Land North East of Aylsham

Revised Access Strategy

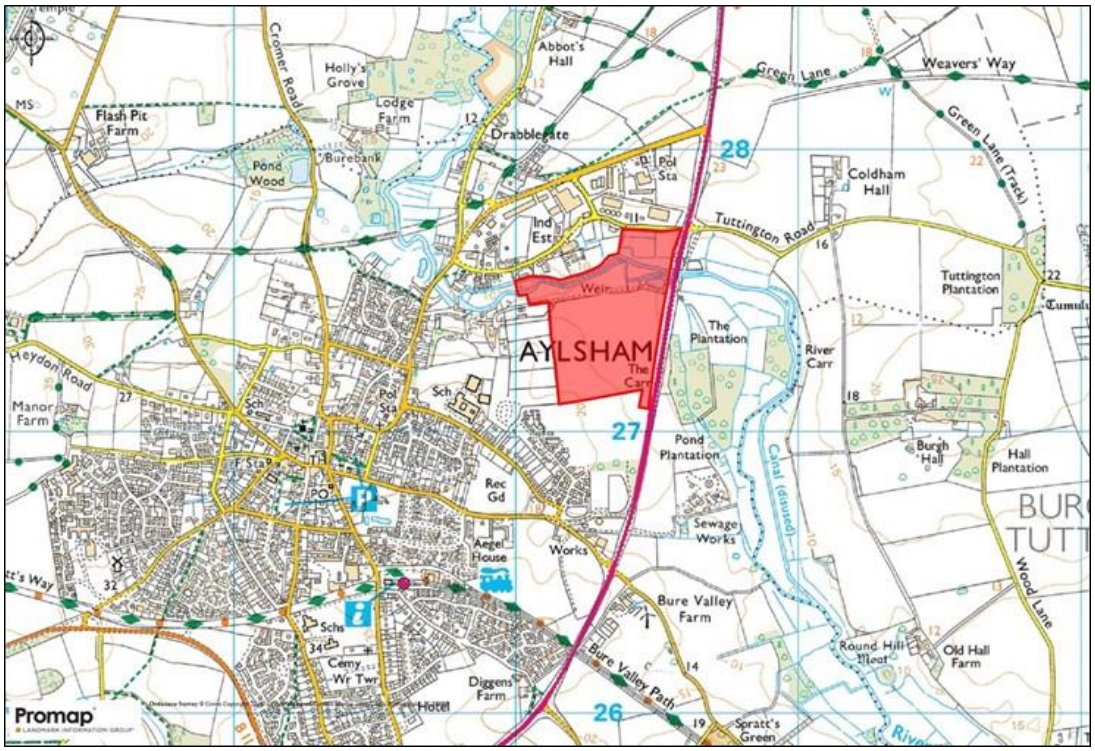
March 2020

184378/N01

Introduction

1. In March 2018, Armstrong Rigg Planning (ARP) submitted representations on behalf of Westmere Homes to the Regulation 18 Consultation pursuant to the emerging Greater Norwich Local Plan (GNLP). These representations related to land controlled by Westmere Homes, which is located to the north of the recently completed Bure Meadows residential area.

Site Location



2. The representations submitted by ARP were supported by a *'Transport Feasibility Appraisal'* prepared by Motion. On the basis of the evidence prepared by Motion, it was concluded that the Land North East of Aylsham site would be suitable to be allocated for residential purposes as:

- The site is well located to encourage people to travel by modes of transport other than the private car;

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- Safe and suitable access for all can be delivered from the A140 and an existing residential area located to the south (i.e. Bure Meadows); and,
- The potential impact of the development proposals considered to date are unlikely to lead to any demonstrable harm to the local highway network, let alone the severe impact referred to in the NPPF as being the only legitimate reason to resist a proposed development on highways and transportation grounds

3. Having reviewed the representations submitted by ARP as part of its wider assessment of the sites promoted across the GNLP administrative area, the emerging Joint Councils[1] (JC) have identified a site located to the South of Burgh Road as being the preferred location for future residential growth in Aylsham. The Land North East of Aylsham site is identified as a "*secondary preference for allocation in the town*"[2].

4. Having reviewed the justification for this from a transportation perspective, it is evident that the Land North East of Aylsham shares many similarities with the South of Burgh Road site. The most notable difference being the representations made by ARP to date are predicated on an access being provided on the A140. Having discussed this with Norfolk County Council Highways (NCCH), it is understood that this reflects its current policy position that recognises the strategic importance of the A140 and a commitment to limit the construction of any new junctions thereon.

5. With this in mind, Westmere Homes has appointed Vectos to reconsider the access strategy for the Land North West of Aylsham site, and where necessary to update the supporting evidence contained within the *'Transport Feasibility Appraisal'* submitted in support of the March 2018 representations. This Technical Note, which draws upon the outcome of a site visit, feedback from NCCH, and updated guidance notes prepared by NCCH, summarises the outcome of this review.

6. In summary, this Technical Note demonstrates that it is viable to access the site using the existing road network that serves the Bure Meadows scheme without having a material impact upon the conclusions reached within the *'Transport Feasibility Appraisal'*. Accordingly, it is our view that the conclusions reached in March 2018 remain valid; namely:

   "…*there is strong justification and legitimate transport sustainability reasons why the Land North East of Aylsham should be included in the emerging Greater Norwich Local Plan as an allocated housing site*".

Vehicular Access Strategy

7. In the time that has elapsed since the March 2018 representations were submitted, NCCH has adopted new guidance entitled 'Safe, Sustainable Development' (SSD). This document includes a series of aims and supporting guidance notes establishing what is likely to be

[1] Broadland District Council, Norwich City Council and South Norfolk Council
[2] GNLP 'Aylsham Assessment Booklet', page 24.

acceptable to NCCH. In light of comments included within the GNLP 'Aylsham Assessment Booklet'[3], point 'G2.7' of the SSD is of particular relevance to the Aylsham site, in so much as it clarifies NCCH's position with respect to the number of access points.

"*More than one access point will only be considered if the scale of development is large enough to require an additional access point for the safe and efficient movement of traffic*".

8. Whilst the SSD does not include any reference to thresholds where second points of access should be considered, it is noteworthy that the highway pages of the Norfolk County Council website direct developers towards the use of Manual for Streets (MfS). Point 'G3.1' of the SSD also makes reference to the sister document of MfS; namely, Manual for Streets 2 (MfS2). As with the SSD, neither MfS or MfS2 indicates limits on the number of dwellings that can be served from a single point of access.

9. However, the third bullet point of MfS paragraph 6.7.3 states:

"*The length of cul-de-sacs or the number of dwellings have been used by local authorities as criteria for limiting the size of a development served by a single access route. Authorities have often argued that the larger the site, the more likely it is that a single access could be blocked for whatever reason. The fire services adopt a less numbers-driven approach and consider each application based on a risk assessment for the site, and response time requirements*".

10. MfS paragraph 6.7.3 goes onto state that parked cars can have a significant influence on response times and recommends that adequate levels of parking are provided to reduce such impacts. In this location, it is noteworthy that the internal layout of the Bure Meadows site has been constructed to adoptable standard and in doing so benefits from suitably wide roads to accommodate a fire tender, including Elizabeth Way and Jenny Lind Close, which would be used to provide access to the Land North of Aylsham site. This is shown on the swept path drawings provided at **Appendix A**.

11. When considering the information presented at **Appendix A**, it is worthy to note that the roads that the fire tender would use when traversing the site are 6 metres wide, and that the internal layout provides a series of loops that ensure Bure Meadows is a highly permeable network of lightly trafficked streets. Of equal importance is the fact that the properties that front these roads benefit from parking that has been deemed to be appropriate for this location, and that a recent site visit did not identify a particular problem with respect to on-street parking.

12. In this regard, the likelihood of a fire tender being blocked by a parked (or abandoned) vehicle is considered very low. This is particularly evident given the northern section of Jenny Lind Close is currently a cul-de-sac that is flanked by just three dwellings. The demand for parking will thus be low.

13. On this basis, the use of Jenny Lind Close to provide access to the North West of Aylsham site would not give rise to a significant impact upon the internal road network that would result

[3] There would be too many houses served by one access.

in a safety concern. This is the test set out in paragraph 109 of the 2019 NPPF if development (either in the form of a planning application or an allocation) is to be prevented. It thus provides the safe and suitable access for all, which is listed at paragraph 108 of the 2019 NPPF.

14. The same also applies to the point at which the current internal network of Bure Meadows joins the wider highway network. As is set out on the Vehicular Movement Strategy provided at **Appendix B**, it is possible to access Bure Meadows from three different roads; namely, the A140; Burgh Road; and, Sir Williams Lane. In this regard, it is clear that an emergency vehicle would be able to use several routes to access the Land North West of Aylsham site in the event that any one of these roads was blocked.

15. Notwithstanding this, it is considered highly unlikely that any of these routes would be blocked, let alone all three at the same time given the lightly trafficked nature of Burgh Road and Sir William's Lane, and the fact that the A140/Burgh Road roundabout is not subject to a poor safety record (see **Appendix C**). In the highly unlikely event that this was the case, it is noteworthy that Bure Meadows includes an emergency access on Sir William's Lane and that Westmere Homes has the ability to deliver additional emergency access points, if required. These are indicatively shown on the Vehicular Movement Strategy at **Appendix B**.

16. In summary, it has been shown that:

- There are no accepted thresholds either at the national or local level that require more than one point of access to be provided to serve a development of the size that is being promoted.
- The Bure Meadows site can be accessed via three different directions; namely, Burgh Road East; Burgh Road West and Sir William's Lane.
- In the unlikely event that any of the three routes that serve Bure Meadows are all blocked there is an existing emergency access that can be utilised on Sir William's Lane, which can be supplemented by a new emergency access from the A140 (if required).
- Bure Meadows is characterised by a highly permeable network of roads that accommodate the swept path of emergency vehicles.

17. Against this background it is clear that the revised vehicular access strategy would not compromise safety and is thus acceptable in transport terms, subject to the usual detailed assessments that would accompany a future planning application.

18. Notwithstanding this, it should be noted that the access options that informed the *'Transport Feasibility Appraisal'* were designed in accordance with current best practice guidance and thus would provide a safe means of access to the site. Similarly, the detailed highway capacity assessments that were included within the *'Transport Feasibility Appraisal'* demonstrated that their deign was such that they would operate under free-flow conditions in 2036. In this regard, they would not compromise the operation of the A140.

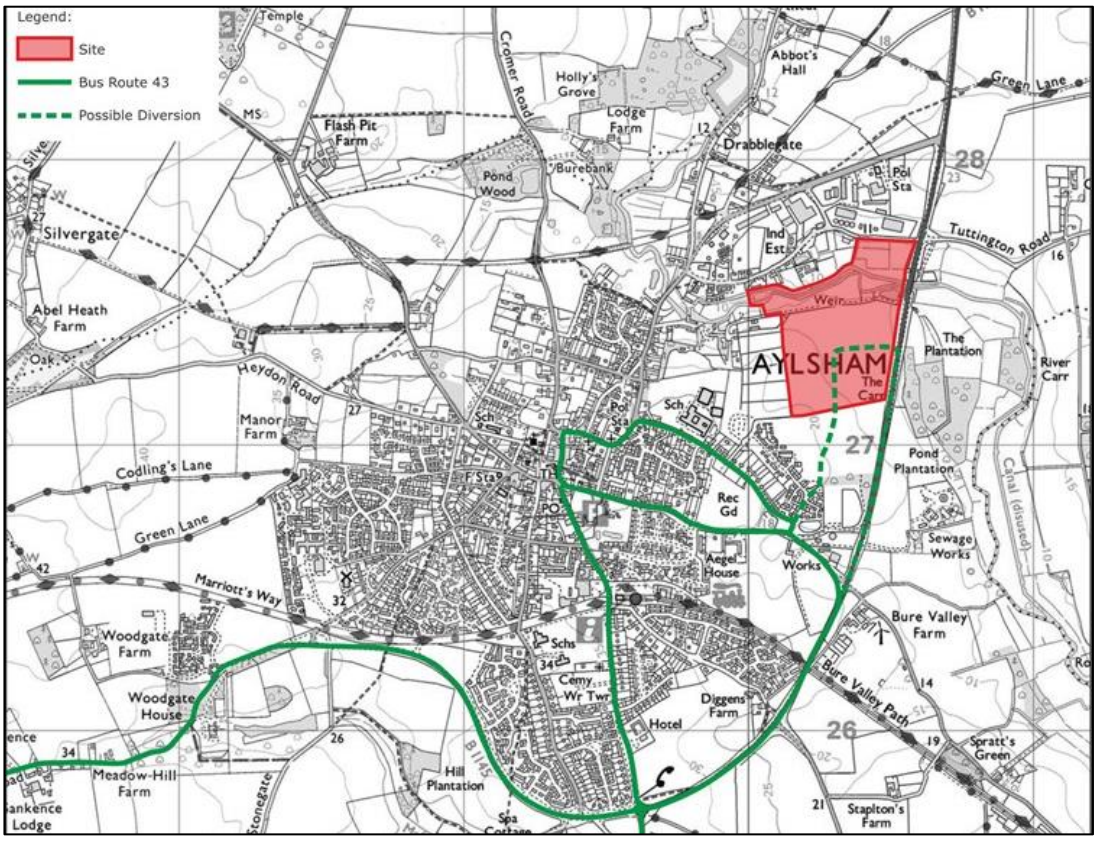
19. On this basis, it is our view that there are no technical reasons why these accesses could not be provided from a transport perspective. Should NCCH change their stance with respect to the A140 there are therefore further viable and deliverable options available to achieve suitable vehicular access to and from the Land North East of Aylsham site. As outlined in the *'Transport Feasibility Appraisal'*, this has wider benefits that include:

- an alternative route to the existing drop off area that is associated with Aylsham High School; and,
- an alternative access to the Mill Road Water Treatment Works, which would remove the need for larger maintenance vehicles to travel through one of the oldest sections of the town.

Sustainable Transport Access Strategy

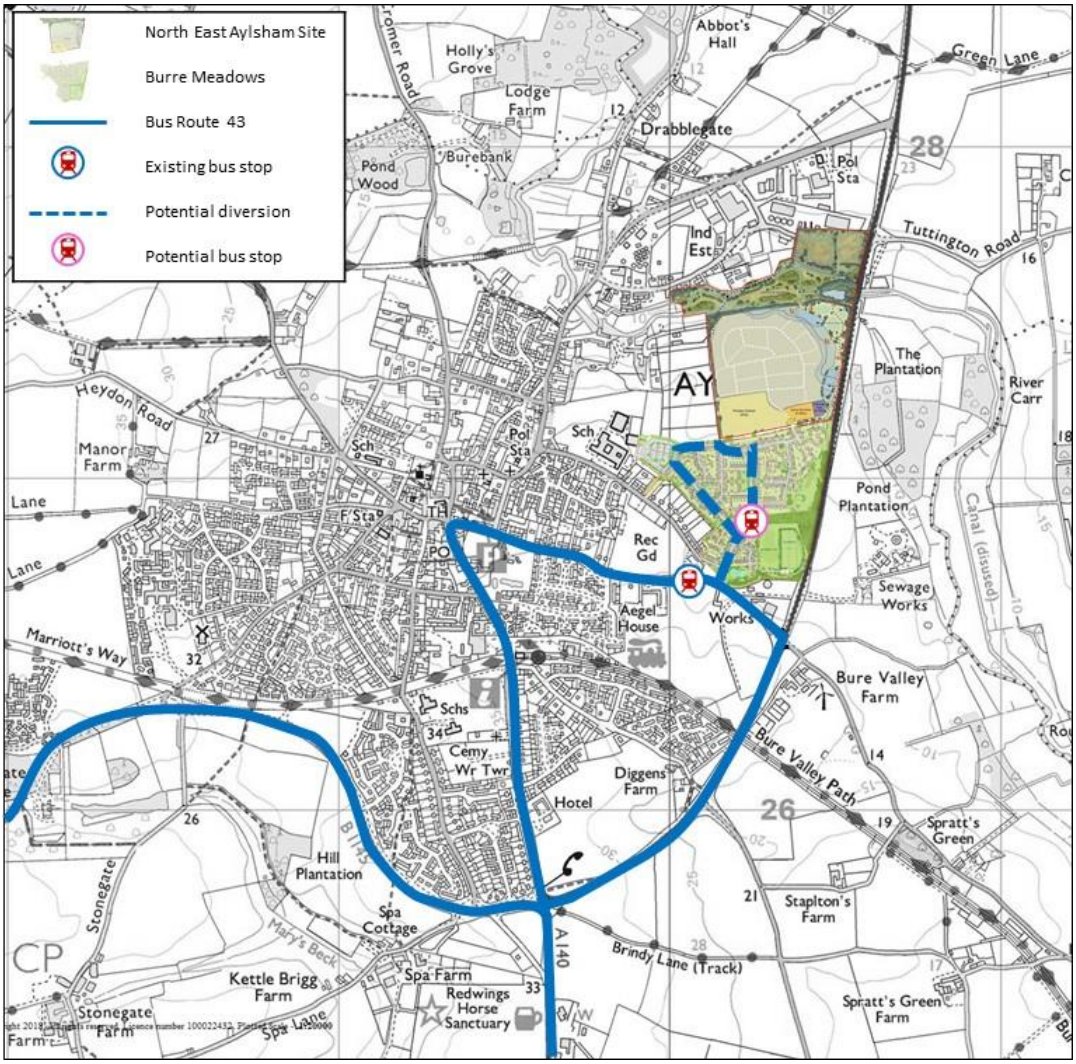
20. The sustainable transport access strategy that informed the *'Transport Feasibility Appraisal'* was predicated on making use of the existing footways that serve the Bure Meadows site and the diversion of Bus Route 43 into the site. The revised vehicular access strategy outlined above only affects the potential diversion of Route 43, as this assumed that the bus would enter Bure Meadows from the south and exit the Land North West of Aylsham site via the A140. A copy of the plan contained within the *'Transport Feasibility Appraisal*' is provided below for reference.

Previous A43 Diversion Route



21. In light of the fact that NCCH has confirmed that it would not wish to see any new junctions constructed on the A140, the above plan is no longer viable. However, it is still viable to divert buses into the Bure Meadows site using the *'Access and Highways'* strategy that was submitted in support of the outline application for this site (Ref: 20111453). A copy of the approved bus routeing strategy is provided at **Appendix D**, with an updated plan showing how Route 43 could be diverted into the site is provided below.

Potential A43 Diversion Route



22. When considering the above, it is worthy to note that the route shown totals 1,100 metres. This compares to the 1,800 metre diversion shown on the equivalent plan that informed the *'Transport Feasibility Appraisal'*. The revised plan also shows the location of some indicative bus stops that are within 500 metres of the northern most point of the indicative masterplan, which is consistent with the equivalent walking distances from the most northern point of the Bure Meadows scheme to the bus stops located on Burgh Road. On this basis, it is clear that the revised option would:

- have less of an impact upon current timetables, which likely to be seen more favourably by a bus operator[4]; and,
- enable the delivery of further bus stops that would not only serve the proposed scheme but enhance the accessibility of the existing residents of Bure Meadows.

23. Having regard to the above, it is evident that the revised access strategy for the site does not have a material impact upon its access to the local public transport network. On the contrary, it is considered that the allocation of two strategic sites in this location of Aylsham would provide the critical mass to secure a step change in the current frequency and hours of operation of Route 43. The upgrading of this service will be key in the context of the wider climate emergency given that the majority of all work based trips are to and from Norwich , which is the southern terminus for Route 43, and that Norwich is also the main destination for higher order services in the region.

24. Clearly increasing the frequency of buses on Route 43 will be advantageous in encouraging future residents to travel by public transport. However, enhancements to this service would inevitably have a wider community benefit that would give the exiting residents of Aylsham greater choice about how they travel when seeking to access employment opportunities and the higher order services that are offered in Norwich.

