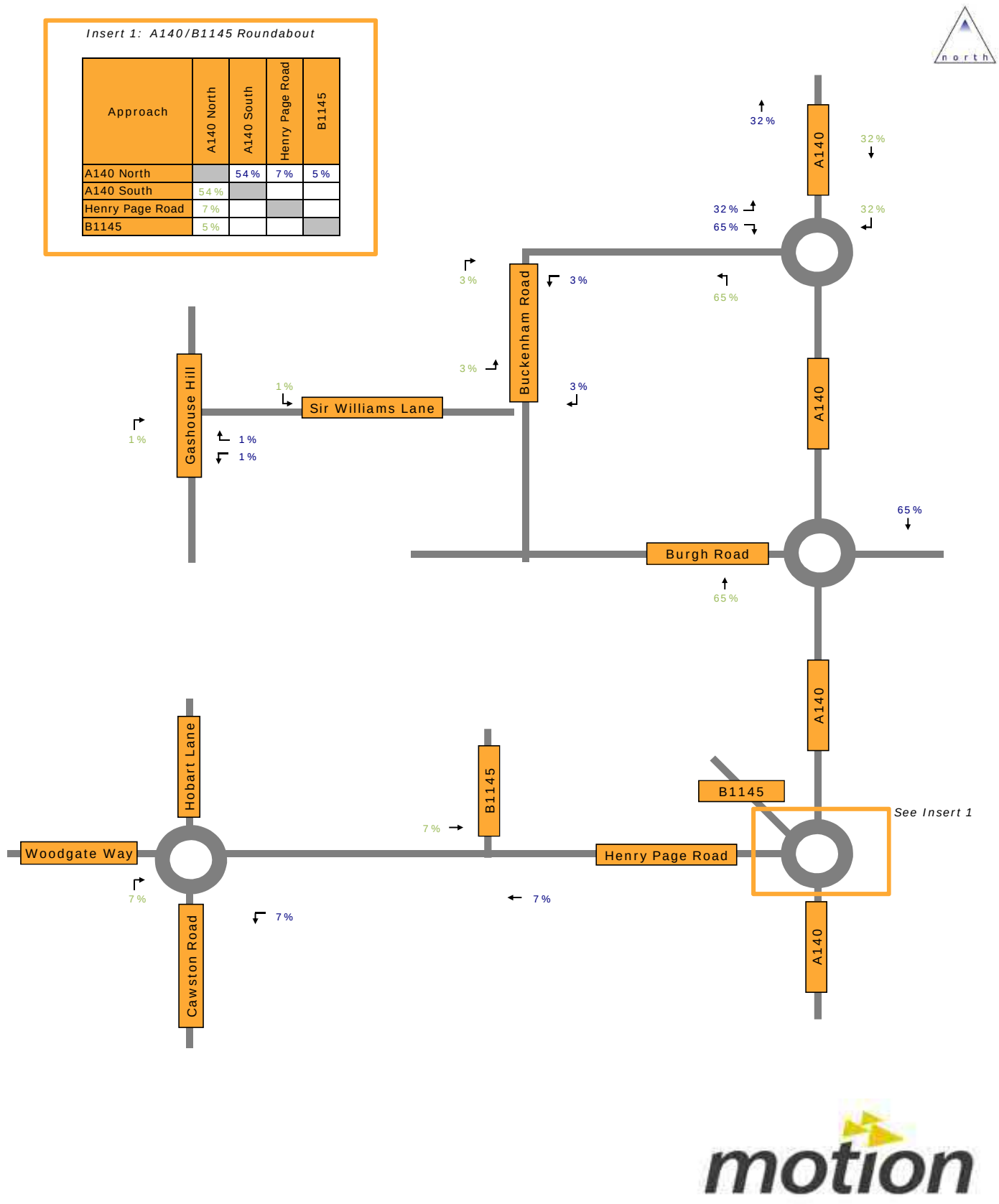
Motion Figure No. 4.0

Key:

123 Passenger Car Units

Notes:

Established by combining the traffic flows shown on Figures 2 and 3



motion

Key:

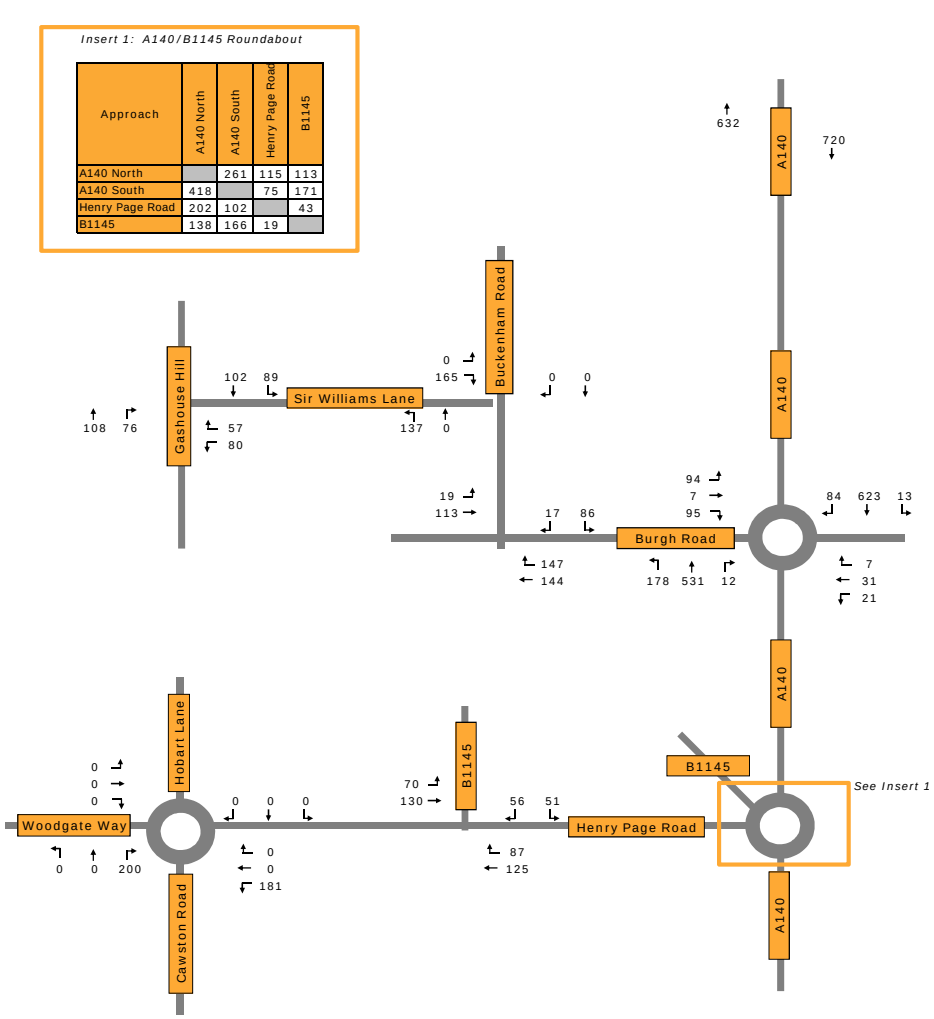
12% Arrivals

34% Departures

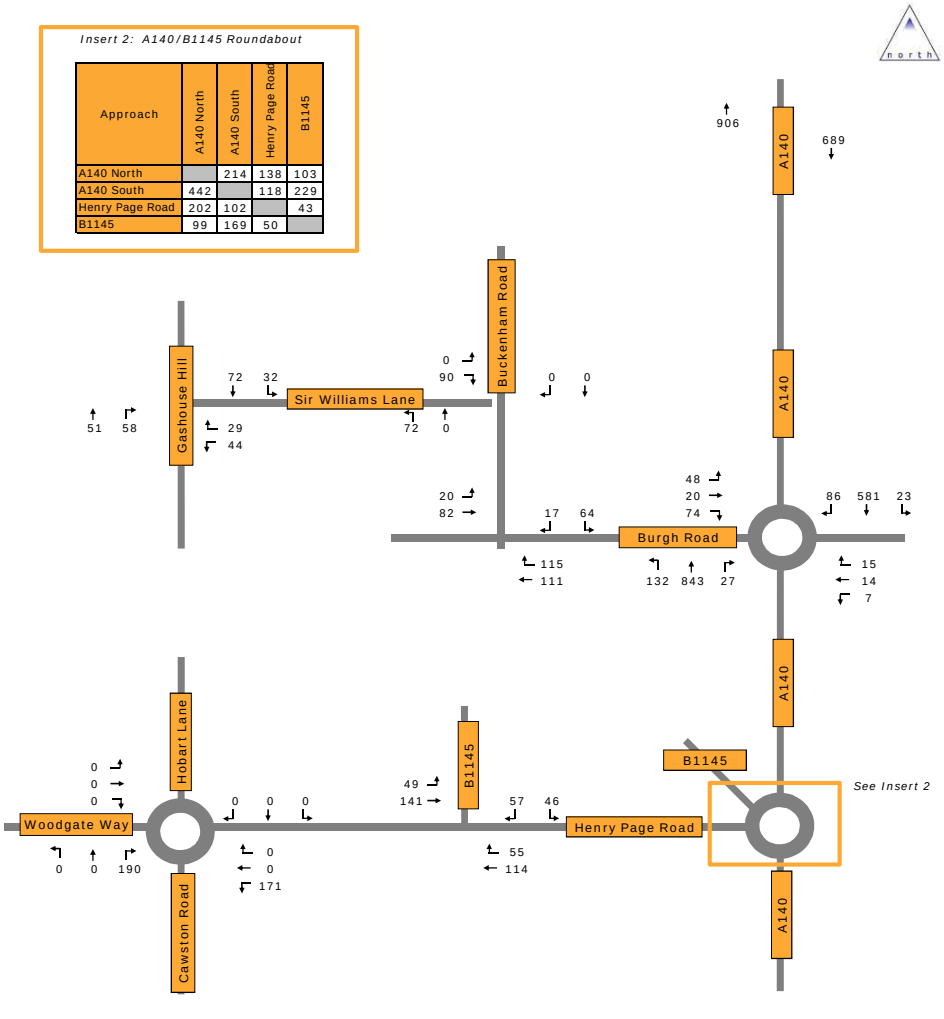
Land North East of Aylsham

Development Traffic Distribution

Motion Figure No. 5.0



AM PEAK HOUR (08:00-09:00)



PM PEAK HOUR (17:00-18:00)

Key:

123 Passenger Car Units

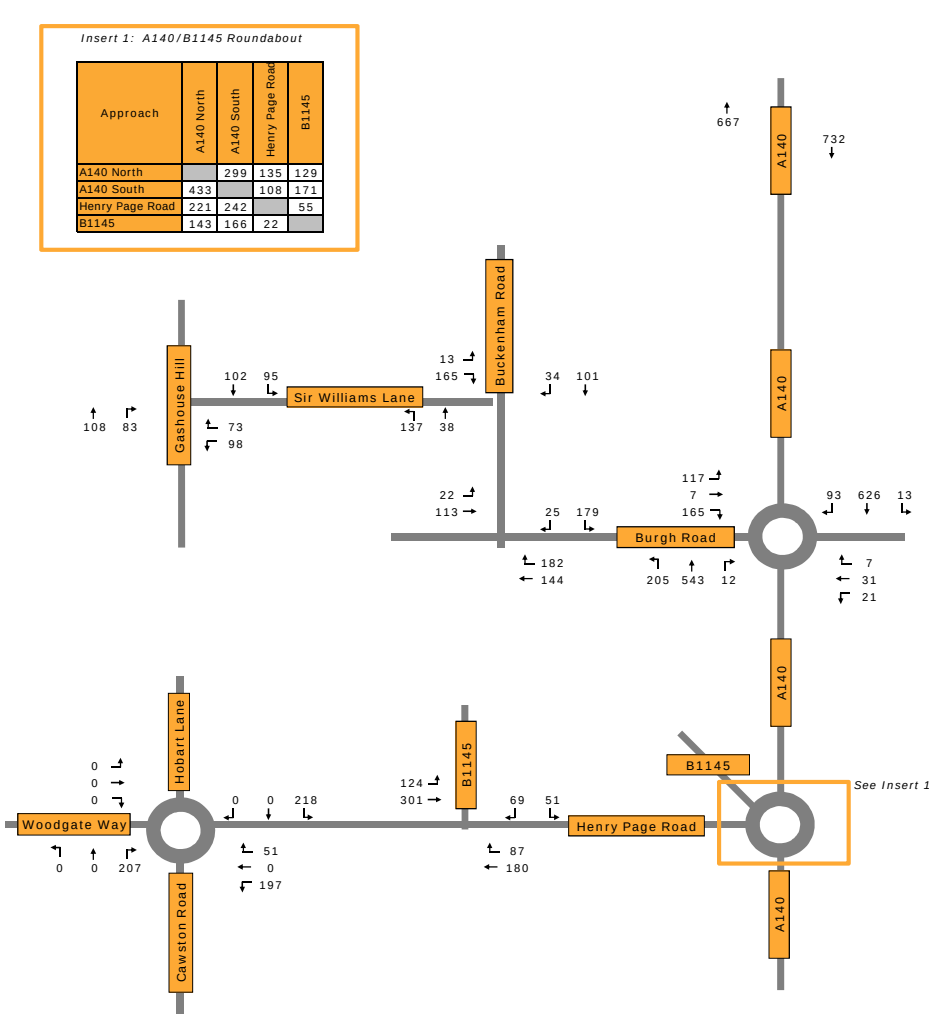
Notes:

Established by combining the traffic flows shown on Figures 1 and 4

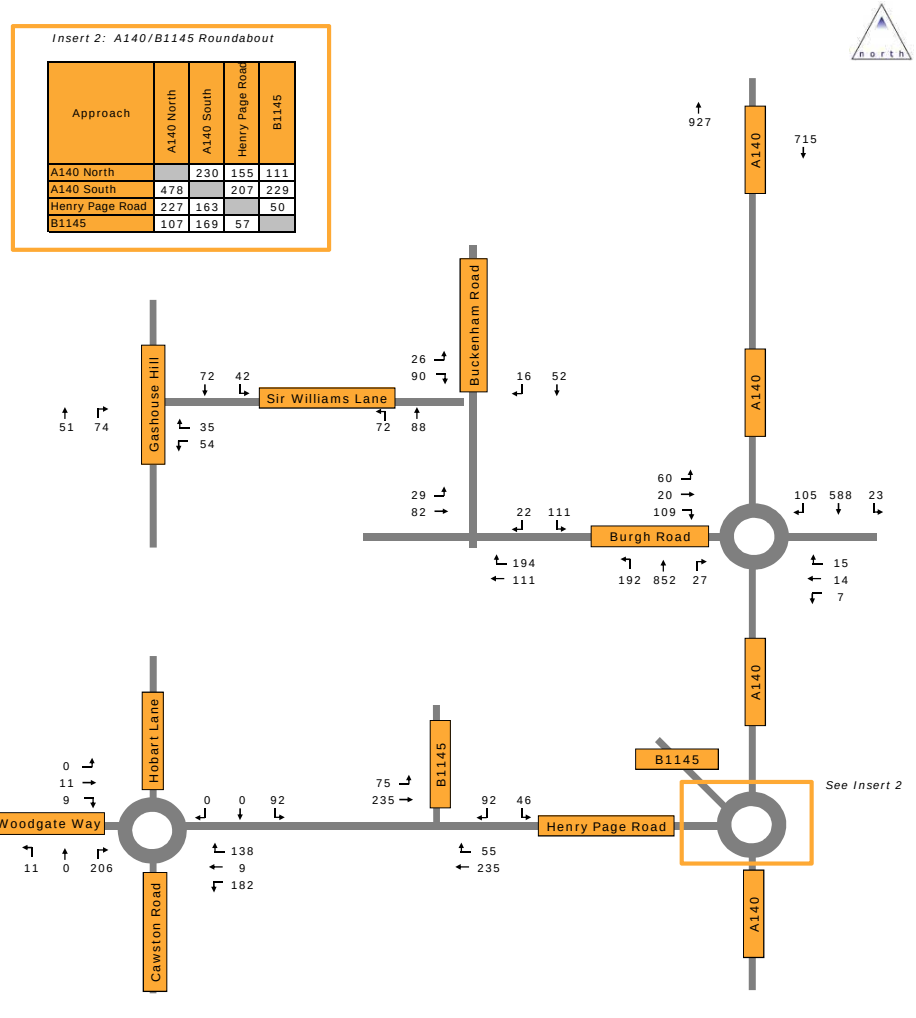
Land North East of Aylsham

2036 Baseline

Motion Figure No. 6.0



AM PEAK HOUR (08:00-09:00)



