Transport Assessment

Proposed Residential Development
Land north of Hookhams Lane
Salph End
Bedford

Revision B: March 2020
Report Reference: 248-TA-01-B

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Revision Record

Revision	Date	Description	Written	Approved
0	28/08/19	Planning Issue	MJA	MJA
A	21/01/20	Updated following LHA comments	MJA	MJA
B	30/01/20	Updated following LHA comments	MJA	MJA

Contents

Appendices

1.0 Introduction

1.1 Instructions

1.1.1 This Transport Assessment has been prepared from instructions received from Manor Oak Homes.

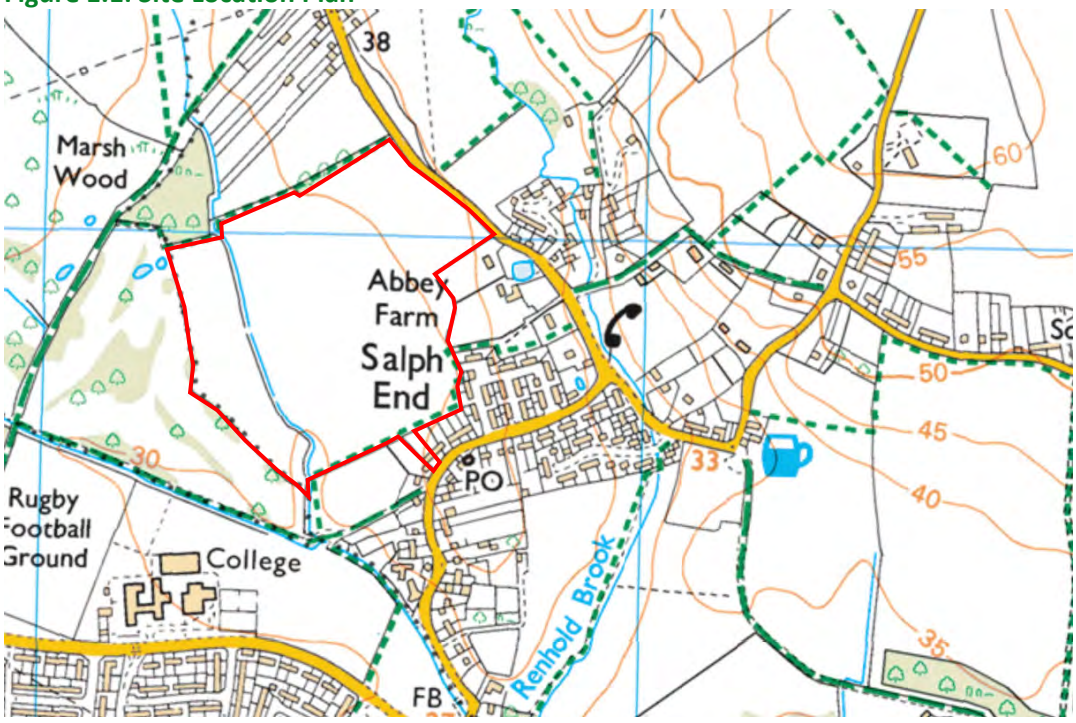
1.1.2 The report has been prepared to support the submission of an outline planning application.

1.1.3 The benefit of this report is to our instructing Client.

1.2 Site Location

1.2.1 The proposed residential development is located at land between Hookhams Lane and Ravensden Road, Salph End, as shown in Figure 1.1 below and enclosed in Appendix A. The approximate National Grid Reference for the site is E507519 N252820.

Figure 1.1: Site Location Plan



1.3 Current Use and Description

1.3.1 The site currently comprises agricultural land there has been no previous development on the site.

1.4 Proposed Development

1.4.1 The proposed development will comprise up to 400 residential dwellings and a two-form entry primary school, up to 420 pupils.

1.5 Revision Record

1.5.1 Revision A of the report has been prepared in response to Bedford Borough Council as Local Highway Authority objection to the first issue of the Transport Assessment. The report has undergone various changes and should be read in whole as a new document.

2.0 Existing Conditions – Site Information

2.1 Site Location

2.1.1 The proposed residential development is located at land between Hookhams Lane and Ravensden Road, Salph End.

2.2 Permitted Use

2.2.1 There has been no previous development on the site. The site is currently an agricultural field. The existing site is shown on the topographical survey enclosed in Appendix B.

2.3 Neighbouring Land Uses

2.3.1 The neighbouring land uses are a children's nursery and area of woodland to the north, Ravensden Road and properties fronting this road to the east, properties on Home Close and Hookhams Lane to southeast, the Mark Rutherford secondary school to the south and Mowsbury Golf Course to the west.

2.3.2 We are aware of an undecided planning application on land to the south of the site which includes 27 Hookhams Lane for 14 dwellings, planning reference 18/02496/MAF. Between submission of the Transport Assessment and Revision A of the document this planning application has been refused.

2.4 Existing Access Arrangements

2.4.1 The existing site is accessed via a field access off Ravensden Road.

3.0 Existing Conditions – Baseline Transport Data

3.1 Walking and Cycling

3.1.1 Hookhams Lane is bound by footways on both sides of the carriageway which are approximately 1.5m wide. Home Close is bound by footways on both sides of the carriageway which are approximately 1.8m wide. Ravensden Road is bound by a single footway of approximately 1.2m wide on the western side of the carriageway. Footways on Hookhams Lane are separated from the carriageway by a grass verge.

3.1.2 To the south of the site there is a gap of approximately 116m in the footway on the northern / western side of Hookhams Lane. To provide continuity of footway a new section of 2m wide footway will be provided. This footway extension is shown on the drawing enclosed in Appendix X.

3.1.3 The existing site has three Public Rights of Way (PROW) running through the site. The PROWs will be maintained through the site post development.

3.1.4 Footways within the vicinity of the site generally have dropped kerbs at the appropriate locations.

3.1.5 There are no dedicated cycling facilities within the vicinity of the site.

3.1.6 Walking and cycling distances to key local facilities is set out on the plan enclosed in Appendix D. The plan also shows the proximity of the site to key facilities including: schools, health services, shops etc. The suitability of the walking distance shown on the drawing is based on the guidance described in full below. Cycle journeys are generally considered acceptable if the distance is less than 5km.

3.1.7 In 2000 the Institution of Highways and Transportation published the document 'Providing for Journeys on Foot'. This document states that:

"80% of walk journeys and walk stages in urban areas are less than one mile. The average length of a walk journey is one kilometre (0.6 miles). This differs little by age or sex and has remained constant since 1975/76."

It goes on to define an average walking speed thus:

"An average walking speed of approximately 1.4 m/s can be assumed, which equates to approximately 400m in five minutes or three miles per hour."

3.1.8 Within the document:

"Table 3.2 contains suggested acceptable walking distances, for pedestrians without a mobility impairment for some common facilities. These may be used for planning and evaluation purposes."

Table 3.2 is replicated below as Table 3.1. Predicted journey times have been added to distances based on the 1.4m/s walking pace.

Table 3.1: Suggested Walking Distances - IHT 'Providing for Journeys on Foot'

	Town Centres		Commuting / School / Sight-seeing		Elsewhere	
	Distance	Time	Distance	Time	Distance	Time
Desirable	200m	2m 23s	500m	5m 57s	400m	4m 46s
Acceptable	400m	4m 46s	1000m	11m 54s	800m	9m 32s
Preferred Maximum	800m	9m 32s	2000m	23m 48s	1200m	14m 17s

3.2 Public Transport

Bus

3.2.1 The nearest bus stops are located on Hookhams Lane approximately 100m from the site's proposed access on Hookhams Lane. The bus stop is located within a 1-2 minute walk from the development site's access off Hookhams Lane. The bus stops serve the bus routes described in Table 3.2 below. Full timetables are enclosed in Appendix E.

Table 3.2: Bus Services and Frequencies

Route No.	Route	Typical Frequency		
		Mon - Fri	Sat	Sun
27	Bedford - Cople - Willington - Great Barford - Renhold - Bedford	~0800-1500 5 per day	~0800-1500 4 per day	No service
	Bedford - Renhold - Great Barford - Willington - Cople - Bedford	~1000-1745 4 per day	~1000-1600 3 per day	No service

3.2.2 The number 27 bus service provides occasional services to Bedford and surrounding villages. This would allow residents of the development to commute to work in Bedford and connect with additional services in Bedford.

3.2.3 The nearest regular bus service is located on Church Road approximately 700m from the site's proposed access on Hookhams Lane. The bus stops serve the bus routes described in Table 3.3 below. Full timetables are enclosed in Appendix E.

Table 3.3: Bus Services and Frequencies

Route No.	Route	Typical Frequency		
		Mon - Fri	Sat	Sun
5	Bedford: Town Centre - Woodside - Goldington	0550-1847 – 12 min 1917-2046 – 30 mins, 2146, 2246	0717 – 0917 – 30 mins then 12 mins to 1847 then 30 mins to 2046, 2146, 2246	0949-1649 hourly
	Bedford: Goldington - Woodside - Town Centre	0608-1852 – 12 min 1905-2105 – 30 mins, 2205	0735 – 0935 – 30 mins then 15mins to 1823 then 30 mins to 2105, 2205	1007-1707 hourly
7	Bedford : Town Centre - Putnoe - Woodside	0623 – 1953 – 30 mins then hourly until 2247	0623 – 1953 – 30 mins then hourly until 2247	0930-1730 hourly
	Bedford : Woodside - Putnoe - Town Centre	0632 – 2002 – 30 mins then hourly until 2251	0802 – 2002 – 30 mins then hourly until 2251	0935-1735 hourly

3.2.4 The number 5 and 7 bus service provides regular bus services to Bedford town centre and suburbs. This would allow residents of the development to commute to work in Bedford and connect with additional services in Bedford.

Rail

3.2.5 The nearest railway station is Bedford St Johns. The railway station is located on the Marston Vale line between Bletchley and Bedford. The station is served by hourly trains to Bedford and Bletchley.

3.2.6 Bedford St Johns railway station is located approximately 6.1km (3.8miles) from the northern site's access to Hookhams Lane.

3.3 Highway network

3.3.1 The proposed development is accessed off Hookhams Lane and Ravensden Road with the characteristics as set out in Table 3.1 below. The proximity of the site in relation to the wider highway network can be seen on the plan enclosed within Appendix D.

Table 3.4: Thenford characteristics

Characteristic	Hookhams Lane	Ravensden Road
Road classification	Unclassified	Unclassified
Carriageway Width	Approx. 5.5m wide	Approx. 5.5m wide
Footways:	Both sides approx. 1.5m wide	Approx. 1.2m wide western side only
Cycleways	None	None
Speed limit	30mph	30mph
Other features	Where footways exist street lit with tactile paving and dropped kerbs at appropriate locations	Where footways exist street lit with tactile paving and dropped kerbs at appropriate locations

3.4 Accident Data

3.4.1 Accident data has been obtained from the local highway authority. The first issue of the Transport Assessment included an accident search comprising Ravensden Road, Hookhams Lane and the Norse Road roundabout. This data covered the most recent 5 year period available at the time from 19 May 2014 to 18 May 2019-. A copy of the accident data is enclosed in Appendix F.

3.4.2 This showed that there had been no accidents on Hookhams Lane or Ravensden Road during this 5 year period.

3.4.3 At Junction 1 Hookhams Lane / Norse Road roundabout there have been two recorded slight accidents and one serious accident. The accidents are summarised below in Table 3.5 below. A review of the basic facts shows that all three accidents occurred in different locations and under different circumstances. There are not any common causes for the accidents.

Table 3.5: Accident Summary - J1 Hookhams Lane / Norse Road

Reference	Severity	Location / Direction of travel	Dry / Wet	Description
313804	Slight	Hookhams Ln - NB	Dry	Cyclist crossed between SB queuing traffic and was obscured by van. Vehicle travelling NB collides with cyclist.
67374	Slight	On Roundabout near Norse Road	Dry	Vehicle pulls out and collides with cyclist on roundabout.
112248	Serious	Norse Road - WB	Dry	Car left carriageway no other vehicles involved. Tiredness / Illness listed as contributory factor

3.4.4 Accident data for the remaining junctions was obtained at a later date at the request of Bedford Borough Council. This accident data covers the period 10 October 2014 to 9 October 2019.

3.4.5 At Junction 2 Wentworth Drive / Putnoe Lane there have been three recorded slight accidents. One slight accident occurred on Wentworth Road east arm with two accidents recorded on the circulatory carriageway. The accidents are summarised below in Table 3.6 below. A review of the basic facts shows that all three accidents occurred in different locations and under different circumstances. There are not any common causes for the accidents.

Table 3.6: Accident Summary - J2 Wentworth Drive / Putnoe Lane

Reference	Severity	Location / Direction of travel	Dry / Wet	Description
238382	Slight	Outside 36 Wentworth Drive	Dry	Vehicle is access driveway at roundabout and collides with cyclist on pavement.
15BA0577	Slight	On Roundabout	Dry	V2 travelling east makes late decision to turn right. V1 travelling west enters roundabout and collides with V2

15BA0013	Slight	Wentworth Dr - WB	Dry	V1 stops at roundabout selects reverse and drives in to V2. Driver of V2 has +ve breath test.

3.4.6 At Junction 3 A4280 St Neots Road / A4280 Goldington Road / Norse Road there have been no recorded accidents. On the Goldington Road approach there has been a single accident. The accident is summarised below in Table 3.7 below. As there is only a single accident there are an no common causes to review.

Table 3.7: Accident Summary - J3 A4280 St Neots Rd / A4280 Goldington Rd / Norse Rd

Reference	Severity	Location / Direction of travel	Dry / Wet	Description
70704	Serious	St Neots Rd, 75m east of junction WB	Dry	Aggressive driving by car causes crash with cyclist.

3.4.7 At Junction 4 A421 / St Neots Road / A4280 northern roundabout there are five recorded slight injury accidents. Four of which have occurred on the A4280 arm, three of which involved some form of slight collisions with cars on the opposite carriageway and a fourth involved a broken-down vehicle with police in attendance. The accidents are summarised below in Table 3.8 below. Whist there are three accidents which result in a broadly similar accident involving a loss of control in damp conditions and hitting vehicles in the opposite direction, only two are in the same direction, they are of such a low frequency with enough differences to not form a pattern.

Table 3.8: Accident Summary - J4 A421 / St Neots Road / A4280 northern roundabout

Reference	Severity	Location / Direction of travel	Dry / Wet	Description
14BA1259	Slight	A4280 St Neots Rd NW	Wet	V2 sees police car about to enter roundabout on an emergency call and brakes. V1 collides into rear of V2.
235061	Slight	A4280 St Neots Rd - SW	Wet	V1 lost control in damp conditions and collided with V2 travelling in opposite direction. Contributory factors – swerved and aggressive driving V1
337716	Slight	A4280 St Neots Rd - SW	Wet	V2 exiting roundabout collides with V1 on opposite side of the carriageway
802367	Slight	A4280 St Neots Rd - NE	Wet	V4 police car had stopped on side of road, helping a broken down vehicle. V3 slowed on opposite side of carriage way after seeing blue lights but did not notice v2 had pulled over and stopped. V3 collided with v2, pushing it into the rear of v1.
80273	Slight	A4280 St Neots Rd - NE	Wet	V1 loses control has possibly mis-judged the carriageway and junction and has then collided with the V2 travelling in opposite direction.

3.4.8 At Junction 4 A421 / St Neots Road / A4280 southern roundabout there are three recorded slight injury accidents. All three accidents are shut type. The accidents are summarised below in Table 3.8 below. Three shunt accidents at a junction of this type with the volume of traffic is not unexpected over a five year period.

Table 3.9: Accident Summary - J4 A421 / St Neots Road / A4280 southern roundabout

Reference	Severity	Location / Direction of travel	Dry / Wet	Description
14BA0998	Slight	A421 Westbound Entry Slip	Dry	V1 a motorcycle travelling too close to V2 and collides into the rear of V1.
15BA0259	Slight	A421 Exit slip - SW	Dry	V2 trav SW, stops at the end of the slip road, waiting to enter rdbt and is struck from behind by V1.
167994	Slight	A4280 St Neots Rd - SW	Dry	V2 trav SW, stops at the end of the slip road, waiting to enter rdbt and is struck from behind by V1.

3.4.9 At Junction 5 Ravensden Rd / Oldways Rd / Church End there have been two recorded slight injury accidents and a single serious accident. The accidents are summarised below in Table 3.10 below. Two accidents, including the serious accident, involved vehicles waiting to turn right onto Church End and failing to see an approaching vehicle. Whilst the third accident involved someone turning right from Church End and again failing to see a vehicle. The type of accidents are as would be expected with a junction of this type in this location. The proposed development is not expected to result in a significant adverse impact.

Table 3.10: Accident Summary - J5 Ravensden Rd / Oldways Rd / Church End t

Reference	Severity	Location / Direction of travel	Dry / Wet	Description
14BA1304	Serious	Ravensden Rd - NW	Wet	V1 travelling NW turns right across path of V2. V2 collides with V1.
15BA0669	Slight	Church End - SW	Dry	V1 turns right onto Oldways and strikes V2 travelling SE.
249935	Slight	Ravensden Rd - NW	Wet	V1 travelling NW turns right across path of V2. V2 collides with V1.

3.4.10 At Junction 6 B660 / Oldways Rd / Thurleigh Rd there were no recorded accidents.

3.4.11 The accident data review has not identified any areas of concern. Therefore, the proposed development is not expected to have an adverse impact on the operation safety of the local junctions.

3.5 Accessibility to Education

3.5.1 The proposed development will incorporate a primary school, so will be within a desirable walking distance of the school. The vast majority of residents on the site would utilise this school.

3.5.2 The catchment for the proposed primary, is yet to be established but is expected to comprise a similar area to that of the existing Renhold School. The catchment comprises Renhold (excluding the developments off Norse Road). The proposed primary school would be anticipated to principally serve the needs of the new development and existing residents of Salph End. Whilst a two-form entry school is proposed it is most likely that the school will initially comprise a 1FE school with room to extend should this be required.

3.5.3 Offsite pupils would access the school using the existing footway provision within Salph End to access the school. This footway provision is considered acceptable for the proposed development and would allow existing residents to access the school safely on foot.

3.5.4 Existing primary schools are located in Renhold (Renhold VC Primary School, Church End) and Ravensden (Ravensden Primary School, Church End) these are located 1.5km and 1.9km from the nearest access so are within the preferred maximum walking distance for education.

3.5.5 To access Renhold Primary School on foot there is at least a single sided footway provision between the site and the primary school which would allow safe access on foot.

3.5.6 Given that Ravensden School is located further from the site than the proposed school and the school in Renhold, there is likely to be very limited demand from the site to Ravensden School.

3.5.7 The nearest secondary school, Mark Rutherford School, is located in Bedford, approximately 1.1km from the proposed development access on Hookhams Lane. The secondary school is located within the preferred maximum walking distance for education and is within an acceptable cycling distance from the proposed development. Pupils accessing the school will be able to utilise the existing footway on the northern / western side of Hookhams Lane. There is a short gap of 116m in the footway provision to the south of Hookhams Lane. The development will fill this gap with a new footway, see Appendix X. Once at Wentworth Road there is an off carriageway shared footway / cycleway connecting the development with the school. The provision with improvements is adequate for use. There are also Public Rights of Way which could shorten the walking distance, this would offer a seasonal weather dependent route to the school.

3.5.8 The nearest nursery (Little Steps Day Care, Ravensden Road) is located immediately to the north of the development site. This is located within a short walking distance of the site. There is existing footway provision on Ravensden Road which would allow residents of the proposed development to safely access the nursery.

3.6 Accessibility to Health

3.6.1 The nearest doctors' surgery, dentist and Pharmacy are all located at Goldington Square on Church Lane. These services are all located approximately 1.0km (0.6 mile) from the proposed development. The location of the doctors' is within an acceptable walking and cycling distance of the proposed development.

3.7 Accessibility to Retail and Leisure

3.7.1 There is a post office and convenience store near the site's access on Hookhams Lane. Additional retail and leisure services can be reached by bus and on bike in Bedford.

3.7.2 Renhold Village Hall is located approximately 1.2km from the proposed development and is accessible via existing footway connections between the development and the village hall.

3.8 Accessibility to Employment

3.8.1 Employment opportunities can be reached by bus and on bike in Bedford.

3.9 Summary

3.9.1 The proposed development is shown to adequately served for pedestrian, cyclist and public transport infrastructure.

3.9.2 The footway provision between the development and the local facilities is adequate for purpose and would allow pedestrians of the development to access the local facilities. From our desktop review of the existing pedestrian facilities we are not aware of any deficiencies in the footway network which would prevent or significantly reduce the likelihood of residents walking to / from the development site.

3.9.3 A review of the accident data shows that there is not an accident data on the highway network within the vicinity of the proposed development site.

4.0 Policy Review

4.1 Introduction

4.1.1 The following section of the report provides an examination of current polices relating to transport at national and local level as they relate to the proposed development.

4.2 National Policy

4.2.1 Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen, The Transport White Paper was published in January 2011 by the Coalition Government. The Document outlines a vision 'for a transport system that is an engine for economic growth, but one that is also greener and safer and improves quality of life in our communities.' Consequently, reducing carbon emissions derived from transport together with generating economic growth and contributing to economic vitality. The Localism Agenda is another strong theme with the White Paper supporting local solutions that are tailored to specific needs and behaviour patterns to deliver effective local transport.

4.2.2 The priority for local transport, as outlined is to "encourage sustainable local travel and economic growth by making public transport and cycling and walking more attractive and effective, promoting lower carbon transport and tackling local road congestion".

4.2.3 The White Paper Chapter 4 is titled Enabling Sustainable Transport Choices. The chapter states that 'the Government wants to encourage and enable more sustainable transport choices'. The document goes on to explain the "nudge" concept that taps into human behavioural tendencies to encourage "good" choices. Nudge interventions are described as being easy and not forbidding choice and travel planning is listed as an example of such.

4.3 National Planning Policy Framework

4.3.1 In March 2012, the National Planning Policy Framework (NPPF) was published by the coalition government with its overarching principle being a 'presumption in favour of sustainable development.' The policies contained within the NPPF applied with immediate effect and thereby replaced, amongst other PPS's and PPG's, PPG 13 'Transport'. Section 4 of the NPPF 'Promoting sustainable transport' covers the transport policy, detailed below are the policies that are of relevance.

4.3.2 In paragraph 29, the NPPF acknowledges that 'transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives' and goes on to say 'the transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel'.

4.3.3 Paragraph 36 states that 'All developments which generates significant amounts of movement should be required to provide a Travel Plan'.

4.3.4 Paragraph 38 states 'Where practical, particularly within large scale developments, key facilities such as primary schools and local shops should be located within walking distance of most properties

5.0 Proposed Development

5.1 Type and Scale

5.1.1 The proposed development will comprise up to 400 residential dwellings and a two-form entry primary school, up to 420 pupils. The proposed development layout is shown on the plan enclosed in Appendix C.

5.2 Access – all modes

5.2.1 It is proposed that the development will be principally accessed off Hookhams Lane via a new all movements access through 25 Hookhams Lane, this access is shown in Appendix G. The proposed access has been subject to a Stage 1 Road Safety Audit (RSA), see Appendix W. The RSA did not raise any significant concerns which could not be addressed at detailed design stage.

5.2.2 A planning application at 27 Hookhams Lane for 14 dwellings, planning reference 18/02496/MAF was recently refused. Therefore, the access proposals for planning application no longer need to be considered.

5.2.3 A new revised planning application, ref 20/00349/MAF, for 13 dwellings was submitted after this planning application. This application is undecided; therefore, this planning application for 400 dwellings and a primary school takes priority in terms of access proposals off Hookhams Lane.

5.2.4 A secondary access will be provided off Ravensden Road, as shown on the drawing enclosed in Appendix H.

5.2.5 A spine road, with a width of 6.25m, will connect both accesses on Hookhams Lane and Ravensden Road making this a suitable route for use by buses. Other adoptable roads within the development site will be constructed inline with the current design standards but will typically comprise 5.5m wide carriageway with 2 no. 2m wide footways for non-shared surfaces.

5.2.6 In addition, the spine road will also provide a 3.5m wide shared footway / cycleway within the development site.

5.2.7 Visibility splay requirements within Bedford Borough are 43m for a recorded speed of 30mph or 90m where no speed surveys have been undertaken. This development undertook speed surveys in June 2017, however, these are not compliant with Bedford Borough Council's current requirements. Speed surveys were undertaken on Hookhams Lane for the adjacent development at 274 Hookhams Lane, these recorded speeds of 28mph consistent with the appropriate use of 43m visibility splays as shown on the access drawing. As no up to date speed data is available for Ravensden Road a worst case assessment will be undertaken, therefore 90m visibility splays are shown on the access drawing.

5.3 Parking

5.3.1 Parking within the development will be provided in line with current Bedfordshire Borough Council guidance at the time of a full or reserved matters planning application.

5.4 Trip Generation

5.4.1 Person and vehicle trip rates have been obtained from the TRICS database. The person trip selection criteria is set out in Table 5.1 below. The full TRICS data is enclosed in Appendix I.

Table 5.1: TRICS Parameters

Parameter	Selection	
Version	7.6.1	
Main land use	03 – Residential	04 – Education
Sub land use	A – Houses Privately Owned	A - Primary
Regions	All of England except Greater London	
Locations	Suburban area, edge of town	

5.4.2 From the TRICS database the predicted person trip rates are set out in Table 5.2 below.

Table 5.2: Person & Vehicle Trip Rates - Mean

Use	Morning Peak (0800-0900)			Afternoon Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Dwellings Person Per dwell	0.192	0.765	0.957	0.585	0.258	0.843
School Vehicle Per pupil	0.324	0.245	0.569	0.026	0.037	0.063

5.4.3 To understand the number of trips generated by the residential aspect of the development by mode we need to establish the likely modal split for a development in this location. The 2011 Census includes the 'Method of Travel to Work' (MTW) dataset which defines mode choice for all local authority wards. MTW data has been extracted from the 2011 Census for the Great Barford ward which includes the development site. The 'Method of Travel to Work' data is summarised in Table 5.3 below.

Table 5.3: Method of Travel to Work - 2011 Census – Great Barford ward

Mode	Number	Proportion
Driving a car or van	2,777	85.6%
Passenger in a car or van	146	4.5%
On foot	146	4.5%
Bus, minibus or coach	95	2.9%
Bicycle	57	1.8%
Motorcycle, scooter or moped	22	0.7%

5.4.4 Using the above mode splits (Table 5.3) it is possible to calculate the predicted number of residential trips generated by each mode. The proposed trips by mode is shown in Table 5.4 below.

Table 5.4: Residential Trip Numbers by Mode

Mode	Morning Peak (0800-0900)			Afternoon Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Driving a car or van	66	262	328	200	88	289
Passenger in a car or van	3	14	17	11	5	15
On foot	3	14	17	11	5	15
Bus, minibus or coach	2	9	11	7	3	10
Bicycle	1	5	7	4	2	6
Motorcycle, scooter or moped	1	2	3	2	1	2

5.4.5 Using the total number of vehicle trips predicted by the development is shown in Table 5.5 below. The school aspect is based on 420 pupils but takes no account of linked trips.

Table 5.5: Vehicle Trip Numbers

Use	Morning Peak (0800-0900)			Afternoon Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Dwellings	66	262	328	200	88	289
School	136	103	239	11	16	26
Total	**213**	**409**	**622**	**245**	**119**	**364**

5.4.6 The proposed development is predicted to generate 622 vehicle trips in the morning peak and 364 trips in the evening peak. Further junction analysis is required to understand the impact of this development on the highway network.

6.0 Junction Impact Assessment

6.1 Area of Assessment

6.1.1 The following junctions have been identified as requiring an impact assessment.

- A1: Access to Hookhams Lane;
- A2: Access to Ravensden Road;
- J1: Hookhams Lane / Norse Road / Church Lane / Wentworth Drive;
- J2: Wentworth Drive / Putnoe Lane;
- J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road;
- J4: A421 / St Neots Road / A4280;
- J5: Ravensden Rd / Oldways Rd / Church End; and
- J6: B660 / Oldaways Road / Thurleigh Road.