25. The revised vehicular access strategy does not have any effect upon the strategy that was outlined in the *'Transport Feasibility Appraisal'* for active modes of transport (i.e. pedestrians and cyclists). In this regard, the conclusions reached in March 2018 with respect to the overall benefits of the Land North East of Aylsham site remain; namely the direct linkages that can be made to the existing Bure Meadows infrastructure (see **Appendix E**) is such that:

- Future residents will benefit from direct access to Dunkirk Industrial Estate and the Town Centre, which are the two main employment areas of Aylsham; and,
- Development at this site will enhance the overall attractiveness of the pedestrian route to Dunkirk Industrial Estate from Bure Meadows.

Updated Highway Impact Assessment

26. Section 5 of the *'Transport Feasibility Appraisal'* contained a summary of the likely impact of 300 dwellings and two-form primary school from a highway capacity perspective. The results of this assessment, which was prepared having regard to ID42 and ID54 of the Planning Practice Guidance (PPG), concluded that there was sufficient residual capacity to accommodate traffic attributed to the Land North West of Aylsham site. It also demonstrated that the potential A140 access designed would operate within accepted thresholds.

[4] The exact details of any future diversion would be agreed with the operator as part of a future planning application.

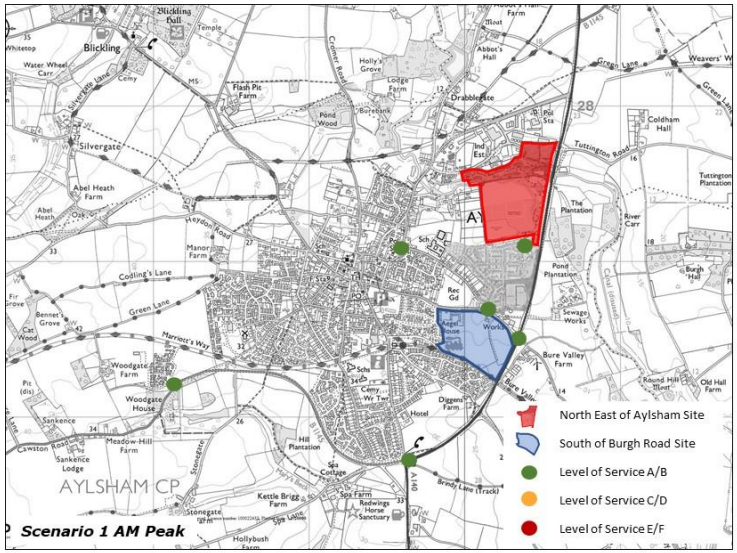
27. In light of the revised access strategy, the analyses presented at Section 5 of the *'Transport Feasibility Appraisal'* have been revisited to:

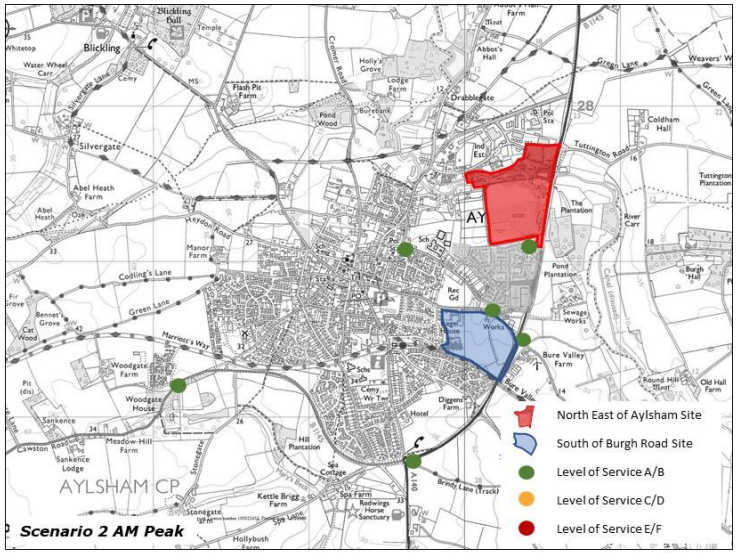
- take account of access no longer being taken from the A140; and,
- include traffic associated with the preferred Land South of Burgh Road site to establish if there is sufficient capacity to accommodate cumulative increases in traffic.

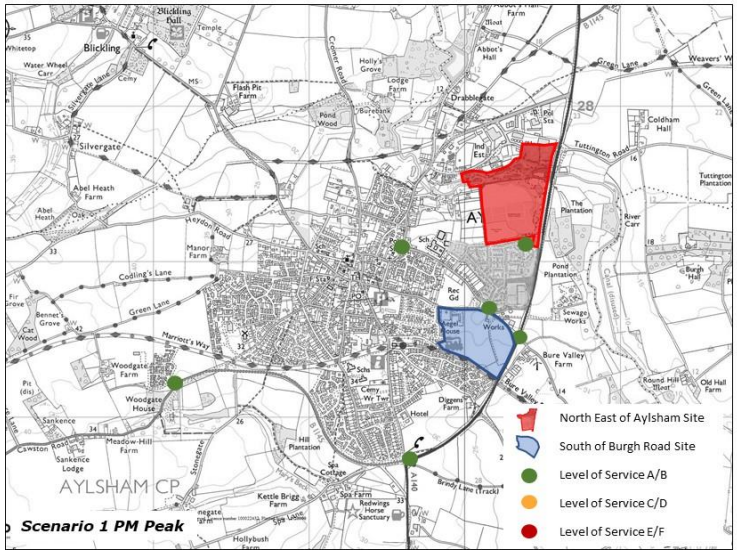
28. For the purposes of this assessment, it has therefore been necessary to:

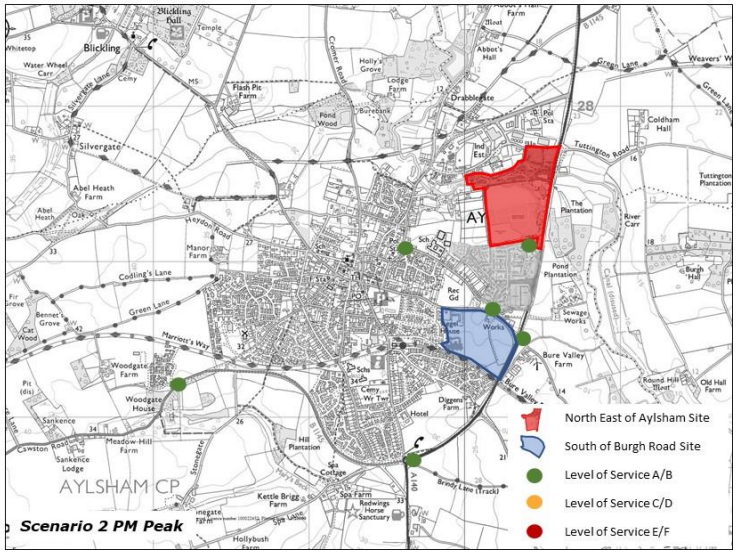
- revise the distribution profiles that informed the *'Transport Feasibility Appraisal'*. These are shown on Figure 6 at **Appendix F**; and,
- make predictions about traffic associated with the Land South of Burgh Road site. Given the proximity of this site to the Land North West of Aylsham, the traffic flows shown on Figure 4 at **Appendix F** have been established having regard to the same trip rates and traffic distribution profiles. It has also been assumed that one point of access would be provided given this is what is referred to in the Rossi Long Consulting *'Transport Note'* that supported the representations made with respect to this site.

29. Full copies of the traffic flows that have been referred to when updating the Junctions 9 assessments referenced in the *'Transport Feasibility Appraisal'* are provided at **Appendix F**, with the corresponding Junctions 9 output files provided at **Appendix G**. The output files at **Appendix G** also include the assumed Land South of Burgh Road access. A summary of the key results is provided below.


North East of Aylsham Site
South of Burgh Road Site
Level of Service A/B
Level of Service C/D
Level of Service E/F
AYLSHAM CP
Scenario 1 AM Peak


North East of Aylsham Site
South of Burgh Road Site
Level of Service A/B
Level of Service C/D
Level of Service E/F
AYLSHAM CP
Scenario 2 AM Peak


North East of Aylsham Site
South of Burgh Road Site
Level of Service A/B
Level of Service C/D
Level of Service E/F
AYLSHAM CP
Scenario 1 PM Peak


North East of Aylsham Site
South of Burgh Road Site
Level of Service A/B
Level of Service C/D
Level of Service E/F
AYLSHAM CP
Scenario 2 PM Peak

30. The information presented above, which has adopted the same approach to that taken in the *'Transport Feasibility Appraisal'*, demonstrates:

- all of the junctions will operate under 'free flow' conditions (i.e. LoS A/LoS B) prior to any development traffic being introduced to the local highway network (i.e. Scenario 1, which includes the Land to the South of Burgh Road); and,
- the assessment junctions are still expected to operate under 'free flow' conditions in 2036 once development traffic is introduced to the local highway network (i.e. Scenario 2).

31. As these conclusions are consistent with those reached in the *'Transport Feasibility Appraisal'*, it is clear that the revised access strategy does not affect the views reached with respect to highway capacity to date. Indeed, it is clear that there is sufficient residual capacity to accommodate traffic associated with both the Land South of Burgh Road and Land North West of Aylsham sites.

32. There are thus no highway capacity reasons why Aylsham could not accommodate a higher level of growth than has been assumed to date. This is particularly evident given that, as with the analysis that supported the *'Transport Feasibility Appraisal'*:

- no allowance has been made for the potential internalisation of education-based trips that originate from the Bure Meadows development; and,
- Growth rates have been applied to take account of anticipated increases in background traffic despite evidence showing traffic flows in the local area remaining largely static since 2001 despite overall increases in population and car ownership rates during the same period.

33. Notwithstanding this, it is accepted that the revised access strategy will inevitably increase demand on the roads that serve Bure Meadows. With this in mind, a further assessment has been undertaken to establish what impact this is likely to have upon the junction that will experience the largest increase in traffic; namely, the Elizabeth Way/Jenny Lind Close priority controlled junction. Copies of the calculations undertaken, and the corresponding Junctions 9 output reports are provided at **Appendix H**.

34. As with the wider highway network, the results presented at **Appendix H** confirm that the increases in traffic that would be experienced at this location are negligible. For example, they are equivalent to just three vehicles per minute at peak times. It has also been shown that the Elizabeth Way/Jenny Lind Close junction will:

- operate comfortably within accepted capacity thresholds;
- not experience any significant queueing;
- be subject to insignificant periods of delay; and,

- operate under free-flow conditions.

35. On this basis, the use of Jenny Lind Close as the sole point of access to the Land North East of Aylsham site will not result in a severe impact from a highway capacity perspective in this location. This provides further justification that the use of the Bure Meadows highway network to access the Land North East of Aylsham site is acceptable in transport terms.

Summary and Conclusions

36. This Technical Note has been prepared for Westmere Homes in relation to a proposed residential development on Land North East of Aylsham, Norfolk. It specifically responds to the outcome of Bure's review of the representations that ARP submitted to the emerging GNLP in March 2018 as part of the Regulation 18 Consultation process, which ostensibly related to the unacceptable inclusion of an access on the A140.

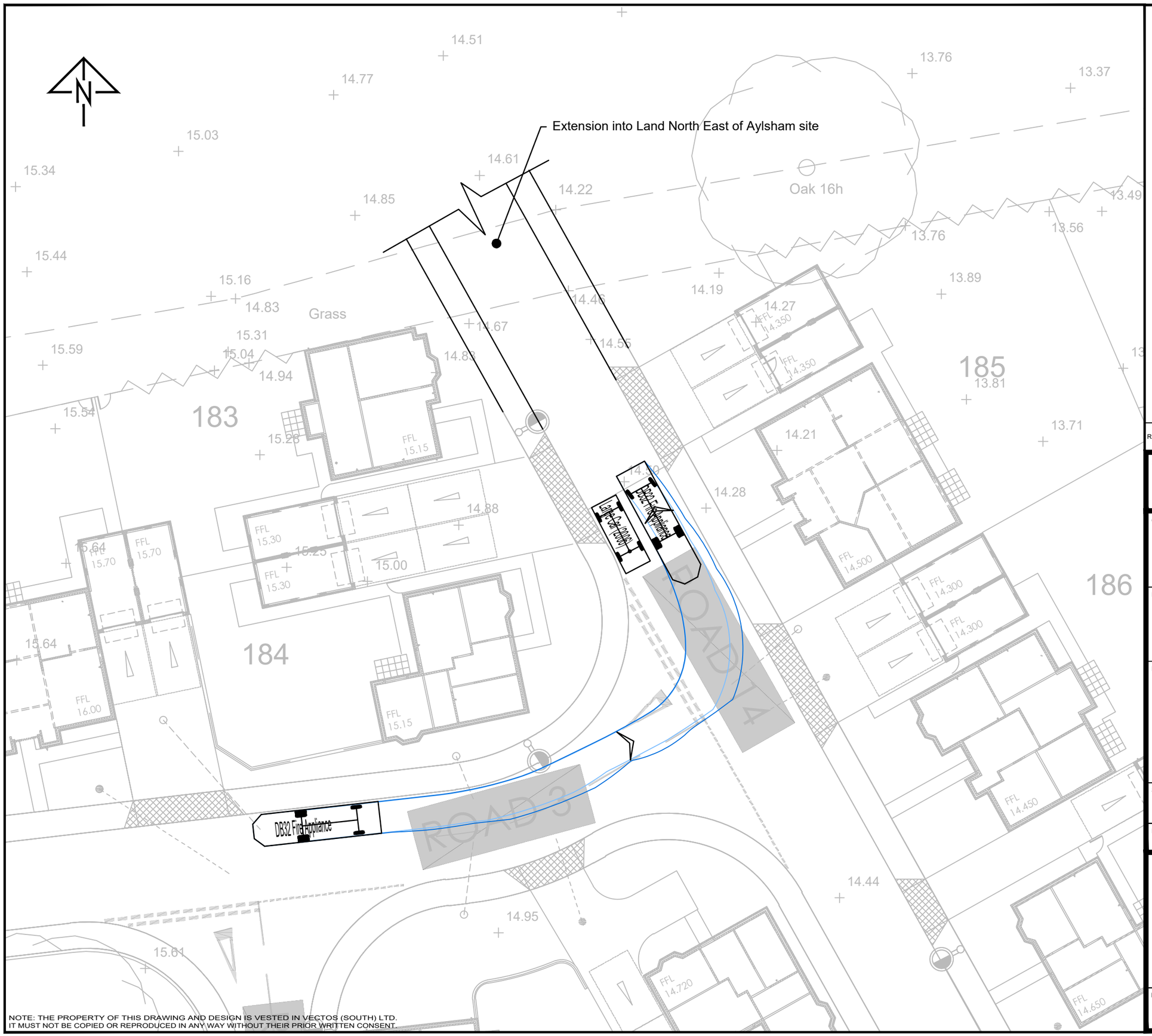
37. The evidence contained within this Technical Note, which takes into account feedback provided from NCCH and its SSD guidance, demonstrates the revised access strategy for the site:

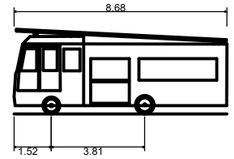
- ensures there are a range of routes and potential emergency access options that would ensure emergency vehicles would be able to access the site in an emergency;
- could still be penetrated by Bus Route 43, subject to future discussions with the bus operator as part of a future planning application; and,
- would not give rise to any unacceptable highway capacity constraints within the Bure Meadows site and/or on the wider highway network.

38. Accordingly, the conclusion reached by Motion in the *'Transport Feasibility Appraisal'* that accompanied the March 2018 representations made by ARP therefore remains; namely:

"…*there is strong justification and legitimate transport sustainability reasons why the Land North East of Aylsham should be included in the emerging Greater Norwich Local Plan as an allocated housing site*".

APPENDIX A





DB32 Fire Appliance	
Overall Length	8.680m
Overall Width	2.180m
Overall Body Height	3.452m
Min Body Ground Clearance	0.337m
Max Track Width	2.121m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m

REV.	DETAILS	DRAWN	CHECKED	DATE
.	.	.	.	.

STATUS:

INFORMATION ONLY

CLIENT:

Westmere Homes

PROJECT:

Land North East of Aylsham

DRAWING TITLE:

Swept Path Analysis
Fire Tender

SCALES:

1:250 @ A3

DRAWN:	CHECKED:	DATE:
CJM	JB	11.03.2020

vectos
transport planning specialists

Broad Quay House, Prince Street, Bristol, BS1 4DJ
t: 0117 905 8888 e: enquiries@vectos.co.uk

DRAWING NUMBER:	REVISION:
184378_SPA_001	-

APPENDIX B

North East Aylsham Site

Bure Meadows

Primary Route

Secondary Route

Existing emergency access

Bure Meadows primary route

Proposed internal roads

Potential emergency access

PROJECT TITLE:

North East Aylsham

CLIENT:

Westmere Homes

DRAWING TITLE:

Vehicular Access

SCALES:

NTS

DRAWN:	CHECKED:	DATE:	REVISION:
RB	JB	11.03.20	

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transport planning specialists

Network Building, 97 Tottenham Court Road, London W1T 4TP
Tel: 020 7580 7373 Email: london@vectos.co.uk www.vectos.co.uk

DRAWING REFERENCE:

Figure B.1

APPENDIX C


Anglian water sewage treatment plant
Sir Williams Ln
Buckenham Rd
The Mayflowers
Burgh Rd
Heatcraft Aylsham
Marks & Spencer
AYLSHAM BP
A140
River Bure
Bure Valley Ln
Penny Flynn
Incident Severity
Slight Serious Fatal
7 results found
Location: aylsham
Years
5 of 20 years selected
Severity
Fatal
Serious
Slight
Casualty Types:
All Casualty Types
Vehicles Involved:
All Vehicle Types
Search

APPENDIX D

IMPROVED CROSSING POINT: (1.) IMPROVED CROSSING POINT(S) FOR ACCESS TO/FROM TOWN CENTRE (AND GASHOUSE HILL BUS STOP) AND (2.) INSTALLATION OF NEW TACTILE PAVING

SECONDARY ACCESS: SECONDARY ACCESS POINT ALLOWING FOR EMERGENCY VEHICLE ACCESS AND A FOOTPATH LINK TO THE NEW SCHOOL ENTRANCE AND RESIDENTIAL DEVELOPMENT

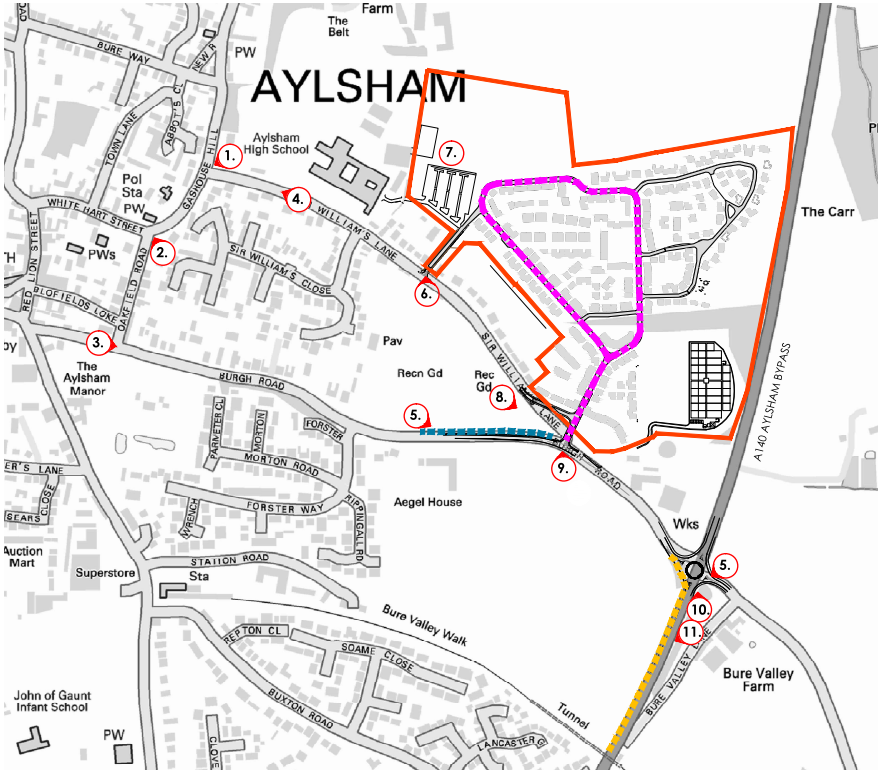
NEW CAR PARK: PROPOSED SCHOOL CAR PARK PROVIDING PARKING FOR STAFF, VISITORS AND INCLUDING A BUS TURNING AREA