PM PEAK HOUR (17:00-18:00)

Key:

123 Passenger Car Units

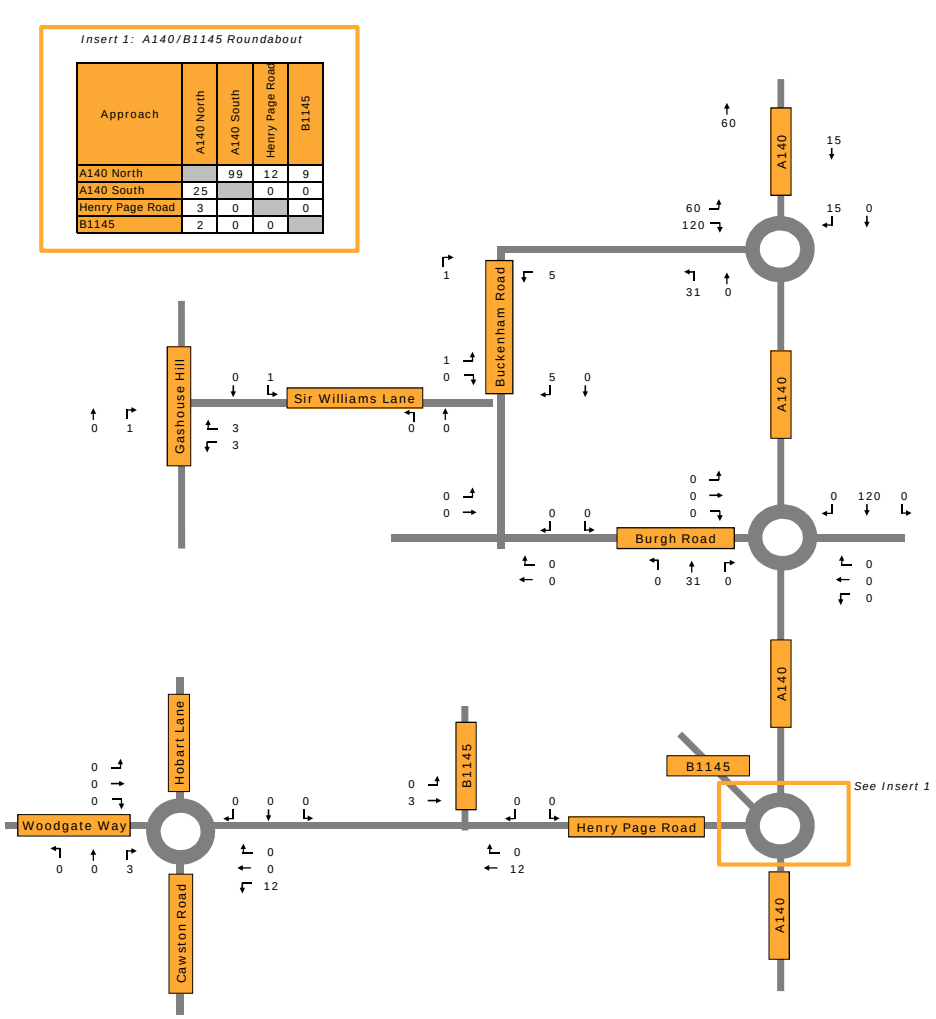
Notes:

Established by applying growth rates extracted from the TEMPRO databse to the traffic flows presented on Figure 6. The AM rate is 1.1884, with the PM rate being 1.1871.

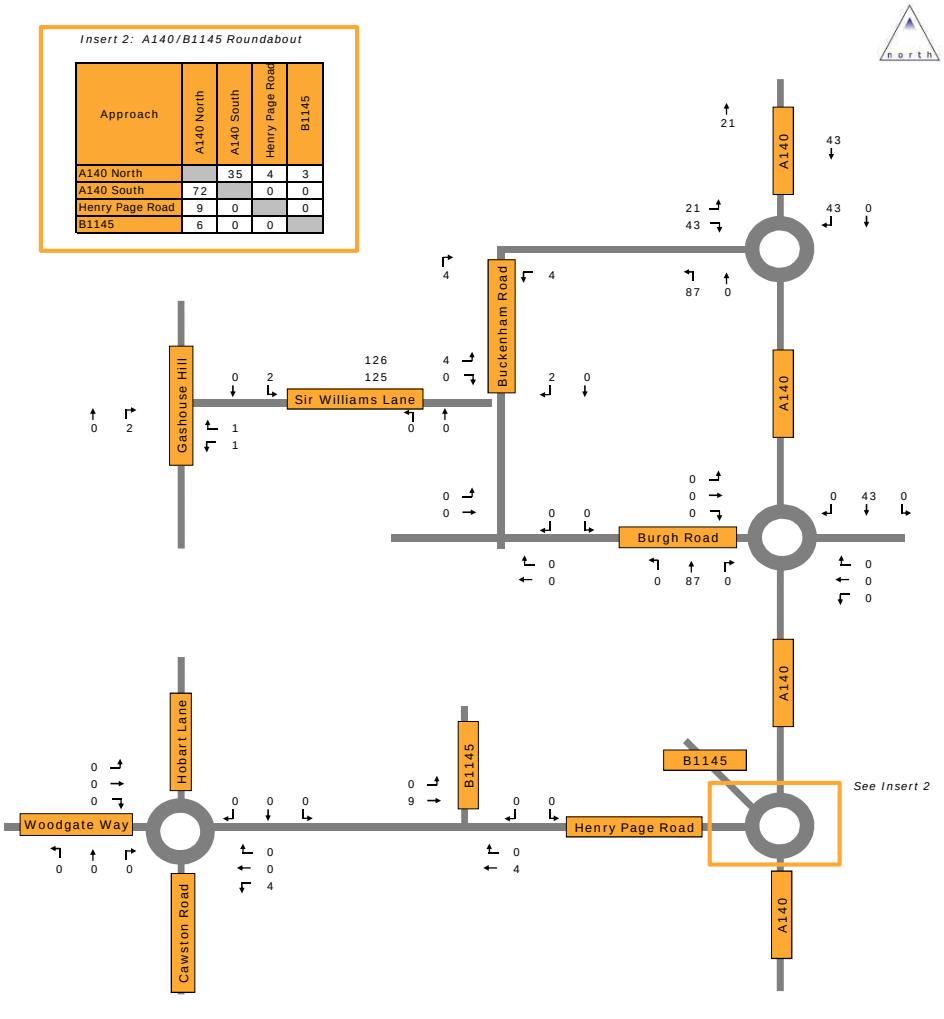
Land North East of Aylsham

2036 Without Development

Motion Figure No. 7.0



AM PEAK HOUR (08:00-09:00)



PM PEAK HOUR (17:00-18:00)

Key:

123 Passenger Car Units

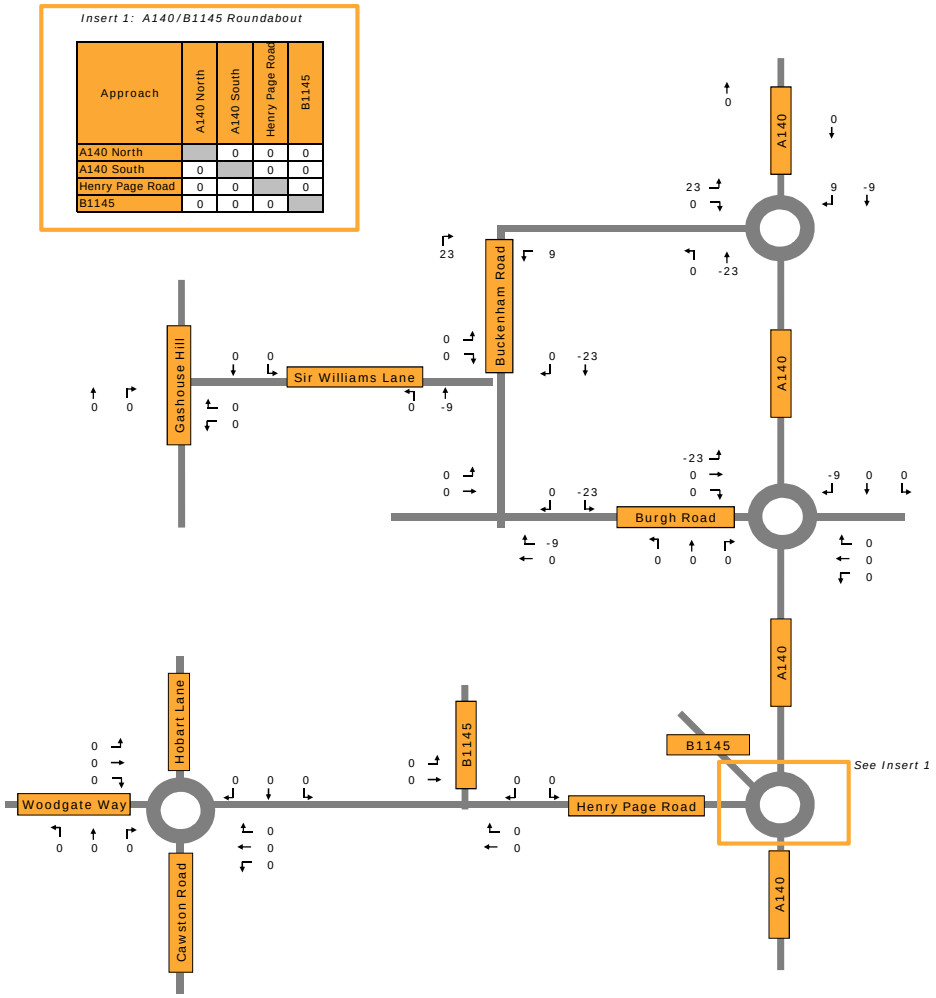
Notes:

0

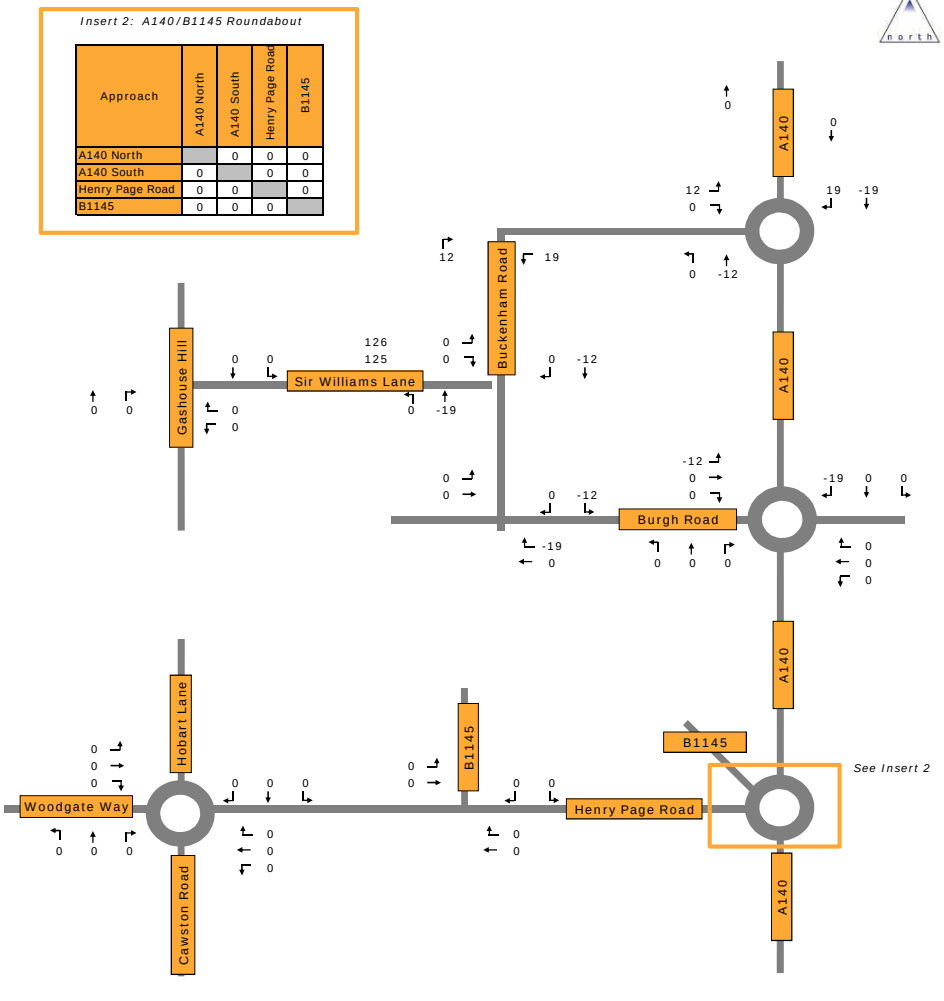
Land North East of Aylsham

Development Traffic Flows: Residential

Motion Figure No. 8.0



AM PEAK HOUR (08:00-09:00)



PM PEAK HOUR (17:00-18:00)

Key:

123 Passenger Car Units

Notes:

0

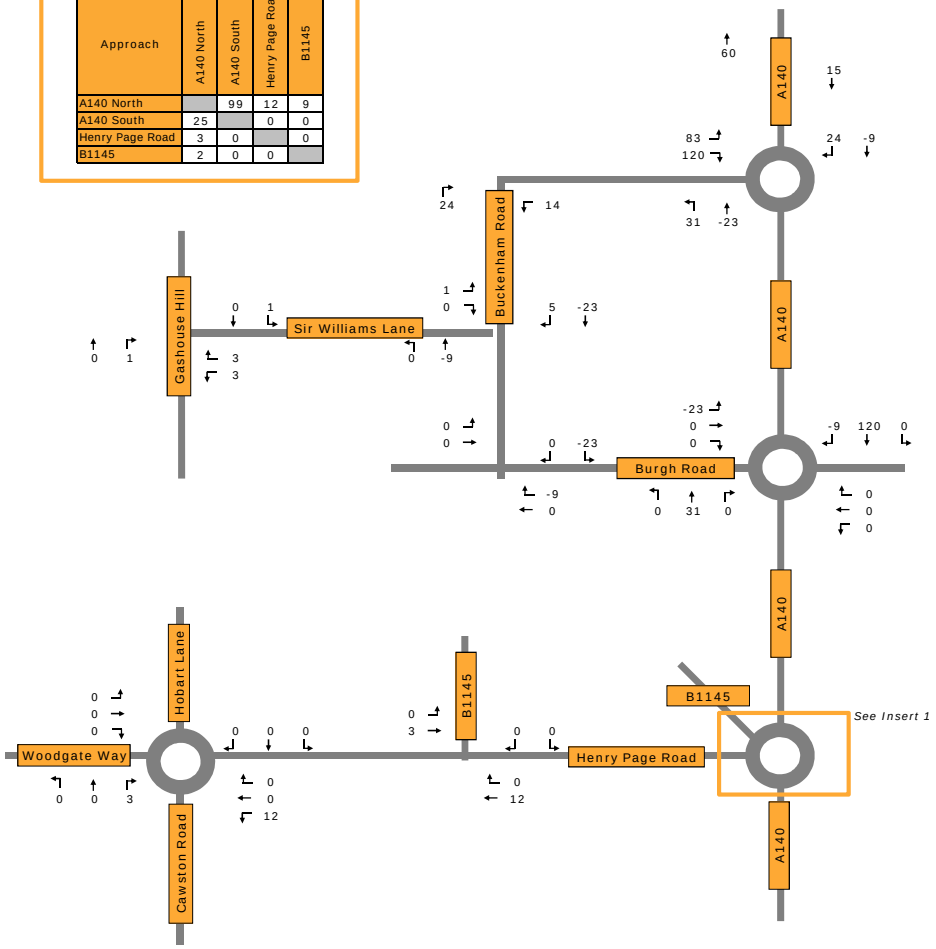
Land North East of Aylsham

Development Traffic Flows: Land off Sir William's Lane Site (Redistribution)