6.2 Distribution

6.2.1 Residential vehicle trip distribution data has been obtained from the 2011 Census using the 'WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)' dataset. The 2011 Census data has been extracted using the following parameters

- Method of Travel to Work – Driving a car or van
- Place of Work – All
- Usual Residence – Bedford 004

6.2.2 Proposed vehicle trips have been assigned onto the highway network using online route planning software. The Census data with proposed assignment is shown in Appendix J.

6.2.3 School vehicle trips for the new primary school have been distributed using engineering judgement as follows:

- 60% originating from the 400 new dwellings on the development site.
- 40% local area predominately Salph End

6.2.4 Proposed development vehicle movement diagrams are shown on the plan enclosed in Appendix K.

6.3 Assessment Year

6.3.1 A planning application will be submitted in 2019. Therefore, a junction analysis will be undertaken for an assessment year of 2030 when the development is expected to be fully occupied.

6.3.2 To grow traffic counts to the future year assessment year Tempro growth factors will be applied utilising the following inputs:

- Tempro – 72;
- Bedford 004
- NTM AF15 – Urban, Principal
- AM peak growth factor – 1.1369
- PM peak growth factor – 1.1554

6.4 Background Traffic

6.4.1 Vehicle counts at the above junctions were completed on Wednesday 27th November 2019. The results are enclosed in Appendix L.

6.5 Committed Development

6.5.1 Except for the adjacent 14 dwelling development we are not aware of any developments which need to be considered separately and would not be picked up as part of generic Tempro assessment.

6.5.2 Vehicle trips from the adjacent development will be generated and assigned to the highway network in the same way as the vehicle trips from the proposed development.

7.0 Junction Analysis Results

7.1 Introduction

7.1.1 The junction assessments have been undertaken using TRL software Arcady 9 and PICADY 9 for roundabouts and priority junctions respectively.

7.1.2 A junction is considered to be operating within capacity if the RFC (Ratio to Flow Capacity) value is less than or equal to 0.85. A RFC value of 1.0 represents absolute capacity, however, a lower value of 0.85 is used to reflect the practical capacity of the junction.

7.2 A1: Site Access off Hookhams Lane

7.2.1 This junction is a new three arm simple priority junction and will comprise the new access for the development site. The arms are labelled thus:

Arm A – Hookhams Lane (W)
Arm B – Access
Arm C – Hookhams Lane (E)

7.2.2 The full junction input data and result can be found in Appendix M. The results of the assessment are summarised below.

Table 7.1: A1 Access off Hookhams Lane – 2030 AM Peak 0800-0900

	Background + Committed + Development	
	Max RFC	Max Queue
B-C	0.25	0
B-A	0.64	2
C-AB	0.11	0

Table 7.2: A1 Access off Hookhams Lane – 2030 AM Peak 0800-0900

	Background + Committed + Development	
	Max RFC	Max Queue
B-C	0.05	0
B-A	0.2	0
C-AB	0.12	0

7.2.3 The access of Hookhams Lane is shown to operate within capacity in the future year scenario.

7.3 A2: Site Access off Ravensden Road

7.3.1 This junction is a new three arm simple priority junction and will comprise the new access for the development site. The arms are labelled thus:

Arm A – Ravensden Road (S)
Arm B – Access
Arm C – Ravensden Road (N)

7.3.2 The full junction input data and result can be found in Appendix N. The results of the assessment are summarised below.

Table 7.3: A1 Access off Ravensden Road – 2030 AM Peak 0800-0900

	Background + Committed + Development	
	Max RFC	Max Queue
B-C	0.07	0
B-A	0	0
C-AB	0.02	0

Table 7.4: A1 Access off Ravensden Road – 2030 AM Peak 0800-0900

	Background + Committed + Development	
	Max RFC	Max Queue
B-C	0.02	0
B-A	0	0
C-AB	0.07	0

7.3.3 The access of Ravensden Road is shown to operate within capacity in the future year scenario.

7.4 Junction 1: Hookhams Lane / Norse Road / Church Lane / Wentworth Drive

7.4.1 The junction is a four-arm roundabout, the arms are labelled thus:

Arm A – Hookhams Lane
Arm B – Norse Road
Arm C – Church Lane
Arm D – Wentworth Drive

7.4.2 The full junction input data and result can be found in Appendix O. The results of the assessment are summarised below.

Table 7.5: J1 Hookhams Ln / Norse Rd / Church Ln / Wentworth Dr – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – Hookhams Lane	0.61	1	0.84	5	0.23	4
B – Norse Road	0.63	1	0.69	2	0.07	1
C – Church Lane	0.33	0	0.36	1	0.03	1
D – Wentworth Drive	0.65	1	0.67	2	0.02	1

Table 7.6: J1 Hookhams Ln / Norse Rd / Church Ln / Wentworth Dr – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – Hookhams Lane	0.25	0	0.31	0	0.06	0
B – Norse Road	0.76	3	0.81	4	0.05	1
C – Church Lane	0.36	0	0.42	1	0.06	1
D – Wentworth Drive	0.39	1	0.44	1	0.05	0

7.4.3 The junction is shown to operate within capacity in all scenarios.

7.5 Junction 2: Wentworth Drive / Putnoe Lane

7.5.1 The junction is a three-arm roundabout, the arms are labelled thus:

Arm A – Wentworth Drive (E)
Arm B – Putnoe Lane
Arm C – Wentworth Drive (W)

7.5.2 The full junction input data and result can be found in Appendix P. The results of the assessment are summarised below.

Table 7.7: J2 Wentworth Dr / Putnoe Lane – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – Wentworth Drive (E)	0.71	3	0.76	3	0.05	1
B – Putnoe Lane	0.52	1	0.55	1	0.03	0
C – Wentworth Drive (W)	0.98	16	1.00	19	0.02	3

Table 7.8: J2 Wentworth Dr / Putnoe Lane – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – Wentworth Drive (E)	0.72	3	0.74	3	0.02	0
B – Putnoe Lane	0.44	1	0.49	1	0.05	0
C – Wentworth Drive (W)	0.51	1	0.54	1	0.03	0

7.5.3 The junction is shown to typically operate within capacity in all scenarios, except for the Wentworth Drive (W) arm during the morning peak period.

7.5.4 The Wentworth Road (W) arm operates with a RFC value of 0.98 without development and 1.00 with development, an increase of 0.0. As a result of the development the queue length increases by 3 from 16 to 19.

7.5.5 The impact of the development is minimal and should not be considered significant. However, the local highway authority has requested that nil detriment mitigation works are identified.

7.5.6 To achieve nil detriment mitigation on the Wentworth Road (W) arm the geometry improvements as shown in Table 7.9 below are required to achieve nil detriment. These changes are small changes to the white lining and are `shown on the drawing enclosed in Appendix Y.

Table 7.9: J2 Arm C Wentworth Road (W) Nil Detriment Geometry Changes

	Existing	Nil Det	Change
E – Entry Width	3.29m	3.57m	0.28m
l'– Flare length	0m	0.5m	0.5m

7.5.7 The results of the nil detriment analysis are shown in Table 7.10 and Table 7.11 below with full results enclosed in Appendix Z.

Table 7.10: J2 Wentworth Dr / Putnoe Lane – 2030 AM Peak 0800-0900 – NIL DET

	Background + Committed		Background + Committed + Development – NIL DET		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – Wentworth Drive (E)	0.71	3	0.76	3	0.06	0
B – Putnoe Lane	0.52	1	0.55	1	0.03	0
C – Wentworth Drive (W)	0.98	16	0.98	15	0	-1

Table 7.11: J2 Wentworth Dr / Putnoe Lane – 2030 PM Peak 1700-1800 – NIL DET

	Background + Committed		Background + Committed + Development – NIL DET		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – Wentworth Drive (E)	0.72	3	0.74	3	0.02	0
B – Putnoe Lane	0.44	1	0.49	1	0.05	0
C – Wentworth Drive (W)	0.51	1	0.53	1	0.02	0

7.5.8 The proposed nil detriment solution mitigates the impact of the proposed development on the junction during both the morning and evening peak periods. Hence, with mitigation the proposed development will not have a significant adverse impact on the highway network.

7.6 Junction 3: A4280 St Neots Road / A4280 Goldington Road / Norse Road

7.6.1 The junction is a four-arm roundabout, the arms are labelled thus:

Arm A – A4280 St Neots Road
Arm B – A4280 Gldington Road – Exit Only
Arm C – A4280 Goldington Road – Entry Only
Arm D – Norse Road

7.6.2 The full junction input data and result can be found in Appendix Q. The results of the assessment are summarised below.

Table 7.12: J3 A4280 St Neots Rd / A4280 Goldington Rd / Norse Rd – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – St Neots Rd	1.05	55	1.06	61	0.01	6
B – Southern Access	∞	6	∞	8	0	2
C – Goldington Road	0.53	1	0.54	1	0.01	0
D – Norse Road	0.86	6	0.90	8	0.04	2

Table 7.13: J3 A4280 St Neots Rd / A4280 Goldington Rd / Norse Rd – 2030 PM Peak 1700-1800

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – St Neots Rd	1.12	108	1.14	131	0.02	23
B – Southern Access	∞	11	∞	11	0	0
C – Goldington Road	0.61	2	0.61	2	0	0
D – Norse Road	0.59	2	0.60	2	0.01	0

7.6.3 Arm A St Neots Road operates over capacity in both peak periods the impact of development is considered significant and a nil detriment solution will be required.

7.6.4 Arm B Southern Access operates with an unregistrable RFC value in all scenarios. Due to the movement patterns on the roundabout with few vehicles turning into Arm B few opportunities are created within the model for vehicles to exit Arm B. In reality the small number of exiting vehicles just 10 vehicles in the morning peak and 14 vehicles in the evening peak would be able to depart with much less delay than predicted in the model. Bunching of vehicles and natural variations in flow would create opportunities for vehicles to depart. Therefore, mitigation is not considered necessary.

7.6.5 Arm C Goldington Road operates with ample capacity in both the morning and evening peak period.

7.6.6 Arm D Norse Road operates over capacity in the morning peak period only. Without development RFC values are 0.86 increasing by 0.04 to 0.90 with the proposed development. As a result of the development the predicted queue length increases by 2 from 6 to 8. The impact of the development on this arm is not considered significant.

7.6.7 To achieve nil detriment mitigation on the St Neots Road arm the geometry improvements as shown in Table 7.14 below are required to achieve nil detriment. These changes are also shown on the table enclosed in Appendix R.

Table 7.14: J3 Arm A St Neots Road Nil Detriment Geometry Changes

	Existing	Nil Det	Change
E – Entry Width	7.03	7.36	+0.33
l'– Flare length	30.8	27.9	-2.9
R – Entry Radius	14.0	29.7	+15.7

7.6.8 The results of the nil detriment analysis are shown in Table 7.15 and Table 7.16 below with full results enclosed in Appendix S.

Table 7.15: J3 A4280 St Neots Rd / A4280 Goldington Rd / Norse Rd – 2030 AM Peak 0800-0900 – NIL DET

	Background + Committed		Background + Committed + Development – NIL DET		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – St Neots Rd	1.05	55	0.99	29	-0.06	-26
B – Southern Access	∞	6	∞	6	0	0
C – Goldington Road	0.53	1	0.54	1	+0.01	0
D – Norse Road	0.86	6	0.90	8	+0.04	+2

Table 7.16: J3 A4280 St Neots Rd / A4280 Goldington Rd / Norse Rd – 2030 PM Peak 1700-1800 – NIL DET

	Background + Committed		Background + Committed + Development – NIL DET		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A – St Neots Rd	1.12	108	1.08	86	-0.04	22
B – Southern Access	∞	11		11	0	0
C – Goldington Road	0.61	2	0.62	2	+0.01	0
D – Norse Road	0.59	2	0.60	2	+0.01	0

7.6.9 The proposed nil detriment solution mitigates the impact of the proposed development on the junction during both the morning and evening peak periods. Hence, with mitigation the proposed development will not have a significant adverse impact on the highway network.

7.8 Junction 4: A421 / St Neots Road / A4280.

7.8.1 The junction is a grade separated dumbbell junction located above the A421. The junction comprises of two roundabouts. One to the north with five arms and one to the south with four arms. The arms are labelled thus:

Northern roundabout
Arm A – A421 (N) – exit only
Arm B – Connecting bridge
Arm C – A421 (S) – entry only
Arm D – St Neots Road
Arm E – Water End

Southern roundabout
Arm A – A421 (N) – entry only
Arm B – St Neots Road
Arm C – A421 (S) – exit only
Arm D – Connecting bridge

7.8.2 The full junction input data and result can be found in Appendix T. The results of the assessment are summarised below.

Table 7.17: J4 A421 / St Neots Road / A4280 – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
1B – Connecting bridge	0.32	1	0.33	1	0.01	0
1C – A421 (S) – entry only	0.44	1	0.45	1	0.01	0
1D – St Neots Road	0.84	5	0.88	7	0.04	2
1E – Water End	0.34	1	0.46	1	0.12	0
2A – A421 (N) – entry only	0.31	1	0.33	1	0.02	0
2B – St Neots Road	0.65	2	0.67	2	0.04	0
2D – Water End	0.59	2	0.61	2	0.02	0

Table 7.18: J4 A421 / St Neots Road / A4280 – 2030 PM Peak 1700-1800

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
1B – Connecting bridge	0.33	1	0.36	1	0.03	0
1C – A421 (S) – entry only	0.65	2	0.68	2	0.03	0
1D – St Neots Road	0.71	2	0.73	3	0.02	1
1E – Water End	0.13	0	0.16	0	0.03	0
2A – A421 (N) – entry only	0.40	1	0.41	1	0.01	0
2B – St Neots Road	0.44	1	0.46	1	0.02	0
2D – Water End	0.63	2	0.64	2	0.01	0

7.8.3 Except for the St Neots Road arm of the northern roundabout the junction typically operates within capacity. The St Neots Road arm of northern roundabout operates overcapacity in the morning peak hour only with RFC values of 0.85 and 0.89 in the morning peak without and with development scenarios respectively. As a result of the development the predicted queue length increases by 2 vehicles from 5 to 7.

7.8.4 The impact of the development in the morning peak hour on St Neots Road arm of the northern roundabout requires is considered insignificant.

7.9 Junction 5: Ravensden Rd / Oldways Rd / Church End

7.9.1 The junction is a three-arm simple priority junction, the arms are labelled thus:

Arm A – Oldways Road
Arm B – Church End
Arm C – Ravensden Road

7.9.2 The full junction input data and result can be found in Appendix P. The results of the assessment are summarised below.

Table 7.19: J5 Ravensden Rd / Oldways Rd / Church End – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
B-C	0.07	0	0.08	0	0.01	0
B-A	0.08	0	0.09	0	0.01	0
C-AB	0.08	0	0.10	0	0.02	0

Table 7.20: J5 Ravensden Rd / Oldways Rd / Church End – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
B-C	0.05	0	0.05	0	0	0
B-A	0.05	0	0.05	0	0	0
C-AB	0.06	0	0.07	0	0.01	0

7.9.3 The junction is shown to typically operate within capacity in all scenarios.

7.10 Junction 6: B660 / Oldways Rd / Thurleigh Rd

7.10.1 The junction is a four-arm staggered crossroads junction, the arms are labelled thus:

Arm A – B660 N
Arm B – Oldways Road
Arm C – B660 S
Arm D – Thurleigh Road

7.10.2 The full junction input data and result can be found in Appendix P. The results of the assessment are summarised below.

Table 7.21: J6 B660 / Oldways Rd / Thurleigh Rd – 2019

	AM Background		PM Background	
	Max RFC	Max Queue	Max RFC	Max Queue
B-ACD	0.48	1	0.74	3
A-BCD	0.04	0	0.04	0
D-A	0.30	0	0.04	0
D-BC	0.92	9	0.33	1
C-ABD	0.15	0	0.05	0

Table 7.22: J6 B660 / Oldways Rd / Thurleigh Rd – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
B-ACD	0.61	2	0.75	3	0.14	1
A-BCD	0.05	0	0.05	0	0	0
D-A	1.10	3	1.13	3	0.03	0
D-BC	1.08	32	1.11	38	0.03	6
C-ABD	0.19	0	0.20	0	0.01	0

Table 7.23: J6 B660 / Oldways Rd / Thurleigh Rd – 2030 AM Peak 0800-0900

	Background + Committed		Background + Committed + Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
B-ACD	0.89	6	0.93	8	0.04	2
A-BCD	0.05	0	0.05	0	0	0
D-A	0.04	0	0.04	0	0	0
D-BC	0.40	1	0.43	1	0.03	0
C-ABD	0.06	0	0.06	0	0	0

7.10.3 In the morning peak period Arm D Thurleigh Road operates over capacity in 2019 and 2030. RFC values peak at 1.10 with the development increasing RFC values by 0.03 and increasing vehicle queue length by 6. The proposed development will generate 10 additional vehicle movements during the morning peak period on this arm.

7.10.4 In the 2019 base year traffic survey 466 of the 485 cars using Thurleigh Road wish to turn right to either access the B660 S or Oldways Road. Therefore, mitigation would not improve the flow of traffic through this junction as it is not possible to provide two right turning lanes. Testing within Junctions 9 shows this to be the case. Neither is it considered appropriate to change the junction type to either a roundabout or a signal-controlled junction.

7.10.5 The proposed development will only generate ten additional vehicle trips in the morning peak period on this arm. This is less than the likely daily variation in traffic flows and could be considered minimal insignificant flow. Further as the junction is already operating over capacity users of the junction will be sensitive to change and would seek to use alternative routes where appropriate included users of the proposed development.

7.10.6 Whilst the development does have an adverse impact on the Thurleigh Road arm, the impact is considered insignificant.

7.10.7 In the evening peak period Oldways operates over capacity in 2030 both without and with the proposed development. As a result of the development RFC values increase from 0.89 to 0.93 which results in a 2 vehicle increase in queue length from 6 to 8. The impact of the development is minor and insignificant, and mitigation is not considered necessary. Further it is not possible to undertake lane widening at there is no available highway land.

7.10.8 The impact of the development on the junction is relatively small and insignificant. It is not possible to convert the staggered crossroads to a normal roundabout, nor is a signal controlled junction deemed appropriate in this rural location. The Travel Plan will actively seek to reduce the number of vehicles generated by the development thus decreasing the minor impact of the development on this junction further. As home and flexible working become more popular again the need to and time of travel will change.

8.0 Conclusion

8.1 Site Location and Permitted Use

8.1.1 The proposed residential development is located at land between Hookhams Lane and Ravensden Road, Salph End.

8.1.2 The site currently comprises agricultural land there has been no previous development on the site

8.2 Existing Conditions

8.2.1 The proposed development is shown to adequately served for pedestrian, cyclist and public transport infrastructure.

8.2.2 The footway provision between the development and the local facilities is adequate for purpose and would allow pedestrians of the development to access the local facilities. From our desktop review of the existing pedestrian facilities we are not aware of any deficiencies in the footway network which would prevent or significantly reduce the likelihood of residents walking to / from the development site.

8.2.3 A review of the accident data shows that there is not an accident data on the highway network within the vicinity of the proposed development site.

8.3 Proposed Development

8.3.1 The proposed development will comprise up to 400 residential dwellings and a two-form entry primary school, up to 420 pupils.

8.3.2 The proposed development will be principally accessed off Hookhams Lane via a new access through 25 Hookhams Lane. A secondary access is provided off Ravensden Road.

8.3.3 A spine road, with a width of 6.0m, will connect both accesses making this a suitable route for use by buses. Other adoptable roads within the development site will be constructed inline with the current design standards but will typically comprise 5.5m wide carriageway with 2 no. 2m wide footways for non-shared surfaces.

8.3.4 In addition, the spine road will also provide a 3m wide shared footway / cycleway within the development site.

8.3.5 Parking within the development will be provided in line with current Bedfordshire Borough Council guidance at the time of a full or reserved matters planning application.

8.3.6 There is a 116m length of Hookhams Lane which doesn't have a footway on the northern / western side of the carriageway to the south of the development site. A new 2m wide footway will be constructed adjacent to Hookhams Lane to provide this link and improve connections to the south to Bedford, the bus stop on Church Lane and the secondary school.

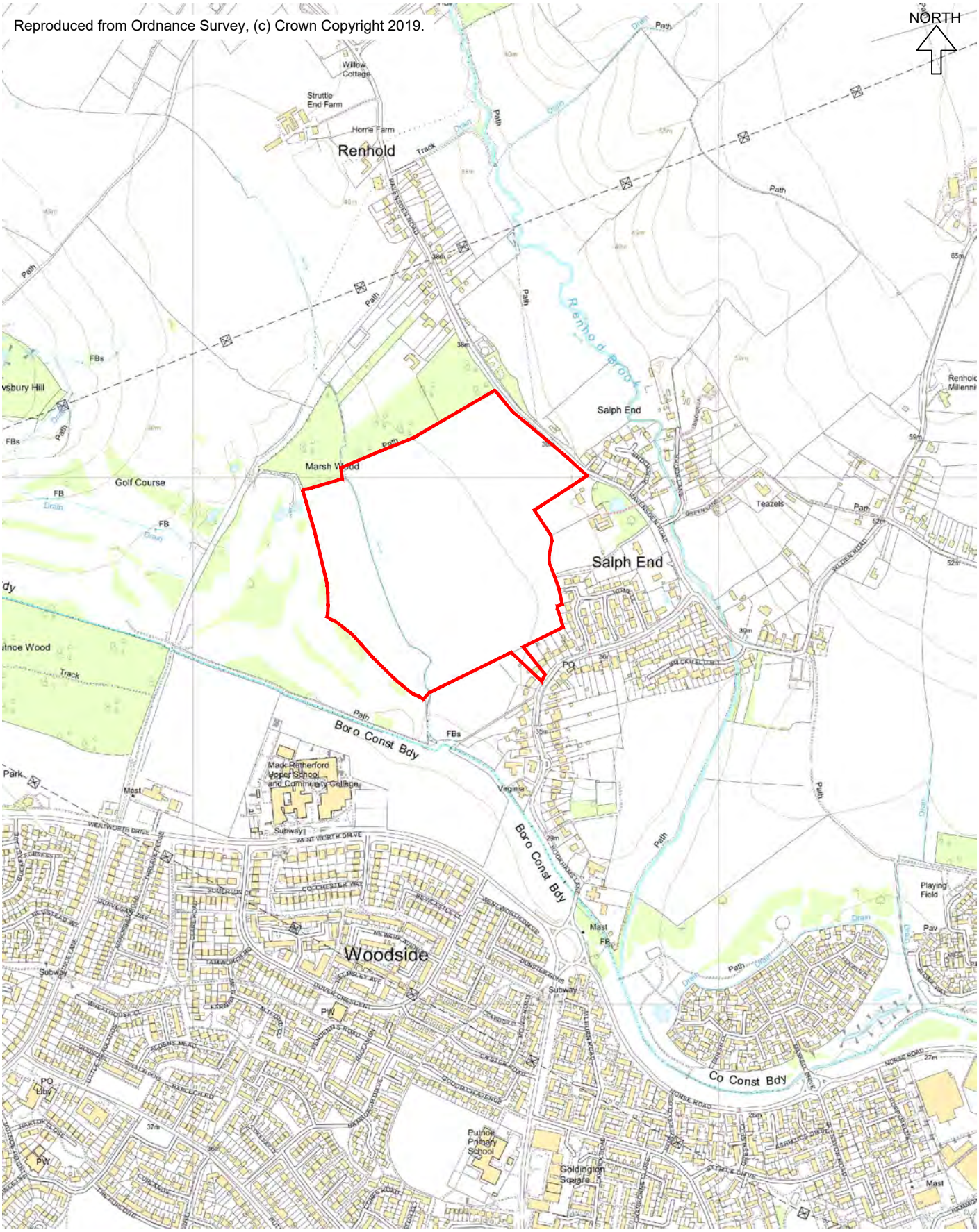
8.3.7 A junction analysis of the impact from the proposed development has been undertaken at 6 junctions and both accesses. Typically, the impact of the development on the highway network is insignificant.

8.3.8 At Junction 3: Wentworth Road / Putnoe Lane the impact of the development is such that mitigation is required to the Wentworth Road (W) arm. Small changes are required to the white lining to increase the entry width and flare length to mitigate the impact of the development on the highway network.

8.3.9 At Junction 3: A4280 St Neots Road / A4280 Goldington Road / Norse Road the impact of the development is such that mitigation is required to the St Neots Road. Small increases are required to the entry width, entry radius and flare length to mitigate the impact of the development on the highway network.

Appendix A

Location Plan
MAC drawing no. 248-TA01



MAC T: 01604 340544 Northampton Office E: info@mac-ltd.co.uk W: mac-ltd.co.uk Martin Andrews Consulting Ltd	Client: Manor Oak Homes	Project: Land betweem Hookhams Ln and Ravensden Rd Salph End, Beds	Date: 28/08/19
			Drw: MJA
	Title: Site Location Plan		Chk: MJA
			Scale: 1:10,000
			Size: A4
	Drawing No. 248-TA01	Revision A	• Transport Assessments • Flood Risk Assessments • Highway Advice • Drainage Strategies

Appendix B

Topographical Survey
MSurv drawing no. 1215/2272/1, 2 and 3

Notes

Grid and levels have been aligned to O.S. National Grid OSGB36(15).

Suffix	Revision	Date	Initial

MSURV your surveying solution

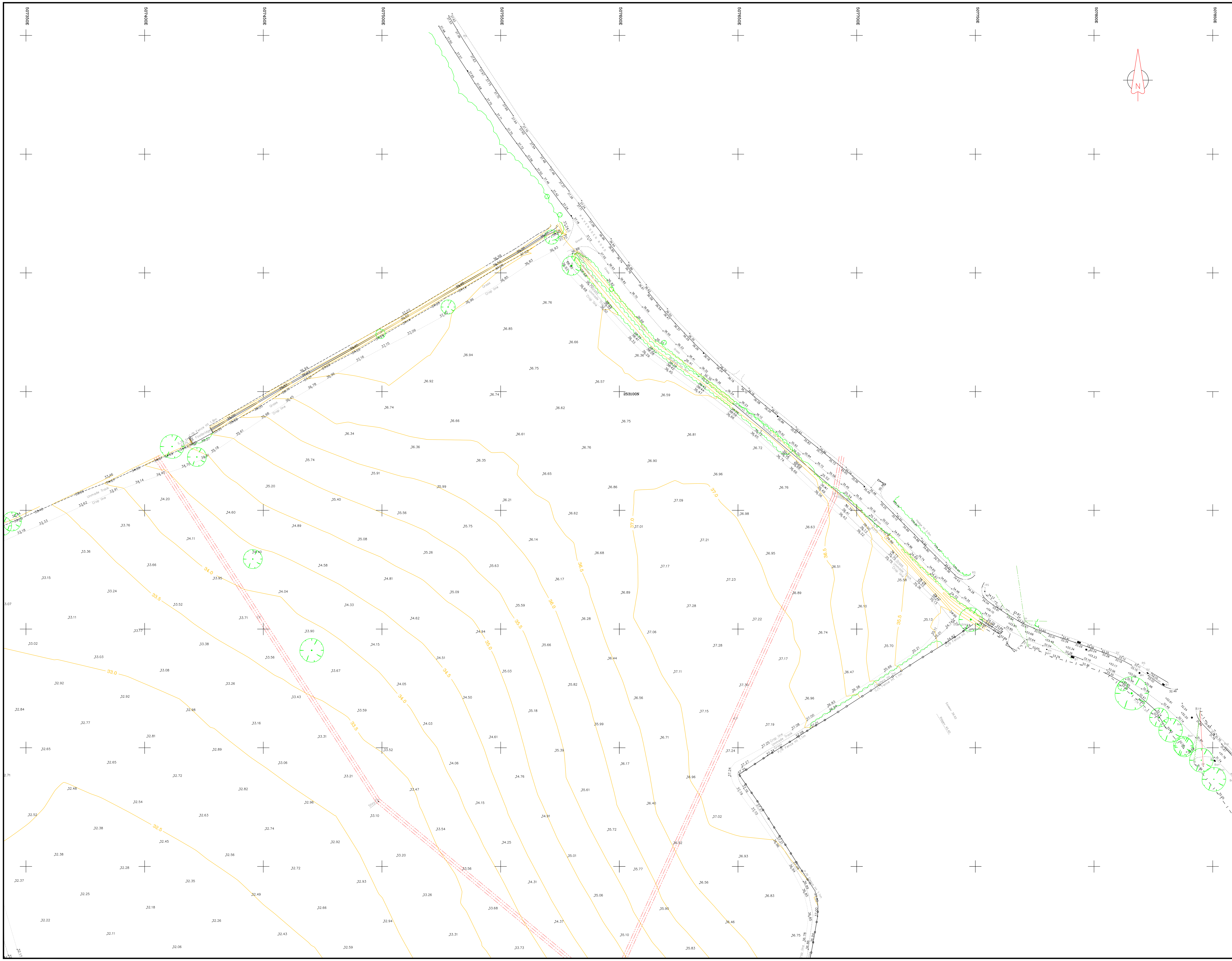
Rainsborough Barns
Charlton
Banbury, Oxon
OX17 3DT
Tel: 01295 814417
Fax: 01295 814410

client
Manor Oak Homes

project
Salph End, Bedford
Topographical Survey

Drawn	Date	Checked	Date	Scale
JG	May 2017			1:500 @A0

drawing no.
1215/2272/1



MASURV
your surveying solution

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Manor Oak Homes

project
Salph End, Bedford
Topographical Survey

Drawn	Date	Checked	Date	Scale
JG	May 2017			1:500 @A0

drawing no.
1215/2272/2

507250E
507300E
507350E
507400E

253250N
253200N
253150N
253100N
253050N
253000N
252950N
252900N

Notes

Grid and levels have been aligned to O.S. National Grid OSGB36(15).