SIR WILLIAM'S LANE: SCHOOL TRAFFIC INCLUDING VISITORS, STAFF AND BUSES, ALL DIRECTED THROUGH THE DEVELOPMENT SITE THEREBY RELIEVING SIR WILLIAM'S LANE

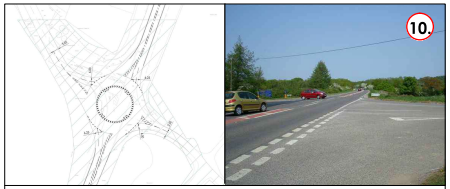
BURGH ROAD SHUTTLE WORKING: LOCALISED TRAFFIC CALMING SCHEME ALSO ALLOWING WIDENING OF EXISTING NARROW SECTION OF FOOTWAY ON EAST SIDE OF JUNCTION

INTERNAL BUS LOOP: PROPOSED TYPE 2 ESTATE ROAD PROVIDING BUS LINK TO AYLSHAM HIGH SCHOOL, REMOVING BUSES FROM SIR WILLIAM'S LANE AND THE FRONT OF THE SCHOOL

BURGH ROAD FOOTWAY: NEW SECTION OF FOOTWAY TO BE PROVIDED ON THE NORTH SIDE OF THE CARRIAGEWAY ALLOWING A CONTINUOUS PEDESTRIAN LINK TO/FROM THE TOWN CENTRE



PRIMARY ACCESS: MODIFIED JUNCTION ARRANGEMENT ONTO BURGH ROAD, DIRECTING TRAFFIC AWAY FROM SIR WILLIAM'S LANE INTO THE DEVELOPMENT SITE



A140 NEW ROUNDABOUT: NEW ROUNDABOUT AT BURGH ROAD PROVIDING IMPROVED ACCESS TO/FROM THE A140 AYLSHAM BYPASS

BURE VALLEY WALK & MARRIOTTS WAY: NEW FOOTPATH/CYCLE-TRACK TO BE PROVIDED IN THE WEST SIDE VERGE OF THE A140 BYPASS TO LINK WITH THE EXISTING BURE VALLEY WALK

KEY:

- NEW FOOT/CYCLE-TRACK TO BURE VALLEY WALK LEADING TO MARRIOTT'S WAY CONSTRUCTED WITHIN THE A140 AYLSHAM BYPASS WEST SIDE VERGE*
- NEW FOOTWAY TO BE PROVIDED FOR CONTINUOUS PEDESTRIAN LINK TO/FROM TOWN CENTRE
- NEW MAIN SCHOOL BUS ROUTE

N (Reference CREATE)

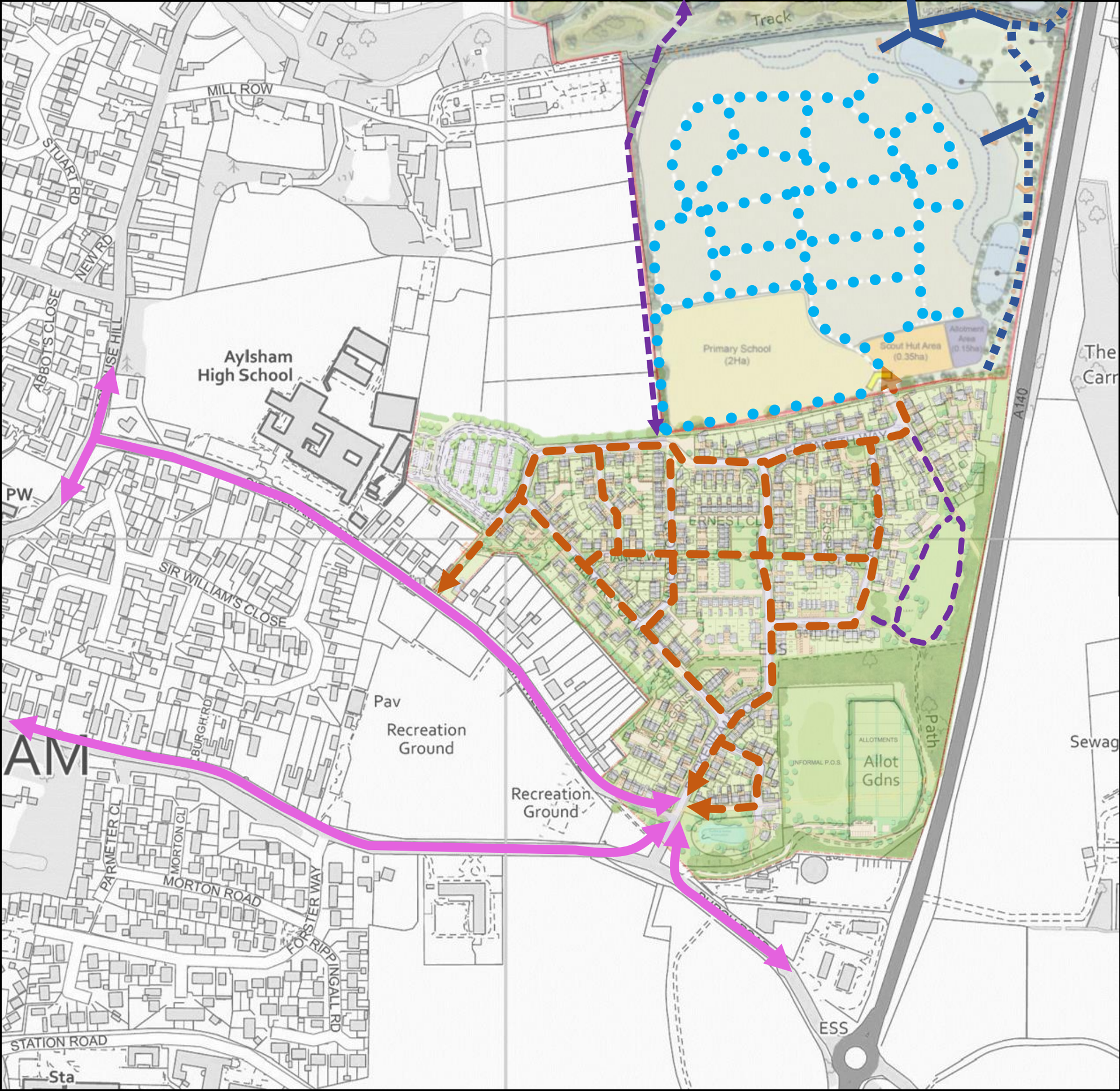
500 Metres

create CONSULTING ENGINEERS LTD

LAND OFF SIR WILLIAM'S LANE: HIGHWAY AND ACCESS STRATEGY

DO NOT SCALE ORIGINAL SHEET SIZE - A1 Landscape

APPENDIX E



North East Aylsham Site

Bure Meadows

Off-site footways

Bure Meadows footways

Bure Meadows recreation paths

Proposed recreation paths

Proposed internal

Potential emergency access

PROJECT TITLE:

North East Aylsham

CLIENT:

Westmere Homes

DRAWING TITLE:

Pedestrian Access

SCALES: NTS

DRAWN:	CHECKED:	DATE:	REVISION:
RB	JB	11.03.20	

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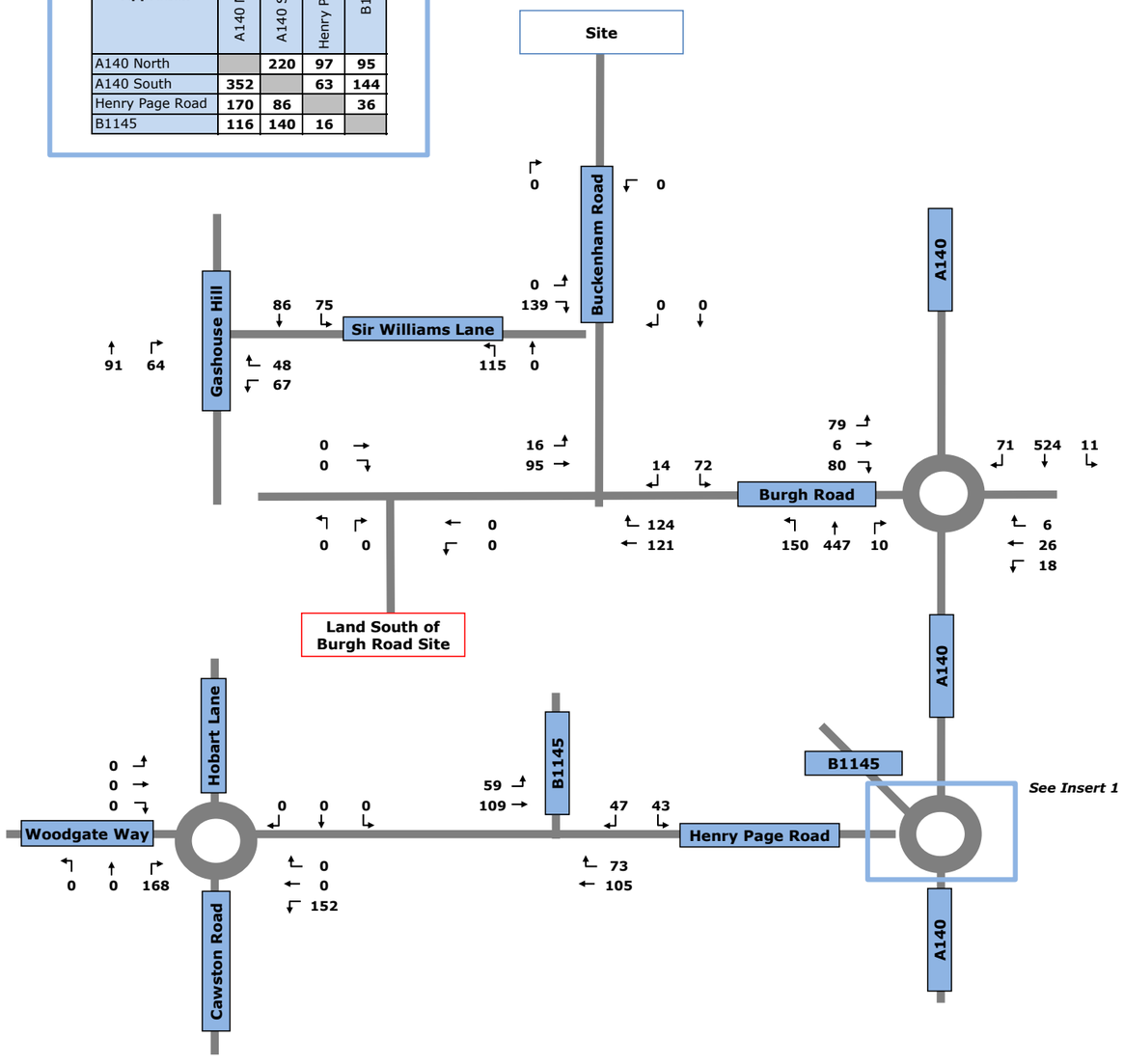
DRAWING REFERENCE:

Figure E.1

APPENDIX F

Insert 1: A140/B1145 Roundabout

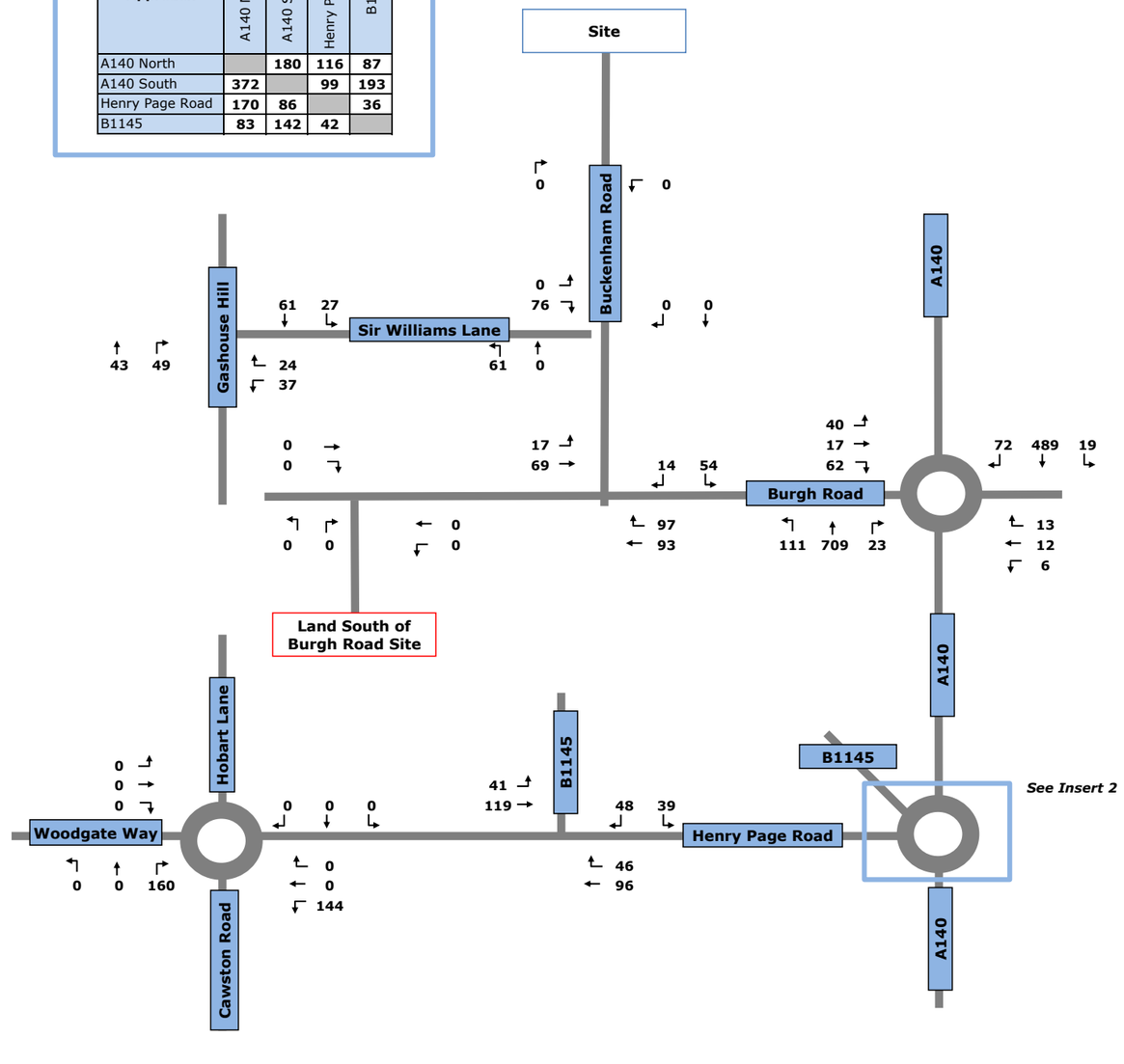
Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		220	97	95
A140 South	352		63	144
Henry Page Road	170	86		36
B1145	116	140	16	



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

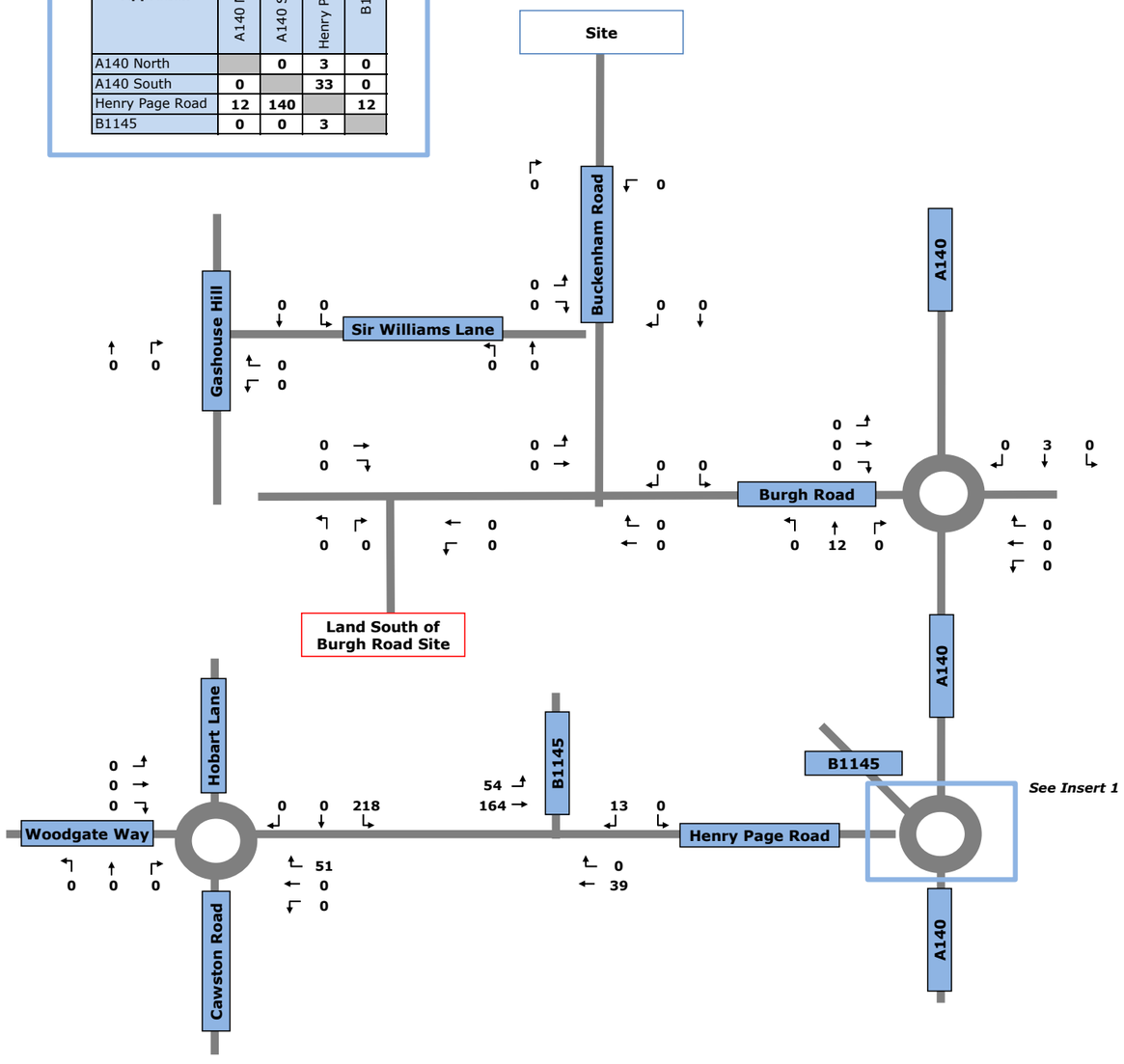
Land North East of Aylsham

Baseline Traffic Data

Figure No. 1.0

Insert 1: A140/B1145 Roundabout

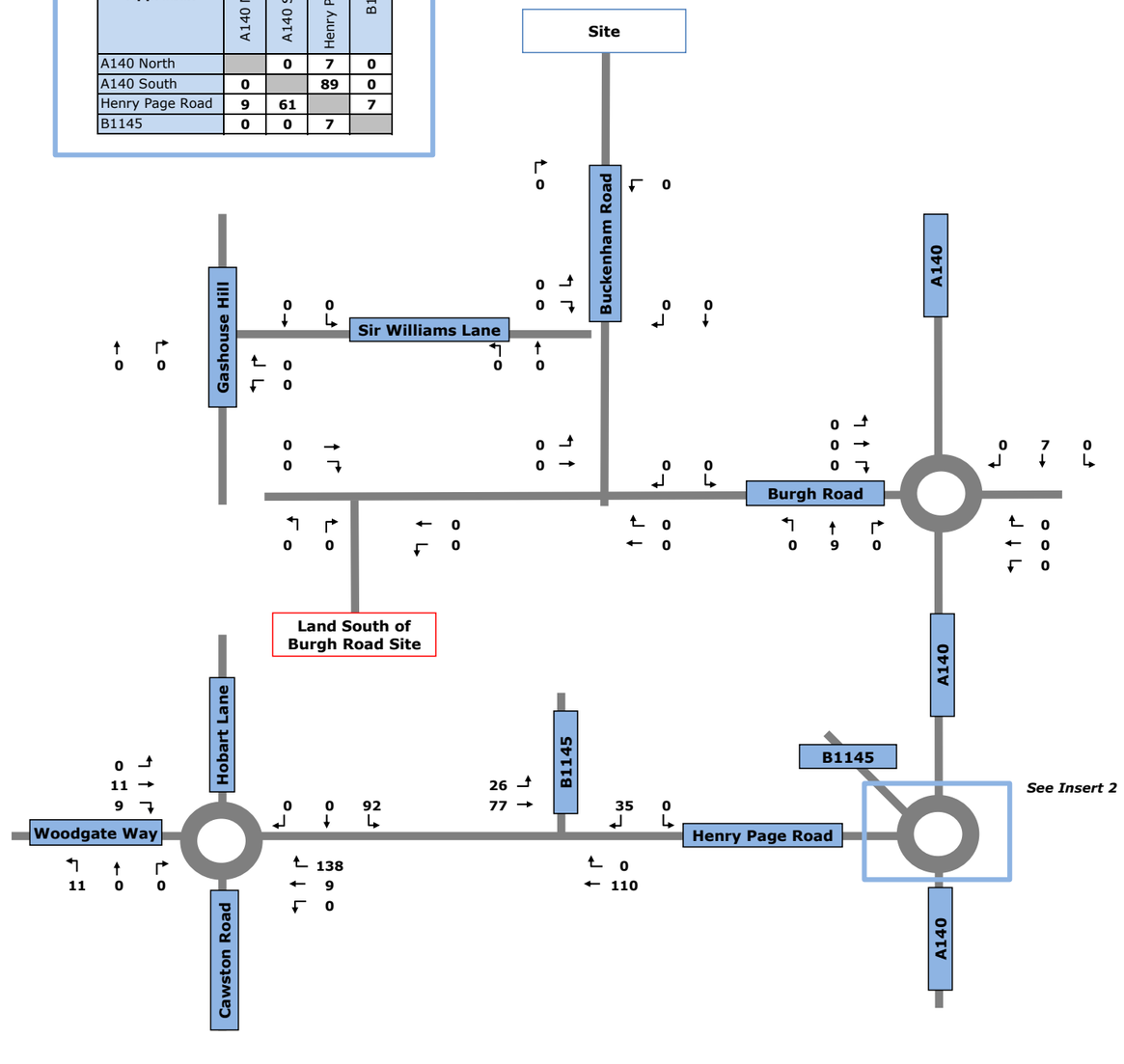
Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		0	3	0
A140 South	0		33	0
Henry Page Road	12	140		12
B1145	0	0	3	