Motion Figure No. 9.0

Insert 1: A140/B1145 Roundabout

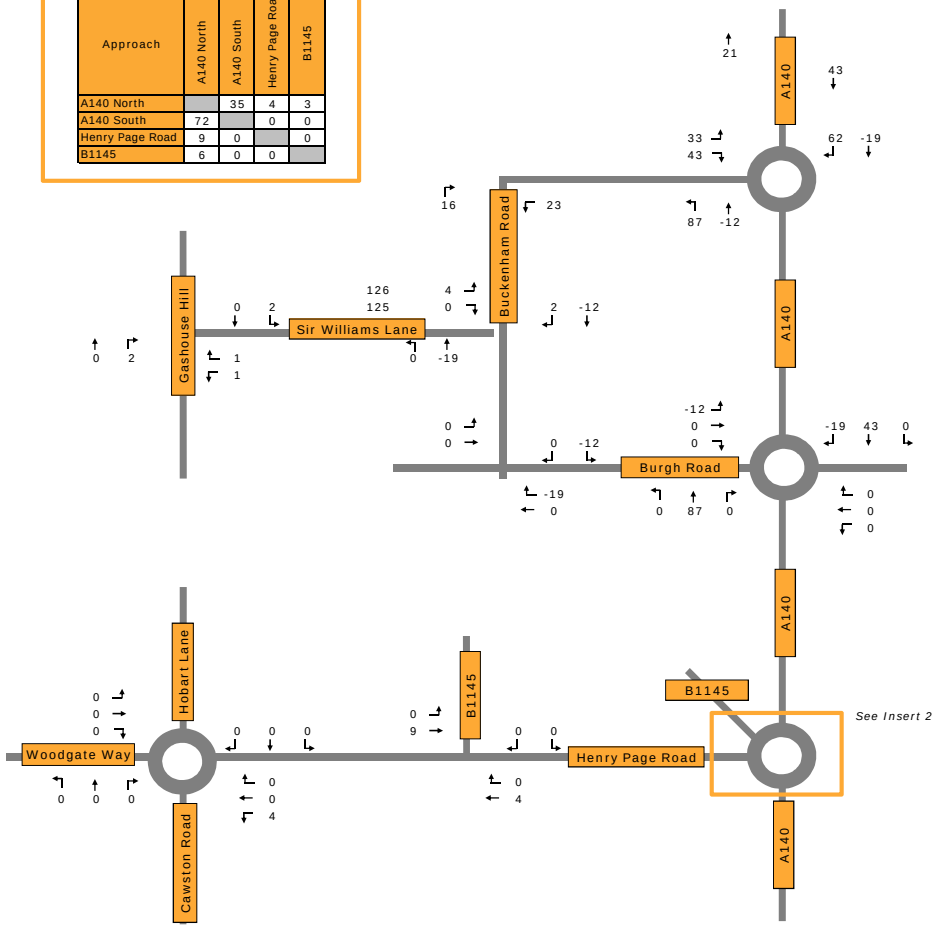
Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		99	12	9
A140 South	25		0	0
Henry Page Road	3	0		0
B1145	2	0	0	



AM PEAK HOUR (08:00-09:00)

Insert 2: A140/B1145 Roundabout

Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		35	4	3
A140 South	72		0	0
Henry Page Road	9	0		0
B1145	6	0	0	



PM PEAK HOUR (17:00-18:00)

Key:

123 Passenger Car Units

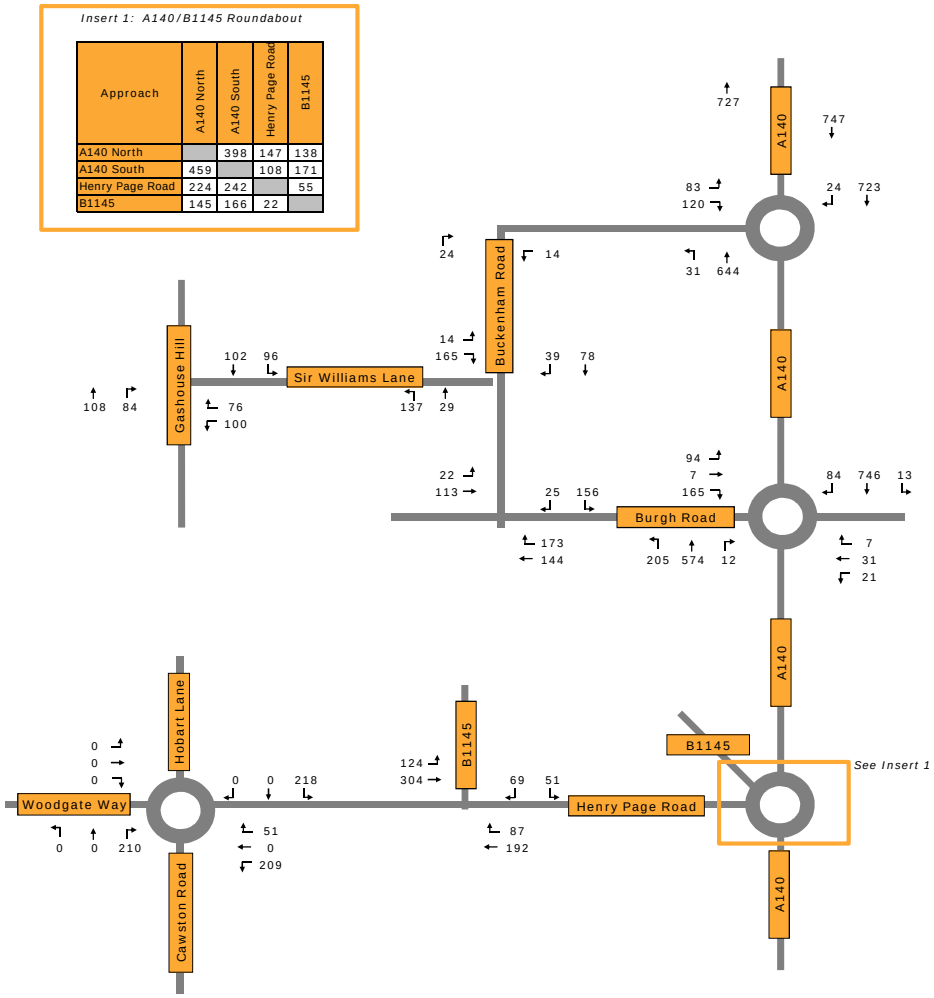
Notes:

Established by combining the traffic flows show on Figures 6 and 7

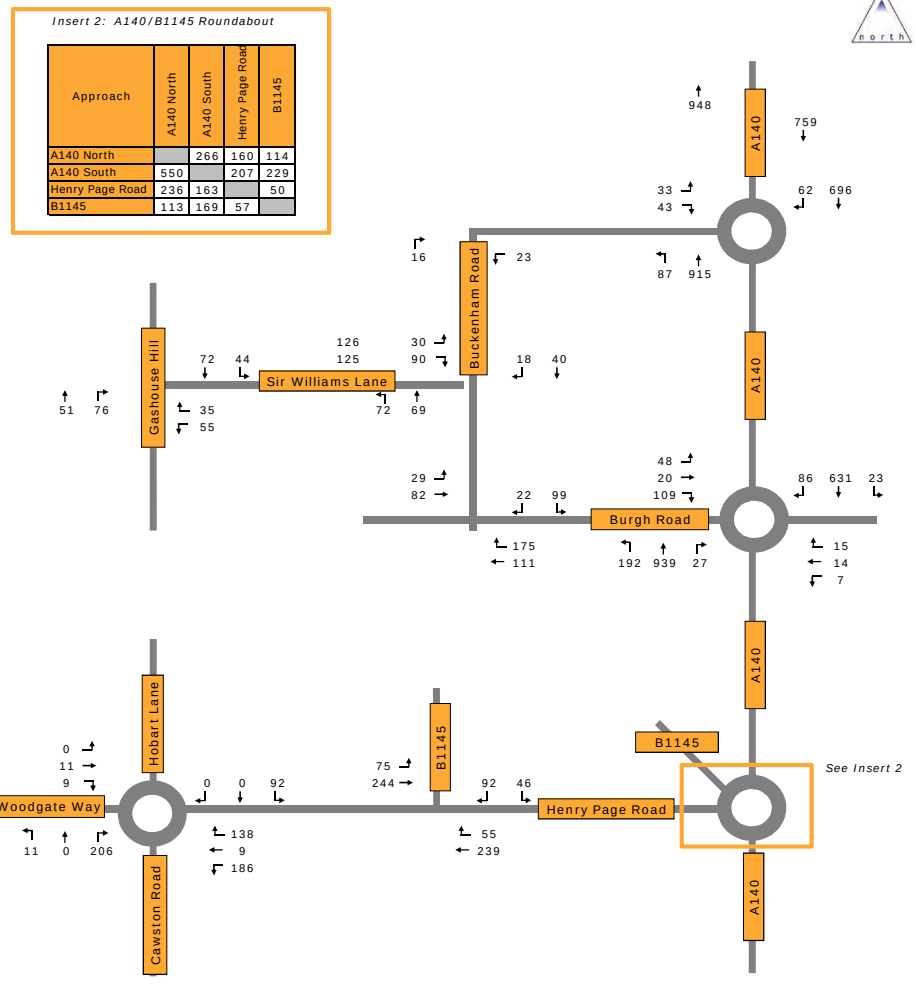
Land North East of Aylsham

Development Traffic Flows: TOTAL

Motion Figure No. 10.0



AM PEAK HOUR (08:00-09:00)



PM PEAK HOUR (17:00-18:00)

Key:

123 Passenger Car Units

Notes:

Established by combining the traffic flows shown on Figures 7 and 10

Land North East of Aylsham

2036 With Development

Motion Figure No. 11.0

Annex B

Trip Generation

Calculation Reference: AUDIT-734001-180223-0220

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL OGVS

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	1 days
	HC	HAMPSHIRE	1 days
	KC	KENT	1 days
	SC	SURREY	1 days
	WS	WEST SUSSEX	3 days
03	SOUTH WEST		
	DC	DORSET	1 days
	DV	DEVON	3 days
	SM	SOMERSET	1 days
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	2 days
	NF	NORFOLK	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	4 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	4 days
	SY	SOUTH YORKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	2 days
	GM	GREATER MANCHESTER	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 9 to 805 (units:)
Range Selected by User: 6 to 805 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/09 to 27/11/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	7 days
Tuesday	3 days
Wednesday	5 days
Thursday	9 days
Friday	4 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	28 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	15
Edge of Town	13

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	25
No Sub Category	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village,

Secondary Filtering selection:

Use Class:

C1	1 days
C3	26 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	5 days
5,001 to 10,000	6 days
10,001 to 15,000	6 days
15,001 to 20,000	4 days
20,001 to 25,000	4 days
25,001 to 50,000	3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	4 days
25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	10 days
100,001 to 125,000	2 days
125,001 to 250,000	6 days
250,001 to 500,000	2 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

1.1 to 1.5	28 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	5 days
No	23 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	28 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CA-03-A-04 DETACHED CAMBRIDGESHIRE

THORPE PARK ROAD
PETERBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 9
Survey date: TUESDAY *18/10/11* *Survey Type: MANUAL*

2 CA-03-A-05 DETACHED HOUSES CAMBRIDGESHIRE
EASTFIELD ROAD

PETERBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 28
Survey date: MONDAY *17/10/16* *Survey Type: MANUAL*

3 CH-03-A-08 DETACHED CHESHIRE
WHITCHURCH ROAD
BOUGHTON HEATH
CHESTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 11
Survey date: TUESDAY *22/05/12* *Survey Type: MANUAL*

4 CH-03-A-09 TERRACED HOUSES CHESHIRE
GREYSTOKE ROAD
HURDSFIELD
MACCLESFIELD
Edge of Town
Residential Zone
Total Number of dwellings: 24
Survey date: MONDAY *24/11/14* *Survey Type: MANUAL*

5 DC-03-A-08 BUNGALOWS DORSET
HURSTDENE ROAD
CASTLE LANE WEST
BOURNEMOUTH
Edge of Town
Residential Zone
Total Number of dwellings: 28
Survey date: MONDAY *24/03/14* *Survey Type: MANUAL*

6 DV-03-A-01 TERRACED HOUSES DEVON
BRONSHILL ROAD

TORQUAY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 37
Survey date: WEDNESDAY *30/09/15* *Survey Type: MANUAL*

7 DV-03-A-02 HOUSES & BUNGALOWS DEVON
MILLHEAD ROAD

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 116
Survey date: FRIDAY *25/09/15* *Survey Type: MANUAL*

8 DV-03-A-03 TERRACED & SEMI DETACHED DEVON
LOWER BRAND LANE

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 70
Survey date: MONDAY *28/09/15* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 ES-03-A-02 PRIVATE HOUSING EAST SUSSEX
SOUTH COAST ROAD

PEACEHAVEN
Edge of Town
Residential Zone
Total Number of dwellings: 37
Survey date: FRIDAY *18/11/11* *Survey Type: MANUAL*

10 GM-03-A-10 DETACHED / SEMI GREATER MANCHESTER
BUTT HILL DRIVE
PRESTWICH
MANCHESTER
Edge of Town
Residential Zone
Total Number of dwellings: 29
Survey date: WEDNESDAY *12/10/11* *Survey Type: MANUAL*

11 HC-03-A-19 HOUSES & FLATS HAMPSHIRE
CANADA WAY

LIPHOOK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 62
Survey date: MONDAY *27/11/17* *Survey Type: MANUAL*

12 KC-03-A-03 MIXED HOUSES & FLATS KENT
HYTHE ROAD
WILLESBOROUGH
ASHFORD
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 51
Survey date: THURSDAY *14/07/16* *Survey Type: MANUAL*

13 NF-03-A-02 HOUSES & FLATS NORFOLK
DEREHAM ROAD

NORWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 98
Survey date: MONDAY *22/10/12* *Survey Type: MANUAL*

14 NY-03-A-06 BUNGALOWS & SEMI DET. NORTH YORKSHIRE
HORSEFAIR

BOROUGHBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: FRIDAY *14/10/11* *Survey Type: MANUAL*

15 NY-03-A-09 MIXED HOUSING NORTH YORKSHIRE
GRAMMAR SCHOOL LANE

NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 52
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

16 NY-03-A-10 HOUSES AND FLATS NORTH YORKSHIRE
BOROUGHBRIDGE ROAD

RIPON
Edge of Town
No Sub Category
Total Number of dwellings: 71
Survey date: TUESDAY *17/09/13* *Survey Type: MANUAL*

17 NY-03-A-11 PRIVATE HOUSING NORTH YORKSHIRE
HORSEFAIR

BOROUGHBRIDGE
Edge of Town
Residential Zone
Total Number of dwellings: 23
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

18 SC-03-A-04 DETACHED & TERRACED SURREY
HIGH ROAD

BYFLEET
Edge of Town
Residential Zone
Total Number of dwellings: 71
Survey date: THURSDAY *23/01/14* *Survey Type: MANUAL*

19 SH-03-A-03 DETATCHED SHROPSHIRE
SOMERBY DRIVE
BICTON HEATH
SHREWSBURY
Edge of Town
No Sub Category
Total Number of dwellings: 10
Survey date: FRIDAY *26/06/09* *Survey Type: MANUAL*

20 SH-03-A-04 TERRACED SHROPSHIRE
ST MICHAEL'S STREET

SHREWSBURY
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 108
Survey date: THURSDAY *11/06/09* *Survey Type: MANUAL*

21 SH-03-A-05 SEMI-DETACHED/TERRACED SHROPSHIRE
SANDCROFT
SUTTON HILL
TELFORD
Edge of Town
Residential Zone
Total Number of dwellings: 54
Survey date: THURSDAY *24/10/13* *Survey Type: MANUAL*

22 SH-03-A-06 BUNGALOWS SHROPSHIRE
ELLESMERE ROAD

SHREWSBURY
Edge of Town
Residential Zone
Total Number of dwellings: 16
Survey date: THURSDAY *22/05/14* *Survey Type: MANUAL*

23 SM-03-A-01 DETACHED & SEMI SOMERSET
WEMBDON ROAD
NORTHFIELD
BRIDGWATER
Edge of Town
Residential Zone
Total Number of dwellings: 33
Survey date: THURSDAY *24/09/15* *Survey Type: MANUAL*