Suffix	Revision	Date	Initial

MSURV your surveying solution

Rainsborough Barns
Charlton
Banbury, Oxon
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Fax: 01295 814410

client
Manor Oak Homes

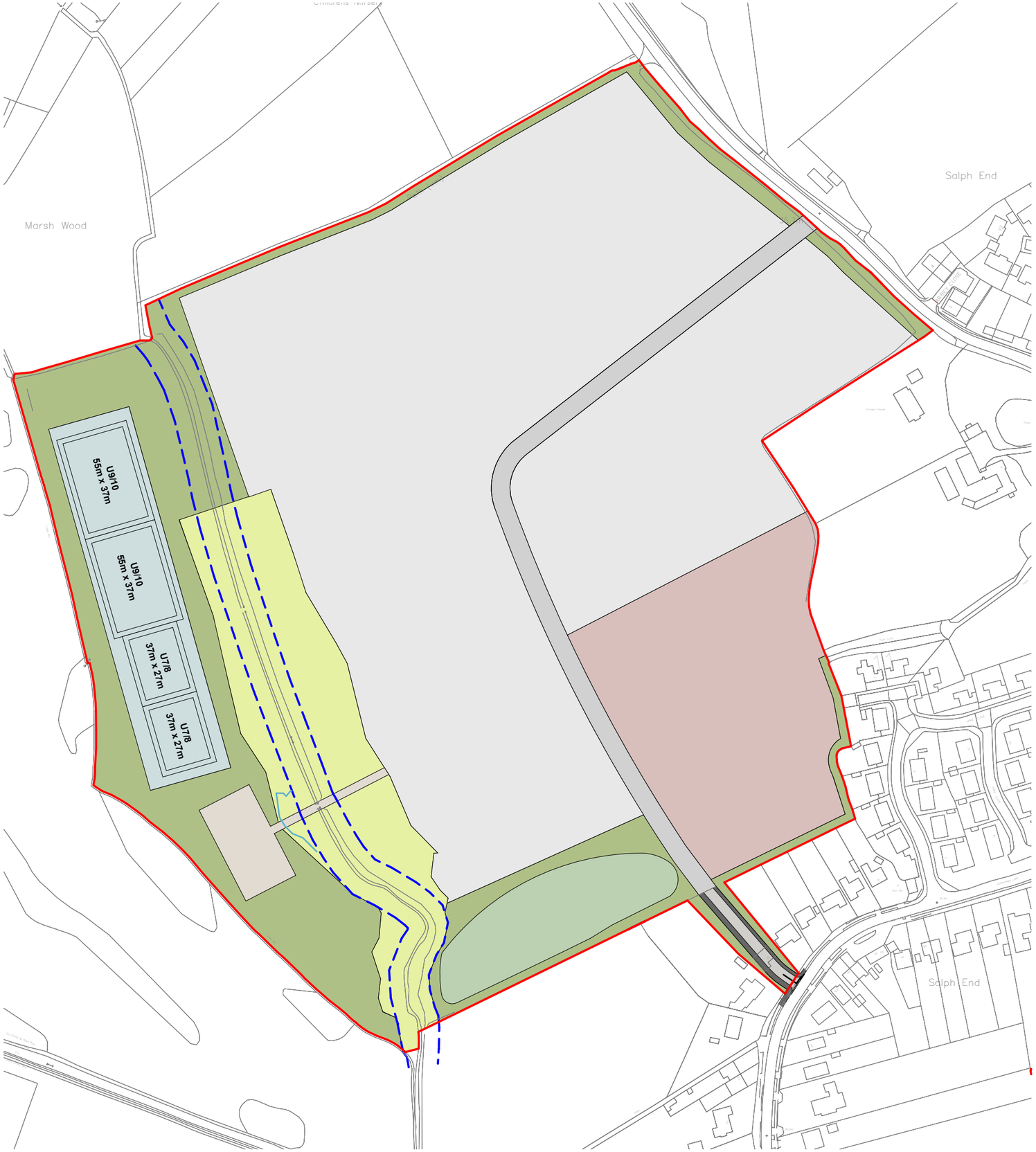
project
Salph End, Bedford
Topographical Survey

Drawn	Date	Checked	Date	Scale
JG	May 2017			1:500 @A1

drawing no.
1215/2272/3

Appendix C

Parameters Plan
RG+P drawing no. 40986 013C



Site area 19.57ha

Open Space 3.17ha

Developable area 10.75ha
Includes primary route

School area 2.1ha

Attenuation basins 0.59ha
Area excluded from open space calculation

Flood zone 1.88ha

Sports pitches 1.08ha

Primary route

Indicative vehicular access and parking for sports pitches.

Easement

Revision:		Date:	
A	Plan updated with revised distribution of POS and relocation of site access.	12.08.19	HW/DW
B	Developable, open space and attenuation areas updated.	20.08.19	HW/DW
C	Attenuation basin amended. Site area added to key.	22.08.19	HW/DW

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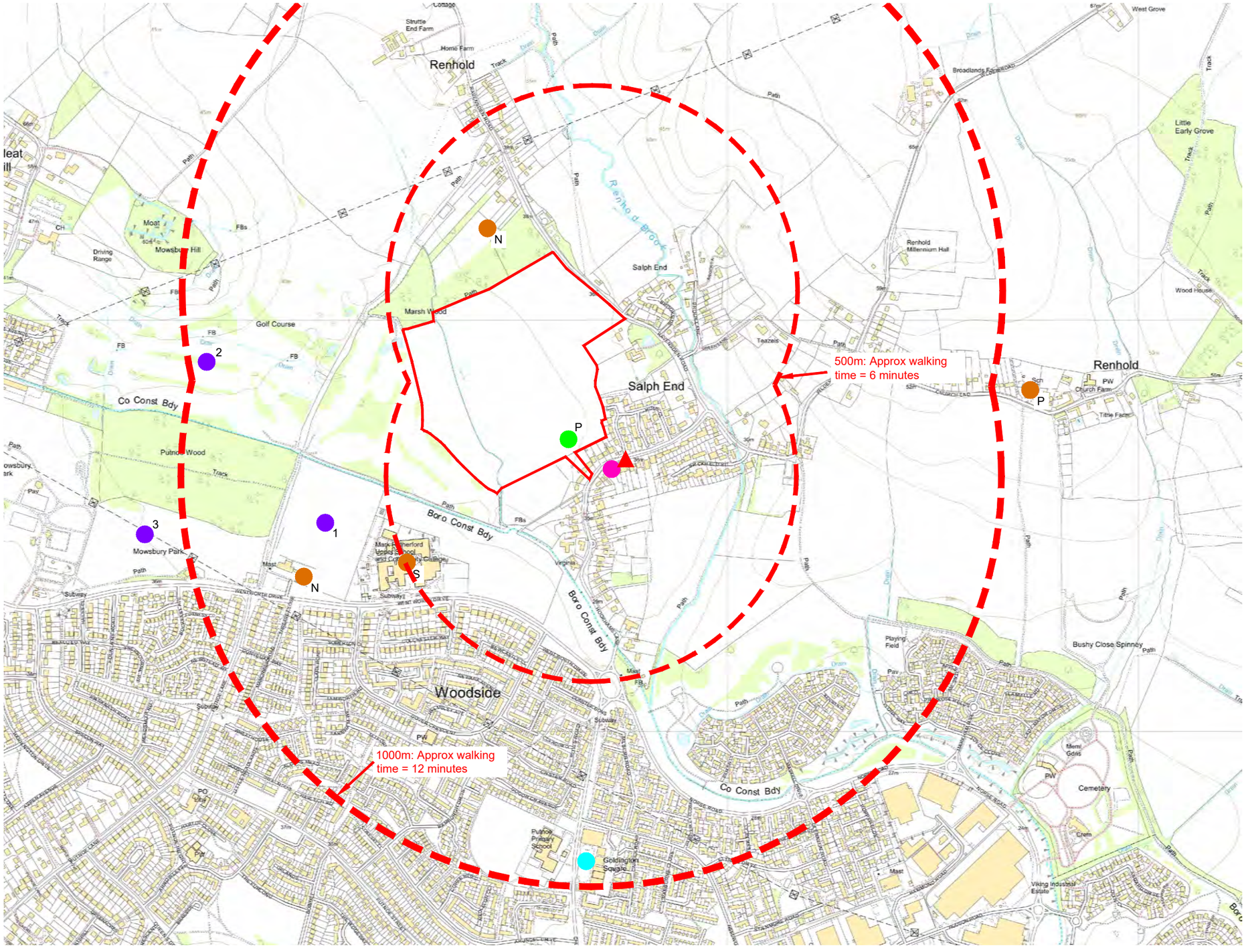
Project:	A development at Salph End, Bedford
Client:	Manor Oak Homes
Sheet title:	Parameters Plan
Ref:	40986 013C
Scale:	1:2500 @ A3
Date:	25.07.19
Drawn:	HW
Checked:	DW

Appendix D

Facilities Plan and Walking Distances
MAC drawing no. 248-TA02



NORTH

Notes:

1. Walking distances based on a walking speed of 1.4 m/s from 'Providing For Journeys On Foot'.
2. Actual walking distances may vary from radial distances shown.
3. Nearest of each facility / service shown only.

Key

- Site Boundary
- Doctors Surgery / Dentist / Pharmacy / Supermarket
- Schools - Existing
  Nursery (N) / Primary (P) / Secondary (S)
- Proposed Primary School
- Library
- Post Office / Convenience Store
- Shops — 1 - Convenience Store / Petrol Station; 2 - Supermarket
- Leisure Facilities
  1. Rugby club
  2. Golf course
  3. Recreation ground
- Bus Stops

Walking Times

- 0-420m - 0 to 5 minutes walking time
- 420-840m - 5 to 10minutes walking time
- 840-1260m - 10 to 15minutes walking time

T: 01604 340544 Northampton Office
E: info@mac-ltd.co.uk W: mac-ltd.co.uk
Martin Andrews Consulting Ltd

- Transport Assessments
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes		Project: Land between Hookhams Lane and Ravensden Rd Salph End, Beds	
Title: Facilities Plan and Walking Distances			Date: 28/08/19
			Drw: MJA
			Chk: MJA
Drawing No: 248-TA02	Revision: -		Scale: 1:10,000
			Size: A3

Appendix E

Bus timetables and routes

Bedford Town Map

Places of Interest

- BH Bedford Borough Hall
- CS Customer Services Centre
- HC Harpur Centre
- L Bedford Library
- P Bedford Prison
- SS St Paul's Square (for Bedford Market)
- CE Bedford Corn Exchange
- H Bedford Hospital
- HW Howard Centre
- M The Higgins Museum
- PS Police Station
- TI Travel & Tourism Centre (Bus Station)

Issue date: July 2019

27 Bedford - Cople - Willington - Great Barford - Renhold - Bedford

Grant Palmer

Timetable valid from 01/01/2019 until further notice

Direction of stops: where shown (eg: W-bound) this is the compass direction towards which the bus is pointing when it stops

Mondays to Fridays

Service Restrictions	NSch	Sch	SchTu	Sch NTu	NSch			Sch	NSch
Notes				TUX					
Bedford, Bus Station (Stop Q)	—	—	0815	0815	0820	1045	1315	1425	1425
Fenlake, o/s Tesco Cardington	—	—	0823	0823	0828	1053	1323	1433	1433
Cardington, o/s The Kings Arms	—	0725	0827	0827	0832	1057	1327	1437	1437
Cople, o/s All Saints Church	—	0728	0830	0830	0835	1100	1330	1440	1440
Willington, adj The Crown	—	0735	0835	0835	0840	1105	1335	1445	1445
Great Barford, opp All Saints Church	—	0741	0841	0841	0846	1111	1341	1451	1451
Great Barford, o/s Alban Middle School	—	0743	0843	0843	0848	1113	1343	1453	1453
Renhold, opp The Green	0757	0754	0849	0849	0854	1119	1349	1459	1459
Salph End, o/s 34 Hookhams Lane	0804	0801	0856	0901	0901	1126	1356	—	1506
Brickhill, opp Mowsbury Park Pavillion	|	0808	0900	|	|	|	|	—	|
Goldington, opp Hudson Road	0808	0813	0905	0905	0905	1130	1400	—	1510
Goldington, opp Goldington Green	0812	0817	0909	0909	0909	1134	1404	—	1514
Bedford, Bus Station (Stop Q)	0821	0830	0918	0918	0918	1143	1413	—	1523

Saturdays

Bedford, Bus Station (Stop Q)	0820	1045	1315	1425
Fenlake, o/s Tesco Cardington	0828	1053	1323	1433
Cardington, o/s The Kings Arms	0832	1057	1327	1437
Cople, o/s All Saints Church	0835	1100	1330	1440
Willington, adj The Crown	0840	1105	1335	1445
Great Barford, opp All Saints Church	0846	1111	1341	1451
Great Barford, o/s Alban Middle School	0848	1113	1343	1453
Renhold, opp The Green	0854	1119	1349	1459
Salph End, o/s 34 Hookhams Lane	0901	1126	1356	1506
Goldington, opp Hudson Road	0905	1130	1400	1510
Goldington, opp Goldington Green	0909	1134	1404	1514
Bedford, Bus Station (Stop Q)	0918	1143	1413	1523

Sundays

no service

Late Summer Bank Holiday (Monday 26th Aug)

no service

Service Restrictions:
NSch - School holidays only: 11 Feb-15 Feb, 8 Apr-22 Apr, 27 May-3 Jun, 22 Jul-3 Sep
NTu - Not Tuesdays
Sch - School days only: 3 Jan-8 Feb, 18 Feb-5 Apr, 23 Apr-24 May, 4 Jun-19 Jul
Tu - Tuesdays only

Notes: **TUX** - Not Tuesdays

27 Bedford - Renhold - Great Barford - Willington - Cople - Bedford

Grant Palmer

Timetable valid from 01/01/2019 until further notice

Direction of stops: where shown (eg: W-bound) this is the compass direction towards which the bus is pointing when it stops

Mondays to Fridays

Service Restrictions			Sch	NSch	
Bedford, Bus Station (Stop Q)	0940	1210	—	1545	1720
Goldington, adj Goldington Green	0948	1218	—	1553	1728
Goldington, adj Hudson Road	0952	1222	—	1557	1732
Brickhill, opp Mowsbury Park Pavillion	|	|	1515	|	|
Salph End, o/s 2 Hookhams Lane	0956	1226	1518	1601	1736
Renhold, adj The Green	1003	1233	1526	1608	1743
Great Barford, opp Alban Middle School	1009	1239	1532	1614	1749
Great Barford, o/s All Saints Church	1011	1241	1534	1616	1751
Willington, opp Willington Lower School	1017	1247	1540	1622	1757
Cople, opp All Saints Church	1021	1251	1544	1626	1801
Cardington, opp The Kings Arms	1023	1253	1546	1628	1803
Fenlake, opp Tesco Cardington	1028	1258	1551	1633	1808
Bedford, Bus Station (Stop Q)	1037	1307	1600	1642	1815

Saturdays

Bedford, Bus Station (Stop Q)	0940	1210	1545
Goldington, adj Goldington Green	0948	1218	1553
Goldington, adj Hudson Road	0952	1222	1557
Salph End, o/s 2 Hookhams Lane	0956	1226	1601
Renhold, adj The Green	1003	1233	1608
Great Barford, opp Alban Middle School	1009	1239	1614
Great Barford, o/s All Saints Church	1011	1241	1616
Willington, opp Willington Lower School	1017	1247	1622
Cople, opp All Saints Church	1021	1251	1626
Cardington, opp The Kings Arms	1023	1253	1628
Fenlake, opp Tesco Cardington	1028	1258	1633
Bedford, Bus Station (Stop Q)	1037	1307	1640

Sundays

no service

Late Summer Bank Holiday (Monday 26th Aug)

no service

Service Restrictions: **NSch** - School holidays only: 11 Feb-15 Feb, 8 Apr-22 Apr, 27 May-3 Jun, 22 Jul-3 Sep
Sch - School days only: 3 Jan-8 Feb, 18 Feb-5 Apr, 23 Apr-24 May, 4 Jun-19 Jul

27 Bedford - Cople - Willington - Great Barford - Renhold - Bedford

Grant Palmer

For times of the next departures from a particular stop you can use **traveline-txt** - by sending the SMS code to **84268**. Add the service number after the code if you just want a specific service - eg: **buctdgtd 60**. The return message from **traveline-txt** will show the next three departures, and it currently costs 25p plus any message sending charge. Departure times will be real-time predictions where available, or scheduled departure times if not.

You can also get the same information by using the SMS code at www.nextbuses.mobi (only normal browsing charges apply) or through several iPhone or Android apps that offer access to **NextBuses**.

NOTE: SMS codes are different in each direction. Make sure you choose the right direction from these lists.

SMS Code	Stop Name	Street	ATCO Code
bfsdamwt	Bedford, Bus Station (Stop Q)		020035577
bfsajwjg	Bedford, St Paul's Square (Stop P2)	St Paul's Square	020035023
bfsapdpg	Bedford, St John's Street (S-bound)	St John's Street	020035770
bfsapdpd	Bedford, opp St Johns Centre	Rope Walk	020035763
bfsapmjp	Bedford, adj Duckmill Lane	Cardington Road	020035821
bfsapdmw	Bedford, o/s Bedford Girls School	Cardington Road	020035761
bfsapdmj	Fenlake, o/s Tesco Cardington	Cardington Road	020035758
bfsapdmg	Fenlake, opp Cardington Road	Cardington Road	020035757
bfsdapap	Fenlake, opp The Fenlake Anchor	Cardington Road	020035581
bfsajpwp	Cardington, o/s The Vicarage	Bedford Road	020033013
bfsajpwj	Cardington, adj St Marys Church	The Green	020033011
bfsajpwg	Cardington, o/s The Kings Arms	The Green	020033009
bfsajpwa	Cardington, o/s Cottage Farm Nursery	Cople Road	020033007
bfsajptp	Cardington, opp Chapel Lane	Cople Road	020033005
bfsajptj	Cople, o/s Grange Farm	Grange Lane	020033003
bfsajptg	Cople, o/s All Saints Church	Grange Lane	020033000
bfsajtag	Cople, adj Rye Crescent	Willington Road	020033021
bfsawtwm	Willington, opp Cople Turn	Bedford Road	020033023
bfsajtap	Willington, adj Churchill Place	Church Road	020033025
bfsdamdj	Willington, adj The Crown	Station Road	020033014
bfsajtat	Willington, Crossroads (S-bound)	Station Road	020033026
bfsajtdj	Great Barford, opp All Saints Church	High Street	020033090
bfsajtdm	Great Barford, opp College Farm	High Street	020033092
bfsdamdp	Great Barford, o/s Alban Middle School	Silver Street	020033018
bfsajtdw	Great Barford, adj The Cross	Bedford Road	020033100
bfsdajtg	Renhold, Green End (N-bound)	Green End	020035526
bfsdajtj	Renhold, opp The Green	Green End	020035527
bfsamtdp	Renhold, adj Becher Close	Green End	020035316
bfsamtdm	Renhold, opp Three Horseshoes	Top End	020035313
bfsamtdj	Renhold, opp Wood Lane	Top End	020035312
bfsdadtj	Renhold, opp All Saints' Church	Church End	020035310
bfsdadtd	Renhold, o/s 8 Church End	Church End	020035307
bfsdadta	Salph End, o/s 14 Hookhams Lane	Hookhams Lane	020035306
bfsdajwa	Salph End, adj Brookside	Ravensden Road	020035531
bfsdajwj	Salph End, Ravensden Road (N-bound)	Ravensden Road	020035534
bfsawpgw	Ravensden, adj Butler Street	Thurleigh Road	020032005
bfsawpgp	Ravensden, Wood End (N-bound)	Thurleigh Road	020032003
bfsajpjp	Riseley, o/s The Old White Horse	High Street	020031041
bfsajpjm	Riseley, opp The Five Bells	High Street	020031039
bfsawpdm	Riseley, opp Keysoe Road	High Street	020031068
bfsdajtp	Renhold, opp Village Hall	Wilden Road	020035529
bfsdajtw	Wilden, opp High Farm	Renhold Road	020035530
bfsawpmt	Wilden, Village Centre (N-bound)	High Street	020032019
bfsawpmj	Wilden, Village Hall (W-bound)	High Street	020032017
bfsawpmd	Ravensden, opp Redbrick Cottages	Ravensden Road	020032015
bfsawpjw	Ravensden, o/s Crow Hill Farm	Ravensden Road	020032013
bfsawpjp	Ravensden, adj Vicarage Close	Church End	020032011
bfsawpjg	Ravensden, o/s Horse and Jockey	Church End	020032009
bfsajpmj	Ravensden, adj Oldways Road	Bedford Road	020032006
bfsdamwj	Ravensden, o/s Wayside Farm Park	Bedford Road	020032090
bfsdamgj	Ravensden, Cleat Hill (S-bound)	Cleat Hill	020032053
bfsamdwd	Brickhill, opp Mowsbury Car Park	Kimbolton Road	020035143
bfsamdwj	Brickhill, adj Parkstone Close	Wentworth Drive	020035145
bfsdampg	Woodside, opp Hailes Close	Wentworth Drive	020035560
bfsamdwp	Brickhill, adj Mowsbury Park Pavillion	Wentworth Drive	020035147
bfsdajwg	Salph End, Ravensden Road (S-bound)	Ravensden Road	020035533
bfsamtda	Salph End, o/s 34 Hookhams Lane	Hookhams Lane	020035303
bfsaptpm	Brickhill, opp Mowsbury Park Pavillion	Wentworth Drive	020035488
bfsaptdw	Woodside, opp Hamsterley Close	Norse Road	020035337
bfsaptdp	Woodside, opp Poppyfields	Norse Road	020035335
bfsamjaj	Woodside, o/s Norse Road Cemetery	Norse Road	020035200
bfsaptdm	Goldington, opp Hudson Road	Norse Road	020035334
bfsampjd	Goldington, opp Caxton Road	Norse Road	020035269
bfsampgt	Goldington, opp Elms Farm Industrial Estate	Goldington Road	020035266
bfsampgm	Goldington, adj Waitrose	Goldington Road	020035264
bfsampga	Goldington, o/s The Wayfarer Hotel	Goldington Road	020035261
bfsampdp	Goldington, opp Goldington Green	Goldington Road	020035258
bfsamjmj	Goldington, opp Harvey Road	Goldington Road	020035222
bfsamjmw	Bedford, adj Dean Street	Goldington Green	020035225
bfsamjpd	Bedford, opp Fox and Hounds	Goldington Road	020035227
bfsamjpj	Bedford, opp Goldington Avenue	Goldington Road	020035229
bfsamadw	Bedford, St Peter's Street (W-bound)	St Peter's Street	020035057

27 Bedford - Renhold - Great Barford - Willington - Cople - Bedford

Grant Palmer

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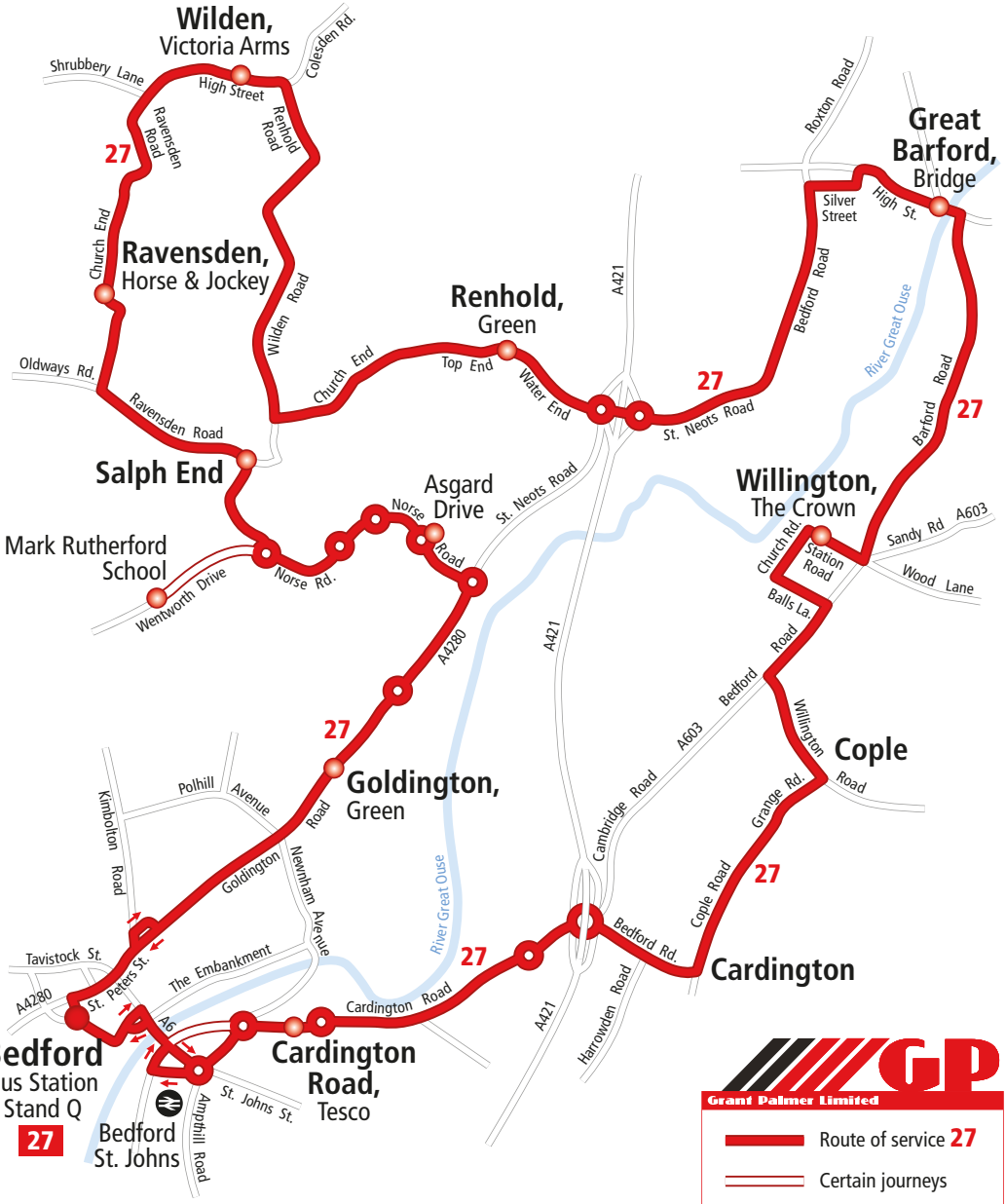
NOTE: SMS codes are different in each direction. Make sure you choose the right direction from these lists.