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

Insert 2: A140/B1145 Roundabout

Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		0	7	0
A140 South	0		89	0
Henry Page Road	9	61		7
B1145	0	0	7	



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

Key:

123 Passenger Car Units

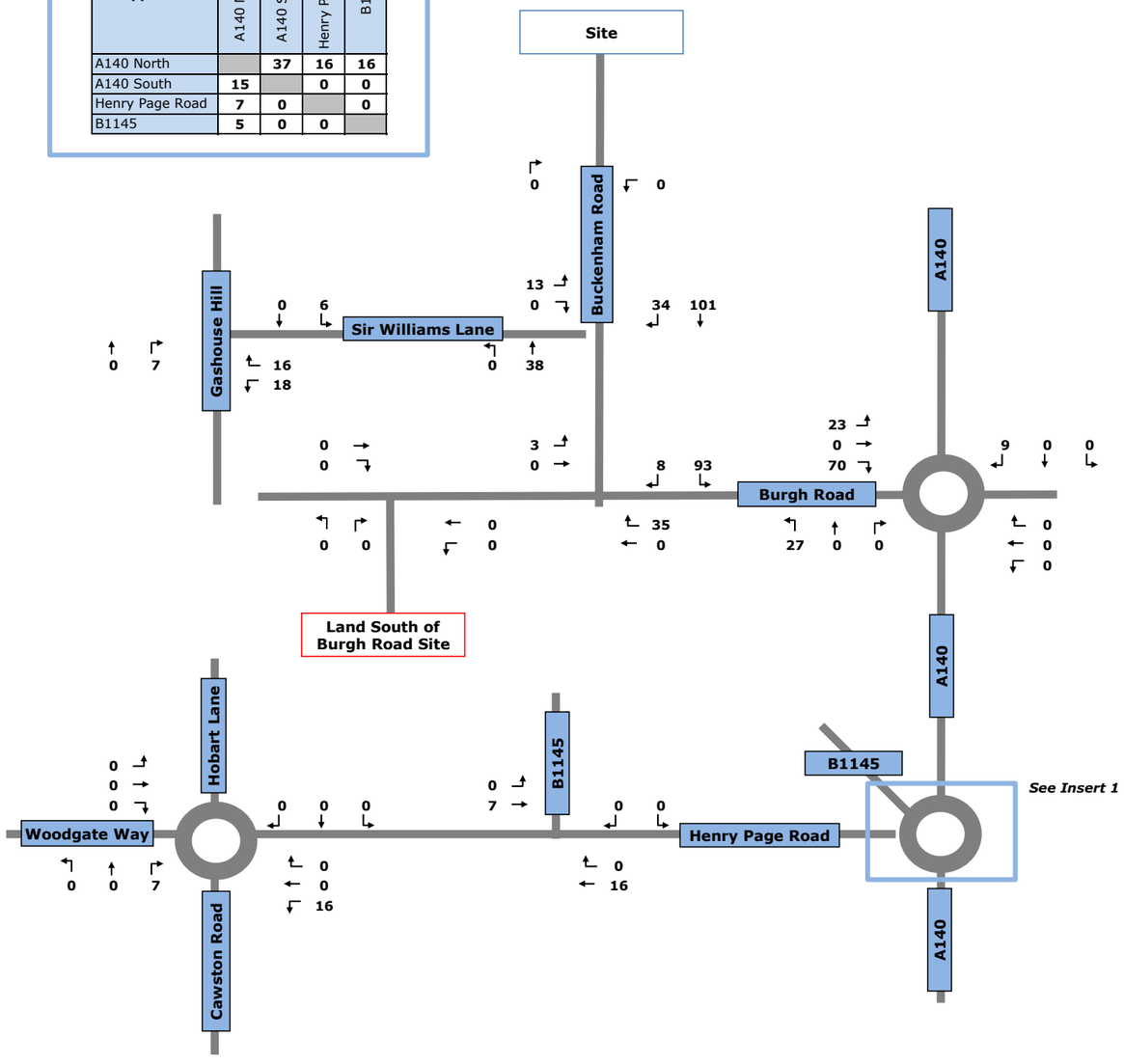
Land North East of Aylsham

Committed Development Traffic Flows: Aylsham Football Club Site

Figure No. 2.0

Insert 1: A140/B1145 Roundabout

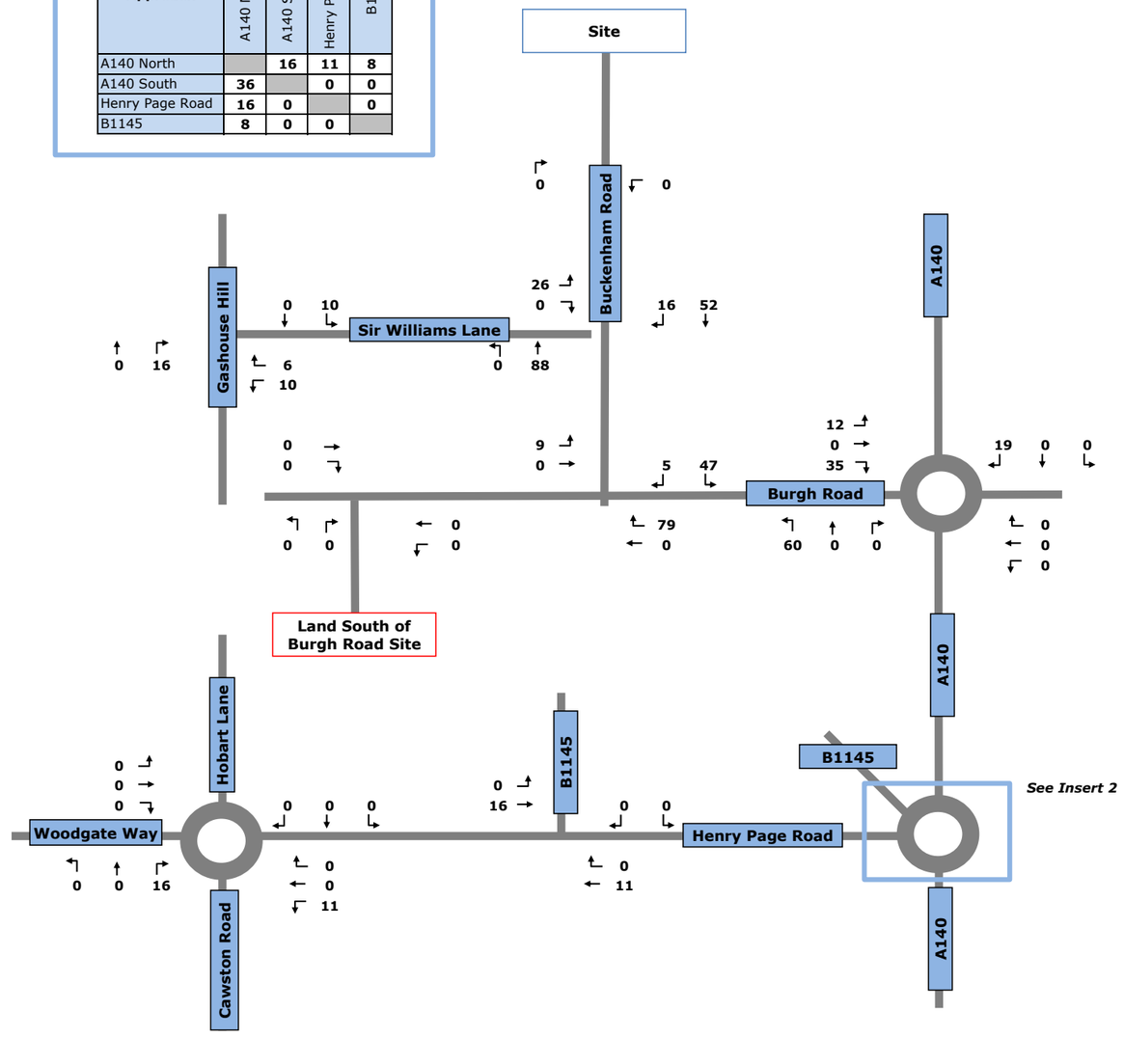
Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		37	16	16
A140 South	15		0	0
Henry Page Road	7	0		0
B1145	5	0	0	



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

Insert 2: A140/B1145 Roundabout

Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		16	11	8
A140 South	36		0	0
Henry Page Road	16	0		0
B1145	8	0	0	



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

Key:

123 Passenger Car Units

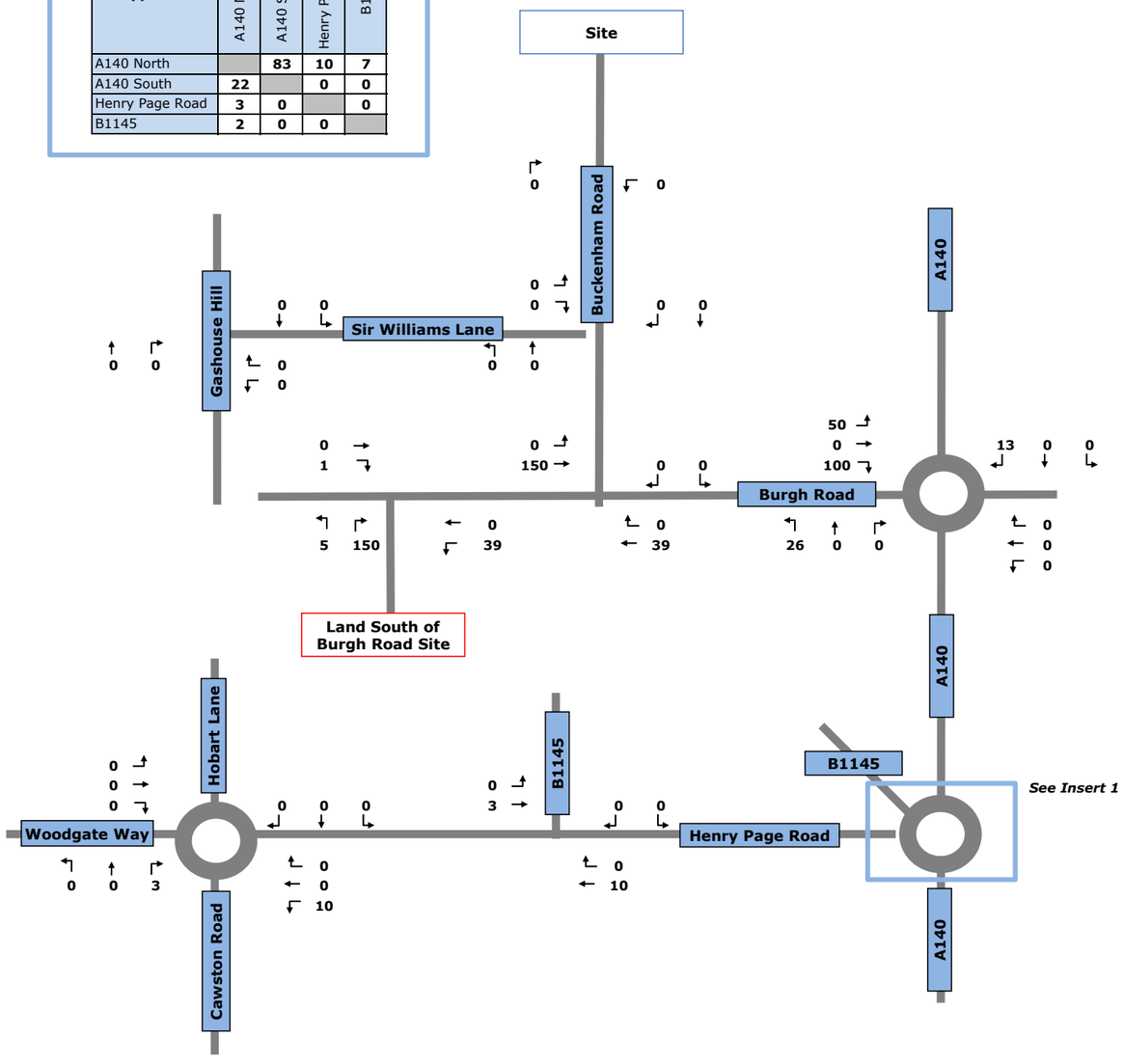
Land North East of Aylsham

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

Figure No. 3.0

Insert 1: A140/B1145 Roundabout

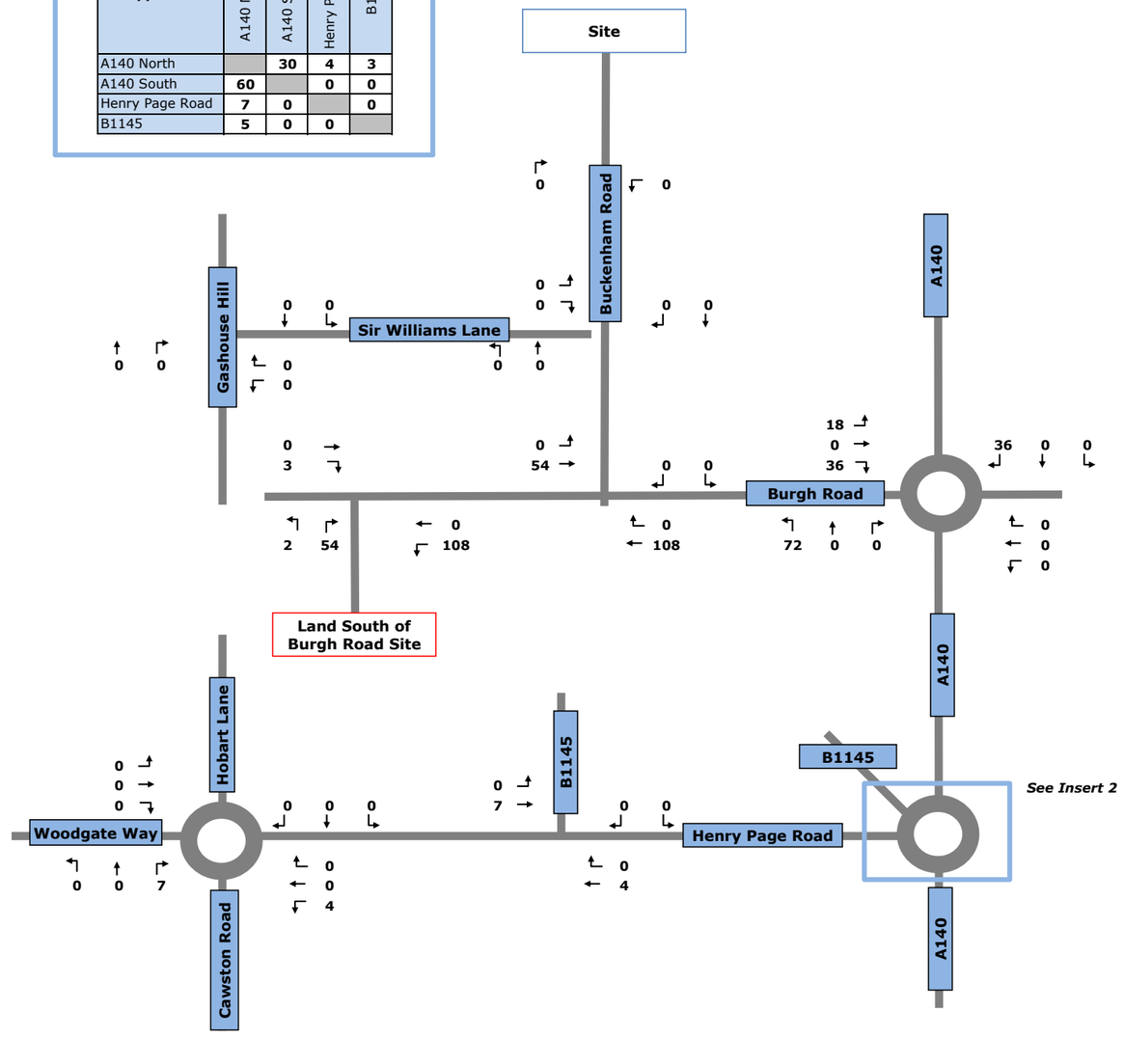
Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		83	10	7
A140 South	22		0	0
Henry Page Road	3	0		0
B1145	2	0	0	



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

Insert 2: A140/B1145 Roundabout

Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		30	4	3
A140 South	60		0	0
Henry Page Road	7	0		0
B1145	5	0	0	



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

Key:

123 Passenger Car Units

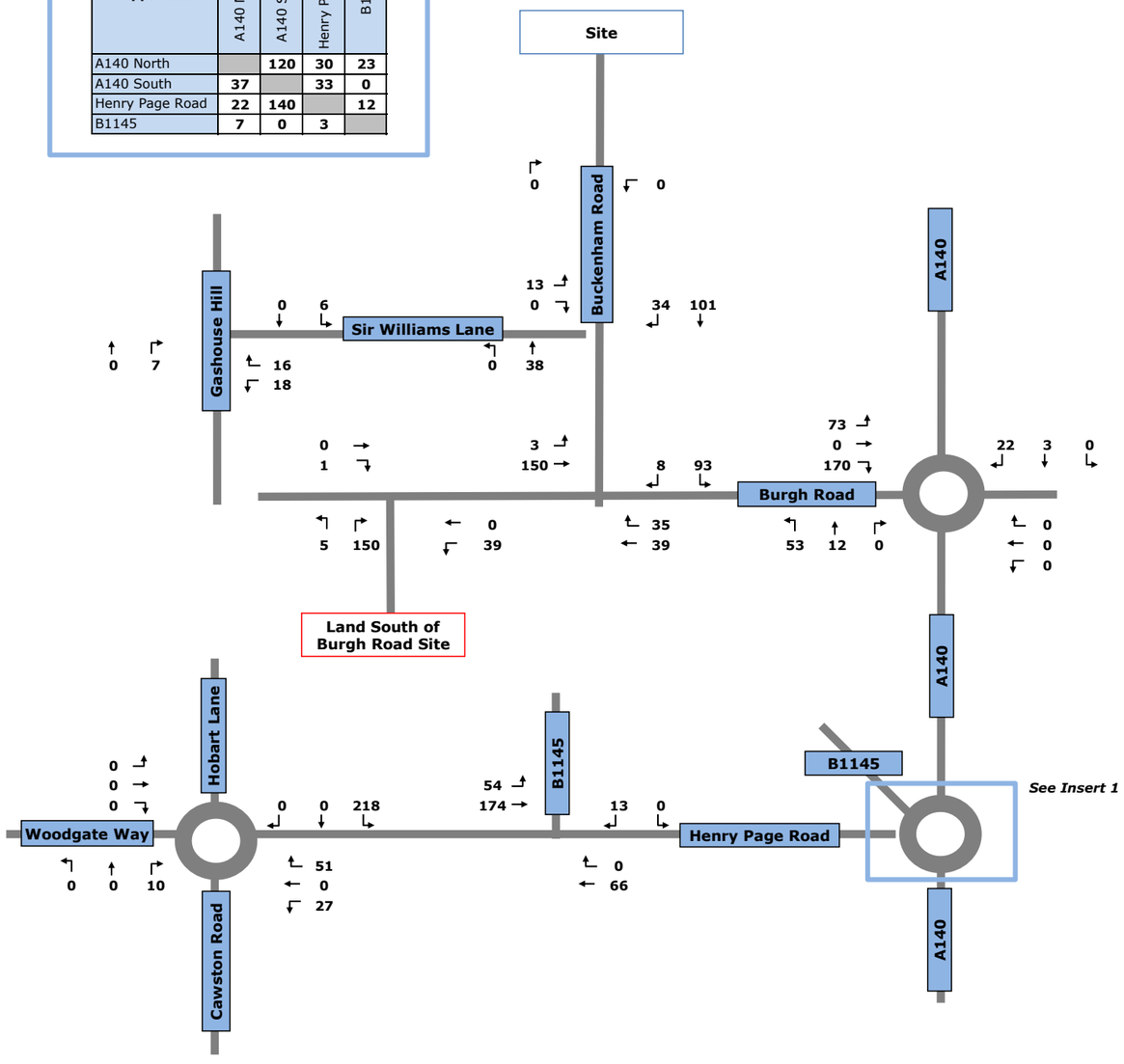
Land North East of Aylsham

Comitted Development Traffic Flows: Land South of Burgh Road Site

Figure No. 4.0

Insert 1: A140/B1145 Roundabout

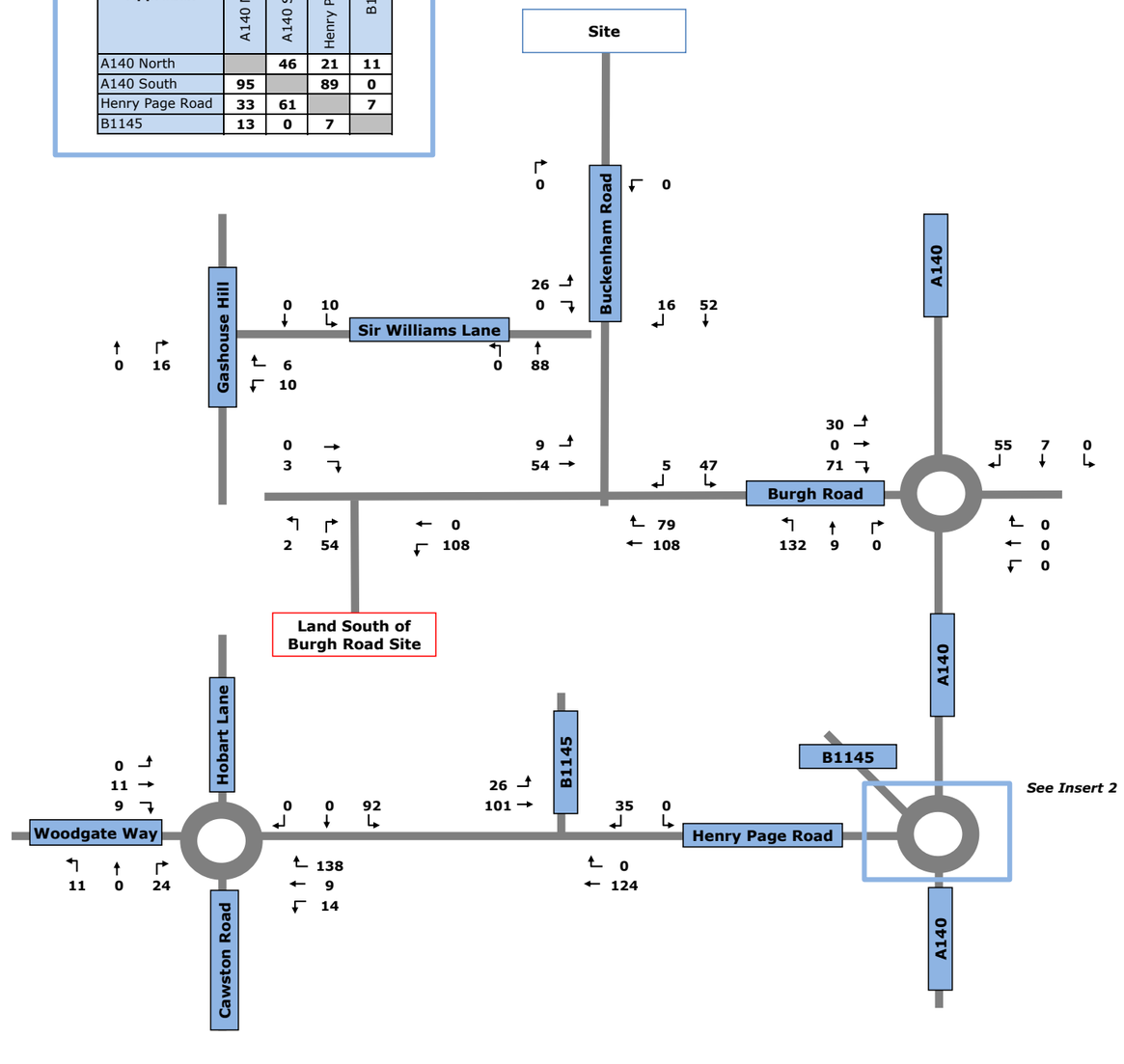
Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		120	30	23
A140 South	37		33	0
Henry Page Road	22	140		12
B1145	7	0	3	



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

Insert 2: A140/B1145 Roundabout

Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		46	21	11
A140 South	95		89	0
Henry Page Road	33	61		7
B1145	13	0	7	



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

Key:

123 Passenger Car Units

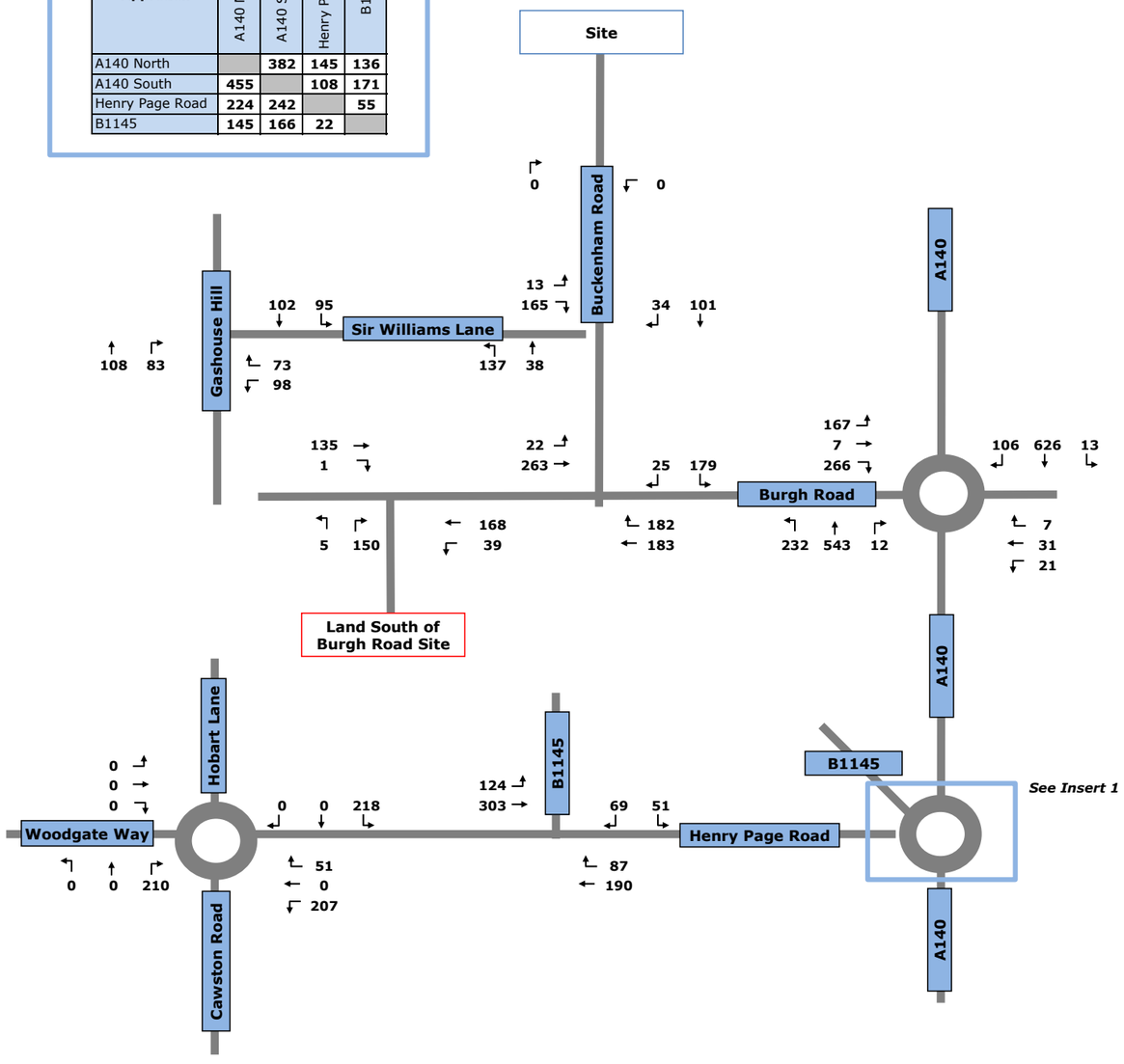
Land North East of Aylsham

Committed Development Traffic Flows: TOTAL

Figure No. 5.0

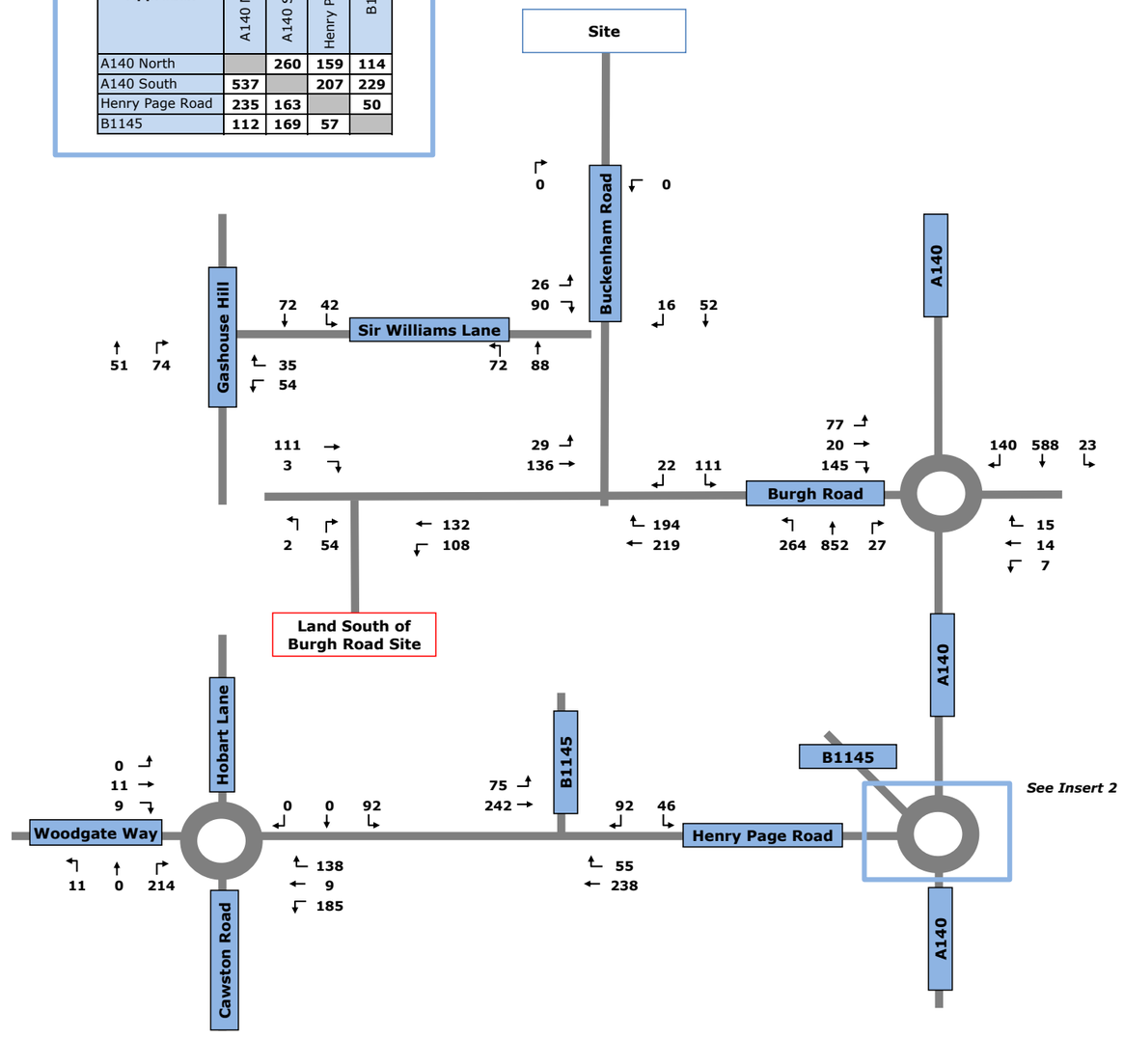
Insert 1: A140/B1145 Roundabout

Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		382	145	136
A140 South	455		108	171
Henry Page Road	224	242		55
B1145	145	166	22	



Insert 2: A140/B1145 Roundabout

Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		260	159	114
A140 South	537		207	229
Henry Page Road	235	163		50
B1145	112	169	57	



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

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

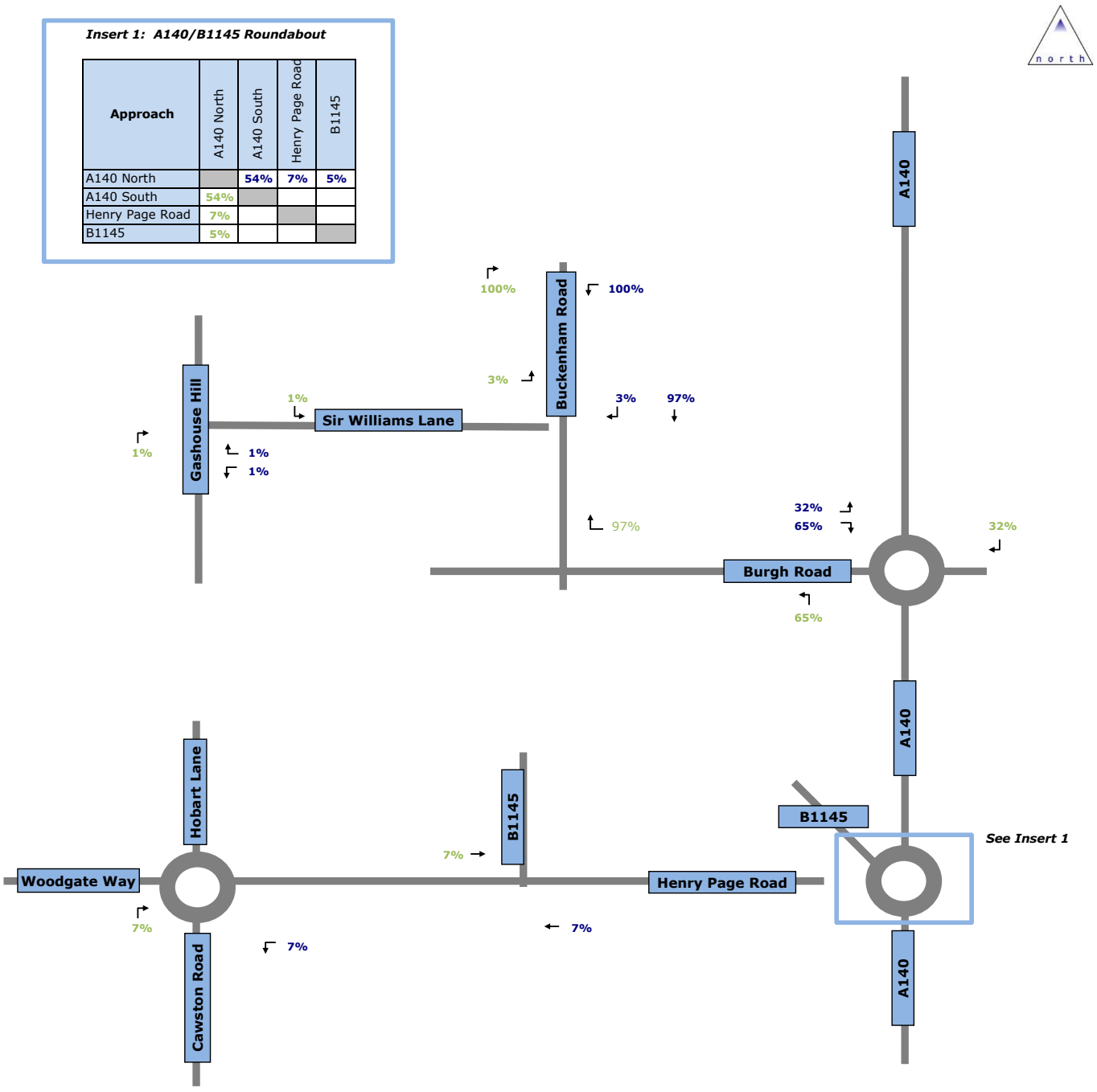
Key:

123 Passenger Car Units

Land North East of Aylsham

2036 Without Development

Figure No. 6.0



Key:

12% Arrivals

34% Departures

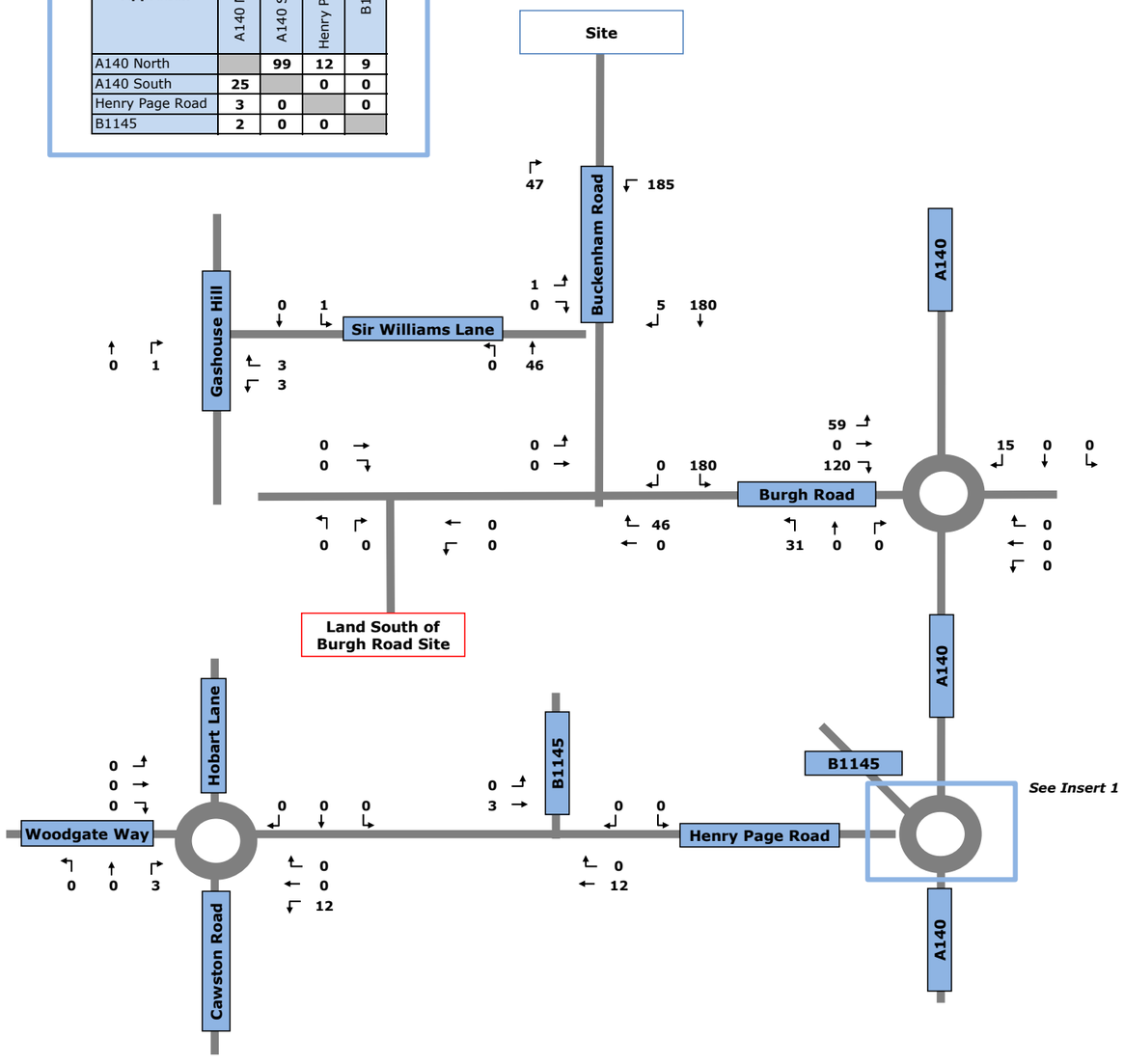
Land North East of Aylsham

Development Traffic Distribution

Motion Figure No. 7.0

Insert 1: A140/B1145 Roundabout

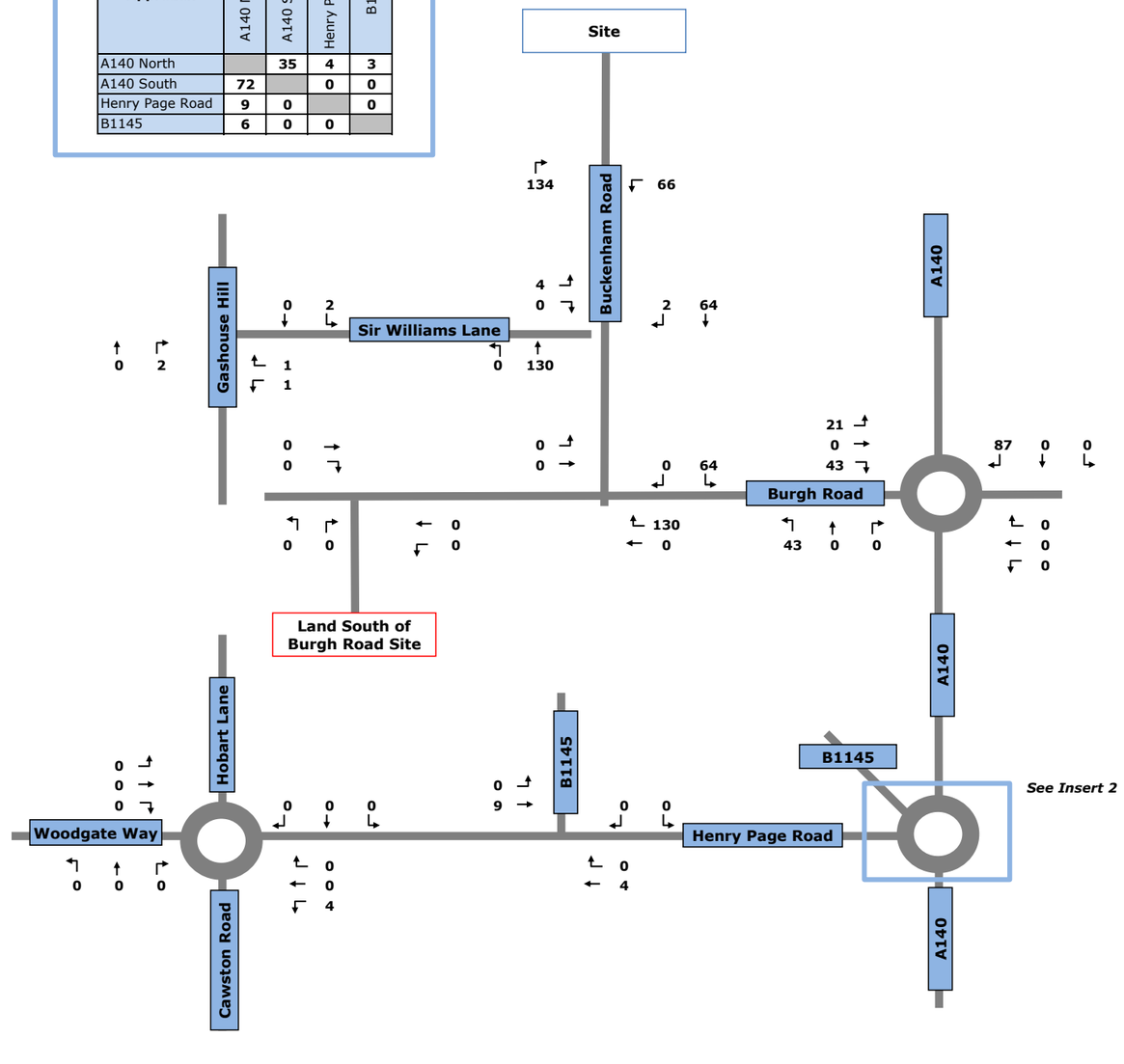
Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		99	12	9
A140 South	25		0	0
Henry Page Road	3	0		0
B1145	2	0	0	



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

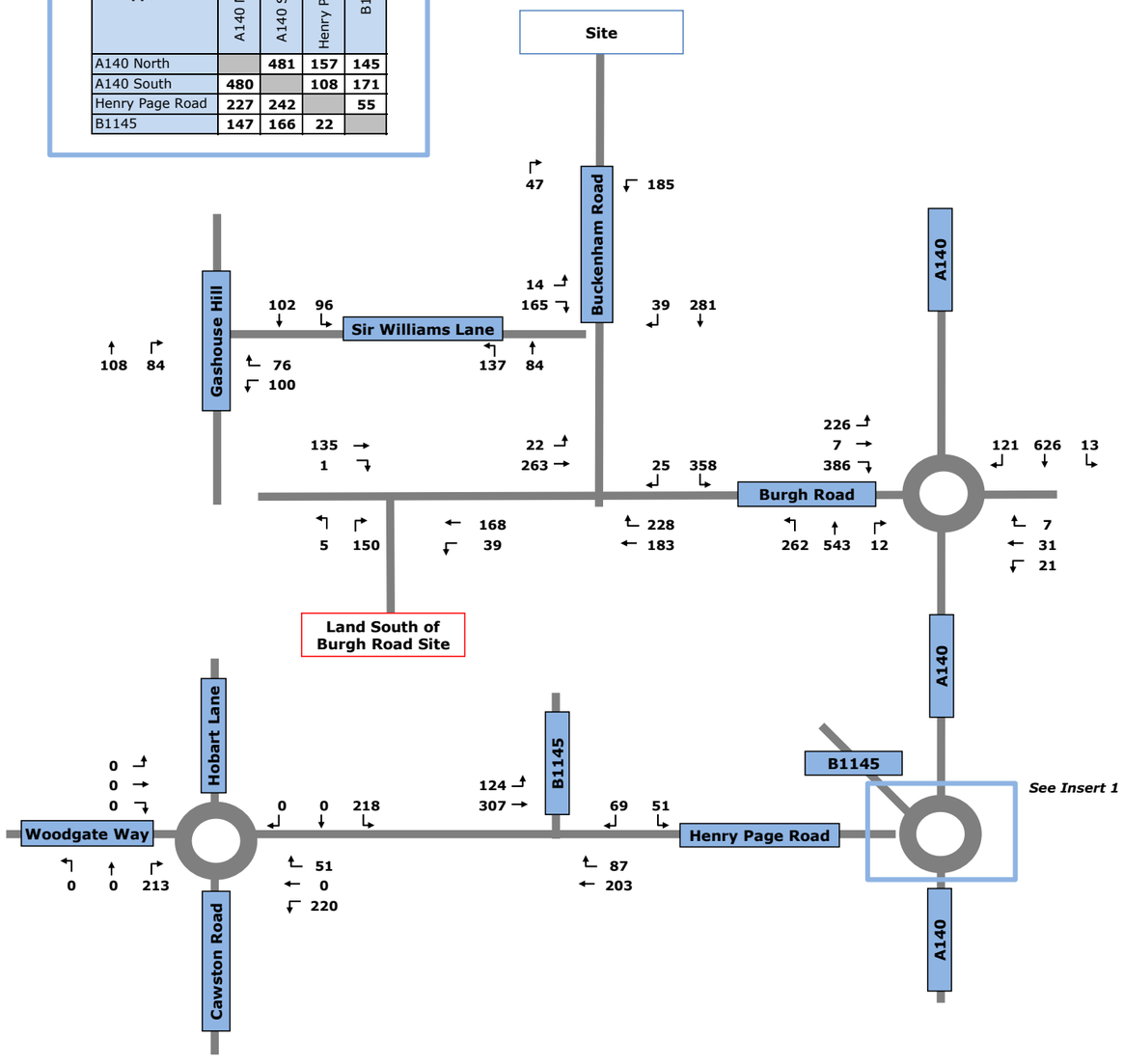
Land North East of Aylsham

Development Traffic Flows: TOTAL

Figure No. 8.0

Insert 1: A140/B1145 Roundabout

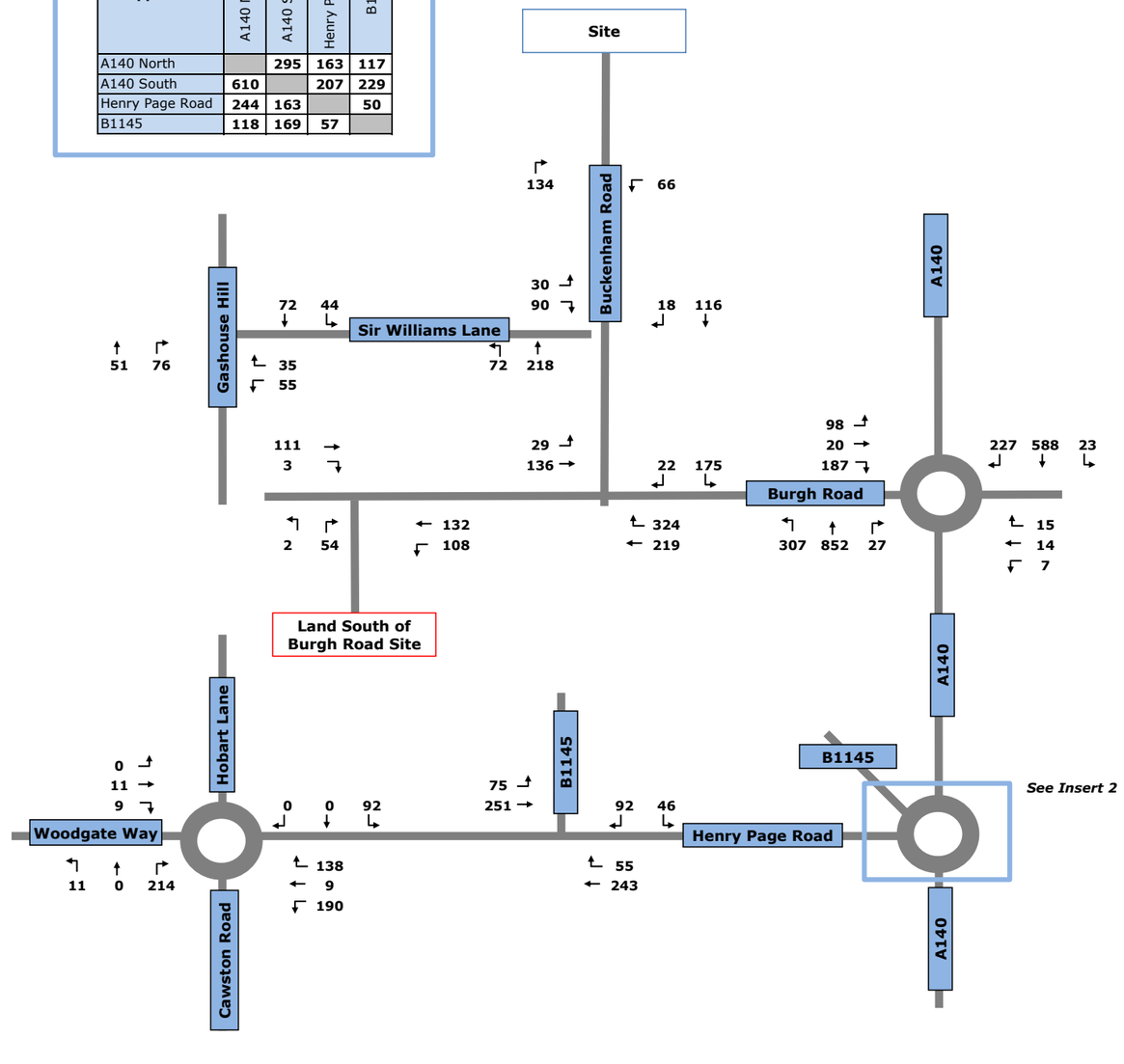
Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		481	157	145
A140 South	480		108	171
Henry Page Road	227	242		55
B1145	147	166	22	



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

Insert 2: A140/B1145 Roundabout

Approach	A140 North	A140 South	Henry Page Road	B1145
A140 North		295	163	117
A140 South	610		207	229
Henry Page Road	244	163		50
B1145	118	169	57	



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

Key:

123 Passenger Car Units

Land North East of Aylsham

2036 With Development

Figure No. 9.0

APPENDIX G

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896

Filename: Junction 1 - A140-Burgh Road Rbt.j9
Path: A:\Projects\180000\184378 - Land North East of Aylsham\3. Design and Calcs\3. ARCADY
Report generation date: 04/03/2020 16:35:46

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	1.3	5.83	0.55	A	5.62	A	56 % [Arm 4]	1.3	5.44	0.56	A	7.41	A	25 % [Arm 3]
Arm 2	0.1	7.54	0.11	A				0.1	6.31	0.07	A			
Arm 3	1.0	4.50	0.49	A				3.2	8.83	0.77	A			
Arm 4	0.9	6.98	0.46	A				0.5	6.94	0.34	A			
	2036 With Development													
Arm 1	1.5	6.85	0.59	A	7.18	A	26 % [Arm 4]	1.7	6.65	0.63	A	9.40	A	15 % [Arm 3]
Arm 2	0.2	8.95	0.13	A				0.1	7.30	0.08	A			
Arm 3	1.1	4.73	0.52	A				4.5	11.77	0.83	B			
Arm 4	1.9	10.64	0.64	B				0.8	7.97	0.43	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	
Identifier	
Client	
Jobnumber	184378
Enumerator	
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)
	✓	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	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.62	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	56	Arm 4

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	✓

Demand overview (Traffic)

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

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	3.00	157.00	27.00
	2	2.00	0.00	5.00	8.00
	3	136.00	3.00	0.00	58.00
	4	42.00	2.00	67.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	3.00	162.00	27.00
	2	2.00	0.00	5.00	8.00
	3	141.00	3.00	0.00	60.00
	4	43.00	2.00	69.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	3.00	166.00	28.00
	2	2.00	0.00	6.00	8.00
	3	144.00	3.00	0.00	61.00
	4	44.00	2.00	70.00	0.00

08:45 - 09:00

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	3.00	141.00	24.00
	2	2.00	0.00	5.00	7.00
	3	123.00	3.00	0.00	52.00
	4	38.00	2.00	60.00	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	0.55	5.83	1.3	A
2	0.11	7.54	0.1	A
3	0.49	4.50	1.0	A
4	0.46	6.98	0.9	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)	Unsignalised level of service
1	187.00	71.49	362.77	0.515	185.89	1.1	5.363	A
2	15.00	249.42	147.50	0.102	14.88	0.1	6.992	A
3	197.00	36.76	421.41	0.467	196.07	0.9	4.232	A
4	111.00	140.33	259.84	0.427	110.21	0.8	6.444	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)	Unsignalised level of service
1	192.00	73.96	361.19	0.532	191.92	1.2	5.637	A
2	15.00	257.89	142.89	0.105	15.00	0.1	7.256	A
3	204.00	36.99	421.26	0.484	203.94	1.0	4.404	A
4	114.00	145.95	256.55	0.444	113.94	0.9	6.792	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)	Unsignalised level of service
1	197.00	74.98	360.53	0.546	196.93	1.3	5.831	A
2	16.00	263.91	139.61	0.115	15.99	0.1	7.536	A
3	208.00	37.98	420.59	0.495	207.96	1.0	4.501	A
4	116.00	148.97	254.78	0.455	115.96	0.9	6.979	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)	Unsignalised level of service
1	168.00	65.15	366.85	0.458	168.36	0.9	4.816	A
2	14.00	225.50	160.54	0.087	14.03	0.1	6.350	A
3	178.00	33.07	423.89	0.420	178.26	0.8	3.901	A
4	100.00	128.18	266.94	0.375	100.24	0.7	5.819	A

2036 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.41	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	25	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	✓

Demand overview (Traffic)

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

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	6.00	163.00	39.00
	2	4.00	0.00	2.00	4.00
	3	237.00	8.00	0.00	73.00
	4	21.00	6.00	40.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	6.00	156.00	37.00
	2	4.00	0.00	2.00	4.00
	3	227.00	7.00	0.00	70.00
	4	20.00	5.00	39.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	6.00	142.00	34.00
	2	4.00	0.00	2.00	3.00
	3	205.00	7.00	0.00	64.00
	4	19.00	5.00	35.00	0.00

17:45 - 18:00

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	5.00	127.00	30.00
	2	3.00	0.00	2.00	3.00
	3	184.00	6.00	0.00	57.00
	4	17.00	4.00	31.00	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	5.44	1.3	A
2	0.07	6.31	0.1	A
3	0.77	8.83	3.2	A
4	0.34	6.94	0.5	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)	Unsignalised level of service
1	208.00	53.57	374.30	0.556	206.74	1.3	5.444	A
2	10.00	240.47	152.38	0.066	9.93	0.1	6.315	A
3	318.00	46.71	414.73	0.767	314.82	3.2	8.833	A
4	67.00	246.52	197.71	0.339	66.49	0.5	6.936	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)	Unsignalised level of service
1	199.00	51.04	375.92	0.529	199.10	1.2	5.201	A
2	10.00	232.12	156.93	0.064	10.00	0.1	6.124	A
3	304.00	45.02	415.86	0.731	304.36	2.8	8.179	A
4	64.00	238.28	202.53	0.316	64.04	0.5	6.598	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)	Unsignalised level of service
1	182.00	47.08	378.47	0.481	182.21	1.0	4.688	A
2	9.00	211.26	168.30	0.053	9.01	0.1	5.650	A
3	276.00	41.05	418.53	0.659	276.83	2.0	6.447	A
4	59.00	216.64	215.19	0.274	59.09	0.4	5.860	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)	Unsignalised level of service
1	162.00	41.08	382.33	0.424	162.20	0.8	4.177	A
2	8.00	188.24	180.84	0.044	8.01	0.0	5.207	A
3	247.00	36.05	421.89	0.585	247.55	1.4	5.228	A
4	52.00	193.43	228.77	0.227	52.09	0.3	5.176	A