24 SY-03-A-01 SEMI DETACHED HOUSES SOUTH YORKSHIRE
A19 BENTLEY ROAD
BENTLEY RISE
DONCASTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 54
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

25 WL-03-A-02 SEMI DETACHED WILTSHIRE
HEADLANDS GROVE

SWINDON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 27
Survey date: THURSDAY *22/09/16* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

26	WS-03-A-04	MIXED HOUSES		WEST SUSSEX
	HILLS FARM LANE			
	BROADBRIDGE HEATH			
	HORSHAM			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		151	
	Survey date: THURSDAY		*11/12/14*	*Survey Type: MANUAL*
27	WS-03-A-05	TERRACED & FLATS		WEST SUSSEX
	UPPER SHOREHAM ROAD			
	SHOREHAM BY SEA			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		48	
	Survey date: WEDNESDAY		*18/04/12*	*Survey Type: MANUAL*
28	WS-03-A-06	MIXED HOUSES		WEST SUSSEX
	ELLIS ROAD			
	S BROADBRIDGE HEATH			
	WEST HORSHAM			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		805	
	Survey date: THURSDAY		*02/03/17*	*Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL OGVS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	28	80	0.000	28	80	0.000	28	80	0.000
08:00 - 09:00	28	80	0.002	28	80	0.001	28	80	0.003
09:00 - 10:00	28	80	0.003	28	80	0.003	28	80	0.006
10:00 - 11:00	28	80	0.004	28	80	0.002	28	80	0.006
11:00 - 12:00	28	80	0.003	28	80	0.004	28	80	0.007
12:00 - 13:00	28	80	0.002	28	80	0.001	28	80	0.003
13:00 - 14:00	28	80	0.002	28	80	0.002	28	80	0.004
14:00 - 15:00	28	80	0.001	28	80	0.002	28	80	0.003
15:00 - 16:00	28	80	0.001	28	80	0.001	28	80	0.002
16:00 - 17:00	28	80	0.000	28	80	0.000	28	80	0.000
17:00 - 18:00	28	80	0.000	28	80	0.000	28	80	0.000
18:00 - 19:00	28	80	0.000	28	80	0.000	28	80	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.016			0.034

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	9 - 805 (units:)
Survey date date range:	01/01/09 - 27/11/17
Number of weekdays (Monday-Friday):	28
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	28	80	0.131	28	80	0.475	28	80	0.606
08:00 - 09:00	28	80	0.210	28	80	0.814	28	80	1.024
09:00 - 10:00	28	80	0.237	28	80	0.294	28	80	0.531
10:00 - 11:00	28	80	0.214	28	80	0.256	28	80	0.470
11:00 - 12:00	28	80	0.229	28	80	0.244	28	80	0.473
12:00 - 13:00	28	80	0.238	28	80	0.251	28	80	0.489
13:00 - 14:00	28	80	0.266	28	80	0.250	28	80	0.516
14:00 - 15:00	28	80	0.228	28	80	0.280	28	80	0.508
15:00 - 16:00	28	80	0.563	28	80	0.295	28	80	0.858
16:00 - 17:00	28	80	0.496	28	80	0.282	28	80	0.778
17:00 - 18:00	28	80	0.589	28	80	0.291	28	80	0.880
18:00 - 19:00	28	80	0.412	28	80	0.250	28	80	0.662
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.813			3.982			7.795

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	9 - 805 (units:)
Survey date date range:	01/01/09 - 27/11/17
Number of weekdays (Monday-Friday):	28
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Trip Generation

Proposed Use

Number of residential units 300

TRICS Person Trips

Time Period	Trip Rates (per unit)			Person Trips			Vehicle Trips (70.5%)		
	Arrivals	Departures	Total	Arrivals	Departures	Total	Arrivals	Departures	Total
AM Peak (0800-0900)	0.21	0.814	1.024	63	244	307	47	183	230
PM Peak (1700-1800)	0.589	0.291	0.88	177	87	264	133	65	198
Daily (0700-1900)	3.813	3.982	7.795	1144	1195	2339	858	896	1754

Method of Travel to Work	%	AM Peak		PM Peak	
		Arrivals	Departures	Arrivals	Departures
Train	*0.0%*	0	0	0	0
Bus, minibus or coach	*3.1%*	2	8	5	3
Taxi	*0.0%*	0	0	0	0
Motorcycle, scooter, moped	*0.8%*	0	2	1	1
Driving a car or van	*70.5%*	44	172	125	61
Passenger in a car or van	*3.9%*	2	9	7	3
Bicycle	*7.0%*	4	17	12	6
On foot	*13.2%*	8	32	23	11
Other	*1.6%*	1	4	3	1
Total	*100%*	*63*	*244*	*177*	*87*

Annex C

Distribution Profile – 2011 Census Data

Land North East of Aylsham - Distribution

Place of work	Number of People		Route
Northumberland	1	*0.1%*	A140 North, Banningham Road
Sunderland	1	*0.1%*	A140 North, Banningham Road
Bolton	1	*0.1%*	A140 North, Banningham Road
Salford	1	*0.1%*	A140 North, Banningham Road
Kirklees	2	*0.1%*	A140 North, Banningham Road
Leeds	1	*0.1%*	A140 North, Banningham Road
Blaby	1	*0.1%*	A140 North, Banningham Road
South Holland	1	*0.1%*	A140 North, Banningham Road
South Kesteven	1	*0.1%*	A140 North, Banningham Road
Ashfield	1	*0.1%*	A140 North, Banningham Road
Staffordshire Moorlands	1	*0.1%*	A140 North, Banningham Road
Birmingham	1	*0.1%*	A140 North, Banningham Road
Peterborough	1	*0.1%*	A140 North, Banningham Road
Luton	2	*0.1%*	A140 South
Southend-on-Sea	1	*0.1%*	A140 South
Cambridge	3	*0.2%*	A140 South
East Cambridgeshire	1	*0.1%*	A140 South
Fenland	1	*0.1%*	A140 North, Banningham Road
South Cambridgeshire	4	*0.2%*	A140 South
Chelmsford	1	*0.1%*	A140 South
Colchester	1	*0.1%*	A140 South
Hertfordshire	4	*0.2%*	A140 South
Breckland	40	*2.1%*	A140 South, B1145 West
Broadland 001	353	*18.8%*	50:25:15:10 A140 North:A140 South, B1145 North:Sir Williams Lane:A140 South
Broadland 002	49	*2.6%*	A140 South, B1145 West
Broadland 003	29	*1.5%*	A140 South
Broadland 004	66	*3.5%*	A140 South
Broadland 005	9	*0.5%*	A140 South
Broadland 006	20	*1.1%*	A140 South
Broadland 007	16	*0.9%*	A140 South
Broadland 008	15	*0.8%*	A140 South
Broadland 009	3	*0.2%*	A140 South
Broadland 010	33	*1.8%*	A140 South
Broadland 011	18	*1.0%*	A140 South
Broadland 012	7	*0.4%*	A140 South
Broadland 013	41	*2.2%*	A140 South
Broadland 014	5	*0.3%*	A140 South
Broadland 015	5	*0.3%*	A140 South
Broadland 016	25	*1.3%*	A140 South
Broadland 017	31	*1.7%*	A140 South
Broadland 018	8	*0.4%*	A140 South
Great Yarmouth	29	*1.5%*	A140 North, B1145 East
King's Lynn and West Nor	17	*0.9%*	A140 North, Banningham Road
North Norfolk 001	29	*1.5%*	A140 North
North Norfolk 002	13	*0.7%*	A140 South, B1145 West
North Norfolk 003	55	*2.9%*	A140 North
North Norfolk 004	41	*2.2%*	A140 North
North Norfolk 005	11	*0.6%*	A140 North
North Norfolk 006	45	*2.4%*	A140 North
North Norfolk 007	17	*0.9%*	A140 North
North Norfolk 008	9	*0.5%*	A140 South, B1145 West
North Norfolk 009	1	*0.1%*	A140 South, B1145 West
North Norfolk 010	90	*4.8%*	A140 North
North Norfolk 011	11	*0.6%*	A140 South, B1145 West
North Norfolk 012	40	*2.1%*	A140 North
North Norfolk 013	8	*0.4%*	A140 North
North Norfolk 014	30	*1.6%*	A140 North
Norwich	466	*24.9%*	A140 South
South Norfolk	129	*6.9%*	A140 South
Ipswich	4	*0.2%*	A140 South
Mid Suffolk	3	*0.2%*	A140 South
St Edmundsbury	4	*0.2%*	A140 South
Suffolk Coastal	1	*0.1%*	A140 South
Greater London	11	*0.6%*	A140 South
Milton Keynes	2	*0.1%*	A140 South
East Hampshire	1	*0.1%*	A140 South
Cherwell	1	*0.1%*	A140 South
Swindon	1	*0.1%*	A140 South
Wrexham	1	*0.1%*	A140 South
Total	1,875	*100.0%*	

Summary

Route	%
A140 North	32.2%
A140 South	53.7%
B1145 West	6.6%
B1145 North	4.7%
Sir Williams Lane	2.8%
TOTAL	100.0%

Annex D

TEMPRO Growth Rates

Land North East of Aylsham – TEMPRO Growth Rates

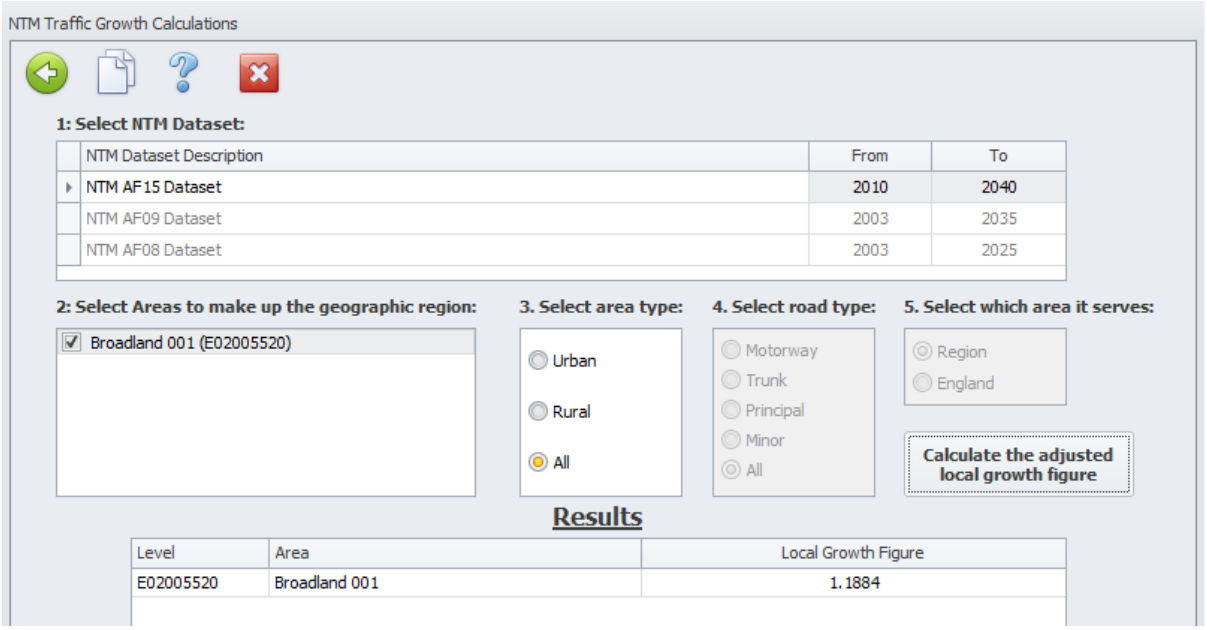
Alternative Planning Assumptions

The current version of TEMPRO assumes that circa 1400 households and 200 new jobs will be delivered in the local area between 2017 and 2036. As the level of development associated with the committed developments that will be assessed accommodate circa 550 dwellings, the planning assumptions included within the TEMPRO database have been adjusted to avoid any double counting of traffic. For completeness, the following table summarises the amendments made to the planning assumptions in TEMPRO.

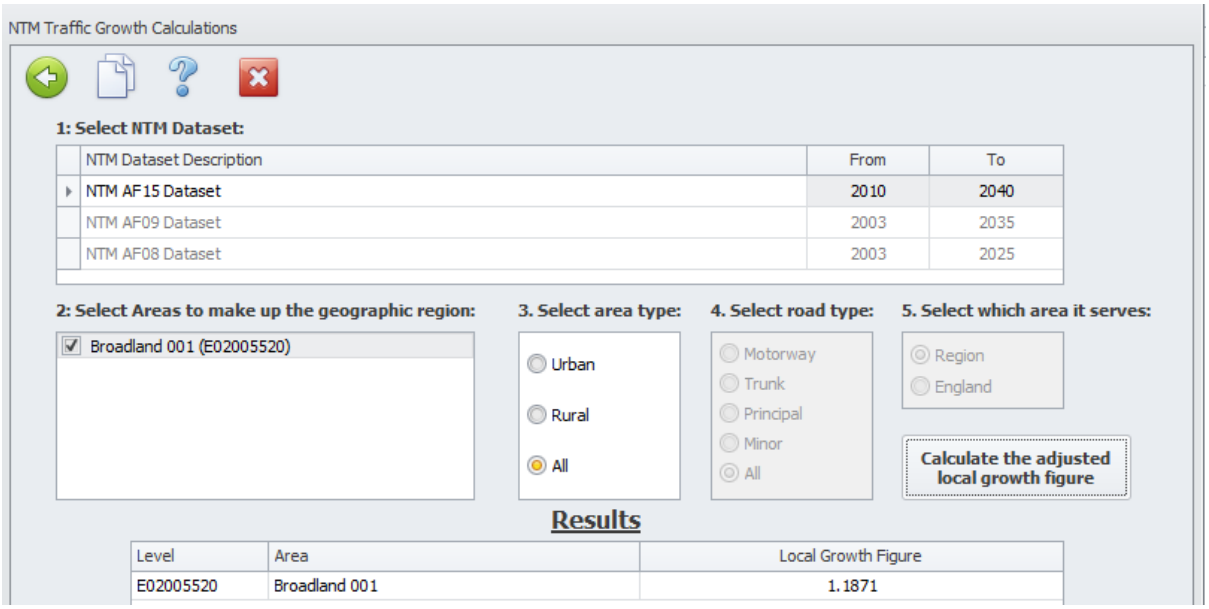
	2017		2036		Increase	
	Households	**Jobs**	**Households**	**Jobs**	**Households**	**Jobs**
Base TEMPRO Assumptions	3718	3552	5138	3761	+1420	+209
Committed Development			*550*	-	*+550*	-
Proposed Development	-	-	*200*	-	*+300*	-
Adjusted TEMPRO Assumptions	3718	3552	4288	3761	+570	+209

Note: Based on Broadland 001 Output Area.