SMS Code	Stop Name	Street	ATCO Code
bfsdamwt	Bedford, Bus Station (Stop Q)		020035577
bfsamaga	Bedford, St Peter's Street (E-bound)	St Peter's Street	020035058
bfsamjpg	Bedford, adj Goldington Avenue	Goldington Road	020035228
bfsamjpa	Bedford, o/s Fox and Hounds	Goldington Road	020035226
bfsamjmt	Bedford, opp Dean Street	Goldington Green	020035224
bfsamjmp	Goldington, adj Harvey Road	Goldington Green	020035223
bfsampdw	Goldington, adj Goldington Green	Goldington Road	020035260
bfsampgj	Goldington, opp Waitrose	Goldington Road	020035263
bfsampgp	Goldington, adj Elms Farm Industrial Estate	Goldington Road	020035265
bfsampja	Goldington, adj Caxton Road	Norse Road	020035268
bfsampgw	Goldington, adj Hudson Road	Norse Road	020035267
bfsaptdt	Woodside, adj Poppyfields	Norse Road	020035336
bfsaptpm	Brickhill, opp Mowsbury Park Pavillion	Wentworth Drive	020035488
bfsdadpt	Salph End, o/s 2 Hookhams Lane	Hookhams Lane	020035304
bfsdajwa	Salph End, adj Brookside	Ravensden Road	020035531
bfsdajwj	Salph End, Ravensden Road (N-bound)	Ravensden Road	020035534
bfsawpjd	Ravensden, opp Horse and Jockey	Church End	020032008
bfsawpm	Ravensden, opp Vicarage Close	Church End	020032010
bfsawpjt	Ravensden, opp Crow Hill Farm	Ravensden Road	020032012
bfsawpma	Ravensden, o/s Redbrick Cottages	Ravensden Road	020032014
bfsawpmg	Wilden, Village Hall (E-bound)	High Street	020032016
bfsawpmp	Wilden, Village Centre (S-bound)	High Street	020032018
bfsamtdg	Renhold, opp 8 Church End	Church End	020035308
bfsdadtg	Renhold, o/s All Saints' Church	Church End	020035309
bfsdadtm	Renhold, adj Wood Lane	Top End	020035311
bfsdadtp	Renhold, o/s Three Horseshoes	Top End	020035314
bfsdadtw	Renhold, opp Becher Close	Green End	020035315
bfsdajtm	Renhold, adj The Green	Green End Lane	020035528
bfsajtga	Great Barford, opp The Cross	Bedford Road	020033101
bfsdamdt	Great Barford, opp Alban Middle School	Silver Street	020033019
bfsajtdp	Great Barford, o/s College Farm	High Street	020033093
bfsawtwt	Great Barford, o/s All Saints Church	High Street	020033091
bfsawtwp	Willington, Crossroads (N-bound)	Station Road	020033027
bfsdamdm	Willington, opp Willington Lower School	Church Road	020033015
bfsajtam	Willington, opp Churchill Place	Church Road	020033024
bfsajtaj	Willington, adj Cople Turn	Bedford Road	020033022
bfsajtad	Cople, opp All Saints Road	Willington Road	020033020
bfsapwgm	Cople, opp All Saints Church	Grange Lane	020033900
bfsawtwd	Cople, opp Grange Farm	Grange Lane	020033002
bfsajptm	Cardington, adj Chapel Lane	Cople Road	020033004
bfsajptw	Cardington, opp Cottage Farm Nursery	Cople Road	020033006
bfsajpwd	Cardington, opp The Kings Arms	The Green	020033008
bfsawtwg	Cardington, opp St Marys Church	The Green	020033010
bfsajpwm	Cardington, opp The Vicarage	Bedford Road	020033012
bfsapdmd	Fenlake, o/s The Fenlake Anchor	Cardington Road	020035756
bfsapdmp	Fenlake, opp Tesco Cardington	Cardington Road	020035759
bfsapwgp	Bedford, o/s St Johns Centre	Rope Walk	020035493
bfsapmjt	Cauldwell, opp Kingsway Link	Kingsway	020035822
bfsapmjm	Cauldwell, o/s Bedford College	Cauldwell Street	020035817
bfsdaptj	Bedford, opp Bedford Girls School	Cardington Road	020035827
bfsapdpa	Bedford, opp Duckmill Lane	Cardington Road	020035762
bfsajwjp	Bedford, St Paul's Square (Arrivals)	St Paul's Square	020035025
bfsajwmd	Bedford, o/s Pilgrims House	Horne Lane	020035029

27



Grant Palmer Limited

- Route of service 27
- Certain journeys
- 27 Route terminus
- Timing point
- Railway Station

Produced by FWT 9.3.16 www.fwt.co.uk

Stagecoach

5 Bedford Town Centre - Woodside - Elms Farm - Goldington Waitrose

Mondays to Fridays (except Public Holidays)

From 2nd June 2019

Bedford, Bus Station (I)	0531	0546	0601	0616	0631	0646	0658	0710	0722	0734
Bedford, St Paul's Square (P4)	0532	0547	0602	0617	0632	0647	0659	0711	0723	0735
Bedford, Honiton Way	0541	0556	0611	0626	0641	0656	0708	0720	0732	0744
Putnoe, opp. Roundmead	0545	0600	0615	0630	0645	0700	0712	0724	0736	0748
Woodside, opp. Milburn Road	0549	0604	0619	0634	0649	0704	0716	0728	0740	0752
Goldington, opp. Hudson Road	0554	0609	0624	0639	0654	0709	0721	0733	0745	0757
Goldington, Waitrose	0559	0614	0629	0644	0659	0714	0726	0738	0750	0802
Goldington, Hudson Road	0602	0617	0632	0647	0702	0717	0729	0741	0753	0805

Bedford, Bus Station (I)	0746	0758	Then at these mins past each hour	10	22	34	46	58	until	1410
Bedford, St Paul's Square (P4)	0747	0759		11	23	35	47	59		1411
Bedford, Honiton Way	0756	0808		20	32	44	56	08		1420
Putnoe, opp. Roundmead	0800	0812		24	36	48	00	12		1424
Woodside, opp. Milburn Road	0804	0816		28	40	52	04	16		1428
Goldington, opp. Hudson Road	0809	0821		33	45	57	09	21		1433
Goldington, Waitrose	0814	0826		38	50	02	14	26		1438
Goldington, Hudson Road	0817	0829		41	53	05	17	29		1441

Bedford, Bus Station (I)	1422	1434	1446	1458	1510	1522	1534	1546	1558	1615
Bedford, St Paul's Square (P4)	1423	1435	1447	1459	1511	1523	1535	1547	1559	1616
Bedford, Honiton Way	1432	1444	1456	1508	1520	1532	1544	1556	1608	1625
Putnoe, opp. Roundmead	1436	1448	1500	1512	1524	1536	1548	1600	1612	1629
Woodside, opp. Milburn Road	1440	1452	1504	1516	1528	1540	1552	1604	1616	1633
Goldington, opp. Hudson Road	1445	1457	1509	1521	1533	1545	1557	1609	1621	1638
Goldington, Waitrose	1450	1502	1514	1526	1538	1550	1602	1614	1626	1643
Goldington, Hudson Road	1453	1505	1517	1529	1541	1553	1605	1617	1629	1646

Bedford, Bus Station (I)	1627	1639	1651	1703	1715	1727	1739	1751	1803	1815
Bedford, St Paul's Square (P4)	1628	1640	1652	1704	1716	1728	1740	1752	1804	1816
Bedford, Honiton Way	1637	1649	1701	1713	1725	1737	1749	1801	1813	1825
Putnoe, opp. Roundmead	1641	1653	1705	1717	1729	1741	1753	1805	1817	1829
Woodside, opp. Milburn Road	1645	1657	1709	1721	1733	1745	1757	1809	1821	1833
Goldington, opp. Hudson Road	1650	1702	1714	1726	1738	1750	1802	1814	1826	1838
Goldington, Waitrose	1655	1707	1719	1731	1743	1755	1807	1819	1831	1843
Goldington, Hudson Road	1658	1710	1722	1734	1746	1758	1810	1822	1834	1846

Bedford, Bus Station (I)	1831	1901	1931	2001	2031	2131	2231
Bedford, St Paul's Square (P4)	1832	1902	1932	2002	2032	2132	2232
Bedford, Honiton Way	1838	1908	1938	2008	2038	2138	2238
Putnoe, opp. Roundmead	1842	1912	1942	2011	2041	2141	2241
Woodside, opp. Milburn Road	1846	1916	1946	2015	2045	2145	2245
Goldington, opp. Hudson Road	1851	1921	1951	2020	2050	2150	2250
Goldington, Waitrose	1856	1926	1956	2025	2055	2155	2255
Goldington, Hudson Road	1859	1929	1959	2028	2058	2158	2258

Stagecoach

5 Bedford Town Centre - Woodside - Elms Farm - Goldington Waitrose

Saturdays

From 2nd June 2019

Bedford, Bus Station (I)	0658	0728	0758	0828	0858	0910	0922	0934	0946	0958
Bedford, St Paul's Square (P4)	0659	0729	0759	0829	0859	0911	0923	0935	0947	0959
Bedford, Honiton Way	0708	0738	0808	0838	0908	0920	0932	0944	0956	1008
Putnoe, opp. Roundmead	0712	0742	0812	0842	0912	0924	0936	0948	1000	1012
Woodside, opp. Milburn Road	0716	0746	0816	0846	0916	0928	0940	0952	1004	1016
Goldington, opp. Hudson Road	0721	0751	0821	0851	0921	0933	0945	0957	1009	1021
Goldington, Waitrose	0726	0756	0826	0856	0926	0938	0950	1002	1014	1026
Goldington, Hudson Road	0729	0759	0829	0859	0929	0941	0953	1005	1017	1029

Bedford, Bus Station (I)	**Then at these mins past each hour**	10	22	34	46	58	**until**	1610	1622	1634
Bedford, St Paul's Square (P4)		11	23	35	47	59		1611	1623	1635
Bedford, Honiton Way		20	32	44	56	08		1620	1632	1644
Putnoe, opp. Roundmead		24	36	48	00	12		1624	1636	1648
Woodside, opp. Milburn Road		28	40	52	04	16		1628	1640	1652
Goldington, opp. Hudson Road		33	45	57	09	21		1633	1645	1657
Goldington, Waitrose		38	50	02	14	26		1638	1650	1702
Goldington, Hudson Road		41	53	05	17	29		1641	1653	1705

Bedford, Bus Station (I)	1646	1658	1710	1722	1734	1746	1758	1810	1831	1901
Bedford, St Paul's Square (P4)	1647	1659	1711	1723	1735	1747	1759	1811	1832	1902
Bedford, Honiton Way	1656	1708	1720	1732	1744	1756	1808	1820	1838	1908
Putnoe, opp. Roundmead	1700	1712	1724	1736	1748	1800	1812	1824	1842	1912
Woodside, opp. Milburn Road	1704	1716	1728	1740	1752	1804	1816	1828	1846	1916
Goldington, opp. Hudson Road	1709	1721	1733	1745	1757	1809	1821	1833	1851	1921
Goldington, Waitrose	1714	1726	1738	1750	1802	1814	1826	1838	1856	1926
Goldington, Hudson Road	1717	1729	1741	1753	1805	1817	1829	1841	1859	1929

Bedford, Bus Station (I)	1931	2001	2031	2131	2231
Bedford, St Paul's Square (P4)	1932	2002	2032	2132	2232
Bedford, Honiton Way	1938	2008	2038	2138	2238
Putnoe, opp. Roundmead	1942	2011	2041	2141	2241
Woodside, opp. Milburn Road	1946	2015	2045	2145	2245
Goldington, opp. Hudson Road	1951	2020	2050	2150	2250
Goldington, Waitrose	1956	2025	2055	2155	2255
Goldington, Hudson Road	1959	2028	2058	2158	2258

Stagecoach

5 Bedford Town Centre - Woodside - Elms Farm - Goldington Waitrose

Sundays and Public Holidays

From 2nd June 2019

Bedford, Bus Station (I)	0933	1033	1133	1233	1333	1433	1533	1633
Bedford, St Paul's Square (P4)	0934	1034	1134	1234	1334	1434	1534	1634
Bedford, Honiton Way	0940	1040	1140	1240	1340	1440	1540	1640
Putnoe, opp. Roundmead	0944	1044	1144	1244	1344	1444	1544	1644
Woodside, opp. Milburn Road	0948	1048	1148	1248	1348	1448	1548	1648
Goldington, opp. Hudson Road	0953	1053	1153	1253	1353	1453	1553	1653
Goldington, Waitrose	0958	1058	1158	1258	1358	1458	1558	1658
Goldington, Hudson Road	1001	1101	1201	1301	1401	1501	1601	1701

Stagecoach

5 Goldington Waitrose - Elms Farm - Woodside - Bedford Town Centre

Mondays to Fridays (except Public Holidays)

From 2nd June 2019

Goldington, Waitrose	0559	0614	0629	0644	0659	0714	0726	0738	0750	0802
Goldington, Hudson Road	0603	0618	0633	0648	0703	0718	0730	0742	0754	0806
Woodside, Milburn Road	0609	0624	0639	0654	0709	0724	0736	0748	0800	0812
Putnoe, Roundmead	0616	0631	0646	0701	0716	0731	0743	0755	0807	0819
Bedford, opp. Honiton Way	0619	0634	0649	0704	0719	0734	0746	0758	0810	0822
Bedford, St Peter's Street	0625	0640	0655	0710	0725	0740	0752	0804	0816	0828
Bedford, Bus Station	0628	0643	0658	0713	0728	0743	0755	0807	0819	0831

Goldington, Waitrose	0814	0826	0838	0850	Then at these mins past each hour	02	14	26	38	50
Goldington, Hudson Road	0818	0830	0842	0854		06	18	30	42	54
Woodside, Milburn Road	0824	0836	0848	0900		12	24	36	48	00
Putnoe, Roundmead	0831	0843	0855	0907		19	31	43	55	07
Bedford, opp. Honiton Way	0834	0846	0858	0910		22	34	46	58	10
Bedford, St Peter's Street	0840	0852	0904	0916		28	40	52	04	16
Bedford, Bus Station	0843	0855	0907	0919		31	43	55	07	19

Goldington, Waitrose	until	1602	1614	1626	1643	1655	1707	1719	1731	1743
Goldington, Hudson Road		1606	1618	1630	1647	1659	1711	1723	1735	1747
Woodside, Milburn Road		1612	1624	1636	1653	1705	1717	1729	1741	1753
Putnoe, Roundmead		1619	1631	1643	1700	1712	1724	1736	1748	1800
Bedford, opp. Honiton Way		1622	1634	1646	1703	1715	1727	1739	1751	1803
Bedford, St Peter's Street		1628	1640	1652	1709	1721	1733	1745	1757	1809
Bedford, Bus Station		1631	1643	1655	1712	1724	1736	1748	1800	1812

Goldington, Waitrose	1755	1807	1819	1843	1856	1926	1956	2025	2055	2155
Goldington, Hudson Road	1759	1811	1823	1847	1900	1930	2000	2030	2100	2200
Woodside, Milburn Road	1805	1817	1829	1853	1906	1936	2006	2036	2106	2206
Putnoe, Roundmead	1812	1824	1836	1900	1913	1943	2013	2043	2113	2213
Bedford, opp. Honiton Way	1815	1827	1839	1903	1916	1946	2016	2046	2116	2216
Bedford, St Peter's Street	1821	1833	1845	1909	1922	1952	2022	2052	2122	2222
Bedford, Bus Station	1824	1836	1848	1912	1925	1955	2025	2055	2125	2225

Stagecoach

5 Goldington Waitrose - Elms Farm - Woodside - Bedford Town Centre

Saturdays

From 2nd June 2019

Goldington, Waitrose	0726	0756	0826	0856	0926	0938	0950	1002	1014	1026
Goldington, Hudson Road	0730	0800	0830	0900	0930	0942	0954	1006	1018	1030
Woodside, Milburn Road	0736	0806	0836	0906	0936	0948	1000	1012	1024	1036
Putnoe, Roundmead	0743	0813	0843	0913	0943	0955	1007	1019	1031	1043
Bedford, opp. Honiton Way	0746	0816	0846	0916	0946	0958	1010	1022	1034	1046
Bedford, St Peter's Street	0752	0822	0852	0922	0952	1004	1016	1028	1040	1052
Bedford, Bus Station	0755	0825	0855	0925	0955	1007	1019	1031	1043	1055

Goldington, Waitrose	1038	1050	Then at these mins past each hour	02	14	26	38	50	until	1602
Goldington, Hudson Road	1042	1054		06	18	30	42	54		1606
Woodside, Milburn Road	1048	1100		12	24	36	48	00		1612
Putnoe, Roundmead	1055	1107		19	31	43	55	07		1619
Bedford, opp. Honiton Way	1058	1110		22	34	46	58	10		1622
Bedford, St Peter's Street	1104	1116		28	40	52	04	16		1628
Bedford, Bus Station	1107	1119		31	43	55	07	19		1631

Goldington, Waitrose	1614	1626	1638	1650	1702	1714	1726	1738	1750	1802
Goldington, Hudson Road	1618	1630	1642	1654	1706	1718	1730	1742	1754	1806
Woodside, Milburn Road	1624	1636	1648	1700	1712	1724	1736	1748	1800	1812
Putnoe, Roundmead	1631	1643	1655	1707	1719	1731	1743	1755	1807	1819
Bedford, opp. Honiton Way	1634	1646	1658	1710	1722	1734	1746	1758	1810	1822
Bedford, St Peter's Street	1640	1652	1704	1716	1728	1740	1752	1804	1816	1828
Bedford, Bus Station	1643	1655	1707	1719	1731	1743	1755	1807	1819	1831

Goldington, Waitrose	1814	1838	1856	1926	1956	2025	2055	2155
Goldington, Hudson Road	1818	1845	1900	1930	2000	2030	2100	2200
Woodside, Milburn Road	1824	1851	1906	1936	2006	2036	2106	2206
Putnoe, Roundmead	1831	1858	1913	1943	2013	2043	2113	2213
Bedford, opp. Honiton Way	1834	1901	1916	1946	2016	2046	2116	2216
Bedford, St Peter's Street	1840	1907	1922	1952	2022	2052	2122	2222
Bedford, Bus Station	1843	1910	1925	1955	2025	2055	2125	2225

Stagecoach

5 Goldington Waitrose - Elms Farm - Woodside - Bedford Town Centre

Sundays and Public Holidays

From 2nd June 2019

Goldington, Waitrose	0958	1058	1158	1258	1358	1458	1558	1658
Goldington, Hudson Road	1002	1102	1202	1302	1402	1502	1602	1702
Woodside, Milburn Road	1008	1108	1208	1308	1408	1508	1608	1708
Putnoe, Roundmead	1015	1115	1215	1315	1415	1515	1615	1715
Bedford, opp. Honiton Way	1018	1118	1218	1318	1418	1518	1618	1718
Bedford, St Peter's Street	1024	1124	1224	1324	1424	1524	1624	1724
Bedford, Bus Station	1027	1127	1227	1327	1427	1527	1627	1727

7 Bedford Town Centre - Putnoe - Woodside

Mondays to Saturdays (except Public Holidays)

From 24th June 2019

Notes:	MF	MF	MF				Then at these mins past each hour			until
Bedford, Bus Station (T)	0605	0635	0705	0735	0805	0835		05	35	
Bedford, St Paul's Square (P4)	0606	0636	0706	0736	0806	0836		06	36	
Bedford, Kimbolton Road, opp. Ellis Rd	0614	0644	0714	0744	0814	0844		14	44	
Putnoe, Poplar Avenue	0616	0646	0716	0746	0816	0846		16	46	
Woodside, Bewcastle Close	0622	0652	0722	0752	0822	0852		22	52	
Woodside, o/s Woodside Middle School	0627	0657	0727	0757	0827	0857		27	57	

Bedford, Bus Station (T)	1705	1735	1805	1835	1905	1935	2030	2130	2230
Bedford, St Paul's Square (P4)	1706	1736	1806	1836	1906	1936	2031	2131	2231
Bedford, Kimbolton Road, opp. Ellis Rd	1714	1744	1814	1844	1914	1944	2038	2138	2238
Putnoe, Poplar Avenue	1716	1746	1816	1846	1916	1946	2040	2140	2240
Woodside, Bewcastle Close	1722	1752	1822	1852	1922	1952	2046	2146	2246
Woodside, o/s Woodside Middle School	1727	1757	1827	1857	1927	1957	2050	2150	2250

Notes:
MF Mondays to Fridays only.

Sundays and Public Holidays

From 24th June 2019

Bedford, Bus Station (T)	0912	1012	1112	1212	1312	1412	1512	1612	1712
Bedford, St Paul's Square (P4)	0913	1013	1113	1213	1313	1413	1513	1613	1713
Bedford, Kimbolton Road, opp. Ellis Rd	0920	1020	1120	1220	1320	1420	1520	1620	1720
Putnoe, Poplar Avenue	0923	1023	1123	1223	1323	1423	1523	1623	1723
Woodside, Bewcastle Close	0930	1030	1130	1230	1330	1430	1530	1630	1730
Woodside, o/s Woodside Middle School	0932	1032	1132	1232	1332	1432	1532	1632	1732

7 Woodside - Putnoe - Bedford Town Centre

Mondays to Saturdays (except Public Holidays)

From 24th June 2019

Notes:	MF	MF	MF			Then at these mins past each hour			until	
Woodside, o/s Woodside Middle School	0631	0701	0731	0801	0831		01	31		1701
Woodside, opp. Bewcastle Close	0634	0704	0734	0804	0834		04	34		1704
Putnoe, opp. Poplar Avenue	0643	0713	0743	0813	0843		13	43		1713
Bedford, Kimbolton Road, Ellis Road	0645	0715	0745	0815	0845		15	45		1715
Bedford, St Peter's Street	0651	0721	0751	0821	0851		21	51		1721
Bedford, Bus Station	0654	0724	0754	0824	0854		24	54		1724

Woodside, o/s Woodside Middle School	1731	1801	1831	1901	1931	2001	2050	2150	2250
Woodside, opp. Bewcastle Close	1734	1804	1834	1904	1934	2004	2053	2153	2253
Putnoe, opp. Poplar Avenue	1743	1813	1843	1913	1943	2013	2100	2200	2300
Bedford, Kimbolton Road, Ellis Road	1745	1815	1845	1915	1945	2015	2102	2202	2302
Bedford, St Peter's Street	1751	1821	1851	1921	1951	2021	2108	2208	2308
Bedford, Bus Station	1754	1824	1854	1924	1954	2024	2111	2211	2311

Notes:
MF Mondays to Fridays only.

Sundays and Public Holidays

From 24th June 2019

Woodside, o/s Woodside Middle School	0935	1035	1135	1235	1335	1435	1535	1635	1735
Woodside, opp. Bewcastle Close	0937	1037	1137	1237	1337	1437	1537	1637	1737
Putnoe, opp. Poplar Avenue	0946	1046	1146	1246	1346	1446	1546	1646	1746
Bedford, Kimbolton Road, Ellis Road	0948	1048	1148	1248	1348	1448	1548	1648	1748
Bedford, St Peter's Street	0952	1052	1152	1252	1352	1452	1552	1652	1752
Bedford, Bus Station	0955	1055	1155	1255	1355	1455	1555	1655	1755

Appendix F

Accident Data


Path (um)
Tennis Court
Childrens Nursery
RAVENSDEN ROAD
Marsh Wood
Salph End
ABBEY CLOSE
BROOKSIDE
BROOK LANE
GREEN LANE
Teazels
Carlyon House
Pond
Track
HOME CLOSE
HOOKHAMS LANE
WILDEN ROAD
Renhold Brook
ESS
BRICKFIELD ROAD
Salph End
FB
Path (um)
Renhold Brook
Mark Rutherford Upper School and Community College
WENTWORTH DRIVE
COLCHESTER WAY
14BA 0537
BEWCASTLE CLOSE
DOVER CRESCENT
Nursing Home
3138 04
CHURCH LANE
6737 4
1122 48
Mast (Telecommunication)
Games Court
Playground
Path
NORSE ROAD
MILBURN ROAD
DUNSTER GARDENS
Lewes Gardens
HELMSLEY AVENUE
Raglan Court
Woodside Church
Tintagel Walk
Flint Way
CAWDOR CLOSE
POWIS ROAD
Eastnor Gardens
Chepstow Gardens
PENDENNIS ROAD
RAGLAN GREEN
CAISTER ROAD
GOODRICH AVENUE
WOODSIDE
Belvoir Walk
Flowerdale Walk
Knarsdale Walk
Kielder Path
Attadale Walk
LANGLANDS ROAD
PARISH CLOSE
SILVERBURN CL
Footbridge

Accident Date BETWEEN '19-May-2014' AND '18-May-2019'

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
1		E06000055	112248	Serious	Tuesday	13/09/2016	23:08	507760/252080		

Location: NORSE ROAD UNSPECIFIED ROAD OR LOCATION 10 METRES SOUTH OF JUNCTION WITH CHURCH LANE C40 **1st Rd:** U0 **2nd Rd:** C40

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Roundabout	R'dabt Give	Dark/lights lit	Fine	Dry	None	Refuge	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Lt hand bend	SE NW	On main	Junt appr	No	None	Offside	Tree	Female	70	N/R

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Female	70	Serious	No	Not ped	Not ped	Not ped	Other
2	1	Passenger	Male	76	Slight	Front	Not ped	Not ped	Not ped	Other

Description: V1 has been travelling along Norse Road heading towards roundabout on Church Lane. V1 has left the carriageway into a small woodland area, where it has collided with a tree.

User Information: **Contributory Factors:** 503V001B 505V001B

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
2		E06000055	14BA0537	Slight	Wednesday	11/06/2014	09:50	507560/252237		

Location: Uc Wentworth Drive Metres Uc Dover Crescent, Bedford, Bedfordshire **1st Rd:** U **2nd Rd:** U

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Roundabout	Mini-R Give	Daylight	Fine	Dry	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Bus or Coach	No	Right turn	S E	On main	Mid junction	No	None		None	Male	51	-ve
2	Car	No	Going ahead	E W	On main	Mid junction	No	None		None	Female	37	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Female	37	Slight	No	Not ped	Not ped	Not ped	Other

Description: V2 Trav West onto Rdbt. V1 a Bus, Trav North, turning right at Rdbt, Fails to Give Way to V2 and Collision Occurs.

User Information: **Contributory Factors:** 405V001A

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
3		E06000055	313804	Slight	Friday	29/06/2018	08:08	507721/252178		

Location: HOOKHAMS LANE **1st Rd:** U **2nd Rd:**

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Single c'way	NotJCT	Daylight	Fine	Dry	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Going ahead	S N	On main	Not at	No	None		None	Female	26	N/R
2	Pedal Cycle	No	Start	E W	On main	Not at	No	None		None	Male	12	N/A

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Male	12	Slight	No	Not ped	Not ped	Not ped	Other

Description: V1 was entering Hookhams Lane from the roundabout. On the other side of the road was a queue of traffic where a pedestrian crossing over the road has been covered by a white van. As V1 has been driving down Hookhams Lane, a 12 year old male on a bicycle (V2) has come out from behind the van into the road. Driver of V1 has a short period of time to react managing to brake but has collided with the male causing him to fall off his bicycle hitting his head, knee and ankle.