2036 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.18	A

Junction Network Options

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

Demand overview (Traffic)

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

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	3.00	157.00	30.00
	2	2.00	0.00	5.00	8.00
	3	136.00	3.00	0.00	66.00
	4	57.00	2.00	97.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	3.00	162.00	31.00
	2	2.00	0.00	5.00	8.00
	3	141.00	3.00	0.00	68.00
	4	59.00	2.00	100.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	3.00	166.00	32.00
	2	2.00	0.00	6.00	8.00
	3	144.00	3.00	0.00	69.00
	4	60.00	2.00	102.00	0.00

08:45 - 09:00

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	3.00	141.00	27.00
	2	2.00	0.00	5.00	7.00
	3	123.00	3.00	0.00	59.00
	4	51.00	2.00	87.00	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	0.59	6.85	1.5	A
2	0.13	8.95	0.2	A
3	0.52	4.73	1.1	A
4	0.64	10.64	1.9	B

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)	Unsignalised level of service
1	190.00	100.98	343.81	0.553	188.71	1.3	6.099	A
2	15.00	281.75	129.89	0.115	14.87	0.1	8.060	A
3	205.00	39.71	419.43	0.489	203.99	1.0	4.415	A
4	156.00	140.30	259.85	0.600	154.42	1.6	9.070	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)	Unsignalised level of service
1	196.00	104.88	341.31	0.574	195.88	1.4	6.551	A
2	15.00	292.76	123.89	0.121	14.99	0.1	8.523	A
3	212.00	40.98	418.58	0.506	211.93	1.1	4.621	A
4	161.00	145.95	256.55	0.628	160.81	1.8	10.104	B

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)	Unsignalised level of service
1	201.00	106.92	339.99	0.591	200.90	1.5	6.848	A
2	16.00	299.82	120.04	0.133	15.98	0.2	8.953	A
3	216.00	41.98	417.91	0.517	215.95	1.1	4.730	A
4	164.00	148.97	254.78	0.644	163.87	1.9	10.645	B

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)	Unsignalised level of service
1	171.00	92.44	349.30	0.490	171.48	1.0	5.376	A
2	14.00	255.91	143.97	0.097	14.05	0.1	7.161	A
3	185.00	36.10	421.85	0.439	185.29	0.8	4.043	A
4	140.00	128.20	266.93	0.524	140.69	1.2	7.723	A

2036 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.40	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	15	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	✓

Demand overview (Traffic)

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

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	6.00	163.00	63.00
	2	4.00	0.00	2.00	4.00
	3	237.00	8.00	0.00	85.00
	4	27.00	6.00	52.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	6.00	156.00	60.00
	2	4.00	0.00	2.00	4.00
	3	227.00	7.00	0.00	82.00
	4	26.00	5.00	50.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	6.00	142.00	55.00
	2	4.00	0.00	2.00	3.00
	3	205.00	7.00	0.00	74.00
	4	24.00	5.00	45.00	0.00

17:45 - 18:00

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	5.00	127.00	49.00
	2	3.00	0.00	2.00	3.00
	3	184.00	6.00	0.00	66.00
	4	21.00	4.00	40.00	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	0.63	6.65	1.7	A
2	0.08	7.30	0.1	A
3	0.83	11.77	4.5	B
4	0.43	7.97	0.8	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)	Unsignalised level of service
1	232.00	65.38	366.70	0.633	230.28	1.7	6.653	A
2	10.00	275.86	133.10	0.075	9.92	0.1	7.301	A
3	330.00	70.47	398.76	0.828	325.52	4.5	11.769	B
4	85.00	245.64	198.23	0.429	84.25	0.8	7.968	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)	Unsignalised level of service
1	222.00	62.07	368.83	0.602	222.16	1.6	6.270	A
2	10.00	266.19	138.37	0.072	10.00	0.1	7.010	A
3	316.00	68.05	400.39	0.789	316.54	3.9	10.922	B
4	81.00	238.41	202.46	0.400	81.06	0.7	7.535	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)	Unsignalised level of service
1	203.00	57.13	372.01	0.546	203.33	1.2	5.459	A
2	9.00	242.41	151.32	0.059	9.01	0.1	6.324	A
3	286.00	62.10	404.38	0.707	287.44	2.5	7.859	A
4	74.00	217.07	214.95	0.344	74.15	0.5	6.501	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)	Unsignalised level of service
1	181.00	50.11	376.52	0.481	181.29	1.0	4.714	A
2	8.00	216.35	165.52	0.048	8.01	0.1	5.713	A
3	256.00	55.09	409.09	0.626	256.79	1.7	5.994	A
4	65.00	193.59	228.68	0.284	65.13	0.4	5.595	A

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Junction 2 - A140-B1145-Henry Page ROad.j9
Path: A:\Projects\180000\184378 - Land North East of Aylsham\3. Design and Calcs\3. ARCADY
Report generation date: 04/03/2020 16:36:12

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	0.4	4.46	0.30	A	5.39	A	33 % [Arm 4]	0.5	4.78	0.33	A	6.69	A	31 % [Arm 3]
Arm 2	0.8	4.13	0.45	A				0.5	3.42	0.34	A			
Arm 3	1.0	4.86	0.51	A				2.4	7.90	0.71	A			
Arm 4	1.3	8.35	0.56	A				1.2	9.04	0.56	A			
2036 With Development														
Arm 1	0.5	4.59	0.31	A	5.76	A	30 % [Arm 4]	0.6	5.28	0.36	A	8.19	A	20 % [Arm 3]
Arm 2	1.1	4.83	0.53	A				0.7	3.76	0.40	A			
Arm 3	1.1	5.14	0.53	A				3.5	10.49	0.79	B			
Arm 4	1.3	8.82	0.58	A				1.5	10.66	0.61	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	04/03/2020
Version	
Status	
Identifier	
Client	
Jobnumber	184378
Enumerator	
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)
	✓	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. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	33	Arm 4

Arms

Arms

Arm	Name	Description
1	B1145 North	
2	A140 East	
3	A140 South	
4	Henry Page Road	

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	✓

Demand overview (Traffic)

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

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	36.00	42.00	6.00
	2	34.00	0.00	96.00	36.00
	3	43.00	114.00	0.00	27.00
	4	14.00	56.00	61.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	38.00	43.00	6.00
	2	35.00	0.00	99.00	38.00
	3	44.00	118.00	0.00	28.00
	4	14.00	58.00	63.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	38.00	44.00	6.00
	2	36.00	0.00	101.00	38.00
	3	45.00	121.00	0.00	29.00
	4	15.00	59.00	64.00	0.00

08:45 - 09:00

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	33.00	38.00	5.00
	2	31.00	0.00	86.00	33.00
	3	39.00	103.00	0.00	24.00
	4	12.00	51.00	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	0.30	4.46	0.4	A
2	0.45	4.13	0.8	A
3	0.51	4.86	1.0	A
4	0.56	8.35	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)	Unsignalised level of service
1	84.00	229.49	299.81	0.280	83.61	0.4	4.155	A
2	166.00	108.29	397.08	0.418	165.29	0.7	3.871	A
3	184.00	75.67	382.81	0.481	183.08	0.9	4.485	A
4	131.00	190.07	252.72	0.518	129.94	1.1	7.268	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)	Unsignalised level of service
1	87.00	238.85	293.39	0.297	86.97	0.4	4.360	A
2	172.00	111.93	394.51	0.436	171.95	0.8	4.042	A
3	190.00	78.97	380.65	0.499	189.93	1.0	4.716	A
4	135.00	196.93	248.62	0.543	134.89	1.2	7.903	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)	Unsignalised level of service
1	88.00	243.89	289.94	0.304	87.99	0.4	4.456	A
2	175.00	113.95	393.08	0.445	174.97	0.8	4.126	A
3	195.00	79.99	379.99	0.513	194.94	1.0	4.862	A
4	138.00	201.95	245.62	0.562	137.91	1.3	8.345	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)	Unsignalised level of service
1	76.00	209.56	313.46	0.242	76.11	0.3	3.792	A
2	150.00	98.26	404.15	0.371	150.20	0.6	3.548	A
3	166.00	69.09	387.11	0.429	166.29	0.8	4.080	A
4	118.00	173.28	262.75	0.449	118.44	0.8	6.254	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. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.69	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	31	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	✓

Demand overview (Traffic)

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

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	31.00	47.00	16.00
	2	32.00	0.00	72.00	32.00
	3	64.00	149.00	0.00	58.00
	4	14.00	65.00	45.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	30.00	45.00	15.00
	2	30.00	0.00	69.00	30.00
	3	61.00	143.00	0.00	55.00
	4	13.00	63.00	43.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	27.00	41.00	14.00
	2	27.00	0.00	63.00	27.00
	3	55.00	129.00	0.00	50.00
	4	12.00	57.00	39.00	0.00

17:45 - 18:00

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	24.00	37.00	12.00
	2	25.00	0.00	56.00	25.00
	3	49.00	116.00	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	0.33	4.78	0.5	A
2	0.34	3.42	0.5	A
3	0.71	7.90	2.4	A
4	0.56	9.04	1.2	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)	Unsignalised level of service
1	94.00	256.57	281.26	0.334	93.50	0.5	4.781	A
2	136.00	107.21	397.84	0.342	135.48	0.5	3.422	A
3	271.00	79.67	380.19	0.713	268.59	2.4	7.903	A
4	124.00	242.99	221.09	0.561	122.75	1.2	9.042	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)	Unsignalised level of service
1	90.00	249.25	286.27	0.314	90.04	0.5	4.588	A
2	129.00	103.07	400.76	0.322	129.04	0.5	3.311	A
3	259.00	75.03	383.23	0.676	259.28	2.1	7.279	A
4	119.00	234.23	226.33	0.526	119.12	1.1	8.406	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)	Unsignalised level of service
1	82.00	225.59	302.48	0.271	82.09	0.4	4.085	A
2	117.00	94.16	407.05	0.287	117.07	0.4	3.106	A
3	234.00	68.05	387.79	0.603	234.58	1.5	5.896	A
4	108.00	211.48	239.93	0.450	108.30	0.8	6.855	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)	Unsignalised level of service
1	73.00	202.39	318.38	0.229	73.08	0.3	3.672	A
2	106.00	84.12	414.14	0.256	106.06	0.3	2.921	A
3	210.00	62.04	391.72	0.536	210.38	1.2	4.974	A
4	97.00	190.31	252.58	0.384	97.20	0.6	5.799	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. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.76	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	30	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	✓

Demand overview (Traffic)

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

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	37.00	42.00	6.00
	2	36.00	0.00	121.00	39.00
	3	43.00	120.00	0.00	27.00
	4	14.00	57.00	61.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	38.00	43.00	6.00
	2	38.00	0.00	125.00	41.00
	3	44.00	124.00	0.00	28.00
	4	14.00	59.00	63.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	39.00	44.00	6.00
	2	38.00	0.00	127.00	42.00
	3	45.00	127.00	0.00	29.00
	4	15.00	60.00	64.00	0.00

08:45 - 09:00

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	33.00	38.00	5.00
	2	33.00	0.00	109.00	35.00
	3	39.00	108.00	0.00	24.00
	4	12.00	51.00	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	0.31	4.59	0.5	A
2	0.53	4.83	1.1	A
3	0.53	5.14	1.1	A
4	0.58	8.82	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)	Unsignalised level of service
1	85.00	236.37	295.09	0.288	84.60	0.4	4.268	A
2	196.00	108.26	397.10	0.494	195.03	1.0	4.433	A
3	190.00	80.60	379.59	0.501	189.01	1.0	4.698	A
4	132.00	197.97	248.00	0.532	130.88	1.1	7.614	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)	Unsignalised level of service
1	87.00	245.83	288.61	0.301	86.97	0.4	4.463	A
2	204.00	111.93	394.51	0.517	203.90	1.1	4.720	A
3	196.00	84.96	376.74	0.520	195.92	1.1	4.975	A
4	136.00	205.91	243.25	0.559	135.87	1.2	8.369	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)	Unsignalised level of service
1	89.00	250.88	285.15	0.312	88.98	0.5	4.587	A
2	207.00	113.95	393.08	0.527	206.96	1.1	4.834	A
3	201.00	85.98	376.07	0.534	200.94	1.1	5.136	A
4	139.00	209.94	240.84	0.577	138.91	1.3	8.817	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)	Unsignalised level of service
1	76.00	214.64	309.98	0.245	76.12	0.3	3.850	A
2	177.00	98.29	404.14	0.438	177.32	0.8	3.973	A
3	171.00	73.13	384.47	0.445	171.33	0.8	4.230	A
4	118.00	180.33	258.54	0.456	118.49	0.9	6.447	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. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	8.19	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	20	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	✓

Demand overview (Traffic)

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

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	33.00	47.00	16.00
	2	33.00	0.00	82.00	45.00
	3	64.00	170.00	0.00	58.00
	4	14.00	68.00	45.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	31.00	45.00	15.00
	2	31.00	0.00	78.00	43.00
	3	61.00	162.00	0.00	55.00
	4	13.00	65.00	43.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	28.00	41.00	14.00
	2	28.00	0.00	71.00	39.00
	3	55.00	147.00	0.00	50.00
	4	12.00	59.00	39.00	0.00

17:45 - 18:00

Demand (PCU/TS)

		To			
		1	2	3	4
From	1	0.00	25.00	37.00	12.00
	2	25.00	0.00	64.00	35.00
	3	49.00	132.00	0.00	45.00
	4	11.00	53.00	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	0.36	5.28	0.6	A
2	0.40	3.76	0.7	A
3	0.79	10.49	3.5	B
4	0.61	10.66	1.5	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)	Unsignalised level of service
1	96.00	279.62	265.46	0.362	95.44	0.6	5.277	A
2	160.00	107.10	397.92	0.402	159.33	0.7	3.761	A
3	292.00	93.58	371.10	0.787	288.51	3.5	10.494	B
4	127.00	264.06	208.50	0.609	125.49	1.5	10.658	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)	Unsignalised level of service
1	91.00	270.45	271.74	0.335	91.05	0.5	4.984	A
2	152.00	103.10	400.74	0.379	152.05	0.6	3.618	A
3	278.00	89.04	374.07	0.743	278.50	3.0	9.476	A
4	121.00	254.41	214.26	0.565	121.19	1.3	9.693	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)	Unsignalised level of service
1	83.00	245.90	288.56	0.288	83.10	0.4	4.383	A
2	138.00	94.20	407.02	0.339	138.10	0.5	3.347	A
3	252.00	81.06	379.28	0.664	252.97	2.0	7.181	A
4	110.00	230.80	228.38	0.482	110.38	0.9	7.651	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)	Unsignalised level of service
1	74.00	220.56	305.93	0.242	74.09	0.3	3.884	A
2	124.00	84.15	414.12	0.299	124.09	0.4	3.103	A
3	226.00	72.06	385.17	0.587	226.58	1.4	5.695	A
4	99.00	206.49	242.91	0.408	99.25	0.7	6.275	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896

Filename: Junction 3 - Sir Williams Way-Burgh Road.j9
Path: A:\Projects\180000\184378 - Land North East of Aylsham\3. Design and Calcs\4. PICADY
Report generation date: 04/03/2020 16:34:37

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	10.39	0.37	B	5.25	A	74 % [Stream C-AB]	0.4	8.40	0.24	A	5.23	A	71 % [Stream C-AB]
Stream C-AB	0.9	9.50	0.40	A				1.1	9.37	0.44	A			
	2036 With Development													
Stream B-AC	2.2	19.28	0.67	C	10.19	B	19 % [Stream B-AC]	0.6	9.85	0.36	A	12.37	B	14 % [Stream C-AB]
Stream C-AB	1.4	11.54	0.50	B				3.6	19.82	0.74	C			

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 - Sir Williams Way/Burgh Road
Location	Aylsham
Site number	
Date	04/03/2020
Version	
Status	
Identifier	
Client	
Jobnumber	184378
Enumerator	
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)
	✓	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	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.25	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	74	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	✓	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
✓	HV Percentages	2.00	✓

Demand overview (Traffic)

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

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	5.00	58.00
	B	5.00	0.00	39.00
	C	40.00	40.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	6.00	71.00
	B	7.00	0.00	49.00
	C	50.00	49.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	6.00	71.00
	B	7.00	0.00	49.00
	C	50.00	49.00	0.00

08:45 - 09:00

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	5.00	63.00
	B	6.00	0.00	43.00
	C	44.00	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	0.37	10.39	0.6	B
C-AB	0.40	9.50	0.9	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)	Unsignalised level of service
B-AC	44.00	156.97	0.280	43.58	0.4	8.699	A
C-AB	52.36	169.47	0.309	51.77	0.6	8.385	A
C-A	27.64			27.64			
A-B	5.00			5.00			
A-C	58.00			58.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56.00	151.26	0.370	55.79	0.6	10.344	B
C-AB	69.03	173.56	0.398	68.73	0.9	9.448	A
C-A	29.97			29.97			
A-B	6.00			6.00			
A-C	71.00			71.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56.00	151.23	0.370	55.99	0.6	10.392	B
C-AB	69.11	173.65	0.398	69.10	0.9	9.501	A
C-A	29.89			29.89			
A-B	6.00			6.00			
A-C	71.00			71.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49.00	154.51	0.317	49.12	0.5	9.406	A
C-AB	58.11	171.36	0.339	58.30	0.7	8.794	A
C-A	28.89			28.89			
A-B	5.00			5.00			
A-C	63.00			63.00			

2036 Without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.23	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	71	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
✓	HV Percentages	2.00	✓

Demand overview (Traffic)

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

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	7.00	33.00
	B	5.00	0.00	27.00
	C	53.00	47.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	7.00	34.00
	B	5.00	0.00	28.00
	C	55.00	48.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	8.00	39.00
	B	6.00	0.00	32.00
	C	63.00	55.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To		
		A	B	C
From	A	0.00	6.00	30.00
	B	5.00	0.00	25.00
	C	49.00	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	0.24	8.40	0.4	A
C-AB	0.44	9.37	1.1	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)	Unsignalised level of service
B-AC	32.00	159.20	0.201	31.73	0.3	7.750	A
C-AB	66.16	183.01	0.362	65.38	0.8	8.386	A
C-A	33.84			33.84			
A-B	7.00			7.00			
A-C	33.00			33.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	33.00	159.00	0.208	32.99	0.3	7.855	A
C-AB	68.69	184.31	0.373	68.64	0.8	8.581	A
C-A	34.31			34.31			
A-B	7.00			7.00			
A-C	34.00			34.00			

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	38.00	155.80	0.244	37.93	0.4	8.395	A
C-AB	82.95	188.52	0.440	82.67	1.1	9.369	A
C-A	35.05			35.05			
A-B	8.00			8.00			
A-C	39.00			39.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	30.00	159.93	0.188	30.09	0.3	7.632	A
C-AB	59.23	181.38	0.327	59.65	0.7	8.179	A
C-A	32.77			32.77			
A-B	6.00			6.00			
A-C	30.00			30.00			

2036 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		10.19	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	19	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
✓	HV Percentages	2.00	✓

Demand overview (Traffic)