TEMPRO Outputs



AM Peak



PM Peak

Annex E

Junction Assessment Model Outputs

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Junction 1 - A140-Burgh Road Rbt.j9
Path: V:\Users\CalumMcGoff\Aylsham Modelling
Report generation date: 07/03/2018 15:08:39

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2036 Base														
Arm 1	1.2	5.35	0.53	A	5.04	A	74 % [Arm 1]	1.2	5.24	0.54	A	6.78	A	32 % [Arm 3]
Arm 2	0.1	6.80	0.10	A				0.1	6.05	0.06	A			
Arm 3	1.0	4.41	0.49	A				2.6	7.86	0.73	A			
Arm 4	0.5	5.55	0.31	A				0.4	6.58	0.28	A			
2036 With Development														
Arm 1	1.6	6.42	0.61	A	5.59	A	54 % [Arm 1]	1.3	5.45	0.56	A	7.87	A	24 % [Arm 3]
Arm 2	0.1	7.72	0.12	A				0.1	6.20	0.06	A			
Arm 3	1.1	4.58	0.51	A				3.5	9.58	0.78	A			
Arm 4	0.4	5.50	0.29	A				0.4	7.15	0.29	A			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 1 - A140/Burgh Road Rbt
Location	Aylsham
Site number	
Date	26/02/2018
Version	

Status	(new file)
Identifier	whayls
Client	
Jobnumber	1802070
Enumerator	MOTION\calummcgoff
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	Ü	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2036 Base	AM	DIRECT	08:00	09:00	60	15
D4	2036 Base	PM	DIRECT	17:00	18:00	60	15
D5	2036 With Development	AM	DIRECT	08:00	09:00	60	15
D6	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2036 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	5.04	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	74	Arm 1

Arms

Arms

Arm	Name	Description
1	A140 North	

2	Burgh Road East	
3	A140 South	
4	Burgh Road West	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.30	6.25	16.0	25.3	40.0	19.5	
2	2.50	4.90	6.0	25.0	40.0	17.5	
3	3.20	6.50	30.0	30.0	40.0	22.0	
4	3.20	6.00	6.5	20.0	40.0	21.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
1	0.643	408.746
2	0.545	283.416
3	0.672	446.119
4	0.585	341.930

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2036 Base	AM	DIRECT	08:00	09:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		ü	100.000
2		ü	100.000
3		ü	100.000
4		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To			
		1	2	3	4
From	1	0.00	3.00	137.00	20.00
	2	2.00	0.00	5.00	7.00
	3	119.00	3.00	0.00	45.00
	4	26.00	2.00	36.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To			
		1	2	3	4
From	1	0.00	3.00	136.00	20.00
	2	2.00	0.00	5.00	7.00
	3	118.00	3.00	0.00	44.00
	4	25.00	2.00	36.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To			
		1	2	3	4
From	1	0.00	4.00	170.00	25.00
	2	2.00	0.00	6.00	8.00
	3	147.00	3.00	0.00	56.00
	4	32.00	2.00	45.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To			
		1	2	3	4
From	1	0.00	3.00	150.00	22.00
	2	2.00	0.00	5.00	7.00
	3	130.00	3.00	0.00	49.00
	4	28.00	2.00	39.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	7	1
	2	0	0	10	0
	3	9	0	0	1
	4	6	0	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.53	5.35	1.2	A
2	0.10	6.80	0.1	A
3	0.49	4.41	1.0	A
4	0.31	5.55	0.5	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	160.00	40.79	382.52	0.418	159.24	0.8	4.264	A
2	14.00	192.07	178.76	0.078	13.91	0.1	5.640	A
3	167.00	28.85	426.73	0.391	166.32	0.7	3.673	A
4	64.00	123.49	269.69	0.237	63.67	0.3	4.686	A

08:15 - 08:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	159.00	41.00	382.38	0.416	159.00	0.8	4.276	A
2	14.00	192.00	178.79	0.078	14.00	0.1	5.644	A
3	165.00	29.00	426.63	0.387	165.01	0.7	3.668	A
4	63.00	123.00	269.97	0.233	63.00	0.3	4.675	A

08:30 - 08:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	199.00	49.91	376.65	0.528	198.58	1.2	5.351	A
2	16.00	239.50	152.91	0.105	15.97	0.1	6.802	A
3	206.00	34.93	422.64	0.487	205.67	1.0	4.414	A
4	79.00	151.76	253.15	0.312	78.85	0.5	5.547	A

08:45 - 09:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	175.00	44.06	380.41	0.460	175.26	0.9	4.662	A
2	14.00	211.31	168.27	0.083	14.03	0.1	6.031	A
3	182.00	31.05	425.25	0.428	182.20	0.8	3.950	A
4	69.00	135.15	262.87	0.262	69.10	0.4	4.996	A

2036 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	6.78	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	32	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2036 Base	PM	DIRECT	17:00	18:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		ü	100.000
2		ü	100.000
3		ü	100.000
4		ü	100.000

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	6.00	142.00	25.00
	2	4.00	0.00	2.00	3.00
	3	205.00	7.00	0.00	46.00
	4	14.00	5.00	26.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	6.00	146.00	26.00
	2	4.00	0.00	2.00	3.00
	3	212.00	7.00	0.00	48.00
	4	15.00	5.00	27.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	7.00	168.00	30.00
	2	4.00	0.00	2.00	4.00
	3	244.00	8.00	0.00	55.00
	4	17.00	6.00	31.00	0.00

17:45 - 18:00

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	5.00	132.00	24.00
	2	3.00	0.00	2.00	3.00
	3	191.00	6.00	0.00	43.00
	4	13.00	4.00	24.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	5	2	2
	2	0	0	0	0
	3	1	8	0	0
	4	5	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.54	5.24	1.2	A
2	0.06	6.05	0.1	A
3	0.73	7.86	2.6	A
4	0.28	6.58	0.4	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	173.00	37.78	384.45	0.450	172.17	0.8	4.313	A
2	9.00	192.05	178.77	0.050	8.95	0.1	5.298	A
3	258.00	31.84	424.72	0.607	256.46	1.5	5.355	A
4	45.00	214.71	216.32	0.208	44.74	0.3	5.317	A

17:15 - 17:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	178.00	38.98	383.68	0.464	177.95	0.9	4.465	A
2	9.00	198.94	175.01	0.051	9.00	0.1	5.420	A
3	267.00	32.99	423.95	0.630	266.85	1.7	5.779	A
4	47.00	222.88	211.55	0.222	46.98	0.3	5.553	A

17:30 - 17:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	205.00	44.90	379.87	0.540	204.69	1.2	5.235	A
2	10.00	228.65	158.83	0.063	9.99	0.1	6.046	A
3	307.00	37.94	420.62	0.730	306.05	2.6	7.865	A
4	54.00	255.21	192.63	0.280	53.90	0.4	6.582	A

17:45 - 18:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	161.00	34.15	386.79	0.416	161.45	0.7	4.085	A
2	8.00	180.52	185.05	0.043	8.02	0.0	5.084	A
3	240.00	30.08	425.90	0.564	241.33	1.3	4.960	A
4	41.00	201.10	224.29	0.183	41.16	0.2	4.994	A

2036 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	5.59	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	54	Arm 1

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D5	2036 With Development	AM	DIRECT	08:00	09:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		ü	100.000
2		ü	100.000
3		ü	100.000
4		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To			
		1	2	3	4
From	1	0.00	3.00	163.00	18.00
	2	2.00	0.00	5.00	7.00
	3	126.00	3.00	0.00	45.00
	4	21.00	2.00	36.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To			
		1	2	3	4
From	1	0.00	3.00	162.00	18.00
	2	2.00	0.00	5.00	7.00
	3	125.00	3.00	0.00	44.00
	4	20.00	2.00	36.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To			
		1	2	3	4
From	1	0.00	4.00	202.00	23.00
	2	2.00	0.00	6.00	8.00
	3	156.00	3.00	0.00	56.00
	4	25.00	2.00	45.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To			
		1	2	3	4
From	1	0.00	3.00	178.00	20.00
	2	2.00	0.00	5.00	7.00
	3	137.00	3.00	0.00	49.00
	4	22.00	2.00	39.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	4	7	1
	2	0	0	10	0
	3	9	0	0	1
	4	6	0	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.61	6.42	1.6	A
2	0.12	7.72	0.1	A
3	0.51	4.58	1.1	A
4	0.29	5.50	0.4	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	184.00	40.79	382.52	0.481	183.02	1.0	4.775	A
2	14.00	215.85	165.80	0.084	13.91	0.1	6.120	A
3	174.00	26.84	428.08	0.406	173.27	0.7	3.756	A
4	59.00	130.45	265.62	0.222	58.69	0.3	4.673	A

08:15 - 08:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	183.00	41.00	382.38	0.479	183.00	1.0	4.799	A
2	14.00	216.00	165.72	0.084	14.00	0.1	6.130	A
3	172.00	27.00	427.97	0.402	172.01	0.7	3.749	A
4	58.00	130.00	265.88	0.218	58.00	0.3	4.660	A

08:30 - 08:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	229.00	49.91	376.65	0.608	228.36	1.6	6.423	A
2	16.00	269.28	136.68	0.117	15.96	0.1	7.715	A
3	215.00	32.91	424.00	0.507	214.63	1.1	4.576	A
4	72.00	160.73	247.90	0.290	71.86	0.4	5.505	A

08:45 - 09:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	201.00	44.06	380.41	0.528	201.41	1.2	5.360	A
2	14.00	237.46	154.02	0.091	14.03	0.1	6.645	A
3	189.00	29.06	426.59	0.443	189.23	0.9	4.047	A
4	63.00	142.17	258.76	0.243	63.09	0.3	4.954	A

2036 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.87	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	24	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D6	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		ü	100.000
2		ü	100.000
3		ü	100.000
4		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

		To			
		1	2	3	4
From	1	0.00	6.00	152.00	21.00
	2	4.00	0.00	2.00	3.00
	3	226.00	7.00	0.00	46.00
	4	12.00	5.00	26.00	0.00

Demand (PCU/TS)

17:15 - 17:30

		To			
		1	2	3	4
From	1	0.00	6.00	157.00	21.00
	2	4.00	0.00	2.00	3.00
	3	234.00	7.00	0.00	48.00
	4	12.00	5.00	27.00	0.00

Demand (PCU/TS)

17:30 - 17:45

		To			
		1	2	3	4
From	1	0.00	7.00	180.00	25.00
	2	4.00	0.00	2.00	4.00
	3	269.00	8.00	0.00	55.00
	4	14.00	6.00	31.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To			
		1	2	3	4
From	1	0.00	5.00	141.00	19.00
	2	3.00	0.00	2.00	3.00
	3	210.00	6.00	0.00	43.00
	4	11.00	4.00	24.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	5	2	2
	2	0	0	0	0
	3	1	8	0	0
	4	5	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.56	5.45	1.3	A
2	0.06	6.20	0.1	A
3	0.78	9.58	3.5	A
4	0.29	7.15	0.4	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	179.00	37.76	384.47	0.466	178.12	0.9	4.435	A
2	9.00	197.99	175.53	0.051	8.95	0.1	5.401	A
3	279.00	27.85	427.40	0.653	277.14	1.9	5.978	A
4	43.00	235.42	204.21	0.211	42.73	0.3	5.639	A

17:15 - 17:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	184.00	38.98	383.68	0.480	183.95	0.9	4.599	A
2	9.00	204.94	171.74	0.052	9.00	0.1	5.529	A
3	289.00	28.00	427.30	0.676	288.79	2.1	6.550	A
4	44.00	244.83	198.70	0.221	43.98	0.3	5.893	A

17:30 - 17:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	212.00	44.88	379.88	0.558	211.66	1.3	5.451	A
2	10.00	235.60	155.03	0.065	9.99	0.1	6.204	A
3	332.00	32.94	423.98	0.783	330.59	3.5	9.584	A
4	51.00	279.82	178.23	0.286	50.88	0.4	7.155	A

17:45 - 18:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS

1	165.00	34.17	386.77	0.427	165.51	0.8	4.163	A
2	8.00	184.59	182.83	0.044	8.02	0.0	5.150	A
3	259.00	25.08	429.26	0.603	260.92	1.6	5.460	A
4	39.00	220.62	212.87	0.183	39.17	0.2	5.258	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: Junction 2 - A140-B1145.j9
Path: V:\Users\CalumMcGoff\Aylsham Modelling
Report generation date: 07/03/2018 15:10:38

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2036 Base														
Arm 1	0.3	3.17	0.24	A	4.98	A	36 % [Arm 4]	0.4	3.63	0.27	A	6.04	A	35 % [Arm 3]
Arm 2	0.6	3.69	0.38	A				0.5	3.45	0.35	A			
Arm 3	1.0	4.65	0.49	A				2.1	7.33	0.68	A			
Arm 4	1.2	7.99	0.55	A				1.1	8.09	0.53	A			
2036 With Development														
Arm 1	0.3	3.17	0.24	A	5.27	A	32 % [Arm 4]	0.4	3.67	0.28	A	7.07	A	26 % [Arm 3]
Arm 2	0.8	4.24	0.46	A				0.6	3.61	0.38	A			
Arm 3	1.1	4.92	0.52	A				2.7	8.77	0.74	A			
Arm 4	1.3	8.44	0.56	A				1.4	10.06	0.59	B			

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 2 - A140/B1145
Location	Aylsham
Site number	
Date	26/02/2018

Version	
Status	(new file)
Identifier	whayls
Client	
Jobnumber	1802070
Enumerator	MOTION\calummcgoff
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	ü	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2036 Base	AM	DIRECT	08:00	09:00	60	15
D4	2036 Base	PM	DIRECT	17:00	18:00	60	15
D5	2036 With Development	AM	DIRECT	08:00	09:00	60	15
D6	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2036 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	4.98	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	36	Arm 4

Arms

Arms

Arm	Name	Description
1	B1145 North	
2	A140 East	
3	A140 South	
4	B1145 West	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.68	7.80	12.7	33.9	40.0	19.0	
2	3.91	7.60	12.0	55.7	40.0	15.0	
3	3.66	6.90	15.4	22.7	40.0	26.0	
4	3.35	5.60	12.9	18.1	40.0	26.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
1	0.685	457.032
2	0.706	473.516
3	0.654	432.274
4	0.598	366.324

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2036 Base	AM	DIRECT	08:00	09:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		ü	100.000
2		ü	100.000
3		ü	100.000
4		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To			
		1	2	3	4
From	1	0.00	36.00	42.00	6.00
	2	32.00	0.00	75.00	34.00
	3	109.00	43.00	0.00	27.00
	4	55.00	14.00	61.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To			
		1	2	3	4
From	1	0.00	37.00	43.00	6.00
	2	33.00	0.00	77.00	35.00
	3	112.00	44.00	0.00	28.00
	4	57.00	14.00	63.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To			
		1	2	3	4
From	1	0.00	38.00	44.00	6.00
	2	34.00	0.00	79.00	36.00
	3	115.00	45.00	0.00	29.00
	4	59.00	15.00	64.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To			
		1	2	3	4
From	1	0.00	32.00	38.00	5.00
	2	29.00	0.00	68.00	31.00
	3	98.00	39.00	0.00	24.00
	4	50.00	12.00	55.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.24	3.17	0.3	A
2	0.38	3.69	0.6	A
3	0.49	4.65	1.0	A
4	0.55	7.99	1.2	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	84.00	117.21	376.73	0.223	83.71	0.3	3.069	A
2	141.00	108.36	397.02	0.355	140.45	0.5	3.500	A
3	179.00	71.72	385.39	0.464	178.14	0.9	4.326	A
4	130.00	183.15	256.86	0.506	128.99	1.0	6.985	A

08:15 - 08:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	86.00	120.94	374.18	0.230	85.99	0.3	3.122	A
2	145.00	111.95	394.49	0.368	144.97	0.6	3.606	A
3	184.00	73.98	383.91	0.479	183.95	0.9	4.499	A
4	134.00	188.95	253.39	0.529	133.90	1.1	7.525	A

08:30 - 08:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	88.00	123.93	372.13	0.236	87.99	0.3	3.166	A
2	149.00	113.95	393.08	0.379	148.97	0.6	3.686	A
3	189.00	75.99	382.60	0.494	188.95	1.0	4.646	A
4	138.00	193.95	250.40	0.551	137.90	1.2	7.990	A

08:45 - 09:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	75.00	106.30	384.21	0.195	75.06	0.2	2.911	A
2	128.00	98.22	404.18	0.317	128.14	0.5	3.261	A
3	161.00	65.07	389.74	0.413	161.26	0.7	3.943	A
4	117.00	166.25	266.96	0.438	117.42	0.8	6.034	A

2036 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	6.04	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	35	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2036 Base	PM	DIRECT	17:00	18:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	Ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		Ü	100.000
2		Ü	100.000
3		Ü	100.000
4		Ü	100.000

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To 1	To 2	To 3	To 4
From	1	0.00	30.00	47.00	16.00
	2	31.00	0.00	64.00	43.00
	3	133.00	64.00	0.00	58.00
	4	14.00	63.00	45.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To 1	To 2	To 3	To 4
From	1	0.00	28.00	45.00	15.00
	2	30.00	0.00	61.00	41.00
	3	127.00	61.00	0.00	55.00
	4	13.00	60.00	43.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To 1	To 2	To 3	To 4
From	1	0.00	26.00	41.00	14.00
	2	27.00	0.00	55.00	37.00
	3	115.00	55.00	0.00	50.00
	4	12.00	55.00	39.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To			
		1	2	3	4
From	1	0.00	23.00	37.00	12.00
	2	24.00	0.00	50.00	33.00
	3	103.00	49.00	0.00	45.00
	4	11.00	49.00	35.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.27	3.63	0.4	A
2	0.35	3.45	0.5	A
3	0.68	7.33	2.1	A
4	0.53	8.09	1.1	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	93.00	170.50	340.22	0.273	92.63	0.4	3.631	A
2	138.00	107.34	397.75	0.347	137.47	0.5	3.450	A
3	255.00	89.65	373.67	0.682	252.91	2.1	7.331	A
4	122.00	226.26	231.09	0.528	120.90	1.1	8.090	A