User Information: **Contributory Factors:** 801C001A 802C001B

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
4		E06000055	67374	Slight	Monday	02/05/2016	09:15	507746/252096		

Location: NORSE ROAD UNSPECIFIED ROAD OR LOCATION CHURCH LANE C40 **1st Rd:** U0 **2nd Rd:** C40

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Roundabout	R'dabt Give	Daylight	Fine	Dry	None	Refuge	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Going ahead	NW SE	On main	Leave r'about	No	None		None	Male	81	-ve
2	Pedal Cycle	No	Going ahead	N S	On main	Mid junction	No	None		None	Male	37	N/A

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Male	37	Slight	No	Not ped	Not ped	Not ped	Other

Description: V2 was travelling southbound from Hook Lane Renhold to Church Lane round the roundabout. V1 was travelling eastbound from Wentworth Drive to Norse Road. V2 was coming past the Norse Road junction, as v1 attempted to pull off the roundabout v1 pulled directly into v2's path causing him to fall off into the road.

User Information: **Contributory Factors:** 405V001A 403V001A 505V001B

WENTWORTH DRIVE

PUTNOE LANE

FURNESS CLOSE

THREAVE CLOSE

SOMERTON CLOSE

Playground

Car Park

4
2383
82

3
15BA
0577

1
15BA
0013

2
15BA
0576

34
36
57
158
165
16
59
61
63
65
67
10
7
20
148
11
15
7
11
2
153
19
30

Accident Date BETWEEN '10-Oct-2014' AND '09-Oct-2019'

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
1		E06000055	15BA0013	Slight	Saturday	10/01/2015	17:13	506862/252331		

Location: Uc Wentworth Drive 10 Metres East of Uc Putnoe Lane, Bedford, Bedfordshire **1st Rd:** U **2nd Rd:** U

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Single c'way	R'dabt Give	Dark/lights lit	Fine Wind	Dry	None	Refuge	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Reversing	W E	On main	Junt appr	No	None		None	Male	39	+ve
2	Car	No	Waiting	E W	On main	Junt appr	No	None		None	Male	20	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Male	39	Slight	No	Not ped	Not ped	Not ped	Other

Description: V1 Trav in Front of V2 on Trav West on Approach to Rdbt. V2 Hangs Back Owing to Erratic Driving by V1. V1 Stops at Rdbt and then Selects Reverse and Collides into Front of V2. V1 Drives off Failing to Stop. Apprehended Shortly After.

User Information: **Contributory Factors:** 501V001A 601V001A

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
2		E06000055	15BA0576	Slight	Monday	22/06/2015	15:04	506963/252318		

Location: Unclassified Road WENTWORTH DRIVE at SOMERTON WALK, BEDFORD, Bedfordshire **1st Rd:** U **2nd Rd:**

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Single c'way	NotJCT	Daylight	Fine	Dry	None	Refuge	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Going ahead	E W	On main	Not at	No	None		None	Male	43	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Pedestrian	Female	14	Slight	No	South	Offside	Ped x'ing	Yes

Description: CAS1 A PED CROSSES ROAD AT CENTRAL REFUGE. CAS1 IS ALLOWED TO CROSS BY SLOWING VEHICLE ON EAST CARRIAGEWAY BUT CAS1 FAILS TO CHECK WESTBOUND SIDE, STEPS INTO ROAD AND IS STRUCK BY V1 TRAV WEST.

User Information: **Contributory Factors:** 802C001A

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
3		E06000055	15BA0577	Slight	Tuesday	23/06/2015	14:10	506845/252332		

Location: Unclassified Road WENTWORTH DRIVE, at its Junction with Unclassified Road PUTNOE LANE, BEDFORD, Bedfordshire **1st Rd:** U **2nd Rd:** U

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Roundabout	Mini-R Give	Daylight	Fine	Dry	None	Refuge	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Going ahead	E W	On main	Mid junction	No	None		None	Female	78	-ve
2	Car	No	Right turn	W S	On main	Mid junction	No	None		None	Female	74	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Female	78	Slight	No	Not ped	Not ped	Not ped	Other
2	2	Drv/Rider	Female	74	Slight	No	Not ped	Not ped	Not ped	Other

Description: V2 TRAV EAST, MAKES A LATE DECISION TO TURN RIGHT AT RDBT JUNC. V1 TRAV WEST, ENTERS RDBT AND COLLIDES WITH V2.

User Information: **Contributory Factors:** 406V001A 403V002A

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
4		E06000055	238382	Slight	Tuesday	26/09/2017	16:20	506845/252349		

Location: OUTSIDE NO 36 WENTWORTH DRIVE AT JN WITH PUTNOE LANE **1st Rd:** U **2nd Rd:** U

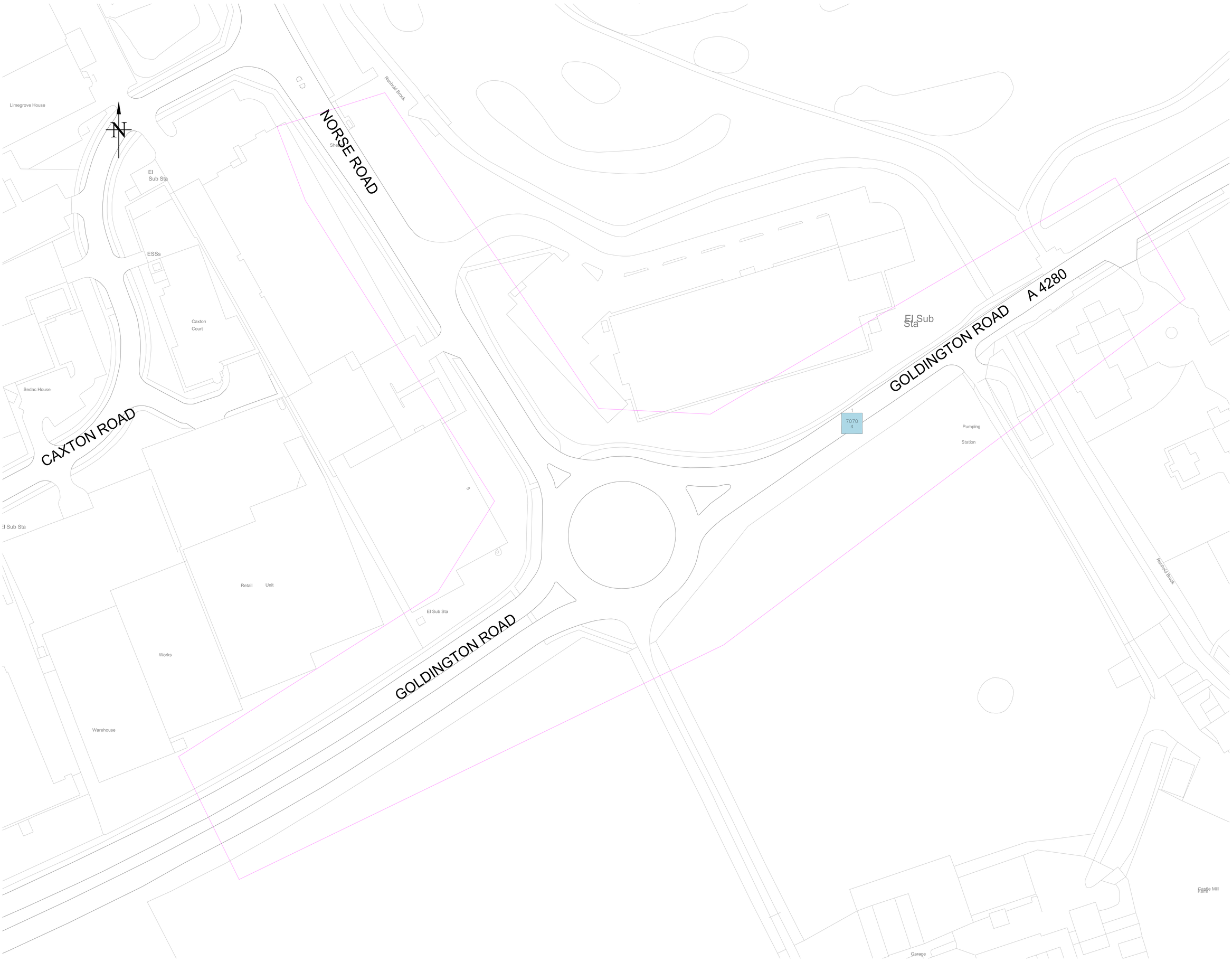
Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Roundabout	Mini-R Give	Daylight	Fine	Dry	None	Refuge	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Going ahead	S N	Cycleway	Leave r'about	No	None		None	Male	69	-ve
2	Pedal Cycle	No	Going ahead	E W	Cycleway	Junt appr	No	None		None	Male	15	N/A

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Male	15	Slight	No	Not ped	Not ped	Not ped	Other

Description: V001 WAS TRAVELLING ALONG PUTNOE LANE TOWARDS ROUNDABOUT WITH WENTWORTH DRIVE. V001'S DRIVEWAY IS IMMEDIATELY OFF THE ROUNDABOUT BETWEEN 1ST AND 3RD EXIT. V002 WAS CYCLING ALONG HE PAVEMENT. V001 ENTERED ROUNDABOUT AND SAW A VEHICLE TO HIS NEARSIDE COMING ONTO ROUNDABOUT AS HE SLOWED TO ENTER HIS DRIVEWAY AND COLLIDED WITH A CYCLIST (V002) AS HE DROVE ONTO HIS DRIVEWAY

User Information: **Contributory Factors:** 108V001A


Limegrove House
El
Sub Sta
ESSs
Caxton
Court
Sedac House
CAXTON ROAD
NORSE ROAD
C D
Reinhold Brook
Shrub
El Sub Sta
GOLDINGTON ROAD
A 4280
El Sub
Sta
7070
4
Pumping
Station
El Sub Sta
Retail
Unit
El Sub Sta
Works
Warehouse
GOLDINGTON ROAD
Reinhold Brook
Castle Mill
Farm
Garage

Accident Date BETWEEN '10-Oct-2014' AND '09-Oct-2019'

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
1		E06000055	70704	Serious	Saturday	07/05/2016	10:00	508998/251153		

Location: ST NEOTS ROAD A4280 75 METRES EAST OF JUNCTION WITH NORSE ROAD **1st Rd:** A4280 **2nd Rd:**

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
40 MPH	Roundabout	NotJCT	Daylight	Fine	Dry	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Stop	NE SW	On main	Not at	No	None		None	Male	57	N/R
2	Pedal Cycle	No	Going ahead	NE SW	On main	Not at	No	None		None	Male	51	N/A

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Male	51	Serious	No	Not ped	Not ped	Not ped	Other

Description: LOCATION IS A SINGLE CARRIAGEWAY ROAD ON THE OUTSKIRTS OF TOWN. CYCLIST 2 WAS CYCLIST IN FRONT OF HIS CYCLIST HEADING WEST ALONG A4280 TOWARDS ROUNDABOUT WITH NORSE ROAD. VEH 1 TRAVELLING IN SAME DIRECTION OVERTOOK CYCLIST 2 AND CAME TO A STOP AT RED PEDESTRIAN TRAFFIC SIGNALS. AS SIGNALS CHANGED CYCLIST 2 RODE UP THE INSIDE OF VEH 1 AND BOTH VEHICLES GAINED SPEED. DRIVER OF VEH 1 BECAME ANNOYED WITH CYCLIST 2 AND HAS PULLED TO THE NEARSIDE DELIBERATELY SQUEEZING HIM OUT. DRIVER OF VEH 1 HAS THEN BRAKED HARD CAUSING CYCLIST 2 TO COLLIDE INTO THE REAR.

User Information:

Contributory Factors: 601V001A


Issues
WATER END
Pond
4
2
WATER END
Drain
A 4280
WATER END
A 421
ST NEOTS ROAD
Track
WATER END
Tunnel
ST NEOTS ROAD
Fairfield Cottage
Water End Cottage
Pumping Station
Earthwork
Hillcrest
Def
CS
9
3377
16
10
8023
67
148A
1255
7
2305
61
11
8027
3
148A
1291
1
1481
27
6
8
8
2586
20
5
1679
94
148A
0998
158A
0259

Accident Date BETWEEN '10-Oct-2014' AND '09-Oct-2019'

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
1		E06000055	148127	Slight	Saturday	07/01/2017	23:47	510330/251418		

Location: MARKER POST 246 BYPASS A421 **1st Rd:** A421 **2nd Rd:**

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
70 MPH	Roundabout	NotJCT	Dark/no lights	Fine	Dry	None	None	None	P/Acc

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Going ahead	E W	On main	Not at	No	None	O/s rebound	Cent barr	Male	49	N/C
2	Car	No	Going ahead	E W	On main	Not at	No	Prev acc	O/s rebound	Cent barr	Male	30	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Male	30	Slight	No	Not ped	Not ped	Not ped	Other

Description: V1 HAD BEEN TRAVELLING WESTBOUND ALONG THE A421, WHEN IT COLLIDED HEAVILY WITH THE CENTRAL RESERVATION BARRIER, CAUSING EXTENSIVE DAMAGE TO X17 UPRIGHT POSTS AND TO THE VEHICLE ITSELF. AS A RESULT OF THIS COLLISION, V1 CAME TO A STOP IN LANE 1, AND HAD NO HAZARD OR MAIN LIGHTS ILLUMINATED. V2 HAD ALSO BEEN TRAVELLING WESTBOUND ALONG THE A421, AND HAD TO SWERVE OUT OF THE WAY TO AVOID A DIRECT COLLISION, WITH V1, AS IT SAW IT AT THE LAST MINUTE, DUE TO NO LIGHTS BEING ILLUMINATED. AS A RESULT, V2 ALSO COLLIDED WITH THE CENTRAL RESERVATION BARRIER, BEFORE COMING TO A STOP IN LANE 1. DAMAGE TO X5 MORE UPRIGHTS HAD BEEN CAUSED BY V2.

User Information:

Contributory Factors:

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
2		E06000055	14BA0998	Slight	Monday	27/10/2014	18:06	510624/251560		

Location: A4280 St Neots Road Metres A421 Westbound Entry Slip, Renhold, Bedfordshire **1st Rd:** A4280 **2nd Rd:** A421

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
60 MPH	Roundabout	R'dabt Give	Dark/lights lit	Fine	Dry	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	M/cycle 50 - 1	No	Right turn	NW SW	On main	Mid junction	No	None		None	Male	32	-ve
2	Car	No	Right turn	NW SW	On main	Mid junction	No	None		None	Female	23	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Male	32	Slight	No	Not ped	Not ped	Not ped	Other

Description: V1 a Motor Cycle Trav Behind V2 onto Rdbt. V2 Starts to Turn right and V1 Following Too Close Collides into Rear of V2. Rider of V1 Falls Off.

User Information:

Contributory Factors: 403V001B 403V002B

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
3		E06000055	14BA1259	Slight	Saturday	27/12/2014	16:53	510504/251620		

Location: A428 Saint Neots Road Metres A421 Bedford Bypass, Renhold, Bedfordshire **1st Rd:** A428 **2nd Rd:** A421

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
60 MPH	Roundabout	R'dabt Give	Dark/lights lit	Rain Wind	Wet	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Stop	SE SW	On main	Ent r'about	Yes	None		None	Male	48	-ve
2	Car	No	Stop	SE SW	On main	Ent r'about	No	None		None	Male	32	-ve
3	Car	No	Left turn	SW NW	On main	Ent r'about	No	None		None	Male	29	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Male	32	Slight	No	Not ped	Not ped	Not ped	Other

Description: V2 Trav Nw, Enters Rdbt, Followed by V1. V2 Driver Sees V3, a Marked Police Vehicle on Blue Lights and Sirens About to Enter Rdbt from N/S Slip Road. V2 Brakes and is Hit from Behind by V1. V3 Unaware Continues On.

User Information:

Contributory Factors: 103V001A 408V002B 307V001B

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
4		E06000055	14BA1291	Slight	Monday	08/12/2014	08:15	510298/251452		

Location: A4280 Saint Neots Road 250 Metres West of Water End, Renhold, Bedfordshire **1st Rd:** A4280 **2nd Rd:**

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
60 MPH	Single c'way	NotJCT	Daylight	Fine	Wet	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Stop	SW NE	On main	Not at	Yes	None		None	Male	25	-ve
2	Car	No	Stop	SW NE	On main	Not at	No	None		None	Female	37	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Female	37	Slight	No	Not ped	Not ped	Not ped	Other
2	2	Passenger	Female	8	Slight	Front	Not ped	Not ped	Not ped	Other

Description: V2 Trav Ne, Begins to Slow Gently on Approach to Rdbt Junc Ahead. V1 Trav Behind Witnessed Trav Too Fast for Conditions, Brakes and Skids into Rear of V2.

User Information:

Contributory Factors: 103V001A 307V001A 308V001A 406V001A 602V001B

Accident Date BETWEEN '10-Oct-2014' AND '09-Oct-2019'

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
5		E06000055	15BA0259	Slight	Thursday	26/03/2015	18:00	510635/251565		

Location: A421 BEDFORD BYPASS, at its Junction with A4280 SAINT NEOTS ROAD, RENHOLD, BEDFORDSHIRE **1st Rd:** A421 **2nd Rd:** A4280

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
70 MPH	Slip road	R'dabt Give	Daylight	Fine	Dry	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Waiting	NE SW	On main	Junt appr	No	None		None	Male	-1	N/C
2	Car	No	Waiting	NE SW	On main	Junt appr	No	None		None	Female	20	N/C

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Female	20	Slight	No	Not ped	Not ped	Not ped	Other

Description: V2 TRAV SW, STOPS AT THE END OF THE SLIP ROAD, WAITING TO ENTER RDBT AND IS STRUCK FROM BEHIND BY V1.

User Information: **Contributory Factors:**

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
6		E06000055	167994	Slight	Wednesday	15/03/2017	17:40	510634/251572		

Location: GREAT BARFORD BYPASS A421 AT JN WITH ST NEOTS ROAD **1st Rd:** A421 **2nd Rd:** U

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Roundabout	R'dabt Give	Daylight	Fine	Dry	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Going ahead	NE SW	On main	Junt appr	No	None		None	Untra.	-1	N/C
2	Car	No	Stop	NE SW	On main	Junt appr	No	None		None	Male	43	N/C

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
2	2	Drv/Rider	Male	43	Slight	No	Not ped	Not ped	Not ped	Other

Description: VEH 2 HAS BEEN TRAVELLING UP SLIP ROAD WHEN VEH 1 HAS FAILED TO STOP AND HAS COLLIDED WITH THE REAR OF VEH 2. ALL DETAILS EXCHANGED AT SCENE BUT DRIVER OF VEH 2 HAS NOW DISCLOSED THAT HE IS HAVING PAIN IN HIS BACK. HE HAS PHONED THE DOCTORS AND THEY HAVE ADVISED TO TAKE PAIN KILLERS SO ASKED TO RECORD IT AS AN INJURY OWING TO THE RTC

User Information: **Contributory Factors:**

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
7		E06000055	230561	Slight	Sunday	08/10/2017	02:48	510423/251601		

Location: ST NEOTS ROAD A4280 AT JN WITH WATER END **1st Rd:** A4280 **2nd Rd:** U

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
60 MPH	Single c'way	R'dabt Give	Dark/lights lit	Fine	Wet	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Going ahead	SW NE	On main	Ent r'about	Yes	None		None	Male	28	-ve
2	Taxi	No	Going ahead	NE SW	On main	Leave r'about	No	None		None	Male	45	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Male	45	Slight	No	Not ped	Not ped	Not ped	Other
2	1	Passenger	Female	30	Slight	No	Not ped	Not ped	Not ped	Other

Description: V1 lost control on bend in damp conditions collided had on with V2 travelling in opposite direction.

User Information: **Contributory Factors:** 409V001A 601V001A

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
8		E06000055	258620	Slight	Wednesday	10/01/2018	09:06	510669/251704		

Location: WESTBOUND A421 AT JN WITH WATER END **1st Rd:** A421 **2nd Rd:** U

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
70 MPH	Dual c'way	Slip-R Give	Daylight	Rain	Wet	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Stop	W E	On main	Junt cleared	No	None		None	Male	-1	-ve
2	Car	No	Stop	W E	On main	Junt cleared	Yes	None		None	Male	20	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	2	Drv/Rider	Male	20	Slight	No	Not ped	Not ped	Not ped	Other

Description: Both vehicles driving westbound on A421, weather conditions were wet & raining, DV1 saw the traffic in front of him slow down so came to a stop, Vehicle behind (V02) was allegedly driving about 50 mph, started to slow down & skidded in the road.

User Information: **Contributory Factors:** 103V002A

Accident Date BETWEEN '10-Oct-2014' AND '09-Oct-2019'

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
9		E06000055	337716	Slight	Monday	15/10/2018	12:00	510466/251641		

Location: A428 AT JN WITH WATER END **1st Rd:** A428 **2nd Rd:** U

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
60 MPH	Roundabout	R'dabt Give	Daylight	Rain	Wet	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Stop	SW NE	On main	Ent r'about	No	None		None	Female	38	N/R
2	Car	No	Going ahead	SE SW	On main	Leave r'about	Yes	None		None	Female	50	N/P

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Female	38	Slight	No	Not ped	Not ped	Not ped	Other
2	2	Drv/Rider	Female	50	Slight	No	Not ped	Not ped	Not ped	Other

Description: V1 was sitting in stationary traffic approaching the roundabout, V2 has exited the roundabout and slid into V1.

User Information:

Contributory Factors:

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
10		E06000055	802367	Slight	Tuesday	20/11/2018	14:10	510455/251633		

Location: ST NEOTS ROAD (A4280) NEAR JUNCTION WITH WATER END (A4280) **1st Rd:** A4280 **2nd Rd:** A4280

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Dual c'way	R'dabt Give	Daylight	Rain	Wet	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Stop	NE SW	On main	Leave r'about	No	None		None	Female	30	-ve
2	Car	No	Stop	NE SW	On main	Leave r'about	No	None		None	Male	49	-ve
3	Car	No	Stop	NE SW	On main	Leave r'about	No	None		None	Female	64	-ve
4	Car	No	Parked	P P	On main	Leave r'about	No	None		None	Male	28	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Female	30	Slight	No	Not ped	Not ped	Not ped	Other
2	2	Drv/Rider	Male	49	Slight	No	Not ped	Not ped	Not ped	Other
3	2	Passenger	Female	-1	Slight	Front	Not ped	Not ped	Not ped	Other

Description: V4 police car had stopped on side of road, helping a broken down vehicle. V3 slowed on opposite side of carriage way after seeing blue lights but did not notice v2 had pulled over and stopped. V3 collided with v2, pushing it into the rear of v1.

User Information:

Contributory Factors: 405V003A 406V003A 510V003A

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
11		E06000055	80273	Slight	Tuesday	17/05/2016	22:45	510402/251561		

Location: ST NEOTS ROAD A4280 100 METRES WEST OF JUNCTION WITH WATER END C44 **1st Rd:** A4280 **2nd Rd:**

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
60 MPH	One Way St	NotJCT	Dark/lights lit	Rain	Wet	None	None	None	None

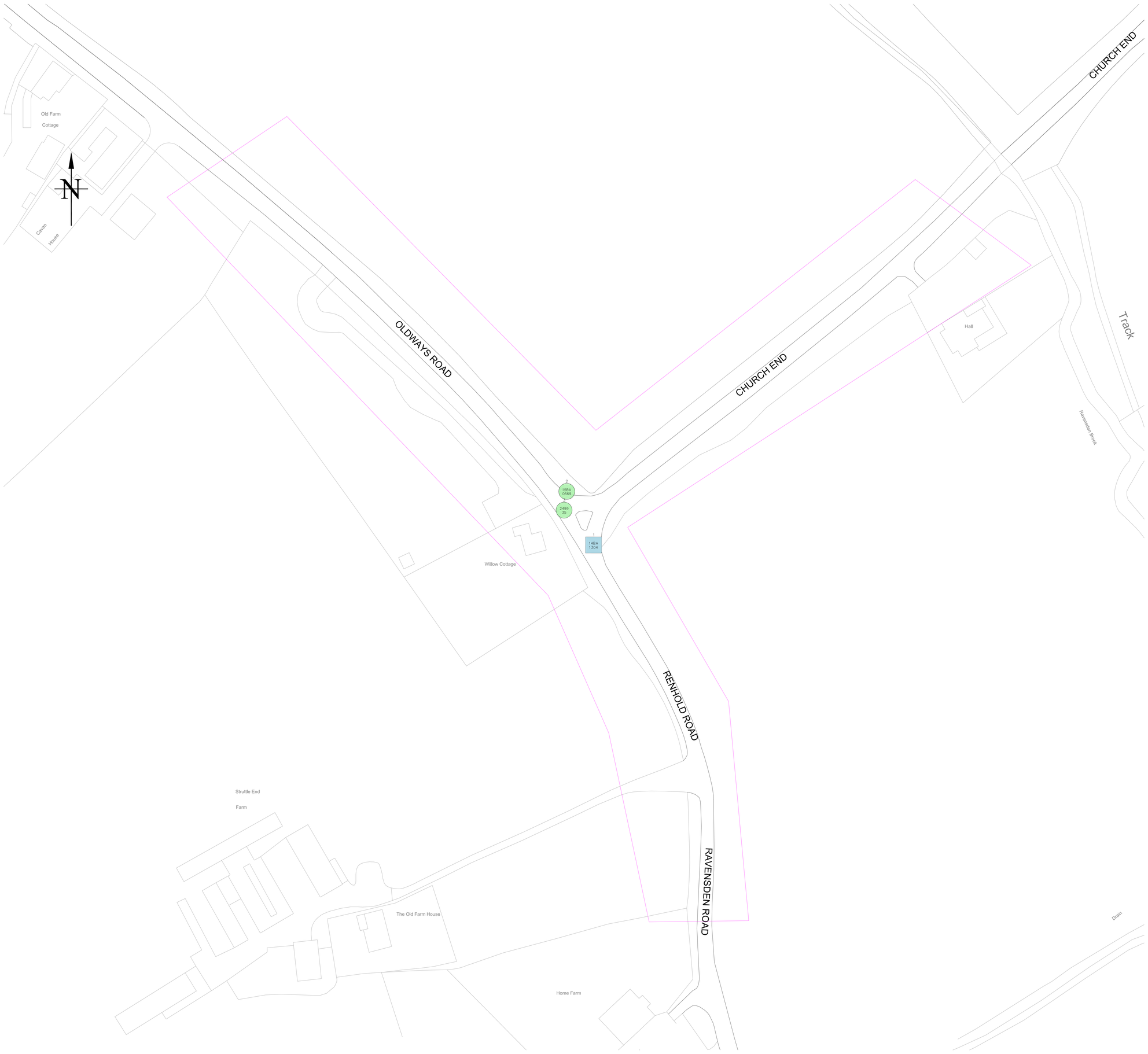
Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Going ahead	SW NE	On main	Not at	No	None		None	Female	68	N/R
2	Taxi	No	Going ahead	NE SW	On main	Not at	No	None		None	Male	61	N/R

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Female	68	Slight	No	Not ped	Not ped	Not ped	Other

Description: Vehicle one has been driving up Goldington Road out of Bedford, towards the A421, vehicle 002 has been coming in the other direction. Vehicle 001 has possibly mis-judged the carriageway and junction and has then collided with the other vehicle

User Information:

Contributory Factors: 405V001A 410V001B


CHURCH END
Old Farm
Cottage
Cavan
House
OLDWAYS ROAD
CHURCH END
Hall
Track
Ravensden Brook
158A
0669
2
2499
35
1
148A
1304
Willow Cottage
RENHOLD ROAD
RAVENSDEN ROAD
Struttle End
Farm
The Old Farm House
Home Farm
Drain

Accident Date BETWEEN '10-Oct-2014' AND '09-Oct-2019'

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
1		E06000055	14BA1304	Serious	Saturday	06/12/2014	10:56	507314/253804		

Location: C43 Revensden Road Metres Uc42 Church Road, Ravensden, Bedfordshire **1st Rd:** C43 **2nd Rd:** U

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
40 MPH	Single c'way	T/Stag Give	Daylight	Fine	Wet	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Right turn	SE NE	On main	Mid junction	No	None		None	Female	76	-ve
2	Car	No	Going ahead	NW SE	On main	Mid junction	No	None		None	Female	39	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Female	76	Serious	No	Not ped	Not ped	Not ped	Other
2	2	Drv/Rider	Female	39	Serious	No	Not ped	Not ped	Not ped	Other

Description: V1 Trav Nw, Turns right at T Junc, across the Path of Oncoming V2. V2 Collides into V1.