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

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	5.00	58.00
	B	5.00	0.00	78.00
	C	40.00	50.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	6.00	71.00
	B	7.00	0.00	97.00
	C	50.00	62.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	6.00	71.00
	B	7.00	0.00	97.00
	C	50.00	62.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To		
		A	B	C
From	A	0.00	5.00	63.00
	B	6.00	0.00	86.00
	C	44.00	54.00	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	0.67	19.28	2.2	C
C-AB	0.50	11.54	1.4	B
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)	Unsignalised level of service
B-AC	83.00	160.30	0.518	81.85	1.1	12.449	B
C-AB	65.45	169.47	0.386	64.63	0.8	9.395	A
C-A	24.55			24.55			
A-B	5.00			5.00			
A-C	58.00			58.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	104.00	155.15	0.670	103.04	2.1	18.648	C
C-AB	87.37	173.60	0.503	86.85	1.3	11.406	B
C-A	24.63			24.63			
A-B	6.00			6.00			
A-C	71.00			71.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	104.00	155.12	0.670	103.94	2.2	19.280	C
C-AB	87.52	173.73	0.504	87.49	1.4	11.539	B
C-A	24.48			24.48			
A-B	6.00			6.00			
A-C	71.00			71.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	92.00	158.18	0.582	92.59	1.6	15.230	C
C-AB	73.03	171.45	0.426	73.37	1.0	10.166	B
C-A	24.97			24.97			
A-B	5.00			5.00			
A-C	63.00			63.00			

2036 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		12.37	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	14	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
✓	HV Percentages	2.00	✓

Demand overview (Traffic)

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

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	7.00	33.00
	B	5.00	0.00	42.00
	C	53.00	78.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	7.00	34.00
	B	5.00	0.00	44.00
	C	55.00	81.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	8.00	39.00
	B	6.00	0.00	50.00
	C	63.00	93.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To		
		A	B	C
From	A	0.00	6.00	30.00
	B	5.00	0.00	39.00
	C	49.00	73.00	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	0.36	9.85	0.6	A
C-AB	0.74	19.82	3.6	C
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)	Unsignalised level of service
B-AC	47.00	160.26	0.293	46.55	0.5	8.673	A
C-AB	109.80	183.01	0.600	107.88	1.9	12.977	B
C-A	21.20			21.20			
A-B	7.00			7.00			
A-C	33.00			33.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	49.00	159.90	0.306	48.97	0.5	8.921	A
C-AB	116.12	184.53	0.629	115.86	2.2	14.492	B
C-A	19.88			19.88			
A-B	7.00			7.00			
A-C	34.00			34.00			

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56.00	156.22	0.358	55.88	0.6	9.852	A
C-AB	140.59	188.80	0.745	139.15	3.6	19.817	C
C-A	15.41			15.41			
A-B	8.00			8.00			
A-C	39.00			39.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	44.00	160.86	0.274	44.19	0.4	8.498	A
C-AB	101.05	181.96	0.555	102.96	1.7	12.912	B
C-A	20.95			20.95			
A-B	6.00			6.00			
A-C	30.00			30.00			

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896

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Filename: Junction 4 - Land south Burgh Road Access-Burgh Road.j9
Path: A:\Projects\180000\184378 - Land North East of Aylsham\3. Design and Calcs\4. PICADY
Report generation date: 04/03/2020 16:35:10

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	0.5	11.09	0.32	B	3.44	A	102 % [Stream B-AC]	0.1	8.47	0.12	A	1.19	A	264 % [Stream B-AC]
Stream C-AB	0.0	0.00	0.00	A				0.0	6.19	0.01	A			
	2036 With Development													
Stream B-AC	0.5	11.09	0.32	B	3.44	A	102 % [Stream B-AC]	0.1	8.47	0.12	A	1.19	A	264 % [Stream B-AC]
Stream C-AB	0.0	0.00	0.00	A				0.0	6.19	0.01	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 3 - Sir Williams Way/Burgh Road
Location	Aylsham
Site number	
Date	04/03/2020
Version	
Status	
Identifier	
Client	
Jobnumber	184378
Enumerator	
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)
	✓	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	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.44	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	102	Stream B-AC

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	✓	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
✓	HV Percentages	2.00	✓

Demand overview (Traffic)

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

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	9.00	37.00
	B	33.00	0.00	1.00
	C	30.00	0.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	11.00	46.00
	B	41.00	0.00	1.00
	C	37.00	0.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	11.00	46.00
	B	41.00	0.00	1.00
	C	37.00	0.00	0.00

08:45 - 09:00

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	9.00	40.00
	B	36.00	0.00	1.00
	C	32.00	0.00	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	0.32	11.09	0.5	B
C-AB	0.00	0.00	0.0	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)	Unsignalised level of service
B-AC	34.00	135.11	0.252	33.64	0.4	9.721	A
C-AB	0.00	145.99	0.000	0.00	0.0	0.000	A
C-A	30.00			30.00			
A-B	9.00			9.00			
A-C	37.00			37.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42.00	131.27	0.320	41.86	0.5	11.054	B
C-AB	0.00	143.48	0.000	0.00	0.0	0.000	A
C-A	37.00			37.00			
A-B	11.00			11.00			
A-C	46.00			46.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42.00	131.27	0.320	42.00	0.5	11.089	B
C-AB	0.00	143.48	0.000	0.00	0.0	0.000	A
C-A	37.00			37.00			
A-B	11.00			11.00			
A-C	46.00			46.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37.00	133.94	0.276	37.09	0.4	10.230	B
C-AB	0.00	145.31	0.000	0.00	0.0	0.000	A
C-A	32.00			32.00			
A-B	9.00			9.00			
A-C	40.00			40.00			

2036 Without Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.19	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	264	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
✓	HV Percentages	2.00	✓

Demand overview (Traffic)

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

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	26.00	32.00
	B	13.00	0.00	0.00
	C	27.00	1.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	27.00	33.00
	B	13.00	0.00	0.00
	C	28.00	1.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	31.00	38.00
	B	15.00	0.00	1.00
	C	32.00	1.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To		
		A	B	C
From	A	0.00	24.00	30.00
	B	12.00	0.00	0.00
	C	25.00	1.00	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	0.12	8.47	0.1	A
C-AB	0.01	6.19	0.0	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)	Unsignalised level of service
B-AC	13.00	133.94	0.097	12.88	0.1	8.171	A
C-AB	1.20	161.65	0.007	1.19	0.0	6.169	A
C-A	26.80			26.80			
A-B	26.00			26.00			
A-C	32.00			32.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13.00	133.41	0.097	13.00	0.1	8.221	A
C-AB	1.21	161.91	0.007	1.21	0.0	6.160	A
C-A	27.79			27.79			
A-B	27.00			27.00			
A-C	33.00			33.00			

17:30 - 17:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	16.00	132.85	0.120	15.97	0.1	8.468	A
C-AB	1.25	162.72	0.008	1.25	0.0	6.132	A
C-A	31.75			31.75			
A-B	31.00			31.00			
A-C	38.00			38.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12.00	135.01	0.089	12.04	0.1	8.052	A
C-AB	1.18	161.15	0.007	1.19	0.0	6.190	A
C-A	24.82			24.82			
A-B	24.00			24.00			
A-C	30.00			30.00			

2036 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		3.44	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	102	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
✓	HV Percentages	2.00	✓

Demand overview (Traffic)

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

Origin-Destination Data

08:00 - 08:15

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	9.00	37.00
	B	33.00	0.00	1.00
	C	30.00	0.00	0.00

08:15 - 08:30

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	11.00	46.00
	B	41.00	0.00	1.00
	C	37.00	0.00	0.00

08:30 - 08:45

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	11.00	46.00
	B	41.00	0.00	1.00
	C	37.00	0.00	0.00

Demand (PCU/TS)

08:45 - 09:00

		To		
		A	B	C
From	A	0.00	9.00	40.00
	B	36.00	0.00	1.00
	C	32.00	0.00	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	0.32	11.09	0.5	B
C-AB	0.00	0.00	0.0	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)	Unsignalised level of service
B-AC	34.00	135.11	0.252	33.64	0.4	9.721	A
C-AB	0.00	145.99	0.000	0.00	0.0	0.000	A
C-A	30.00			30.00			
A-B	9.00			9.00			
A-C	37.00			37.00			

08:15 - 08:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42.00	131.27	0.320	41.86	0.5	11.054	B
C-AB	0.00	143.48	0.000	0.00	0.0	0.000	A
C-A	37.00			37.00			
A-B	11.00			11.00			
A-C	46.00			46.00			

08:30 - 08:45

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42.00	131.27	0.320	42.00	0.5	11.089	B
C-AB	0.00	143.48	0.000	0.00	0.0	0.000	A
C-A	37.00			37.00			
A-B	11.00			11.00			
A-C	46.00			46.00			

08:45 - 09:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	37.00	133.94	0.276	37.09	0.4	10.230	B
C-AB	0.00	145.31	0.000	0.00	0.0	0.000	A
C-A	32.00			32.00			
A-B	9.00			9.00			
A-C	40.00			40.00			

2036 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		1.19	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	264	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
✓	HV Percentages	2.00	✓

Demand overview (Traffic)

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

Origin-Destination Data

17:00 - 17:15

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	26.00	32.00
	B	13.00	0.00	0.00
	C	27.00	1.00	0.00

17:15 - 17:30

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	27.00	33.00
	B	13.00	0.00	0.00
	C	28.00	1.00	0.00

17:30 - 17:45

Demand (PCU/TS)

		To		
		A	B	C
From	A	0.00	31.00	38.00
	B	15.00	0.00	1.00
	C	32.00	1.00	0.00

Demand (PCU/TS)

17:45 - 18:00

		To		
		A	B	C
From	A	0.00	24.00	30.00
	B	12.00	0.00	0.00
	C	25.00	1.00	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	0.12	8.47	0.1	A
C-AB	0.01	6.19	0.0	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)	Unsignalised level of service
B-AC	13.00	133.94	0.097	12.88	0.1	8.171	A
C-AB	1.20	161.65	0.007	1.19	0.0	6.169	A
C-A	26.80			26.80			
A-B	26.00			26.00			
A-C	32.00			32.00			

17:15 - 17:30

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13.00	133.41	0.097	13.00	0.1	8.221	A
C-AB	1.21	161.91	0.007	1.21	0.0	6.160	A
C-A	27.79			27.79			
A-B	27.00			27.00			
A-C	33.00			33.00			

17:30 - 17:45

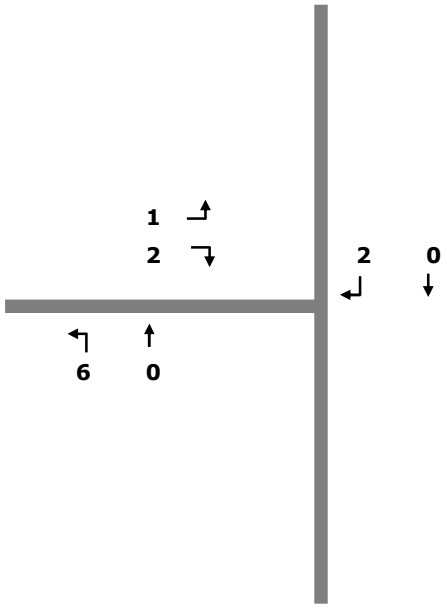
Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	16.00	132.85	0.120	15.97	0.1	8.468	A
C-AB	1.25	162.72	0.008	1.25	0.0	6.132	A
C-A	31.75			31.75			
A-B	31.00			31.00			
A-C	38.00			38.00			

17:45 - 18:00

Stream	Total Demand (PCU/TS)	Capacity (PCU/TS)	RFC	Throughput (PCU/TS)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	12.00	135.01	0.089	12.04	0.1	8.052	A
C-AB	1.18	161.15	0.007	1.19	0.0	6.190	A
C-A	24.82			24.82			
A-B	24.00			24.00			
A-C	30.00			30.00			

APPENDIX H

AM Peak



PM Peak

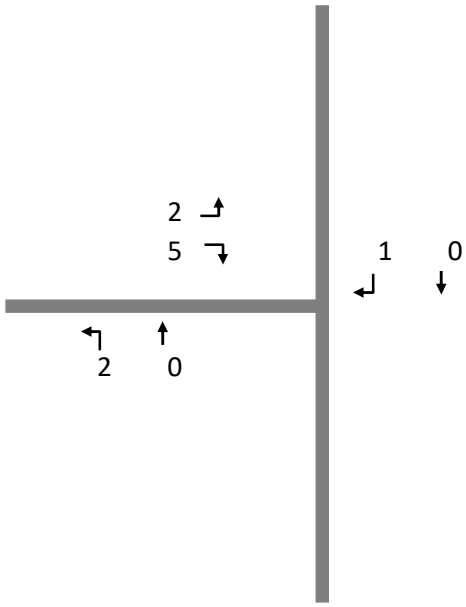
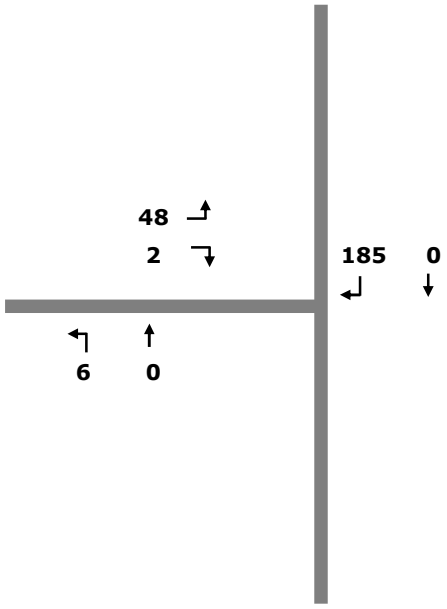


Figure:

Without Development

AM Peak



PM Peak

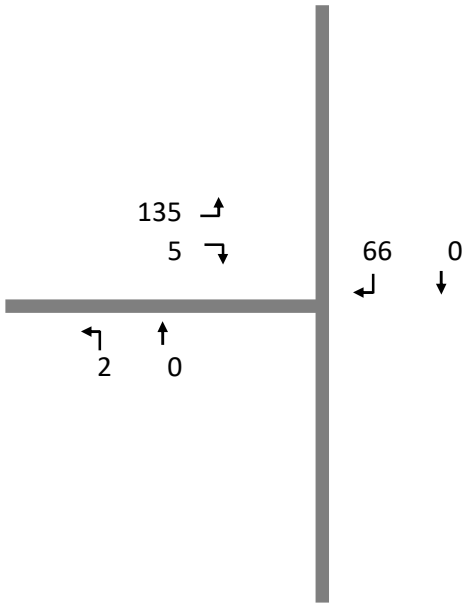


Figure:

With Development

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896

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Filename: Drawing 500_002 Road 14_3 Junction.j9
Path: A:\Projects\180000\184378 - Land North East of Aylsham\3. Design and Calcs\4. PICADY
Report generation date: 16/03/2020 11:08:16

Summary of junction performance

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	Junction LOS	Queue (Veh)	Delay (s)	RFC	Junction LOS
	Without Development							
Stream B-AC	0.0	0.00	0.00	A	0.0	5.70	0.01	A
Stream C-AB	0.0	0.00	0.00		0.0	0.00	0.00	
	With Development							
Stream B-AC	0.1	5.16	0.07	A	0.3	5.96	0.20	A
Stream C-AB	0.5	9.08	0.34		0.1	6.81	0.12	

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

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

File summary

File Description

Title	Road 14/ Road 3
Location	Aylesham
Site number	
Date	11/03/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS South Ltd
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	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	Without Development	AM	ONE HOUR	07:45	09:15	15	✓
D2	Without Development	PM	ONE HOUR	16:45	18:15	15	✓
D3	With Development	AM	ONE HOUR	07:45	09:15	15	✓
D4	With Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

Without 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. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	untitled		Major
B	untitled		Minor
C	untitled		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	6.00			47.5	✓	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	5.00	27	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	598	0.109	0.276	0.173	0.394
1	B-C	768	0.118	0.297	-	-
1	C-B	601	0.233	0.233	-	-

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 segment length (min)	Run automatically
D1	Without Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	6	100.000
B		ONE HOUR	✓	3	100.000
C		ONE HOUR	✓	2	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	6	0
	B	2	0	1
	C	0	2	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.00	0.00	0.0	A	0	0
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					6	8
A-C					0	0

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	672	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	600	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	5	1			5				
A-C	0	0			0				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	672	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	600	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	5	1			5				
A-C	0	0			0				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	672	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	600	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	7	2			7				
A-C	0	0			0				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	672	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	600	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	7	2			7				
A-C	0	0			0				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	672	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	600	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	5	1			5				
A-C	0	0			0				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	672	0.000	0	0.0	0.0	0.000	A
C-AB	0	0	600	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	5	1			5				
A-C	0	0			0				

Without 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. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		5.70	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Without Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	2	100.000
B		ONE HOUR	✓	7	100.000
C		ONE HOUR	✓	1	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	2	0
	B	5	0	2
	C	0	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.01	5.70	0.0	A	6	10
C-AB	0.00	0.00	0.0	A	0	0
C-A					0	0
A-B					0	0
A-C					0	0

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	1	639	0.008	5	0.0	0.0	5.682	A
C-AB	0	0	601	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	2	639	0.010	6	0.0	0.0	5.691	A
C-AB	0	0	601	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	8	2	639	0.012	8	0.0	0.0	5.704	A
C-AB	0	0	601	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	8	2	639	0.012	8	0.0	0.0	5.704	A
C-AB	0	0	601	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	2	639	0.010	6	0.0	0.0	5.694	A
C-AB	0	0	601	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	1	639	0.008	5	0.0	0.0	5.685	A
C-AB	0	0	601	0.000	0	0.0	0.0	0.000	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

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. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		8.04	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	With Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	6	100.000
B		ONE HOUR	✓	50	100.000
C		ONE HOUR	✓	185	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	6	0
	B	2	0	48
	C	0	185	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.07	5.16	0.1	A	46	69
C-AB	0.34	9.08	0.5	A	170	255
C-A					0	0
A-B					6	8
A-C					0	0

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	9	755	0.050	37	0.0	0.1	5.017	A
C-AB	139	35	600	0.232	138	0.0	0.3	7.766	A
C-A	0	0			0				
A-B	5	1			5				
A-C	0	0			0				

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	11	754	0.060	45	0.1	0.1	5.078	A
C-AB	166	42	600	0.277	166	0.3	0.4	8.285	A
C-A	0	0			0				
A-B	5	1			5				
A-C	0	0			0				

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	14	752	0.073	55	0.1	0.1	5.161	A
C-AB	204	51	600	0.340	203	0.4	0.5	9.061	A
C-A	0	0			0				
A-B	7	2			7				
A-C	0	0			0				

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	55	14	752	0.073	55	0.1	0.1	5.161	A
C-AB	204	51	600	0.340	204	0.5	0.5	9.084	A
C-A	0	0			0				
A-B	7	2			7				
A-C	0	0			0				

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	45	11	754	0.060	45	0.1	0.1	5.079	A
C-AB	166	42	600	0.277	167	0.5	0.4	8.315	A
C-A	0	0			0				
A-B	5	1			5				
A-C	0	0			0				

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	9	755	0.050	38	0.1	0.1	5.020	A
C-AB	139	35	600	0.232	140	0.4	0.3	7.817	A
C-A	0	0			0				
A-B	5	1			5				
A-C	0	0			0				

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. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		6.23	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	With Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	2	100.000
B		ONE HOUR	✓	140	100.000
C		ONE HOUR	✓	66	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	2	0
	B	5	0	135
	C	0	66	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
B-AC	0.20	5.96	0.3	A	128	193
C-AB	0.12	6.81	0.1	A	61	91
C-A					0	0
A-B					0	0
A-C					0	0

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	26	759	0.139	105	0.0	0.2	5.499	A
C-AB	50	12	601	0.083	49	0.0	0.1	6.515	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	126	31	759	0.166	126	0.2	0.2	5.686	A
C-AB	59	15	601	0.099	59	0.1	0.1	6.639	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	154	39	758	0.203	154	0.2	0.3	5.955	A
C-AB	73	18	601	0.121	73	0.1	0.1	6.804	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	154	39	758	0.203	154	0.3	0.3	5.957	A
C-AB	73	18	601	0.121	73	0.1	0.1	6.806	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	126	31	759	0.166	126	0.3	0.2	5.694	A
C-AB	59	15	601	0.099	59	0.1	0.1	6.644	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	26	759	0.139	106	0.2	0.2	5.510	A
C-AB	50	12	601	0.083	50	0.1	0.1	6.527	A
C-A	0	0			0				
A-B	0	0			0				
A-C	0	0			0				