17:15 - 17:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	88.00	164.16	344.57	0.255	88.03	0.3	3.507	A
2	132.00	103.06	400.77	0.329	132.03	0.5	3.348	A
3	243.00	86.02	376.04	0.646	243.23	1.9	6.790	A
4	116.00	218.19	235.92	0.492	116.12	1.0	7.519	A

17:30 - 17:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	81.00	149.32	354.73	0.228	81.05	0.3	3.290	A
2	119.00	94.12	407.08	0.292	119.08	0.4	3.125	A
3	220.00	78.05	381.25	0.577	220.48	1.4	5.616	A
4	106.00	197.39	248.35	0.427	106.23	0.8	6.342	A

17:45 - 18:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	72.00	133.24	365.75	0.197	72.05	0.2	3.064	A
2	107.00	84.10	414.15	0.258	107.07	0.3	2.933	A
3	197.00	69.05	387.14	0.509	197.34	1.0	4.751	A
4	95.00	176.28	260.97	0.364	95.18	0.6	5.433	A

2036 With Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	5.27	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	32	Arm 4

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D5	2036 With Development	AM	DIRECT	08:00	09:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		ü	100.000
2		ü	100.000
3		ü	100.000
4		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To			
		1	2	3	4
From	1	0.00	36.00	42.00	6.00
	2	35.00	0.00	100.00	37.00
	3	115.00	43.00	0.00	27.00
	4	56.00	14.00	61.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To			
		1	2	3	4
From	1	0.00	38.00	43.00	6.00
	2	36.00	0.00	103.00	38.00
	3	119.00	44.00	0.00	28.00
	4	58.00	14.00	63.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To			
		1	2	3	4
From	1	0.00	38.00	44.00	6.00
	2	37.00	0.00	105.00	39.00
	3	122.00	45.00	0.00	29.00
	4	59.00	15.00	64.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To			
		1	2	3	4
From	1	0.00	33.00	38.00	5.00
	2	31.00	0.00	90.00	33.00
	3	104.00	39.00	0.00	24.00
	4	51.00	12.00	55.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue	Max LOS
			(PCU)	
1	0.24	3.17	0.3	A
2	0.46	4.24	0.8	A
3	0.52	4.92	1.1	A
4	0.56	8.44	1.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	84.00	117.17	376.76	0.223	83.71	0.3	3.068	A
2	172.00	108.34	397.04	0.433	171.24	0.8	3.972	A
3	185.00	77.66	381.51	0.485	184.07	0.9	4.538	A
4	131.00	192.05	251.54	0.521	129.93	1.1	7.340	A

08:15 - 08:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	87.00	120.92	374.19	0.233	86.98	0.3	3.133	A
2	177.00	111.94	394.50	0.449	176.95	0.8	4.136	A
3	191.00	79.98	379.99	0.503	190.93	1.0	4.757	A
4	135.00	198.93	247.42	0.546	134.89	1.2	7.987	A

08:30 - 08:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	88.00	123.93	372.13	0.236	87.99	0.3	3.166	A
2	181.00	113.95	393.08	0.460	180.96	0.8	4.241	A
3	196.00	81.98	378.68	0.518	195.94	1.1	4.924	A
4	138.00	203.94	244.43	0.565	137.91	1.3	8.439	A

08:45 - 09:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	76.00	106.32	384.19	0.198	76.06	0.2	2.923	A
2	154.00	98.24	404.17	0.381	154.23	0.6	3.606	A
3	167.00	69.10	387.10	0.431	167.30	0.8	4.099	A
4	118.00	174.30	262.15	0.450	118.45	0.8	6.284	A

2036 With Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	7.07	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	26	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D6	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		ü	100.000
2		ü	100.000
3		ü	100.000
4		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

		To			
		1	2	3	4
From	1	0.00	31.00	47.00	16.00
	2	44.00	0.00	74.00	32.00
	3	153.00	64.00	0.00	58.00
	4	14.00	66.00	45.00	0.00

Demand (PCU/TS)

17:15 - 17:30

		To			
		1	2	3	4
From	1	0.00	30.00	45.00	15.00
	2	43.00	0.00	71.00	30.00
	3	146.00	61.00	0.00	55.00
	4	13.00	63.00	43.00	0.00

Demand (PCU/TS)

17:30 - 17:45

		To			
		1	2	3	4
From	1	0.00	27.00	41.00	14.00
	2	39.00	0.00	64.00	27.00
	3	133.00	55.00	0.00	50.00
	4	12.00	57.00	39.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To			
		1	2	3	4
From	1	0.00	24.00	37.00	12.00
	2	35.00	0.00	57.00	25.00
	3	119.00	49.00	0.00	45.00
	4	11.00	51.00	35.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.28	3.67	0.4	A
2	0.38	3.61	0.6	A
3	0.74	8.77	2.7	A
4	0.59	10.06	1.4	B

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	94.00	173.12	338.43	0.278	93.62	0.4	3.672	A
2	150.00	107.24	397.82	0.377	149.40	0.6	3.613	A
3	275.00	91.63	372.38	0.739	272.28	2.7	8.769	A
4	125.00	258.68	211.72	0.590	123.60	1.4	10.062	B

17:15 - 17:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	90.00	167.22	342.47	0.263	90.02	0.4	3.567	A
2	144.00	103.07	400.76	0.359	144.04	0.6	3.505	A
3	262.00	88.02	374.73	0.699	262.34	2.4	8.036	A
4	119.00	250.27	216.74	0.549	119.16	1.2	9.243	A

17:30 - 17:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	82.00	151.47	353.26	0.232	82.05	0.3	3.318	A
2	130.00	94.16	407.05	0.319	130.09	0.5	3.252	A
3	238.00	80.05	379.94	0.626	238.68	1.7	6.401	A
4	108.00	227.56	230.31	0.469	108.35	0.9	7.399	A

17:45 - 18:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	73.00	135.31	364.33	0.200	73.05	0.3	3.092	A
2	117.00	84.12	414.14	0.283	117.08	0.4	3.032	A
3	213.00	72.05	385.18	0.553	213.45	1.3	5.254	A
4	97.00	203.38	244.76	0.396	97.23	0.7	6.111	A

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 3 - Gashouse Hill-Sir Williams Way.j9
Path: V:\Users\CalumMcGoff\Aylsham Modelling
Report generation date: 07/03/2018 15:12:44

»2036 Without Development, AM
»2036 Without Development, PM
»2036 With Development, AM
»2036 With Development, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
2036 Without Development														
Stream B-AC	0.6	11.74	0.36	B	4.87	A	92 %	0.2	8.88	0.18	A	4.21	A	241 %
Stream C-AB	0.3	7.24	0.16	A			[Stream B-AC]	0.2	7.33	0.15	A			[Stream B-AC]
2036 With Development														
Stream B-AC	0.6	11.98	0.37	B	5.04	A	88 %	0.3	8.93	0.19	A	4.24	A	231 %
Stream C-AB	0.3	7.31	0.17	A			[Stream B-AC]	0.2	7.40	0.15	A			[Stream B-AC]

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 3 - Gashouse Hill/Sir Williams Lane
Location	Aylsham
Site number	
Date	26/02/2018
Version	
Status	(new file)
Identifier	whayls

Client	
Jobnumber	1802070
Enumerator	MOTION\calummcgoff
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	ü	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2036 Without Development	AM	DIRECT	08:00	09:00	60	15
D2	2036 Without Development	PM	DIRECT	17:00	18:00	60	15
D3	2036 With Development	AM	DIRECT	08:00	09:00	60	15
D4	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2036 Without Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	4.87	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	92	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	Gashouse Hill North		Major
B	Sir Williams Way		Minor
C	Gashouse Hill South		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.90			80.0	ü	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.85	60	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/TS)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	128.495	0.082	0.207	0.130	0.295
1	B-C	161.393	0.086	0.219	-	-
1	C-B	155.073	0.210	0.210	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2036 Without Development	AM	DIRECT	08:00	09:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

From \ To	A	B	C
A	0.00	21.00	22.00
B	16.00	0.00	21.00
C	24.00	18.00	0.00

Demand (PCU/TS)

08:15 - 08:30

From \ To	A	B	C
A	0.00	26.00	28.00
B	20.00	0.00	27.00
C	29.00	22.00	0.00

Demand (PCU/TS)

08:30 - 08:45

From \ To	A	B	C
A	0.00	26.00	28.00
B	20.00	0.00	27.00
C	29.00	22.00	0.00

Demand (PCU/TS)

08:45 - 09:00

From \ To	A	B	C
A	0.00	23.00	24.00
B	17.00	0.00	23.00
C	26.00	20.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

From \ To	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.36	11.74	0.6	B
C-AB	0.16	7.24	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	37.00	133.91	0.276	36.59	0.4	10.130	B
C-AB	21.12	162.25	0.130	20.93	0.2	7.000	A
C-A	20.88			20.88			
A-B	21.00			21.00			
A-C	22.00			22.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	47.00	131.34	0.358	46.81	0.6	11.684	B
C-AB	26.78	163.49	0.164	26.72	0.3	7.240	A
C-A	24.22			24.22			
A-B	26.00			26.00			
A-C	28.00			28.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	47.00	131.33	0.358	46.99	0.6	11.736	B
C-AB	26.79	163.50	0.164	26.79	0.3	7.244	A
C-A	24.21			24.21			
A-B	26.00			26.00			
A-C	28.00			28.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	40.00	133.07	0.301	40.13	0.5	10.668	B
C-AB	23.84	162.84	0.146	23.87	0.2	7.128	A
C-A	22.16			22.16			
A-B	23.00			23.00			
A-C	24.00			24.00			

2036 Without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	4.21	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	241	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D2	2036 Without Development	PM	DIRECT	17:00	18:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

		To		
		A	B	C
From	A	0.00	10.00	17.00
	B	8.00	0.00	13.00
	C	12.00	18.00	0.00

Demand (PCU/TS)

17:15 - 17:30

		To		
		A	B	C
From	A	0.00	10.00	18.00
	B	9.00	0.00	13.00
	C	13.00	18.00	0.00

Demand (PCU/TS)

17:30 - 17:45

		To		
		A	B	C
From	A	0.00	12.00	21.00
	B	10.00	0.00	15.00
	C	15.00	21.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To		
		A	B	C
From	A	0.00	9.00	16.00
	B	8.00	0.00	12.00
	C	11.00	17.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.18	8.88	0.2	A
C-AB	0.15	7.33	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	21.00	138.97	0.151	20.81	0.2	8.365	A
C-AB	19.49	157.42	0.124	19.32	0.2	7.162	A
C-A	10.51			10.51			
A-B	10.00			10.00			
A-C	17.00			17.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	22.00	137.50	0.160	21.99	0.2	8.569	A
C-AB	19.63	157.89	0.124	19.63	0.2	7.163	A
C-A	11.37			11.37			
A-B	10.00			10.00			
A-C	18.00			18.00			

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	25.00	136.40	0.183	24.96	0.2	8.881	A
C-AB	23.22	158.21	0.147	23.18	0.2	7.332	A
C-A	12.78			12.78			
A-B	12.00			12.00			
A-C	21.00			21.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	20.00	138.69	0.144	20.06	0.2	8.350	A
C-AB	18.29	157.17	0.116	18.34	0.2	7.136	A
C-A	9.71			9.71			
A-B	9.00			9.00			
A-C	16.00			16.00			

2036 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	5.04	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	88	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2036 With Development	AM	DIRECT	08:00	09:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To		
		A	B	C
From	A	0.00	21.00	22.00
	B	17.00	0.00	22.00
	C	24.00	18.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To		
		A	B	C
From	A	0.00	26.00	28.00
	B	21.00	0.00	27.00
	C	29.00	23.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To		
		A	B	C
From	A	0.00	26.00	28.00
	B	21.00	0.00	27.00
	C	29.00	23.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To		
		A	B	C
From	A	0.00	23.00	24.00
	B	18.00	0.00	24.00
	C	26.00	20.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.37	11.98	0.6	B
C-AB	0.17	7.31	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	39.00	133.77	0.292	38.55	0.4	10.352	B
C-AB	21.12	162.25	0.130	20.93	0.2	7.000	A
C-A	20.88			20.88			
A-B	21.00			21.00			
A-C	22.00			22.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	48.00	130.64	0.367	47.82	0.6	11.927	B
C-AB	28.00	163.49	0.171	27.92	0.3	7.302	A
C-A	24.00			24.00			
A-B	26.00			26.00			
A-C	28.00			28.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	48.00	130.63	0.367	47.99	0.6	11.978	B
C-AB	28.01	163.50	0.171	28.01	0.3	7.312	A
C-A	23.99			23.99			
A-B	26.00			26.00			
A-C	28.00			28.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	42.00	132.91	0.316	42.12	0.5	10.919	B
C-AB	23.84	162.85	0.146	23.89	0.2	7.129	A
C-A	22.16			22.16			
A-B	23.00			23.00			
A-C	24.00			24.00			

2036 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	4.24	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	231	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

		To		
		A	B	C
From	A	0.00	11.00	17.00
	B	8.00	0.00	13.00
	C	12.00	18.00	0.00

Demand (PCU/TS)

17:15 - 17:30

		To		
		A	B	C
From	A	0.00	11.00	18.00
	B	9.00	0.00	14.00
	C	13.00	19.00	0.00

Demand (PCU/TS)

17:30 - 17:45

		To		
		A	B	C
From	A	0.00	13.00	21.00
	B	10.00	0.00	16.00
	C	15.00	22.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To		
		A	B	C
From	A	0.00	10.00	16.00
	B	8.00	0.00	12.00
	C	11.00	17.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.19	8.93	0.3	A
C-AB	0.15	7.40	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	21.00	138.88	0.151	20.81	0.2	8.371	A
C-AB	19.49	157.21	0.124	19.32	0.2	7.173	A
C-A	10.51			10.51			
A-B	11.00			11.00			
A-C	17.00			17.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	23.00	137.98	0.167	22.98	0.2	8.606	A
C-AB	20.72	157.69	0.131	20.71	0.2	7.230	A
C-A	11.28			11.28			
A-B	11.00			11.00			
A-C	18.00			18.00			

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	26.00	136.81	0.190	25.96	0.3	8.928	A
C-AB	24.33	158.01	0.154	24.29	0.2	7.404	A
C-A	12.67			12.67			
A-B	13.00			13.00			
A-C	21.00			21.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	20.00	138.61	0.144	20.07	0.2	8.357	A
C-AB	18.30	156.97	0.117	18.36	0.2	7.145	A
C-A	9.70			9.70			
A-B	10.00			10.00			
A-C	16.00			16.00			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 4 - Sir Williams Way-Burgh Road.j9
Path: V:\Users\CalumMcGoff\Aylsham Modelling
Report generation date: 07/03/2018 15:15:09

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2036 Without Development													
Stream B-AC	0.6	9.29	0.34	A	5.94	A	100 %	0.3	7.99	0.23	A	6.01	A	95 %
Stream C-AB	0.7	8.93	0.36	A			[Stream C-AB]	0.8	9.59	0.40	A			[Stream C-AB]
	2036 With Development													
Stream B-AC	0.5	8.81	0.30	A	5.53	A	106 %	0.3	7.79	0.21	A	5.50	A	111 %
Stream C-AB	0.7	8.73	0.35	A			[Stream C-AB]	0.7	9.05	0.36	A			[Stream C-AB]

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 4 - Sir Williams Way/Burgh Road
Location	Aylsham
Site number	
Date	26/02/2018
Version	
Status	(new file)
Identifier	whayls

Client	
Jobnumber	1802070
Enumerator	MOTION\calummcgoff
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	ü	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2036 Without Development	AM	DIRECT	08:00	09:00	60	15
D2	2036 Without Development	PM	DIRECT	17:00	18:00	60	15
D3	2036 With Development	AM	DIRECT	08:00	09:00	60	15
D4	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2036 Without Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	5.94	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	100	Stream C-AB

Arms

Arms

Arm	Name	Description	Arm type
A	Burgh Road West		Major
B	Sir Williams Way		Minor
C	Burgh Road East		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.30			90.0	ü	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.36	120	120