User Information:

Contributory Factors: 999V001B 103V001A 103V002B

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
2		E06000055	15BA0669	Slight	Wednesday	22/07/2015	17:00	507304/253824		

Location: C43 OLDWAYS ROAD, at its Junction with U42 CHURCH END, RAVENSDEN, Bedfordshire **1st Rd:** C43 **2nd Rd:** U42

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
40 MPH	Single c'way	T/Stag Give	Daylight	Fine	Dry	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Right turn	NE NW	On main	Mid junction	No	None		None	Male	72	-ve
2	Car	No	Going ahead	NW SE	On main	Mid junction	No	None		None	Female	47	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Male	72	Slight	No	Not ped	Not ped	Not ped	Other
2	2	Drv/Rider	Female	47	Slight	No	Not ped	Not ped	Not ped	Other

Description: V1 TRAV SW, TURNS RIGHT ONTO MAIN ROAD, FAILING TO SEE OR GIVE WAY TO V2 TRAV SE. V1 STRIKES V2 TO F/N/S.

User Information:

Contributory Factors: 706V001B 406V001A

No.	Area	L/A	Reference	Severity	Day	Date	Time	Grid Coords	Link/Node	Street
3		E06000055	249935	Slight	Thursday	07/12/2017	08:18	507303/253817		

Location: RAVENSDEN ROAD AT JN WITH CHURCH END **1st Rd:** U **2nd Rd:** U

Speed	C'Way	Jct Det/Ctrl	Lighting	Weather	Rd Surf	PedX - Human	- Phy Fac	Special	Hazard
30 MPH	Single c'way	Other Give	Daylight	Rain	Wet	None	None	None	None

Veh	Vehicle type	Towing	Manoeuvre	Dir	Veh loc	Junct. loc	Skidding	Hit obj in	Left cway	Hit obj off	Sex	Age	B/T
1	Car	No	Right turn	SE NE	On main	Junt appr	No	None		None	Female	55	-ve
2	Car	No	Rt hand bend	NW SE	On main	Junt appr	No	None		None	Male	30	-ve
3	Car	No	Lt hand bend	SE NW	On main	Junt appr	No	None		None	Female	55	-ve

Cas No	Veh ref	Cas Class	Sex	Age	Severity	Car Pass	Ped Direction	Ped Movement	Ped location	School Pupil
1	1	Drv/Rider	Female	55	Slight	No	Not ped	Not ped	Not ped	Other
2	2	Drv/Rider	Male	30	Slight	No	Not ped	Not ped	Not ped	Other
3	1	Passenger	Female	62	Slight	Front	Not ped	Not ped	Not ped	Other

Description: V1 was travelling along Ravensden Road, waiting to turn right onto church end. V1 failed to see V2 and turned right in front of V2, colliding with V2. V3 was travelling behind V1 and was hit by debris caused by the collision between V1 and V2.

User Information:

Contributory Factors: 401V001A

Appendix G

Hookhams Lane Access
MAC drawing no. 248-TA11

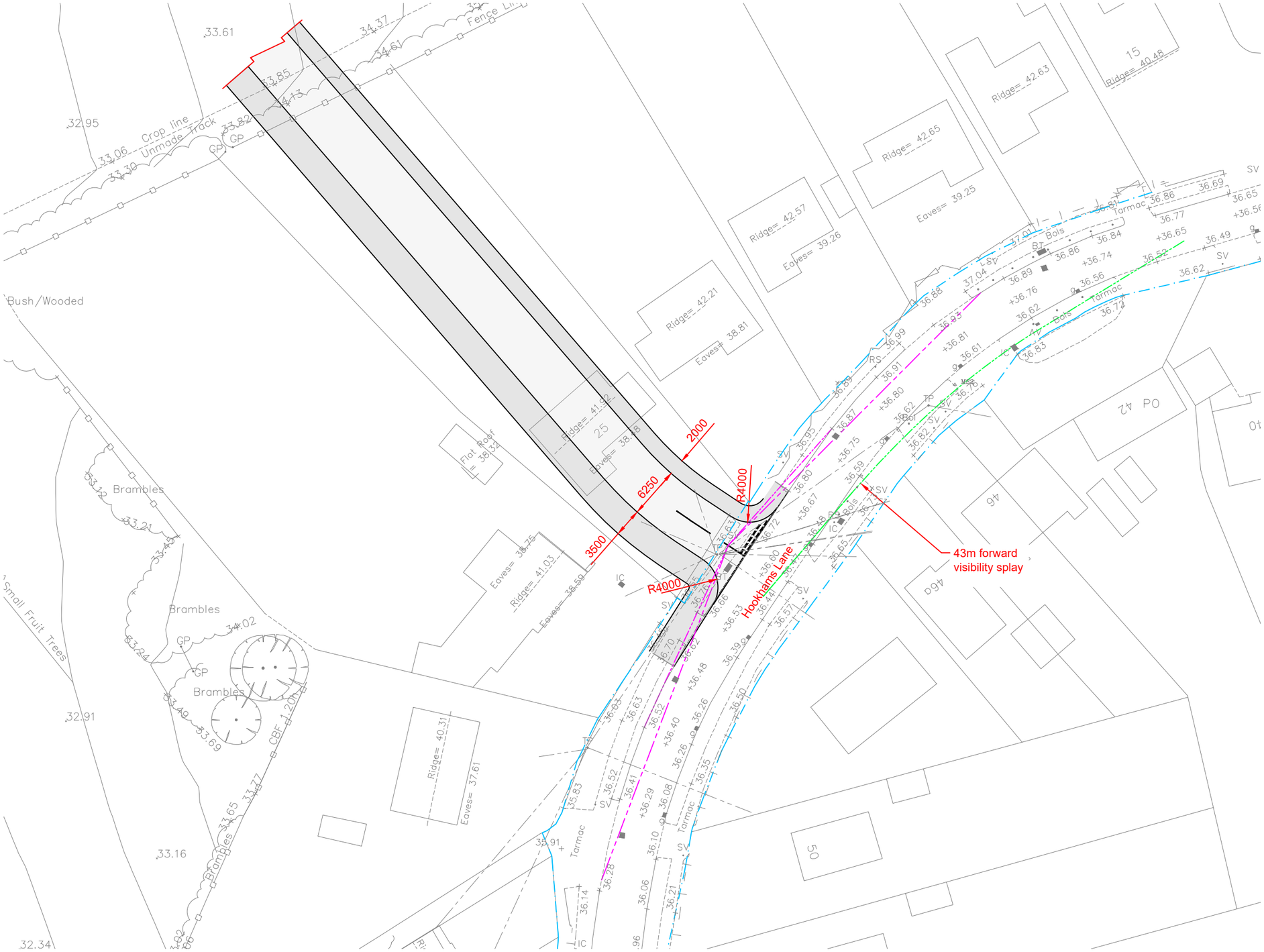
NORTH

Notes

1. Based on MSurv 'Topographical Survey' drawing number 1215/2272/1.
2. Based on Ordnance Survey mapping.

Key

- Visibility Splays - 2.4m x 43m
- Forward visibility splay - 43m
- Highway boundary



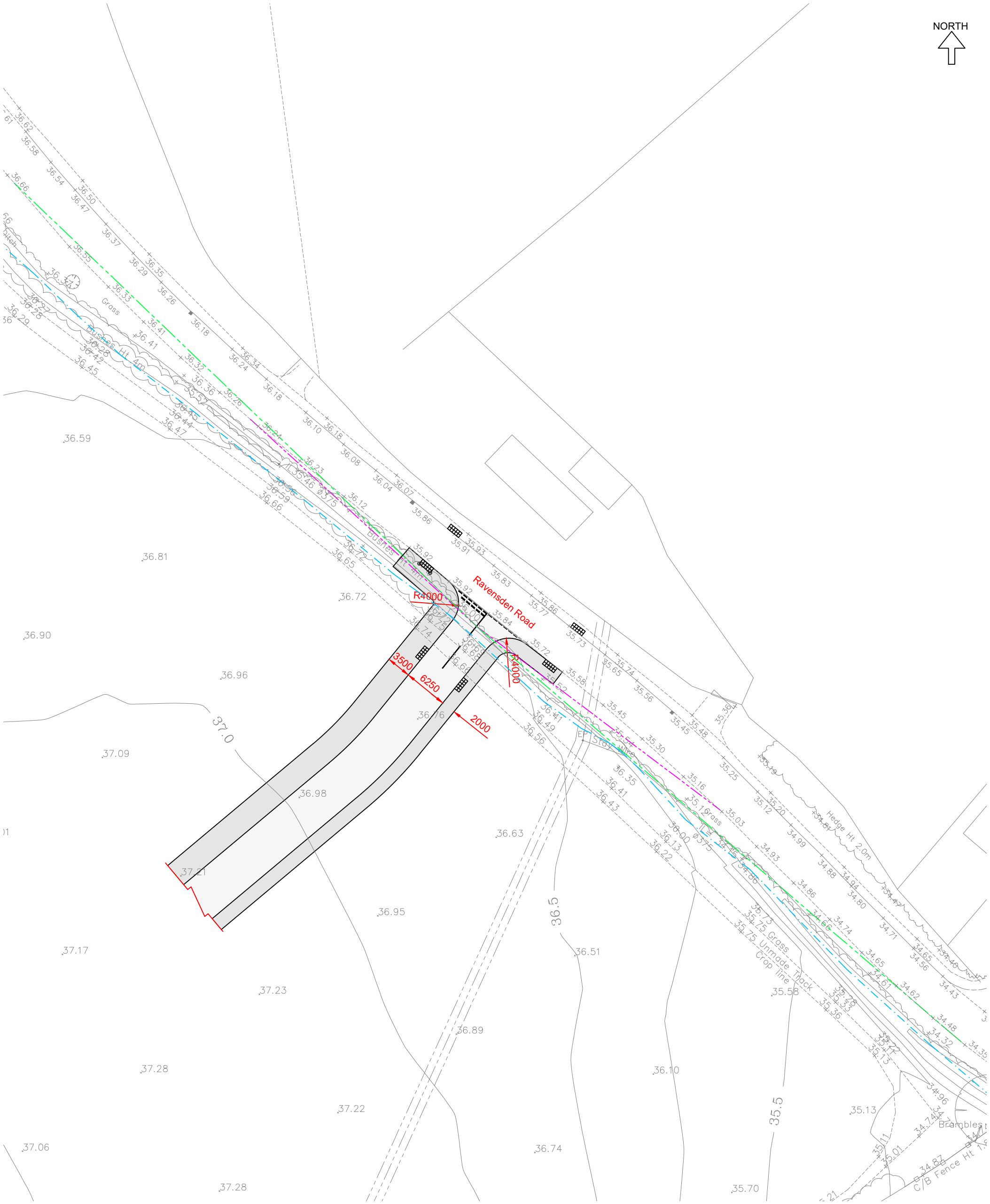
T: 01604 340544 Northampton Office
E: info@mac-ltd.co.uk W: mac-ltd.co.uk
Martin Andrews Consulting Ltd

- Transport Assessments
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes		Project: Land North of Hookhams Lane, Salph End	
Title: No. 25 Hookhams Lane - Access Option 1			Date: 18/01/20
			Drw: MJA
			Chk: MJA
Drawing No: 248-TA11	Revision: B		Scale: 1:500
			Size: A3

Appendix H

Ravensden Road Access
MAC drawing no. 248-TA12



Notes

1. Based on MSurv 'Topographical Survey' drawing number 1215/2272/1.
2. Based on Ordnance Survey mapping.

Key

- Visibility Splays - 2.4m x 43m
- Visibility Splays - 2.4m x 90m
- Highway Boundary

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Martin Andrews Consulting Ltd

- Transport Assessments
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes		Project: Land North of Hookhams Lane Salph End	
Title: Ravensden Road Access			Date: 19/01/20
			Drw: MJA
			Chk: MJA
Drawing No: 248-TA11	Revision: A		Scale: 1:500
			Size: A3

Appendix I

TRICS Data

Calculation Reference: AUDIT-864401-190717-0707

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	3 days
	HC	HAMPSHIRE	3 days
	KC	KENT	4 days
	SC	SURREY	1 days
	WS	WEST SUSSEX	6 days
03	SOUTH WEST		
	DC	DORSET	1 days
	DV	DEVON	3 days
	SM	SOMERSET	1 days
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	2 days
	NF	NORFOLK	3 days
	SF	SUFFOLK	2 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	LN	LINCOLNSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	2 days
	ST	STAFFORDSHIRE	1 days
	WK	WARWICKSHIRE	2 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	6 days
	SY	SOUTH YORKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	2 days
	GM	GREATER MANCHESTER	1 days
	MS	MERSEYSIDE	1 days
09	NORTH		
	DH	DURHAM	1 days
	TW	TYNE & WEAR	1 days

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

Secondary Filtering selection:

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

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

Parking Spaces Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 20/11/18

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

Selected survey days:

Monday	10 days
Tuesday	11 days
Wednesday	13 days
Thursday	11 days
Friday	7 days

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

Selected survey types:

Manual count	52 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	25
Edge of Town	27

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

Selected Location Sub Categories:

Residential Zone	50
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	52 days

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

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	6 days
5,001 to 10,000	10 days
10,001 to 15,000	15 days
15,001 to 20,000	9 days
20,001 to 25,000	6 days
25,001 to 50,000	5 days

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

Secondary Filtering selection (Cont.):

Population within 5 miles:

5,001 to 25,000	5 days
25,001 to 50,000	3 days
50,001 to 75,000	7 days
75,001 to 100,000	13 days
100,001 to 125,000	2 days
125,001 to 250,000	16 days
250,001 to 500,000	5 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.6 to 1.0	15 days
1.1 to 1.5	37 days

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

Travel Plan:

Yes	10 days
No	42 days

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

PTAL Rating:

No PTAL Present	52 days

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

LIST OF SITES relevant to selection parameters

1 CA-03-A-04 DETACHED CAMBRIDGESHIRE

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

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

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

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

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

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

6 DH-03-A-01 SEMI DETACHED DURHAM
GREENFIELDS ROAD
BISHOP AUCKLAND

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY *28/03/17* *Survey Type: MANUAL*

7 DS-03-A-02 MIXED HOUSES DERBYSHIRE
RADBOURNE LANE
DERBY

Edge of Town
Residential Zone
Total Number of dwellings: 371
Survey date: TUESDAY *10/07/18* *Survey Type: MANUAL*

8 DV-03-A-01 TERRACED HOUSES DEVON
BRONSHILL ROAD
TORQUAY

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

LIST OF SITES relevant to selection parameters (Cont.)

9 DV-03-A-02 HOUSES & BUNGALOWS DEVON
MILLHEAD ROAD
HONITON

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

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

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

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

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

12 ES-03-A-03 MIXED HOUSES & FLATS EAST SUSSEX
SHEPHAM LANE
POLEGATE

Edge of Town
Residential Zone
Total Number of dwellings: 212
Survey date: MONDAY *11/07/16* *Survey Type: MANUAL*

13 ES-03-A-04 MIXED HOUSES & FLATS EAST SUSSEX
NEW LYDD ROAD
CAMBER

Edge of Town
Residential Zone
Total Number of dwellings: 134
Survey date: FRIDAY *15/07/16* *Survey Type: MANUAL*

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

15 HC-03-A-20 HOUSES & FLATS HAMPSHIRE
CANADA WAY
LIPHOOK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 62
Survey date: TUESDAY *20/11/18* *Survey Type: MANUAL*

16 HC-03-A-21 TERRACED & SEMI-DETACHED HAMPSHIRE
PRIESTLEY ROAD
BASINGSTOKE
HOUNDMILLS
Edge of Town
Residential Zone
Total Number of dwellings: 39
Survey date: TUESDAY *13/11/18* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

17 HC-03-A-22 MIXED HOUSES HAMPSHIRE
BOW LAKE GARDENS
NEAR EASTLEIGH
BISHOPSTOKE
Edge of Town
Residential Zone
Total Number of dwellings: 40
Survey date: WEDNESDAY 31/10/18 Survey Type: MANUAL

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

19 KC-03-A-04 SEMI-DETACHED & TERRACED KENT
KILN BARN ROAD
AYLESFORD
DITTON
Edge of Town
Residential Zone
Total Number of dwellings: 110
Survey date: FRIDAY 22/09/17 Survey Type: MANUAL

20 KC-03-A-06 MIXED HOUSES & FLATS KENT
MARGATE ROAD
HERNE BAY

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 363
Survey date: WEDNESDAY 27/09/17 Survey Type: MANUAL

21 KC-03-A-07 MIXED HOUSES KENT
RECULVER ROAD
HERNE BAY

Edge of Town
Residential Zone
Total Number of dwellings: 288
Survey date: WEDNESDAY 27/09/17 Survey Type: MANUAL

22 LN-03-A-03 SEMI DETACHED LINCOLNSHIRE
ROOKERY LANE
LINCOLN
BOULTHAM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 22
Survey date: TUESDAY 18/09/12 Survey Type: MANUAL

23 MS-03-A-03 DETACHED MERSEYSIDE
BEMPTON ROAD
LIVERPOOL
OTTERSPOOL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 15
Survey date: FRIDAY 21/06/13 Survey Type: MANUAL

24 NE-03-A-02 SEMI DETACHED & DETACHED NORTH EAST LINCOLNSHIRE
HANOVER WALK
SCUNTHORPE

Edge of Town
No Sub Category
Total Number of dwellings: 432
Survey date: MONDAY 12/05/14 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

25 NF-03-A-01 SEMI DET. & BUNGALOWS NORFOLK
YARMOUTH ROAD
CAISTER-ON-SEA

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 27
Survey date: TUESDAY *16/10/12* *Survey Type: MANUAL*

26 NF-03-A-02 HOUSES & FLATS NORFOLK
DEREHAM ROAD
NORWICH

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

27 NF-03-A-03 DETACHED HOUSES NORFOLK
HALING WAY
THETFORD

Edge of Town
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY *16/09/15* *Survey Type: MANUAL*

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

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

29 NY-03-A-08 TERRACED HOUSES NORTH YORKSHIRE
NICHOLAS STREET
YORK

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 21
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

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

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

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

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

32 NY-03-A-11 PRIVATE HOUSING NORTH YORKSHIRE
HORSEFAIR
BOROUGHBRIDGE

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

LIST OF SITES relevant to selection parameters (Cont.)

33 NY-03-A-13 TERRACED HOUSES NORTH YORKSHIRE
CATTERICK ROAD
CATTERICK GARRISON
OLD HOSPITAL COMPOUND
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY 10/05/17 Survey Type: MANUAL

34 SC-03-A-04 DETACHED & TERRACED SURREY
HIGH ROAD
BYFLEET

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

35 SF-03-A-04 DETACHED & BUNGALOWS SUFFOLK
NORMANSTON DRIVE
LOWESTOFT

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 7
Survey date: TUESDAY 23/10/12 Survey Type: MANUAL

36 SF-03-A-05 DETACHED HOUSES SUFFOLK
VALE LANE
BURY ST EDMUNDS

Edge of Town
Residential Zone
Total Number of dwellings: 18
Survey date: WEDNESDAY 09/09/15 Survey Type: MANUAL

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

38 SH-03-A-06 BUNGALOWS SHROPSHIRE
ELLESMERE ROAD
SHREWSBURY

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

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

40 ST-03-A-07 DETACHED & SEMI-DETACHED STAFFORDSHIRE
BEACONSIDE
STAFFORD
MARSTON GATE
Edge of Town
Residential Zone
Total Number of dwellings: 248
Survey date: WEDNESDAY 22/11/17 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

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

42 TW-03-A-02 SEMI-DETACHED TYNE & WEAR
WEST PARK ROAD
GATESHEAD

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 16
Survey date: MONDAY *07/10/13* *Survey Type: MANUAL*

43 WK-03-A-01 TERRACED/SEMI/DET. WARWICKSHIRE
ARLINGTON AVENUE
LEAMINGTON SPA

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 6
Survey date: FRIDAY *21/10/11* *Survey Type: MANUAL*

44 WK-03-A-02 BUNGALOWS WARWICKSHIRE
NARBERTH WAY
COVENTRY
POTTERS GREEN
Edge of Town
Residential Zone
Total Number of dwellings: 17
Survey date: THURSDAY *17/10/13* *Survey Type: MANUAL*

45 WL-03-A-02 SEMI DETACHED WILTSHIRE
HEADLANDS GROVE
SWINDON

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

46 WO-03-A-07 MIXED HOUSES WORCESTERSHIRE
TEASEL WAY
WORCESTER
CLAINES
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 146
Survey date: TUESDAY *26/06/18* *Survey Type: MANUAL*

47 WS-03-A-04 MIXED HOUSES WEST SUSSEX
HILLS FARM LANE
HORSHAM
BROADBRIDGE HEATH
Edge of Town
Residential Zone
Total Number of dwellings: 151
Survey date: THURSDAY *11/12/14* *Survey Type: MANUAL*

48 WS-03-A-05 TERRACED & FLATS WEST SUSSEX
UPPER SHOREHAM ROAD
SHOREHAM BY SEA

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 48
Survey date: WEDNESDAY *18/04/12* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

49	WS-03-A-06	MIXED HOUSES	WEST SUSSEX
	ELLIS ROAD		
	WEST HORSHAM		
	S BROADBRIDGE HEATH		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	805	
	Survey date: THURSDAY	*02/03/17*	*Survey Type: MANUAL*
50	WS-03-A-08	MIXED HOUSES	WEST SUSSEX
	ROUNDSTONE LANE		
	ANGMERING		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	180	
	Survey date: THURSDAY	*19/04/18*	*Survey Type: MANUAL*
51	WS-03-A-09	MIXED HOUSES & FLATS	WEST SUSSEX
	LITTLEHAMPTON ROAD		
	WORTHING		
	WEST DURRINGTON		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	197	
	Survey date: THURSDAY	*05/07/18*	*Survey Type: MANUAL*
52	WS-03-A-10	MIXED HOUSES	WEST SUSSEX
	TODDINGTON LANE		
	LITTLEHAMPTON		
	WICK		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	79	
	Survey date: WEDNESDAY	*07/11/18*	*Survey Type: MANUAL*

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

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	52	100	0.116	52	100	0.489	52	100	0.605
08:00 - 09:00	52	100	0.192	52	100	0.765	52	100	0.957
09:00 - 10:00	52	100	0.218	52	100	0.284	52	100	0.502
10:00 - 11:00	52	100	0.204	52	100	0.256	52	100	0.460
11:00 - 12:00	52	100	0.213	52	100	0.240	52	100	0.453
12:00 - 13:00	52	100	0.248	52	100	0.239	52	100	0.487
13:00 - 14:00	52	100	0.257	52	100	0.249	52	100	0.506
14:00 - 15:00	52	100	0.253	52	100	0.292	52	100	0.545
15:00 - 16:00	52	100	0.548	52	100	0.299	52	100	0.847
16:00 - 17:00	52	100	0.531	52	100	0.289	52	100	0.820
17:00 - 18:00	52	100	0.585	52	100	0.258	52	100	0.843
18:00 - 19:00	52	100	0.477	52	100	0.295	52	100	0.772
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.842			3.955			7.797

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

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

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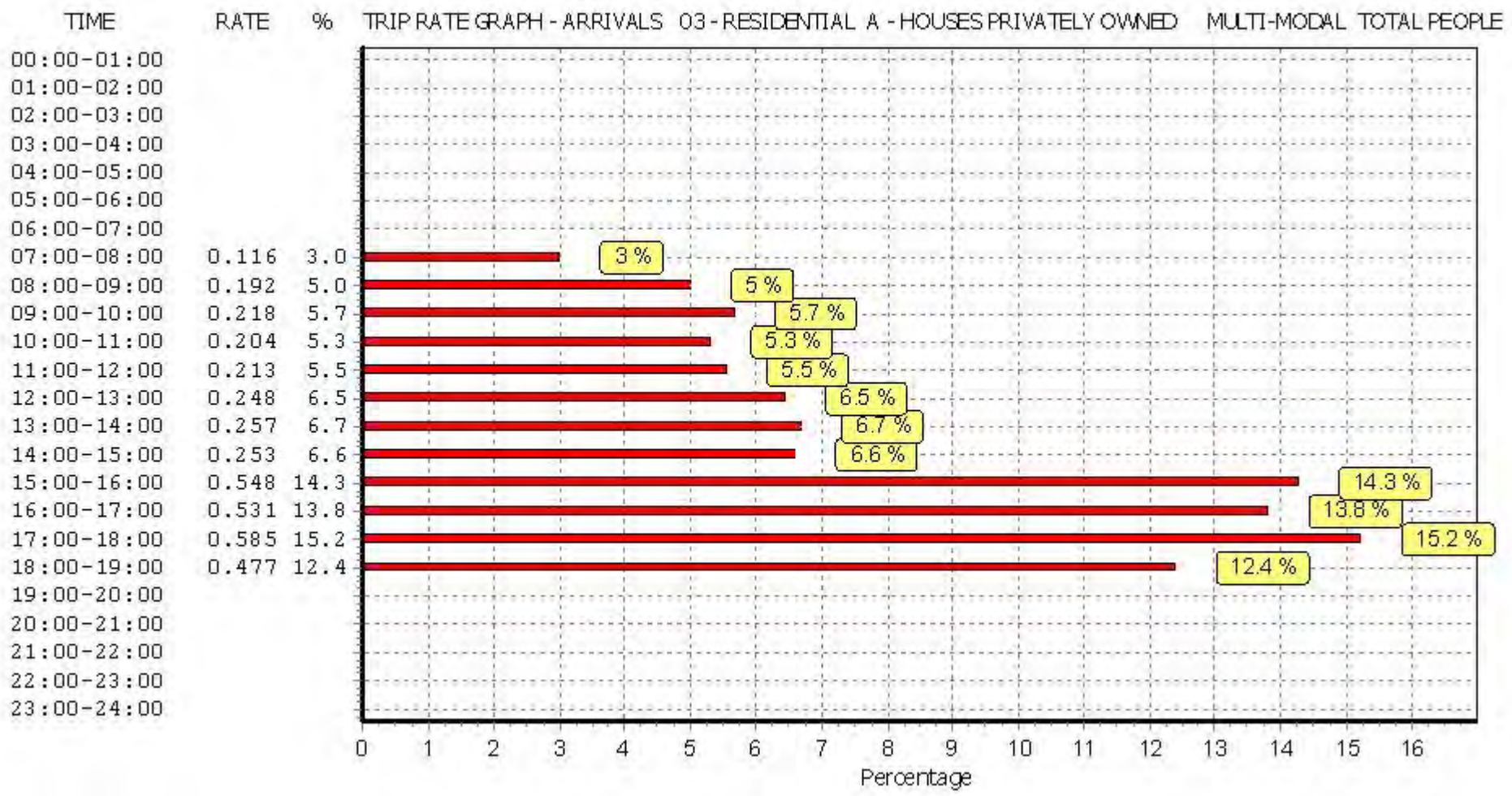
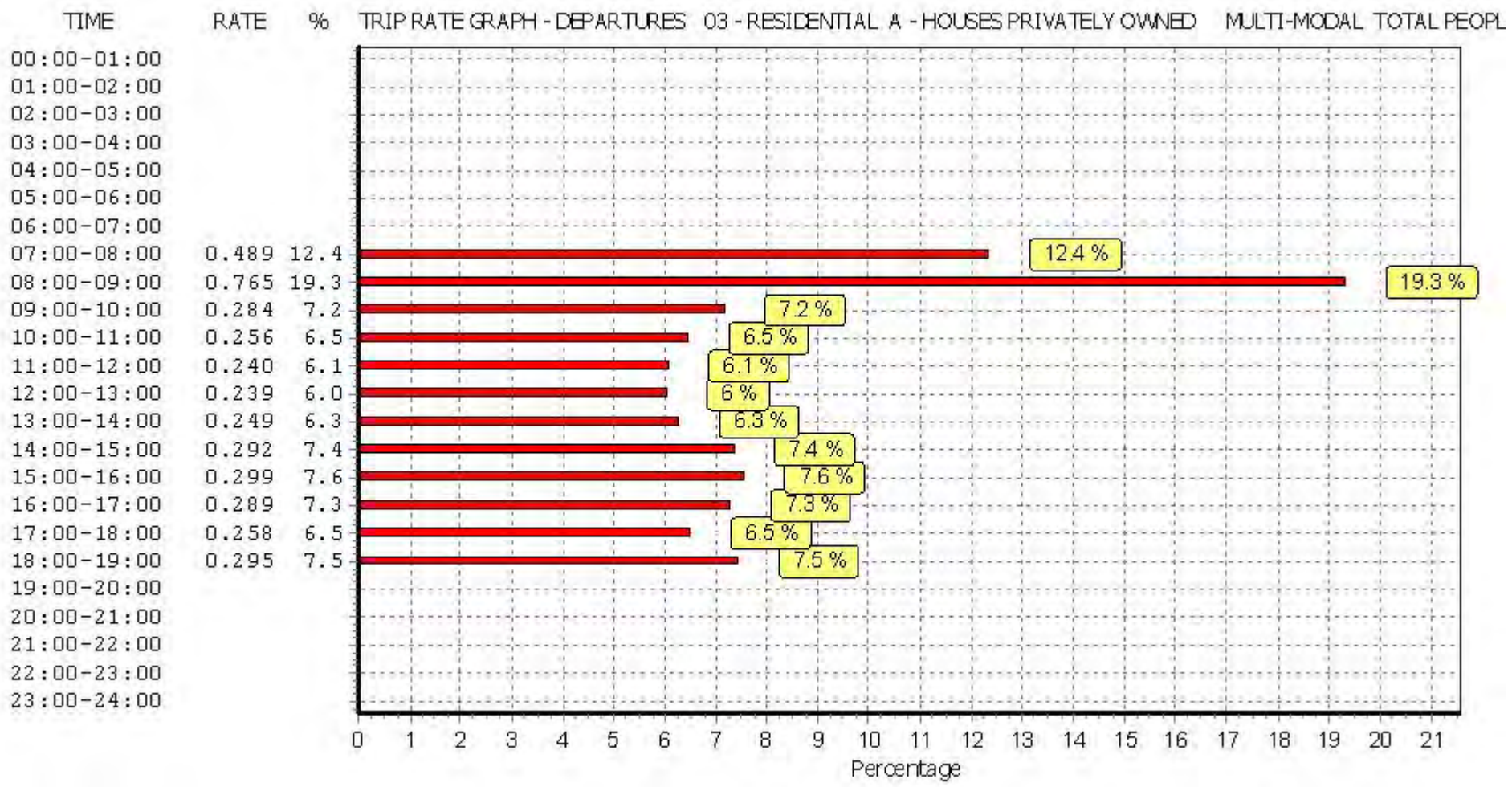


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Martin Andrews Consulting Ltd 8 Corn Kiln Close Cogenhoe Licence No: 864401



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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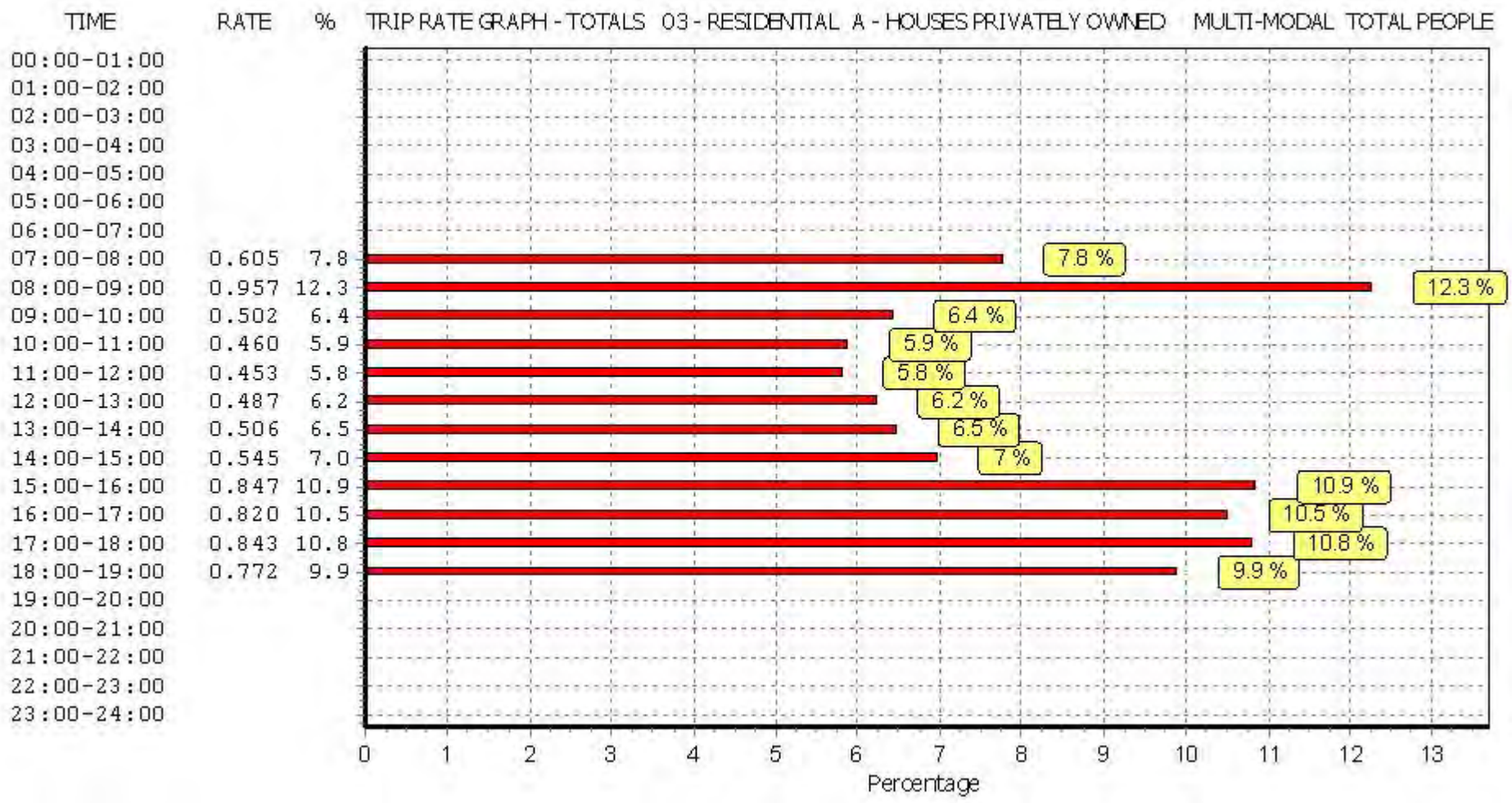


This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

Calculation Reference: AUDIT-864401-190717-0722

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 04 - EDUCATION
Category : A - PRIMARY
VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	HC	HAMPSHIRE	1 days
03	SOUTH WEST		
	BR	BRISTOL CITY	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	LE	LEICESTERSHIRE	1 days
	NR	NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS		
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	WY	WEST YORKSHIRE	2 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
	GM	GREATER MANCHESTER	1 days
	LC	LANCASHIRE	1 days
	MS	MERSEYSIDE	1 days
09	NORTH		
	TW	TYNE & WEAR	1 days

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

Secondary Filtering selection:

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

Parameter: Number of pupils
Actual Range: 147 to 621 (units:)
Range Selected by User: 79 to 657 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/11 to 12/07/17

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

Selected survey days:

Monday	4 days
Tuesday	4 days
Wednesday	1 days
Thursday	5 days

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

Selected survey types:

Manual count	14 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	8

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

Selected Location Sub Categories:

Residential Zone	13
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

D1	14 days

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

Population within 1 mile:

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

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

Population within 5 miles:

5,001 to 25,000	1 days
125,001 to 250,000	4 days
250,001 to 500,000	7 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	7 days
1.1 to 1.5	7 days

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

Travel Plan:

Yes	2 days
No	12 days

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

PTAL Rating:

No PTAL Present	14 days

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

LIST OF SITES relevant to selection parameters

1 BR-04-A-01 PRIMARY SCHOOL BRISTOL CITY
SCHOOL CLOSE
BRISTOL
WHITCHURCH
Edge of Town
Residential Zone
Total Number of pupils: 208
Survey date: TUESDAY *22/09/15* *Survey Type: MANUAL*

2 CH-04-A-01 PRIMARY SCHOOL CHESHIRE
WESTON GROVE
CHESTER
UPTON
Edge of Town
Residential Zone
Total Number of pupils: 219
Survey date: MONDAY *17/11/14* *Survey Type: MANUAL*

3 DS-04-A-01 PRIMARY SCHOOL DERBYSHIRE
VICARAGE ROAD
DERBY
MICKLEOVER
Edge of Town
Residential Zone
Total Number of pupils: 387
Survey date: THURSDAY *25/06/15* *Survey Type: MANUAL*

4 GM-04-A-01 PRIMARY SCHOOL GREATER MANCHESTER
ROCH MILLS CRESCENT
ROCHDALE

Edge of Town
Residential Zone
Total Number of pupils: 457
Survey date: TUESDAY *20/10/15* *Survey Type: MANUAL*

5 HC-04-A-05 PRIMARY SCHOOL HAMPSHIRE
HAVANT ROAD
HAYLING ISLAND

Edge of Town
Residential Zone
Total Number of pupils: 550
Survey date: MONDAY *30/11/15* *Survey Type: MANUAL*

6 LC-04-A-05 PRIMARY SCHOOL LANCASHIRE
NEWTON STREET
BLACKBURN

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of pupils: 472
Survey date: WEDNESDAY *28/09/16* *Survey Type: MANUAL*

7 LE-04-A-02 PRIMARY SCHOOL LEICESTERSHIRE
BEAUFORT WAY
LEICESTER
OADBY
Edge of Town
Residential Zone
Total Number of pupils: 380
Survey date: THURSDAY *30/10/14* *Survey Type: MANUAL*

8 MS-04-A-02 PRIMARY SCHOOL MERSEYSIDE
BOOKER AVENUE
LIVERPOOL
ALVERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of pupils: 264
Survey date: THURSDAY *13/06/13* *Survey Type: MANUAL*

9 NE-04-A-01 PRIMARY SCHOOL NORTH EAST LINCOLNSHIRE
SUNNINGDALE ROAD
SCUNTHORPE

Edge of Town
Residential Zone
Total Number of pupils: 147
Survey date: TUESDAY *20/05/14* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

10	NR-04-A-03 BOOTH LANE NORTH NORTHAMPTON	PRIMARY SCHOOL		NORTHAMPTONSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils:		400	
	Survey date: THURSDAY		*24/03/16*	*Survey Type: MANUAL*
11	TW-04-A-01 GLYNWOOD GARDENS GATESHEAD	PRIMARY SCHOOL		TYNE & WEAR
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils:		260	
	Survey date: MONDAY		*07/10/13*	*Survey Type: MANUAL*
12	WM-04-A-02 HAZEL ROAD BIRMINGHAM RUBERY Edge of Town Residential Zone	PRIMARY SCHOOL		WEST MIDLANDS
	Total Number of pupils:		234	
	Survey date: TUESDAY		*10/11/15*	*Survey Type: MANUAL*
13	WY-04-A-01 SHAKESPEARE AVENUE LEEDS	PRIMARY SCHOOL		WEST YORKSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils:		370	
	Survey date: THURSDAY		*19/09/13*	*Survey Type: MANUAL*
14	WY-04-A-02 TOWN STREET LEEDS	PRIMARY SCHOOL		WEST YORKSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of pupils:		621	
	Survey date: MONDAY		*19/10/15*	*Survey Type: MANUAL*

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

TRIP RATE for Land Use 04 - EDUCATION/A - PRIMARY
VEHICLES
Calculation factor: 1 PUPILS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate	No. Days	Ave. PUPILS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	14	355	0.065	14	355	0.024	14	355	0.089
08:00 - 09:00	14	355	0.324	14	355	0.245	14	355	0.569
09:00 - 10:00	14	355	0.029	14	355	0.051	14	355	0.080
10:00 - 11:00	14	355	0.013	14	355	0.011	14	355	0.024
11:00 - 12:00	14	355	0.023	14	355	0.014	14	355	0.037
12:00 - 13:00	14	355	0.023	14	355	0.028	14	355	0.051
13:00 - 14:00	14	355	0.016	14	355	0.023	14	355	0.039
14:00 - 15:00	14	355	0.080	14	355	0.023	14	355	0.103
15:00 - 16:00	14	355	0.172	14	355	0.259	14	355	0.431
16:00 - 17:00	14	355	0.051	14	355	0.089	14	355	0.140
17:00 - 18:00	14	355	0.026	14	355	0.037	14	355	0.063
18:00 - 19:00	14	355	0.011	14	355	0.017	14	355	0.028
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.833			0.821			1.654

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

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

Parameter summary

Trip rate parameter range selected:	147 - 621 (units:)
Survey date date range:	01/01/11 - 12/07/17
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Appendix J
Distribution

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

population	All usual residents aged 16 and over in employment the week before the census
units	Persons
date	2011
method of travel to work	Driving a car or van
usual residence	Bedford 004

100%

place of work : 2011 super	Area Description	Drivers	Routing	Access 1 (A1)				Access 2 (A2)				Junction 1						Junction 2				Junction 3				Junction 4								Junction 5				Junction 6					
				Access to Hookhams Lane				Access to Ravensden Road				Hookhams Ln / Norse Rd / Church Ln /						Wentworth Drive / Putnoe				Norse Rd / St Neots Rd / Goldington Rd				A421 (N & S), St Neots Road, Water End								Ravensden Rd / Oldways Rd / Church End				B660 / Oldways Rd / Thurleigh Rd					
				N	S	N	S	N	S	N	S	SE	SW	NW	SE	SW	NW	S	W	S	W	E	W	E	W	NE	SE	SW	NW	NE	SE	SW	NW	N	E	N	E	N	NE	SW	N	NE	SW
						87%				13%					66%					19%				21%						42%						13%					13%		
		2,808				21%	66%			13%	0%				25%	21%	20%			11%	9%			21%	0%					13%	7%	22%	0%			13%	0%				5%	8%	0%
						592	1859			357	0				705	601	553			305	241			592	0					376	185	623	0			357	0				139	218	0
Barnet 001	High Barnet	5	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	5	0			0	0				0	0	0
Bedford 020	Wootton & Stewartby	14	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	7	7			0	0	0.5			7	0	0			0	0	0.5		7	0			1		0	0	14	0			0	0				0	0	0
Central Bedfordshire 007	Rural inc. Cranfield, Brogborough & Aspley Guise	48	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	24	24			0	0	0.5			24	0	0			0	0	0.5		24	0			1		0	0	48	0			0	0				0	0	0
Central Bedfordshire 015	Flitwick - east	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0			1		0	0	4	0			0	0				0	0	0
Central Bedfordshire 016	Flitwick - west	5	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	5	0			0	0				0	0	0
Central Bedfordshire 024	Leighton Buzzard - south	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0			1		0	0	4	0			0	0				0	0	0
Milton Keynes 014	Milton Keynes - centre	47	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	24	24			0	0	0.5			24	0	0			0	0	0.5		24	0			1		0	0	47	0			0	0				0	0	0
Milton Keynes 017	Milton Keynes - east inc. Broughton & Kingston	25	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	13	13			0	0	0.5			13	0	0			0	0	0.5		13	0			1		0	0	25	0			0	0				0	0	0
Milton Keynes 018	Milton Keynes inc. Woughton on the Green	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0			1		0	0	4	0			0	0				0	0	0
Milton Keynes 021	Milton Keynes - Winterhill	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0			1		0	0	4	0			0	0				0	0	0
Milton Keynes 022	Milton Keynes - Tilbrook	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	6	0			0	0				0	0	0
Milton Keynes 023	Milton Keynes - Denbigh North	18	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	9	9			0	0	0.5			9	0	0			0	0	0.5		9	0			1		0	0	18	0			0	0				0	0	0
Milton Keynes 030	Bletchley	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0			1		0	0	4	0			0	0				0	0	0
Bedford 019	Elstow Storage Depot, Wixams & Shortstown	45	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	23	23			0	0	0.5			23	0	0			0	0	0.5		23	0			1		0	0	45	0			0	0				0	0	0
Central Bedfordshire 008	Rural inc. Houghton Conquest & Clophill	18	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	9	9			0	0	0.5			9	0	0			0	0	0.5		9	0			1		0	0	18	0			0	0				0	0	0
Central Bedfordshire 017	Rural inc. Silsoe & Harlington	8	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0			1		0	0	8	0			0	0				0	0	0
Central Bedfordshire 018	Rural inc. Barton-le-Clay	8	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0			1		0	0	8	0			0	0				0	0	0
Luton 001	Luton - Warden Hill	5	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	5	0			0	0				0	0	0
Luton 002	Luton - Sundon Park & Willowgate Trading Estate	9	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	5	5			0	0	0.5			5	0	0			0	0	0.5		5	0			1		0	0	9	0			0	0				0	0	0
Luton 008	Luton - Stopsley	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0			1		0	0	4	0			0	0				0	0	0
Luton 013	Luton - Lewsey Farm	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0			1		0	0	4	0			0	0				0	0	0
Luton 014	Luton - Wigmore & airport	14	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	7	7			0	0	0.5			7	0	0			0	0	0.5		7	0			1		0	0	14	0			0	0				0	0	0
Luton 015	Luton - Bury Park	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	6	0			0	0				0	0	0
Luton 016	Luton - Airport	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	6	0			0	0				0	0	0
Luton 018	Luton - centre	19	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	10	10			0	0	0.5			10	0	0			0	0	0.5		10	0			1		0	0	19	0			0	0				0	0	0
Luton 019	Luton - centre	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	6	0			0	0				0	0	0
Luton 021	Luton - centre	18	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	9	9			0	0	0.5			9	0	0			0	0	0.5		9	0			1		0	0	18	0			0	0				0	0	0
North Hertfordshire 014	Rural inc. Pirton & Great Offley	5	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), A6 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	5	0			0	0				0	0	0
Central Bedfordshire 009	Rural inc. Millbrook Technology Park	12	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), B530 (S)	0.5	0.5	6	6			0	0	0.5			6	0	0			0	0	0.5		6	0			1		0	0	12	0			0	0				0	0	0
Central Bedfordshire 012	Millbrook Technology Park & Ampthill	47	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), B530 (S)	0.5	0.5	24	24			0	0	0.5			24	0	0			0	0	0.5		24	0			1		0	0	47	0			0	0				0	0	0
Central Bedfordshire 010	Rural inc. Henlow & Church End	9	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S) Bedford Rd	0.5	0.5	5	5			0	0	0.5			5	0	0			0	0	0.5		5	0			1		0	0	9	0			0	0				0	0	0
Central Bedfordshire 011	Rural inc. Shefford & MOD DISC	35	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S) Bedford Rd	0.5	0.5	18	18			0	0	0.5			18	0	0			0	0	0.5		18	0			1		0	0	35	0			0	0				0	0	0
Central Bedfordshire 013	RAF Henlow	21	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S) Bedford Rd	0.5	0.5	11	11			0	0	0.5			11	0	0			0	0	0.5		11	0			1		0	0	21	0			0	0				0	0	0
Central Bedfordshire 014	Stotfold & Fairfield	5	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S) Bedford Rd	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	5	0			0	0				0	0	0
North Hertfordshire 004	Letchworth - Baldock	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S) Bedford Rd	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0			1		0	0	4	0			0	0				0	0	0
North Hertfordshire 006	Letchworth - Jubilee Industrial Centre	12	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S) Bedford Rd	0.5	0.5	6	6			0	0	0.5			6	0	0			0	0	0.5		6	0			1		0	0	12	0			0	0				0	0	0
North Hertfordshire 008	Letchworth - central & south	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S) Bedford Rd	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	6	0			0	0				0	0	0
Central Bedfordshire 003	Rural inc. Potton	23	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), Cambridge Rd	0.5	0.5	12	12			0	0	0.5			12	0	0			0	0	0.5		12	0			1		0	0	23	0			0	0				0	0	0
Central Bedfordshire 004	Rural inc. Moggerhanger & Blunham	57	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), Cambridge Rd	0.5	0.5	29	29			0	0	0.5			29	0	0			0	0	0.5		29	0			1		0	0	57	0			0	0				0	0	0
Broxbourne 003	Hoddesdon - central	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0	1				4	0	0	0			0	0				0	0	0
Central Bedfordshire 005	Biggleswade	38	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	19	19			0	0	0.5			19	0	0			0	0	0.5		19	0	1				38	0	0	0			0	0				0	0	0
Central Bedfordshire 006	Biggleswade - south	32	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	16	16			0	0	0.5			16	0	0			0	0	0.5		16	0	1				32	0	0	0			0	0				0	0	0
North Hertfordshire 005	Rural inc. Ashwell, Weston & Barkway	8	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0	1				8	0	0	0			0	0				0	0	0
North Hertfordshire 010	Hitchin - north inc. industrial estate	12	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	6	6			0	0	0.5			6	0	0			0	0	0.5		6	0	1				12	0	0	0			0	0				0	0	0
North Hertfordshire 012	Hitchin - central & Westmill	10	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	5	5			0	0	0.5			5	0	0			0	0	0.5		5	0	1				10	0	0	0			0	0				0	0	0
South Cambridgeshire 018	Rural inc. Melbourn, Fowlmere & Great Chishill	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0	1				4	0	0	0			0	0				0	0	0
Stevenage 001	Stevenage - Pin Green Industrial Area	8	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0	1				8	0	0	0			0	0				0	0	0
Stevenage 002	Stevenage - north	7	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0	1				7	0	0	0			0	0				0	0	0
Stevenage 005	Stevenage - Symonds Green & Fishers Green	11	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	6	6			0	0	0.5			6	0	0			0	0	0.5		6	0	1				11	0	0	0			0	0				0	0	0
Stevenage 008	Stevenage - central	10	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	5	5			0	0	0.5			5	0	0			0	0	0.5		5	0	1				10	0	0	0			0	0				0	0	0
Stevenage 011	Stevenage - Roebuck	9	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	5	5			0	0	0.5			5	0	0			0	0	0.5		5	0	1				9	0	0	0			0	0				0	0	0
Welwyn Hatfield 002	Rural inc. Welwyn	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0	1				4	0	0	0			0	0				0	0	0
Welwyn Hatfield 004	Welwyn Garden City - Haldens	8	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0	1				8	0	0	0			0	0				0	0	0
Welwyn Hatfield 010	Hatfield - UoH Havilland campus	14	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	7	7			0	0	0.5			7	0	0			0	0	0.5		7	0	1				14	0	0	0			0	0				0	0	0
Bedford 014	Bedford - Fenlake	155	S - Hookhams Ln, Church Ln		1.0	0	155			0	0		1		0	155	0			0	0			0	0					0	0	0	0			0	0				0	0	0
Central Bedfordshire 027	Dunstable	5	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), M1 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	5	0			0	0				0	0	0
Central Bedfordshire 028	Dunstable - west	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), M1 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	6	0			0	0				0	0	0
Central Bedfordshire 029	Dunstable	7	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), M1 (S)	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0			1		0	0	7	0			0	0				0	0	0
City of London 001	City of London	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), M1 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	6	0			0	0				0	0	0
Hillingdon 031	Heathrow	5	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (S), M1 (S)	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0			1		0	0	5	0			0	0				0	0	0
Bedford 004	Rural inc. Great Barford & Little Staughton	185	S - Hookhams Ln, Norse Rd, St Neots Road, St Neots Rd	0.5	0.5	93	93			0	0	0.5			93	0	0			0	0	0.5		93	0		1			0	185	0	0			0	0				0	0	0
Cambridge 003	Cambridge - Chesterton	5	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0	1				5	0	0	0			0	0				0	0	0
Cambridge 005	Cambridge - North West Cambridge Development	5	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0	1				5	0	0	0			0	0				0	0	0
Cambridge 007	Cambridge - central & Newnham	16	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	8	8			0	0	0.5			8	0	0			0	0	0.5		8	0	1				16	0	0	0			0	0				0	0	0
Cambridge 012	Cambridge - Trumpington	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0	1				4	0	0	0			0	0				0	0	0
Cambridge 013	Cambridge - Addenbrooke's hospital	7	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0	1				7	0	0	0			0	0				0	0	0
Huntingdonshire 006	Rural inc. RAF Wyton	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0	1				4	0	0	0			0	0				0	0	0
Huntingdonshire 007	Needingworth, Bluntisham & Earith	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0	1				6	0	0	0			0	0				0	0	0
Huntingdonshire 010	Rural inc. Brampton & RAF Alconbury	27	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	14	14			0	0	0.5			14	0	0			0	0	0.5		14	0	1				27	0	0	0			0	0				0	0	0
Huntingdonshire 013	St Ives - south	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0	1				6	0	0	0			0	0				0	0	0
Huntingdonshire 018	Rural inc. Little Paxton & Abbotsley	11	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	6	6			0	0	0.5			6	0	0			0	0	0.5		6	0	1				11	0	0	0			0	0				0	0	0
South Cambridgeshire 013	Rural inc. Gamlingay & Barrington	6	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	3	3			0	0	0.5			3	0	0			0	0	0.5		3	0	1				6	0	0	0			0	0				0	0	0
Central Bedfordshire 001	Sandy - inc. Sandy Upper School	14	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	7	7			0	0	0.5			7	0	0			0	0	0.5		7	0	1				14	0	0	0			0	0				0	0	0
Central Bedfordshire 002	Sandy	49	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N), A1 (S)	0.5	0.5	25	25			0	0	0.5			25	0	0			0	0	0.5		25	0	1				49	0	0	0			0	0				0	0	0
Bedford 001	Rural inc. Sharnbrook & Riseley	66	N - Ravensden Rd, Thurleigh Rd			0	0	1		66	0				0	0	0			0	0			0	0					0	0	0	0	1		66	0	1			66	0	0
Bedford 002	Rural inc. Harrold	14	N - Ravensden Rd, Thurleigh Rd			0	0	1		14	0				0	0	0			0	0			0	0					0	0	0	0	1		14	0	1			14	0	0
Bedford 003	Rural inc. Clapham, Oakley & Milton Ernest	46	N - Ravensden Rd, Thurleigh Rd			0	0	1		46	0				0	0	0			0	0			0	0					0	0	0	0	1		46	0	1			46	0	0
East Northamptonshire 008	Higham Ferrers and Rushden	5	N - Ravensden Rd, Thurleigh Rd			0	0	1		5	0				0	0	0			0	0			0	0					0	0	0	0	1		5	0	1			5	0	0
Huntingdonshire 008	Huntingdon - Oxmoor	11	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		11	0				0	0	0			0	0			0	0					0	0	0	0	1		11	0		1		0	11	0
Huntingdonshire 012	Huntingdon	28	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		28	0				0	0	0			0	0			0	0					0	0	0	0	1		28	0		1		0	28	0
Huntingdonshire 015	Rural inc. Kimbolton	31	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		31	0				0	0	0			0	0			0	0					0	0	0	0	1		31	0		1		0	31	0
Huntingdonshire 017	Rural inc. Buckden	14	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		14	0				0	0	0			0	0			0	0					0	0	0	0	1		14	0		1		0	14	0
Huntingdonshire 019	St Neots - north	28	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		28	0				0	0	0			0	0			0	0					0	0	0	0	1		28	0		1		0	28	0
Huntingdonshire 020	St Neots - west	8	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		8	0				0	0	0			0	0			0	0					0	0	0	0	1		8	0		1		0	8	0
Huntingdonshire 021	St Neots - south east	27	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		27	0				0	0	0			0	0			0	0					0	0	0	0	1		27	0		1		0	27	0
Huntingdonshire 022	St Neots - south west	61	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		61	0				0	0	0			0	0			0	0					0	0	0	0	1		61	0		1		0	61	0
Kettering 009	Kettering - south	8	N - Ravensden Rd, Thurleigh Rd			0	0	1		8	0				0	0	0			0	0			0	0					0	0	0	0	1		8	0	1			8	0	0
Peterborough 014	Peterborough - centre	5	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		5	0				0	0	0			0	0			0	0					0	0	0	0	1		5	0		1		0	5	0
Peterborough 015	Peterborough - west	5	N - Ravensden Rd, Thurleigh Rd - B660 NE			0	0	1		5	0				0	0	0			0	0			0	0					0	0	0	0	1		5	0		1		0	5	0
South Cambridgeshire 005	Rural inc. Boxworth & Bar Hill	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0	1				4	0	0	0			0	0				0	0	0
South Cambridgeshire 007	Milton & Horningsea	7	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0	1				7	0	0	0			0	0				0	0	0
South Cambridgeshire 017	Rural inc. Duxford & Babraham	4	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	2	2			0	0	0.5			2	0	0			0	0	0.5		2	0	1				4	0	0	0			0	0				0	0	0
South Cambridgeshire 020	Cambourne & Bourn Airfield	7	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	4	4			0	0	0.5			4	0	0			0	0	0.5		4	0	1				7	0	0	0			0	0				0	0	0
South Cambridgeshire 021	Rural inc. Caxton & Papworth Everard	15	S - Hookhams Ln, Norse Rd, St Neots Road, A421 (N),	0.5	0.5	8	8			0	0	0.5			8	0	0			0	0	0.5		8	0	1				15	0	0	0			0	0				0	0	0
Bedford 011	Bedford - Newnham	72	S - Hookhams Ln, Church Ln		1	0	72			0	0		1		0	72	0			0	0			0	0					0	0	0	0			0	0				0	0	0
Bedford 015	Bedford - South End	178	S - Hookhams Ln, Church Ln, A4280 (W), Newnham Av		1	0	178			0	0		1		0	178	0			0	0			0	0					0	0	0	0			0	0				0	0	0
Bedford 016	Bedford - Kempston	27	S - Hookhams Ln, Church Ln, A4280 (W), Newnham Av		1	0	27			0	0		1		0	27	0			0	0			0	0					0	0	0	0			0	0				0	0	0
Bedford 017	Bedford - Kempston	30	S - Hookhams Ln, Church Ln, A4280 (W), Newnham Av		1	0	30			0	0		1		0	30	0			0	0			0	0					0	0	0	0			0	0				0	0	0
Bedford 018	Bedford - Kempston	139	S - Hookhams Ln, Church Ln, A4280 (W), Newnham Av		1	0	139			0	0		1		0	139	0			0	0			0	0					0	0	0	0			0	0				0	0	0
Bedford 007	Bedford - Elms Farm Industrial Estate	113	S - Hookhams Ln, Norse Rd, Hudson Rd		1	0	113			0	0	1			113	0	0			0	0			0	0					0	0	0	0			0	0				0	0	0
Bedford 005	Bedford - Brickhill	31	S - Hookhams Ln, Wentworth Dr		1	0	31			0	0			1	0	0	31		1	0	31			0	0					0	0	0	0			0	0				0	0	0
Bedford 006	Bedford - Putnoe	15	S - Hookhams Ln, Wentworth Dr		1	0	15			0	0			1	0	0	15		1	0	8			0	0					0	0	0	0			0	0				0	0	0
Bedford 008	Bedford - Biddenham & Bromham	20	S - Hookhams Ln, Wentworth Dr		1	0	20			0	0			1	0	0	20		1	0	20			0	0					0	0	0	0			0	0				0	0	0
Bedford 010	Bedford - Harpur & Bedford Modern School	139	S - Hookhams Ln, Wentworth Dr		1	0	139			0	0			1	0	0	139		1	0	139			0	0					0	0	0	0			0	0				0	0	0
Milton Keynes 007	Milton Keynes - Tongwell	8	S - Hookhams Ln, Wentworth Dr, A422		1	0	8			0	0			1	0	0	8		1	0	8			0	0					0	0	0	0			0	0				0	0	0
Milton Keynes 009	Milton Keynes - Linford Wood	6	S - Hookhams Ln, Wentworth Dr, A422		1	0	6			0	0			1	0	0	6		1	0	6			0	0					0	0	0	0			0	0				0	0	0
Milton Keynes 010	Stony Stratford & Old Wolverton	6	S - Hookhams Ln, Wentworth Dr, A422		1	0	6			0	0			1	0	0	6		1	0	6			0	0					0	0	0	0			0	0				0	0	0
Milton Keynes 001	Olney	11	S - Hookhams Ln, Wentworth Dr, A428 (N)		1	0	11			0	0			1	0	0	11		1	0	11			0	0					0	0	0	0			0	0				0	0	0
Northampton 028	Northampton - Brackmills	12	S - Hookhams Ln, Wentworth Dr, A428 (N)		1	0	12			0	0			1	0	0	12		1	0	12			0	0					0	0	0	0			0	0				0	0	0
Bedford 009	Bedford - centre	61	S - Hookhams Ln, Wentworth Dr, Putnoe Ln		1	0	61			0	0			1	0	0	61	1		61	0			0	0					0	0	0	0			0	0				0	0	0
Bedford 012	Bedford - centre	233	S - Hookhams Ln, Wentworth Dr, Putnoe Ln		1	0	233			0	0			1	0	0	233	1		233	0			0	0					0	0	0	0			0	0				0	0	0
Bedford 013	Bedford - Queens Park & Biddenham Upper School	11	S - Hookhams Ln, Wentworth Dr, Putnoe Ln		1	0	11			0	0			1	0	0	11	1		11	0			0	0					0	0	0	0			0	0				0	0	0