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/TS)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	149.732	0.103	0.260	0.164	0.372
1	B-C	181.173	0.105	0.265	-	-
1	C-B	156.521	0.229	0.229	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2036 Without Development	AM	DIRECT	08:00	09:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To		
		A	B	C
From	A	0.00	5.00	25.00
	B	5.00	0.00	39.00
	C	32.00	40.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To		
		A	B	C
From	A	0.00	6.00	31.00
	B	7.00	0.00	49.00
	C	39.00	49.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To		
		A	B	C
From	A	0.00	6.00	31.00
	B	7.00	0.00	49.00
	C	39.00	49.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To		
		A	B	C
From	A	0.00	5.00	27.00
	B	6.00	0.00	43.00
	C	34.00	43.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.34	9.29	0.6	A
C-AB	0.36	8.93	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	44.00	166.11	0.265	43.61	0.4	8.056	A
C-AB	49.21	171.01	0.288	48.70	0.5	8.070	A
C-A	22.79			22.79			
A-B	5.00			5.00			
A-C	25.00			25.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	56.00	162.55	0.345	55.82	0.6	9.260	A
C-AB	63.26	174.29	0.363	63.03	0.7	8.898	A
C-A	24.74			24.74			
A-B	6.00			6.00			
A-C	31.00			31.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	56.00	162.52	0.345	56.00	0.6	9.293	A
C-AB	63.30	174.33	0.363	63.29	0.7	8.932	A
C-A	24.70			24.70			
A-B	6.00			6.00			
A-C	31.00			31.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	49.00	164.61	0.298	49.10	0.5	8.578	A
C-AB	53.75	172.04	0.312	53.89	0.6	8.403	A
C-A	23.25			23.25			
A-B	5.00			5.00			
A-C	27.00			27.00			

2036 Without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	6.01	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	95	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D2	2036 Without Development	PM	DIRECT	17:00	18:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

		To		
		A	B	C
From	A	0.00	7.00	20.00
	B	5.00	0.00	27.00
	C	27.00	47.00	0.00

Demand (PCU/TS)

17:15 - 17:30

		To		
		A	B	C
From	A	0.00	7.00	20.00
	B	5.00	0.00	28.00
	C	28.00	48.00	0.00

Demand (PCU/TS)

17:30 - 17:45

		To		
		A	B	C
From	A	0.00	8.00	23.00
	B	6.00	0.00	32.00
	C	32.00	55.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To		
		A	B	C
From	A	0.00	6.00	18.00
	B	5.00	0.00	25.00
	C	25.00	43.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.23	7.99	0.3	A
C-AB	0.40	9.59	0.8	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	32.00	163.96	0.195	31.74	0.3	7.472	A
C-AB	55.98	168.32	0.333	55.37	0.6	8.729	A
C-A	18.02			18.02			
A-B	7.00			7.00			
A-C	20.00			20.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	33.00	164.07	0.201	32.99	0.3	7.552	A
C-AB	57.64	169.05	0.341	57.61	0.6	8.891	A
C-A	18.36			18.36			
A-B	7.00			7.00			
A-C	20.00			20.00			

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	38.00	161.76	0.235	37.94	0.3	7.991	A
C-AB	67.81	170.87	0.397	67.63	0.8	9.590	A
C-A	19.19			19.19			
A-B	8.00			8.00			
A-C	23.00			23.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	30.00	164.37	0.183	30.09	0.2	7.376	A
C-AB	50.66	167.74	0.302	50.93	0.5	8.503	A
C-A	17.34			17.34			
A-B	6.00			6.00			
A-C	18.00			18.00			

2036 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	5.53	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	106	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2036 With Development	AM	DIRECT	08:00	09:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To		
		A	B	C
From	A	0.00	5.00	25.00
	B	5.00	0.00	34.00
	C	32.00	38.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To		
		A	B	C
From	A	0.00	6.00	31.00
	B	7.00	0.00	42.00
	C	39.00	47.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To		
		A	B	C
From	A	0.00	6.00	31.00
	B	7.00	0.00	42.00
	C	39.00	47.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To		
		A	B	C
From	A	0.00	5.00	27.00
	B	6.00	0.00	37.00
	C	34.00	41.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.30	8.81	0.5	A
C-AB	0.35	8.73	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	39.00	165.32	0.236	38.66	0.3	7.797	A
C-AB	46.75	171.01	0.273	46.27	0.5	7.915	A
C-A	23.25			23.25			
A-B	5.00			5.00			
A-C	25.00			25.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	49.00	161.44	0.304	48.86	0.5	8.783	A
C-AB	60.67	174.28	0.348	60.46	0.7	8.698	A
C-A	25.33			25.33			
A-B	6.00			6.00			
A-C	31.00			31.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	49.00	161.42	0.304	49.00	0.5	8.805	A
C-AB	60.71	174.33	0.348	60.71	0.7	8.728	A
C-A	25.29			25.29			
A-B	6.00			6.00			
A-C	31.00			31.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	43.00	163.63	0.263	43.08	0.4	8.219	A
C-AB	51.24	172.03	0.298	51.38	0.6	8.228	A
C-A	23.76			23.76			
A-B	5.00			5.00			
A-C	27.00			27.00			

2036 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	5.50	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	111	Stream C-AB

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

		To		
		A	B	C
From	A	0.00	7.00	20.00
	B	5.00	0.00	24.00
	C	27.00	42.00	0.00

Demand (PCU/TS)

17:15 - 17:30

		To		
		A	B	C
From	A	0.00	7.00	20.00
	B	5.00	0.00	25.00
	C	28.00	44.00	0.00

Demand (PCU/TS)

17:30 - 17:45

		To		
		A	B	C
From	A	0.00	8.00	23.00
	B	6.00	0.00	28.00
	C	32.00	50.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To		
		A	B	C
From	A	0.00	6.00	18.00
	B	5.00	0.00	22.00
	C	25.00	39.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-AC	0.21	7.79	0.3	A
C-AB	0.36	9.05	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	29.00	163.45	0.177	28.77	0.2	7.339	A
C-AB	50.02	168.32	0.297	49.50	0.5	8.306	A
C-A	18.98			18.98			
A-B	7.00			7.00			
A-C	20.00			20.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	30.00	163.49	0.184	29.99	0.2	7.415	A
C-AB	52.83	169.04	0.313	52.79	0.6	8.523	A
C-A	19.17			19.17			
A-B	7.00			7.00			
A-C	20.00			20.00			

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	34.00	161.03	0.211	33.95	0.3	7.788	A
C-AB	61.64	170.86	0.361	61.50	0.7	9.054	A
C-A	20.36			20.36			
A-B	8.00			8.00			
A-C	23.00			23.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-AC	27.00	163.68	0.165	27.07	0.2	7.252	A
C-AB	45.94	167.73	0.274	46.17	0.5	8.167	A
C-A	18.06			18.06			
A-B	6.00			6.00			
A-C	18.00			18.00			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 5 - Cawston Road-Henry Page Road.j9
Path: V:\Users\CalumMcGoff\Aylsham Modelling
Report generation date: 07/03/2018 15:19:25

»2036 Without Development, AM
»2036 Without Development, PM
»2036 With Development, AM
»2036 With Development, PM

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2036 Without Development													
Stream B-C	0.1	7.23	0.09	A	2.26	A	101 %	0.1	7.13	0.09	A	2.29	A	101 %
Stream B-A	0.2	10.55	0.17	B			[Stream B-A]	0.3	10.48	0.22	B			[Stream B-A]
Stream C-AB	0.2	8.42	0.17	A				0.1	7.45	0.11	A			
	2036 With Development													
Stream B-C	0.1	7.24	0.09	A	2.22	A	99 %	0.1	7.18	0.09	A	2.27	A	98 %
Stream B-A	0.2	10.61	0.17	B			[Stream B-A]	0.3	10.60	0.22	B			[Stream B-A]
Stream C-AB	0.2	8.42	0.17	A				0.1	7.50	0.11	A			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Junction 5 - Cawston Road/Henry PAge Road
Location	Aylsham
Site number	
Date	26/02/2018
Version	
Status	(new file)
Identifier	whayls

Client	
Jobnumber	1802070
Enumerator	MOTION\calummcgoff
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	ü	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2036 Without Development	AM	DIRECT	08:00	09:00	60	15
D2	2036 Without Development	PM	DIRECT	17:00	18:00	60	15
D3	2036 With Development	AM	DIRECT	08:00	09:00	60	15
D4	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2036 Without Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.26	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	101	Stream B-A

Arms

Arms

Arm	Name	Description	Arm type
A	Cawston Road West		Major
B	Cawston Road North		Minor
C	Henry Page Road		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.50		ü	3.00	100.0	ü	7.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	9.00	5.20	4.20	4.20	ü	2.00	100	100

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/TS)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	158.901	0.113	0.286	0.180	0.409
1	B-C	184.330	0.111	0.279	-	-
1	C-B	171.722	0.260	0.260	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2036 Without Development	AM	DIRECT	08:00	09:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

From \ To	A	B	C
A	0.00	27.00	66.00
B	15.00	0.00	11.00
C	39.00	19.00	0.00

Demand (PCU/TS)

08:15 - 08:30

From \ To	A	B	C
A	0.00	34.00	82.00
B	19.00	0.00	14.00
C	49.00	24.00	0.00

Demand (PCU/TS)

08:30 - 08:45

From \ To	A	B	C
A	0.00	34.00	82.00
B	19.00	0.00	14.00
C	49.00	24.00	0.00

Demand (PCU/TS)

08:45 - 09:00

From \ To	A	B	C
A	0.00	30.00	72.00
B	16.00	0.00	12.00
C	43.00	21.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

From \ To	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.09	7.23	0.1	A
B-A	0.17	10.55	0.2	B
C-AB	0.17	8.42	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	11.00	157.86	0.070	10.92	0.1	6.734	A
B-A	15.00	122.15	0.123	14.85	0.2	9.213	A
C-AB	19.00	147.51	0.129	18.84	0.2	7.685	A
C-A	39.00			39.00			
A-B	27.00			27.00			
A-C	66.00			66.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	14.00	150.86	0.093	13.97	0.1	7.230	A
B-A	19.00	112.85	0.168	18.93	0.2	10.534	B
C-AB	24.00	141.52	0.170	23.94	0.2	8.415	A
C-A	49.00			49.00			
A-B	34.00			34.00			
A-C	82.00			82.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	14.00	150.82	0.093	14.00	0.1	7.234	A
B-A	19.00	112.83	0.168	19.00	0.2	10.550	B
C-AB	24.00	141.52	0.170	24.00	0.2	8.423	A
C-A	49.00			49.00			
A-B	34.00			34.00			
A-C	82.00			82.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	12.00	155.43	0.077	12.02	0.1	6.903	A
B-A	16.00	118.38	0.135	16.05	0.2	9.678	A
C-AB	21.00	145.17	0.145	21.04	0.2	7.977	A
C-A	43.00			43.00			
A-B	30.00			30.00			
A-C	72.00			72.00			

2036 Without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.29	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	101	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D2	2036 Without Development	PM	DIRECT	17:00	18:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

		To		
		A	B	C
From	A	0.00	18.00	57.00
	B	22.00	0.00	11.00
	C	57.00	13.00	0.00

Demand (PCU/TS)

17:15 - 17:30

		To		
		A	B	C
From	A	0.00	19.00	59.00
	B	23.00	0.00	11.00
	C	59.00	14.00	0.00

Demand (PCU/TS)

17:30 - 17:45

		To		
		A	B	C
From	A	0.00	21.00	67.00
	B	26.00	0.00	13.00
	C	67.00	16.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To		
		A	B	C
From	A	0.00	17.00	53.00
	B	21.00	0.00	10.00
	C	53.00	12.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.09	7.13	0.1	A
B-A	0.22	10.48	0.3	B
C-AB	0.11	7.45	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	11.00	156.73	0.070	10.92	0.1	6.787	A
B-A	22.00	126.67	0.174	21.77	0.2	9.419	A
C-AB	13.00	152.20	0.085	12.90	0.1	7.103	A
C-A	57.00			57.00			
A-B	18.00			18.00			
A-C	57.00			57.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	11.00	155.32	0.071	11.00	0.1	6.858	A
B-A	23.00	125.35	0.183	22.98	0.2	9.670	A
C-AB	14.00	151.42	0.092	13.99	0.1	7.203	A
C-A	59.00			59.00			
A-B	19.00			19.00			
A-C	59.00			59.00			

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	13.00	151.79	0.086	12.98	0.1	7.132	A
B-A	26.00	120.31	0.216	25.95	0.3	10.484	B
C-AB	16.00	148.81	0.108	15.98	0.1	7.453	A
C-A	67.00			67.00			
A-B	21.00			21.00			
A-C	67.00			67.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	10.00	157.98	0.063	10.03	0.1	6.691	A
B-A	21.00	129.27	0.162	21.08	0.2	9.157	A
C-AB	12.00	153.50	0.078	12.04	0.1	7.002	A
C-A	53.00			53.00			
A-B	17.00			17.00			
A-C	53.00			53.00			

2036 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.22	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	99	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D3	2036 With Development	AM	DIRECT	08:00	09:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

		To		
		A	B	C
From	A	0.00	27.00	67.00
	B	15.00	0.00	11.00
	C	42.00	19.00	0.00

Demand (PCU/TS)

08:15 - 08:30

		To		
		A	B	C
From	A	0.00	34.00	82.00
	B	19.00	0.00	14.00
	C	52.00	24.00	0.00

Demand (PCU/TS)

08:30 - 08:45

		To		
		A	B	C
From	A	0.00	34.00	82.00
	B	19.00	0.00	14.00
	C	52.00	24.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To		
		A	B	C
From	A	0.00	30.00	73.00
	B	16.00	0.00	12.00
	C	46.00	21.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	10	10	10
	B	10	10	10
	C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.09	7.24	0.1	A
B-A	0.17	10.61	0.2	B
C-AB	0.17	8.42	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

08:00 - 08:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	11.00	157.56	0.070	10.92	0.1	6.749	A
B-A	15.00	121.33	0.124	14.85	0.2	9.285	A
C-AB	19.00	147.25	0.129	18.84	0.2	7.700	A
C-A	42.00			42.00			
A-B	27.00			27.00			
A-C	67.00			67.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	14.00	150.82	0.093	13.97	0.1	7.231	A
B-A	19.00	112.31	0.169	18.93	0.2	10.595	B
C-AB	24.00	141.52	0.170	23.94	0.2	8.415	A
C-A	52.00			52.00			
A-B	34.00			34.00			
A-C	82.00			82.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	14.00	150.79	0.093	14.00	0.1	7.236	A
B-A	19.00	112.29	0.169	19.00	0.2	10.611	B
C-AB	24.00	141.52	0.170	24.00	0.2	8.423	A
C-A	52.00			52.00			
A-B	34.00			34.00			
A-C	82.00			82.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	12.00	155.12	0.077	12.02	0.1	6.920	A
B-A	16.00	117.56	0.136	16.05	0.2	9.758	A
C-AB	21.00	144.91	0.145	21.04	0.2	7.994	A
C-A	46.00			46.00			
A-B	30.00			30.00			
A-C	73.00			73.00			

2036 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.27	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	98	Stream B-A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D4	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Default vehicle mix	Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
ü	HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
A		ü	100.000
B		ü	100.000
C		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

From \ To	A	B	C
A	0.00	18.00	59.00
B	22.00	0.00	11.00
C	58.00	13.00	0.00

Demand (PCU/TS)

17:15 - 17:30

From \ To	A	B	C
A	0.00	19.00	61.00
B	23.00	0.00	11.00
C	60.00	14.00	0.00

Demand (PCU/TS)

17:30 - 17:45

From \ To	A	B	C
A	0.00	21.00	70.00
B	26.00	0.00	13.00
C	68.00	16.00	0.00

Demand (PCU/TS)

17:45 - 18:00

From \ To	A	B	C
A	0.00	17.00	55.00
B	21.00	0.00	10.00
C	54.00	12.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

From \ To	A	B	C
A	10	10	10
B	10	10	10
C	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.09	7.18	0.1	A
B-A	0.22	10.60	0.3	B
C-AB	0.11	7.50	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	11.00	156.16	0.070	10.92	0.1	6.813	A
B-A	22.00	125.91	0.175	21.77	0.2	9.486	A
C-AB	13.00	151.68	0.086	12.90	0.1	7.129	A
C-A	58.00			58.00			
A-B	18.00			18.00			
A-C	59.00			59.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	11.00	154.75	0.071	11.00	0.1	6.886	A
B-A	23.00	124.59	0.185	22.98	0.2	9.743	A
C-AB	14.00	150.89	0.093	13.99	0.1	7.230	A

C-A	60.00			60.00			
A-B	19.00			19.00			
A-C	61.00			61.00			

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	13.00	150.92	0.086	12.98	0.1	7.177	A
B-A	26.00	119.26	0.218	25.94	0.3	10.602	B
C-AB	16.00	148.03	0.108	15.98	0.1	7.497	A
C-A	68.00			68.00			
A-B	21.00			21.00			
A-C	70.00			70.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
B-C	10.00	157.41	0.064	10.03	0.1	6.717	A
B-A	21.00	128.50	0.163	21.08	0.2	9.224	A
C-AB	12.00	152.98	0.078	12.04	0.1	7.025	A
C-A	54.00			54.00			
A-B	17.00			17.00			
A-C	55.00			55.00			

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Site Access Rbt (South).j9
Path: V:\Users\CalumMcGoff\Aylsham Modelling
Report generation date: 07/03/2018 15:21:33

Summary of junction performance

	AM							PM						
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Junction LOS	Network Residual Capacity
	2036 With Development													
Arm 1	1.5	6.63	0.59	A	4.90	A	53 % [Arm 1]	1.5	6.55	0.60	A	5.63	A	59 % [Arm 1]
Arm 2	0.6	3.11	0.39	A				1.6	4.98	0.61	A			
Arm 3	0.3	4.52	0.21	A				0.1	5.09	0.10	A			

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

File Description

Title	Site Access Rbt
Location	Aylsham
Site number	
Date	27/02/2018
Version	
Status	(new file)
Identifier	whayls
Client	
Jobnumber	1802070
Enumerator	MOTION\calummcgoff
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
	ü	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2036 With Development	AM	DIRECT	08:00	09:00	60	15
D2	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2036 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	4.90	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	53	Arm 1

Arms

Arms

Arm	Name	Description
1	A140 North	
2	A140 South	
3	Site Access	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.00	7.12	7.9	30.0	34.0	17.5	
2	3.15	7.01	30.0	35.0	34.0	15.5	
3	3.00	6.72	9.0	30.0	34.0	16.5	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/TS)
1	0.622	364.629
2	0.718	477.498
3	0.628	370.827

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D1	2036 With Development	AM	DIRECT	08:00	09:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		ü	100.000
2		ü	100.000
3		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

08:00 - 08:15

From \ To	1	2	3
1	0.00	158.00	5.00
2	141.00	0.00	7.00
3	18.00	26.00	0.00

Demand (PCU/TS)

08:15 - 08:30

From \ To	1	2	3
1	0.00	196.00	7.00
2	175.00	0.00	8.00
3	22.00	33.00	0.00

Demand (PCU/TS)

08:30 - 08:45

From \ To	1	2	3
1	0.00	196.00	7.00
2	175.00	0.00	8.00
3	22.00	33.00	0.00

Demand (PCU/TS)

08:45 - 09:00

From \ To	1	2	3
1	0.00	173.00	6.00
2	154.00	0.00	7.00
3	20.00	29.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

From \ To	1	2	3
1	0	4	1
2	0	0	0
3	9	0	1

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.59	6.63	1.5	A
2	0.39	3.11	0.6	A
3	0.21	4.52	0.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	163.00	25.89	348.52	0.468	162.10	0.9	4.993	A
2	148.00	4.97	473.93	0.312	147.55	0.5	2.754	A
3	44.00	140.57	282.48	0.156	43.81	0.2	3.899	A

08:15 - 08:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	203.00	32.95	344.12	0.590	202.43	1.5	6.573	A
2	183.00	6.98	472.49	0.387	182.82	0.6	3.105	A
3	55.00	174.83	260.95	0.211	54.92	0.3	4.515	A

08:30 - 08:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	203.00	33.00	344.09	0.590	202.99	1.5	6.626	A
2	183.00	7.00	472.48	0.387	183.00	0.6	3.108	A

3	55.00	175.00	260.84	0.211	55.00	0.3	4.521	A

08:45 - 09:00

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	179.00	29.03	346.56	0.517	179.36	1.1	5.604	A
2	161.00	6.01	473.18	0.340	161.11	0.5	2.886	A
3	49.00	154.11	273.97	0.179	49.05	0.2	4.143	A

2036 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	5.63	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	59	Arm 1

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)
D2	2036 With Development	PM	DIRECT	17:00	18:00	60	15

Vehicle mix source	PCU Factor for a HV (PCU)	O-D data varies over time
HV Percentages	2.00	ü

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Scaling Factor (%)
1		ü	100.000
2		ü	100.000
3		ü	100.000

Origin-Destination Data

Demand (PCU/TS)

17:00 - 17:15

From \ To	1	2	3
1	0.00	168.00	13.00
2	221.00	0.00	21.00
3	8.00	10.00	0.00

Demand (PCU/TS)

17:15 - 17:30

From \ To	1	2	3
1	0.00	173.00	13.00
2	228.00	0.00	22.00
3	8.00	11.00	0.00

Demand (PCU/TS)

17:30 - 17:45

From \ To	1	2	3
1	0.00	199.00	15.00
2	262.00	0.00	25.00
3	9.00	12.00	0.00

Demand (PCU/TS)

17:45 - 18:00

From \ To	1	2	3
1	0.00	156.00	12.00
2	205.00	0.00	19.00
3	7.00	10.00	0.00

Vehicle Mix

Heavy Vehicle Percentages

From \ To	1	2	3
1	0	5	2
2	0	0	0
3	1	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
1	0.60	6.55	1.5	A
2	0.61	4.98	1.6	A
3	0.10	5.09	0.1	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS

1	181.00	9.95	358.44	0.505	179.94	1.1	5.253	A
2	242.00	12.92	468.22	0.517	240.94	1.1	3.942	A
3	18.00	220.03	232.54	0.077	17.91	0.1	4.391	A

17:15 - 17:30

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	186.00	10.99	357.79	0.520	185.93	1.1	5.484	A
2	250.00	13.00	468.17	0.534	249.92	1.1	4.123	A
3	19.00	227.93	227.58	0.083	18.99	0.1	4.527	A

17:30 - 17:45

Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	214.00	11.99	357.17	0.599	213.58	1.5	6.547	A
2	287.00	14.97	466.75	0.615	286.56	1.6	4.982	A
3	21.00	261.60	206.42	0.102	20.98	0.1	5.090	A

17:45 - 18:00

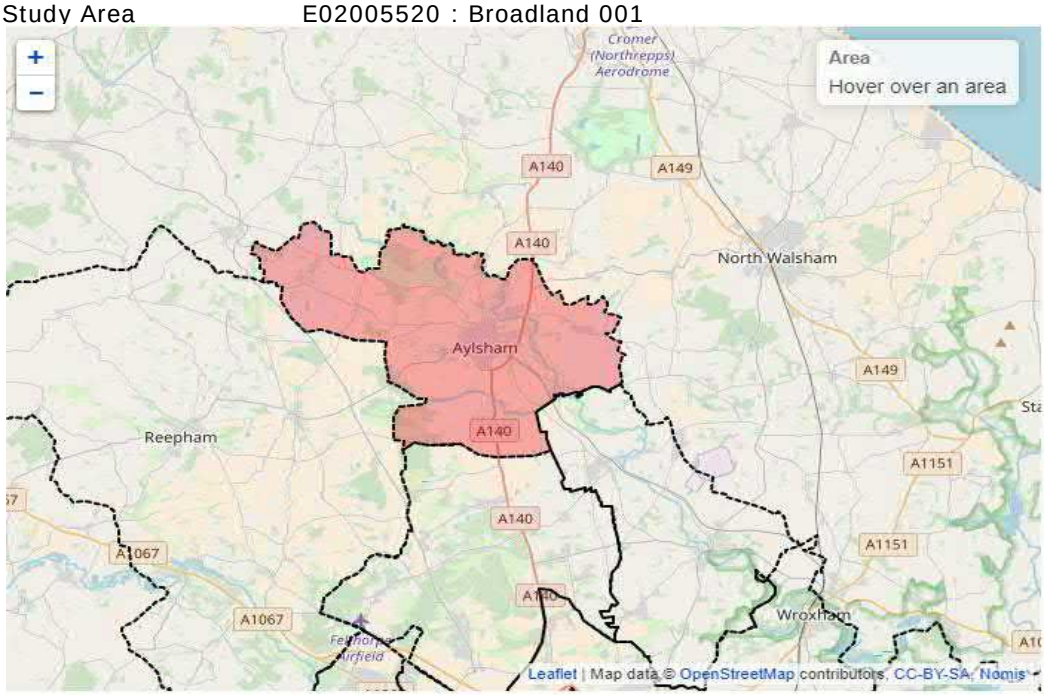
Arm	Total Demand (PCU/TS)	Circulating flow (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	LOS
1	168.00	10.02	358.39	0.469	168.61	0.9	4.986	A
2	224.00	12.04	468.86	0.478	224.65	0.9	3.694	A
3	17.00	205.59	241.62	0.070	17.04	0.1	4.208	A

Appendix H

School Based Trips

Land North East of Aylsham: Nursery and Primary School Trips

Study Area E02005520 : Broadland 001



Age	2011 Census Data	Bure Meadows	Land NE Aylsham
All usual residents	7,378	632	632
Age 0 to 4	298	26	26
Age 5 to 7	206	18	18
Age 8 to 9	150	13	13
Age 10 to 14	376	32	32
Age 15	80	7	7
Age 16 to 17	160	14	14
Age 18 to 19	143	12	12
Age 20 to 24	285	24	24
Age 25 to 29	242	21	21
Age 30 to 44	1,191	102	102
Age 45 to 59	1,530	131	131
Age 60 to 64	718	62	62
Age 65 to 74	1,029	88	88
Age 75 to 84	665	57	57
Age 85 to 89	201	17	17
Age 90 and over	104	9	9

Households 3,500
People per household 2.108

Nursery and Primary School Children	Bure Meadows	69
	Land NE Aylsham	69

Note: It has been assumed that the 'Age 10 to 14' age group will provide a flat profile for each individual age (i.e. 32/5)

National Travel Survey Data Set NTS0613 indicates that 41% of all journeys for children of primary school age are competed by car. Therefore:

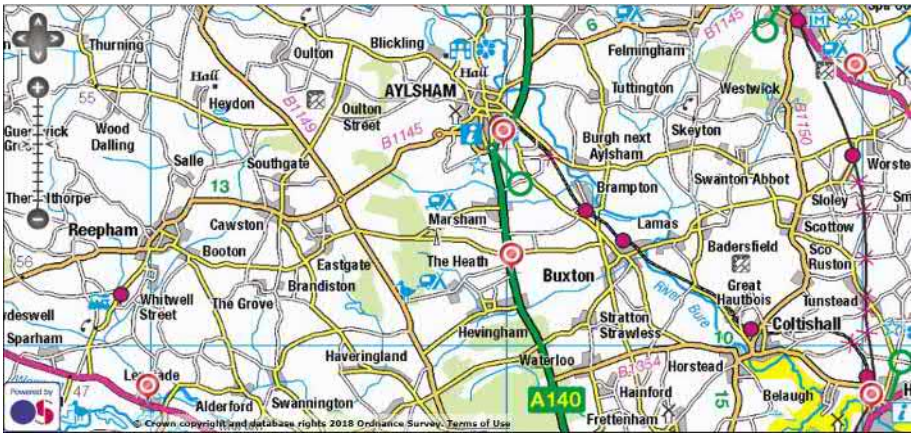
Car Trips	Bure Meadows	28
	Land NE Aylsham	28

Appendix I

A140 Traffic Flows

Land North East of Aylsham: DfT Annual Average Daily Traffic Flows

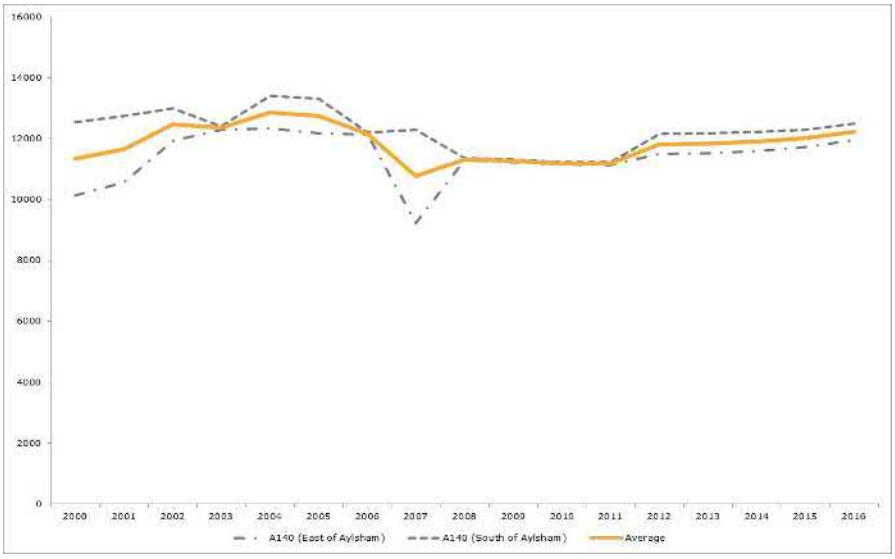
Study Area



DfT AADT Data

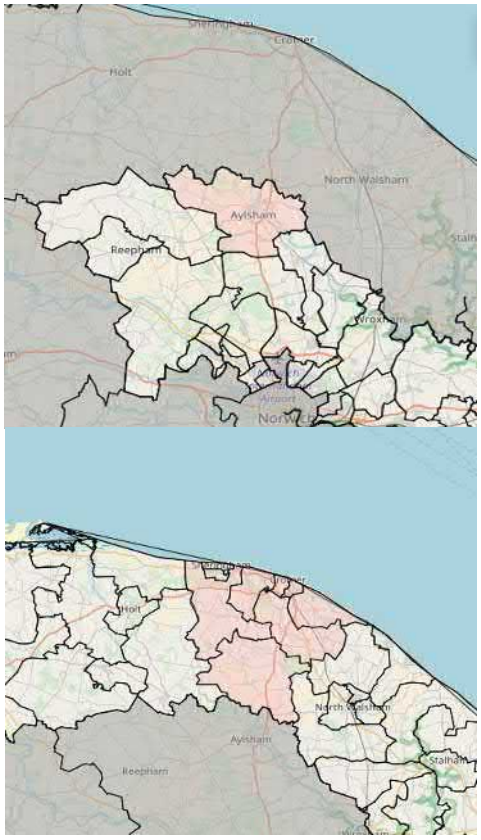
Year	DfT Count Point 36714	38112	Average	*Variation*
2000	10129	12543	11336	*-4.16%*
2001	10573	12737	11655	*-1.46%*
2002	11931	12993	12462	*5.36%*
2003	12299	12410	12355	*4.46%*
2004	12326	13395	12861	*8.73%*
2005	12168	13308	12738	*7.69%*
2006	12134	12188	12161	*2.82%*
2007	9234	12287	10761	*-9.02%*
2008	11281	11356	11319	*-4.30%*
2009	11229	11308	11269	*-4.73%*
2010	11150	11226	11188	*-5.41%*
2011	11139	11222	11181	*-5.47%*
2012	11484	12141	11813	*-0.13%*
2013	11518	12167	11843	*0.13%*
2014	11580	12211	11896	*0.57%*
2015	11725	12291	12008	*1.52%*
2016	11954	12500	12227	*3.37%*
Average	11403	12252	11828	*0.00%*

2000 to 2016 Growth 4.3%
Per Annum Growth 0.3%



Land North East of Aylsham: Population Growth

Study Area



2011 Census Data

Ward	2001	2011	Growth
Aylsham	6765	7378	9.1%
Chaucer	2347	2315	-1.4%
Cromer To	3882	3648	-6.0%
Erpingham	2242	2344	4.5%
Poppyland	2244	2401	7.0%
Roughton	2090	2231	6.7%
Suffield Pa	3867	4035	4.3%
The Runto	2068	2125	2.8%