	AM Peak 08.00-09.00			PM Peak 17.00-18.00		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Dwellings	66	262	328	200	88	289
School	136	103	239	11	16	26
Dwellings	2	9	11	7	3	10

	Residential - 500 dwellings	School - 420 Pupils	Total	Residential - 14 dwellings

A1 Access to Hookhams Lane

%	A	B	C
A		66%	
B	66%		20%
C		20%	

%	A	B	C
A		20%	
B	20%		20%
C		20%	

%	A	B	C
A		66%	
B			
C			

AM	A	B	C
A		43	
B	173		52
C		13	

AM	A	B	C
A		27	
B	21		21
C		27	

AM	A	B	C
A	0	71	0
B	194	0	73
C	0	40	0

AM	A	B	C
A		2	
B	6		
C			

PM	A	B	C
A		132	
B	58		18
C		40	

PM	A	B	C
A		2	
B	3		3
C		2	

PM	A	B	C
A	0	134	0
B	61	0	21
C	0	42	0

PM	A	B	C
A		5	
B	2		
C			

A2 Access to Ravensden Rd

%	A	B	C
A			
B			14%
C		14%	

%	A	B	C
A			
B			
C			

%	A	B	C
A			
B			14%
C		14%	

AM	A	B	C
A		0	
B	0		37
C		9	

AM	A	B	C
A			
B			
C			

AM	A	B	C
A	0	0	0
B	0	0	37
C	0	9	0

AM	A	B	C
A			
B			1
C		0	

PM	A	B	C
A		0	
B	0		12
C		28	

PM	A	B	C
A			
B			
C			

PM	A	B	C
A	0	0	0
B	0	0	12
C	0	28	0

PM	A	B	C
A			
B			0
C		1	

J1: Hookhams Lane / Norse Road / Church Lane / Wentworth Drive

%	A	B	C	D
A		25%	21%	20%
B	25%			
C	21%			
D	20%			

%	A	B	C	D
A		5%	5%	5%
B	5%			
C	5%			
D	5%			

%	A	B	C	D
A				
B	25%			
C	21%			
D	20%			

AM	A	B	C	D
A		66	56	52
B	17			
C	14			
D	13			

AM	A	B	C	D
A		5	5	5
B	7			
C	7			
D	7			

AM	A	B	C	D
A	0	71	61	57
B	23	0	0	0
C	21	0	0	0
D	20	0	0	0

AM	A	B	C	D
A		2	2	2
B	1			
C	0			
D	0			

217

PM	A	B	C	D
A		22	19	17
B	50			
C	43			
D	39			

PM	A	B	C	D
A		1	1	1
B	1			
C	1			
D	1			

PM	A	B	C	D
A	0	23	20	18
B	51	0	0	0
C	43	0	0	0
D	40	0	0	0

PM	A	B	C	D
A		1	1	1
B	2			
C	2			
D	1			

191

J2: Wentworth Drive / Putnoe Lane

%	A	B	C
A		11%	9%
B	11%		
C	9%		

%	A	B	C
A			
B			
C			

%	A	B	C
A		11%	9%
B	11%		
C	9%		

AM	A	B	C
A		28	22
B	7		
C	6		

AM	A	B	C
A			
B			
C			

AM	A	B	C
A	0	28	22
B	7	0	0
C	6	0	0

AM	A	B	C
A		1	1
B	0		
C	0		

64

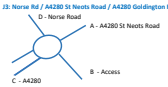
PM	A	B	C
A		10	8
B	22		
C	17		

PM	A	B	C
A			
B			
C			

PM	A	B	C
A	0	10	8
B	22	0	0
C	17	0	0

PM	A	B	C
A		2	0
B	1		
C	1		

J3: Norse Rd / A4280 St Neots Road / A4280 Goldington Rd



%	A	B	C	D
A				21%
B				
C				
D	21%			

%	A	B	C	D
A				
B				
C				
D				

%	A	B	C	D
A				21%
B				
C				
D	21%			

AM	A	B	C	D
A				14
B				
C				
D	55			

AM	A	B	C	D
A				
B				
C				
D				

AM	A	B	C	D
A	0	0	0	14
B	0	0	0	0
C	0	0	0	0
D	55	0	0	0

AM	A	B	C	D
A				0
B				
C				
D	2			

PM	A	B	C	D
A				42
B				
C				
D	19			

PM	A	B	C	D
A				
B				
C				
D				

PM	A	B	C	D
A	0	0	0	42
B	0	0	0	0
C	0	0	0	0
D	19	0	0	0

PM	A	B	C	D
A				1
B				
C				
D	1			

J4: A421 (N) / St Neots Rd / A421 (S) / A4280

%	A	B	C	D	E
A				7%	7%
B				3%	3%
C				11%	11%
D	7%	3%	11%		
E	7%	3%	11%		

%	A	B	C	D	E
A					
B					
C					
D					
E					

%	A	B	C	D	E
A				7%	7%
B				3%	3%
C				11%	11%
D	7%	3%	11%		
E					

AM	A	B	C	D	E
A				4	4
B				2	2
C				7	7
D	18	9	29		
E	18	9	29		

AM	A	B	C	D	E
A					
B					
C					
D					
E					

AM	A	B	C	D	E
A	0	0	0	4	4
B	0	0	0	2	2
C	0	0	0	7	7
D	18	9	29	0	0
E	18	9	29	0	0

AM	A	B	C	D	E
A				0	
B				0	
C				0	
D	1	0	1		
E					

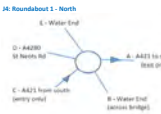
PM	A	B	C	D	E
A				13	13
B				7	7
C				22	22
D	6	3	10		
E	6	3	10		

PM	A	B	C	D	E
A					
B					
C					
D					
E					

PM	A	B	C	D	E
A	0	0	0	13	13
B	0	0	0	7	7
C	0	0	0	22	22
D	6	3	10	0	0
E	6	3	10	0	0

PM	A	B	C	D	E
A				0	
B				0	
C				1	
D	0	0	1		
E					

J4: Roundabout 1 - North



%	A	B	C	D	E
A					
B				10%	10%
C				11%	11%
D	7%	14%			
E	7%	14%			

%	A	B	C	D	E
A					
B					
C					
D					
E					

%	A	B	C	D	E
A				0%	
B				10%	
C				11%	
D	7%	14%	0%		
E					

AM	A	B	C	D	E
A				0	0
B				7	7
C				7	7
D	18	38	0		
E	18	38	0		

AM	A	B	C	D	E
A					
B					
C					
D					
E					

AM	A	B	C	D	E
A	0	0	0	0	0
B	0	0	0	7	7
C	0	0	0	7	7
D	18	38	0	0	0
E	18	38	0	0	0

AM	A	B	C	D	E
A				0	
B				0	
C				0	
D	1	1	0		
E					

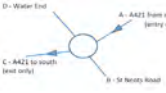
PM	A	B	C	D	E
A				0	0
B				20	20
C				22	22
D	6	13	0		
E	6	13	0		

PM	A	B	C	D	E
A					
B					
C					
D					
E					

PM	A	B	C	D	E
A	0	0	0	0	0
B	0	0	0	20	20
C	0	0	0	22	22
D	6	13	0	0	0
E	6	13	0	0	0

PM	A	B	C	D	E
A				0	
B				1	
C				1	
D	0	0	0		
E					

J4: Roundabout 2 - South



%	A	B	C	D
A				7%
B				3%
C				
D		3%	11%	

%	A	B	C	D
A				
B				
C				
D				

%	A	B	C	D
A				7%
B				3%
C				0%
D	0%	3%	11%	

AM	A	B	C	D
A				4
B				2
C				0
D	0	9	29	

AM	A	B	C	D
A				
B				
C				
D				

AM	A	B	C	D
A	0	0	0	4
B	0	0	0	2
C	0	0	0	0
D	0	9	29	0

AM	A	B	C	D
A				0
B				0
C				0
D	0	0	1	

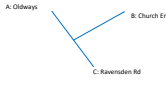
PM	A	B	C	D
A				13
B				7
C				0
D	0	3	10	

PM	A	B	C	D
A				
B				
C				
D				

PM	A	B	C	D
A	0	0	0	13
B	0	0	0	7
C	0	0	0	0
D	0	3	10	0

PM	A	B	C	D
A				0
B				0
C				0
D	0	0	1	

J5: Ravensden Rd / Oldways Rd / Church End



%	A	B	C
A			13%
B			
C	13%		

%	A	B	C
A			
B			
C			

%	A	B	C
A			13%
B			
C	13%		

AM	A	B	C
A			8
B			
C	33		

AM	A	B	C
A			
B			
C			

AM	A	B	C
A	0	0	8
B	0	0	0
C	33	0	0

AM	A	B	C
A			0
B			
C	1		

PM	A	B	C
A			25
B			
C	11		

PM	A	B	C
A			
B			
C			

PM	A	B	C
A	0	0	25
B	0	0	0
C	11	0	0

PM	A	B	C
A			1
B			
C	0		

J6: B660 / Oldways Rd / Thurleigh Rd

%	A	B	C	D
A		8%		
B	8%			5%
C				
D		5%		

%	A	B	C	D
A				
B				
C				
D				

%	A	B	C	D
A		8%		
B	8%			5%
C				
D		5%		

AM	A	B	C	D
A		5		
B	20			13
C				
D		10		

AM	A	B	C	D
A				
B				
C				
D				

AM	A	B	C	D
A	0	5	0	0
B	20	0	0	13
C	0	0	0	0
D	0	10	0	0

AM	A	B	C	D
A		0		
B	1			0
C				
D		0		

PM	A	B	C	D
A		5		
B	7			4
C				
D		10		

PM	A	B	C	D
A				
B				
C				
D				

PM	A	B	C	D
A	0	5	0	0
B	7	0	0	4
C	0	0	0	0
D	0	10	0	0

PM	A	B	C	D
A		1		
B	0			0
C				
D		0		

Appendix K

Vehicle Movement Diagrams

NORTH

Thurleigh Rd
B660
5%
8%
J6
8%
5%
Oldways Road
13%
Church End
0%
J5
0%
13%
13%
A2
13%
Ravensden Rd
Site
Wilden Road
A1
66%
21%
21%
66%
Hookhams Lane
9%
J2
9%
11%
Wentworth Drive
11%
20%
20%
21%
25%
J1
21%
25%
Putnoe Lane
Church Lane
Norse Road
Water End
Goldington Road
21%
J3
21%
St Neots Rd
7%
14%
14%
7%
11%
11%
10%
10%
J4
A421
A421
11%
3%
7%
3%
St Neots Rd

Junctions:
A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lane / Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road
J4: A421 / St Neots Road / A4280

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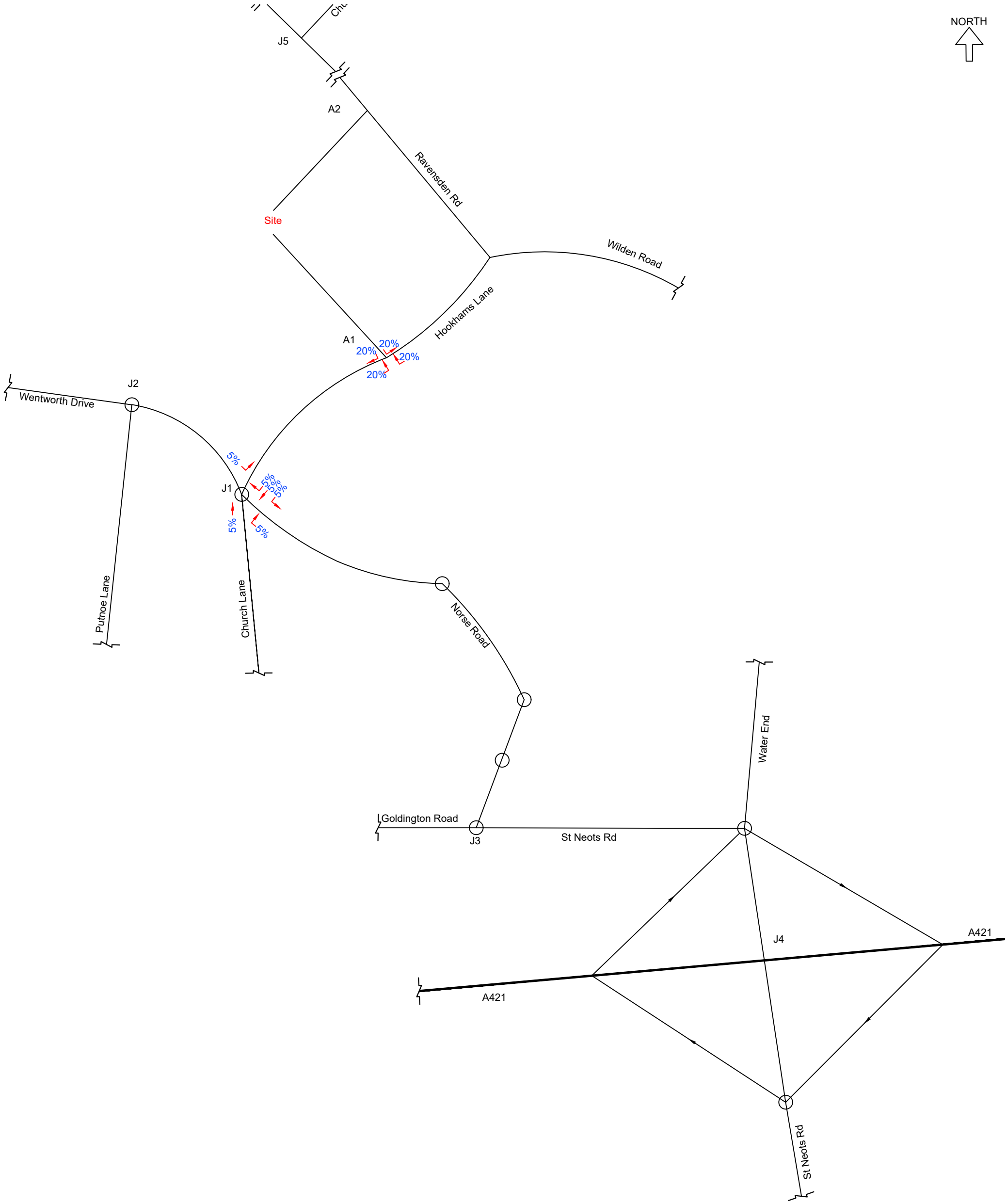
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes
Project: Land north of Hookhams Ln Salph End
Title: Vehicle Distribution - Dwellings
Date: 21/01/20
Drw: MJA
Chk: MJA
Drawing No: 143-TA25
Revision: A
Scale: NTS
Size: A3



Junctions:

A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lane / Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road
J4: A421 / St Neots Road / A4280

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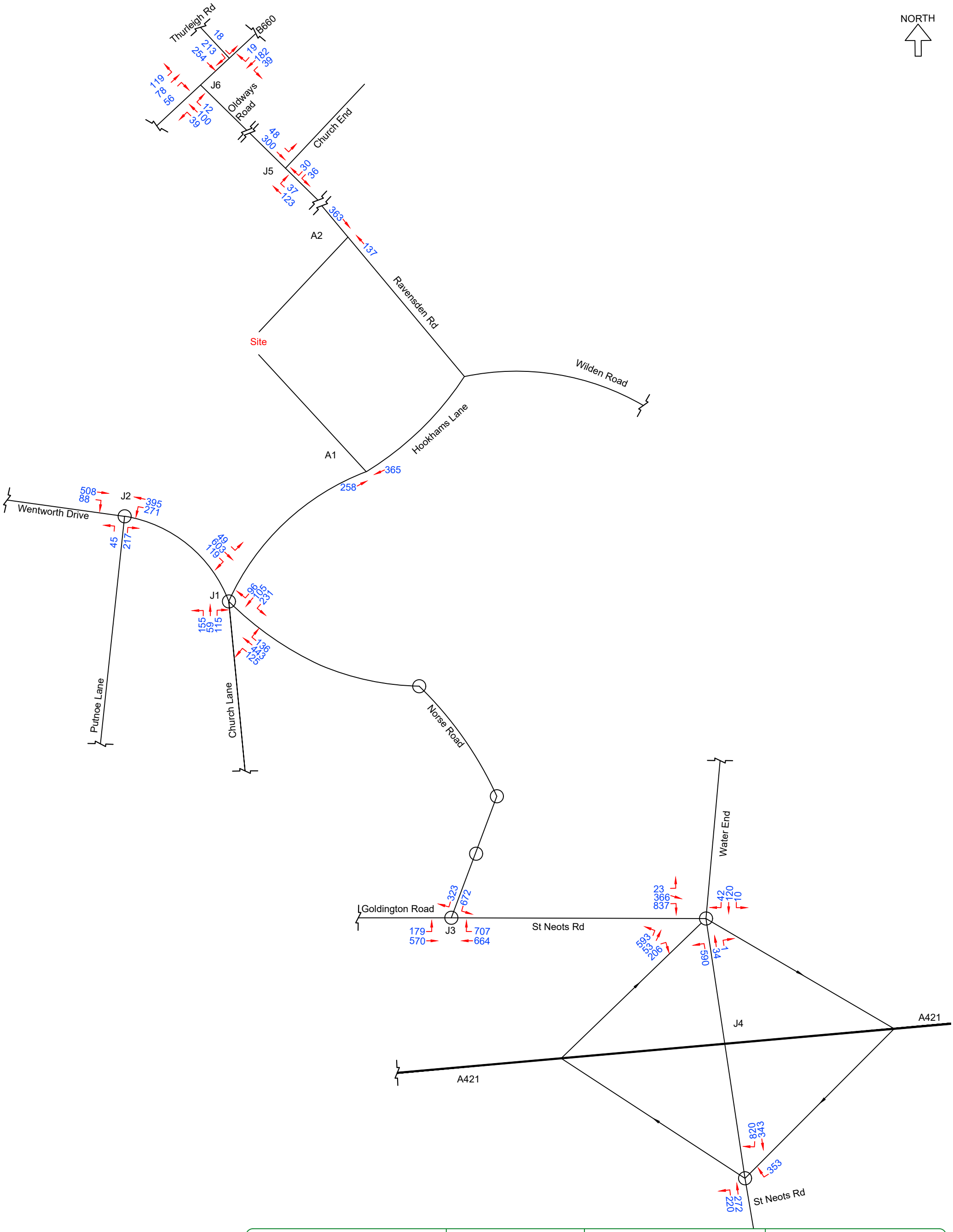
Client: Manor Oak Homes		Project: Land north of Hookhams Ln Salph End	
Title: Vehicle Distribution - School			Date: 29/08/19
			Drw: MJA
			Chk: MJA
Drawing No: 143-TA26	Revision: -		Scale: NTS
			Size: A3



Junctions:

A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lane / Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road
J4: A421 / St Neots Road / A4280

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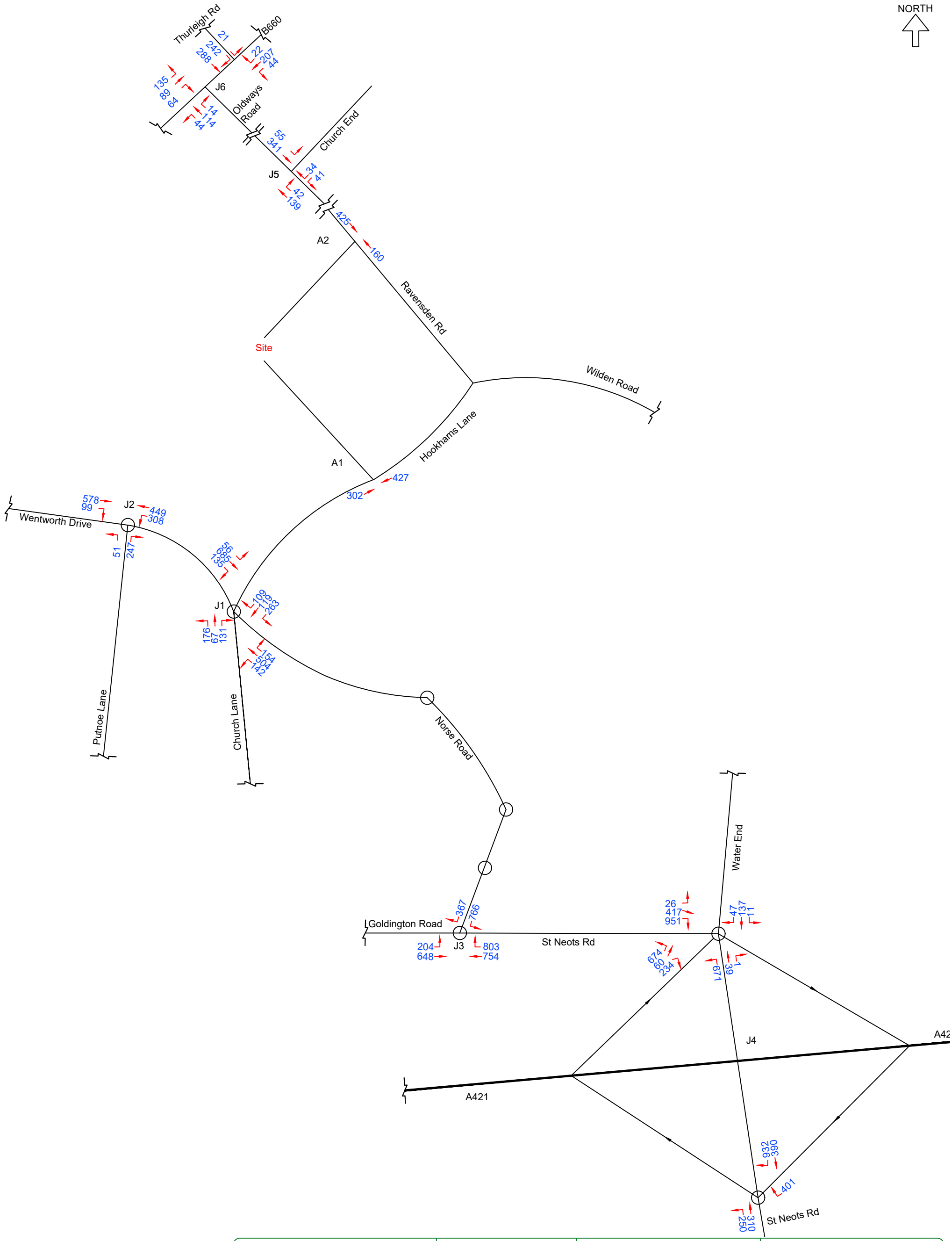
- Vehicle tracking

Client: Manor Oak Homes		Project: Land north of Hookhams Ln Salph End	
Title: Vehicle Trip Movement Diagram 2019 - AM Peak Background			Date: 21/01/20
			Drw: MJA
			Chk: MJA
Drawing No: 143-TA30	Revision: A		Scale: NTS
			Size: A3



Junctions:

A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lane / Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road
J4: A421 / St Neots Road / A4280

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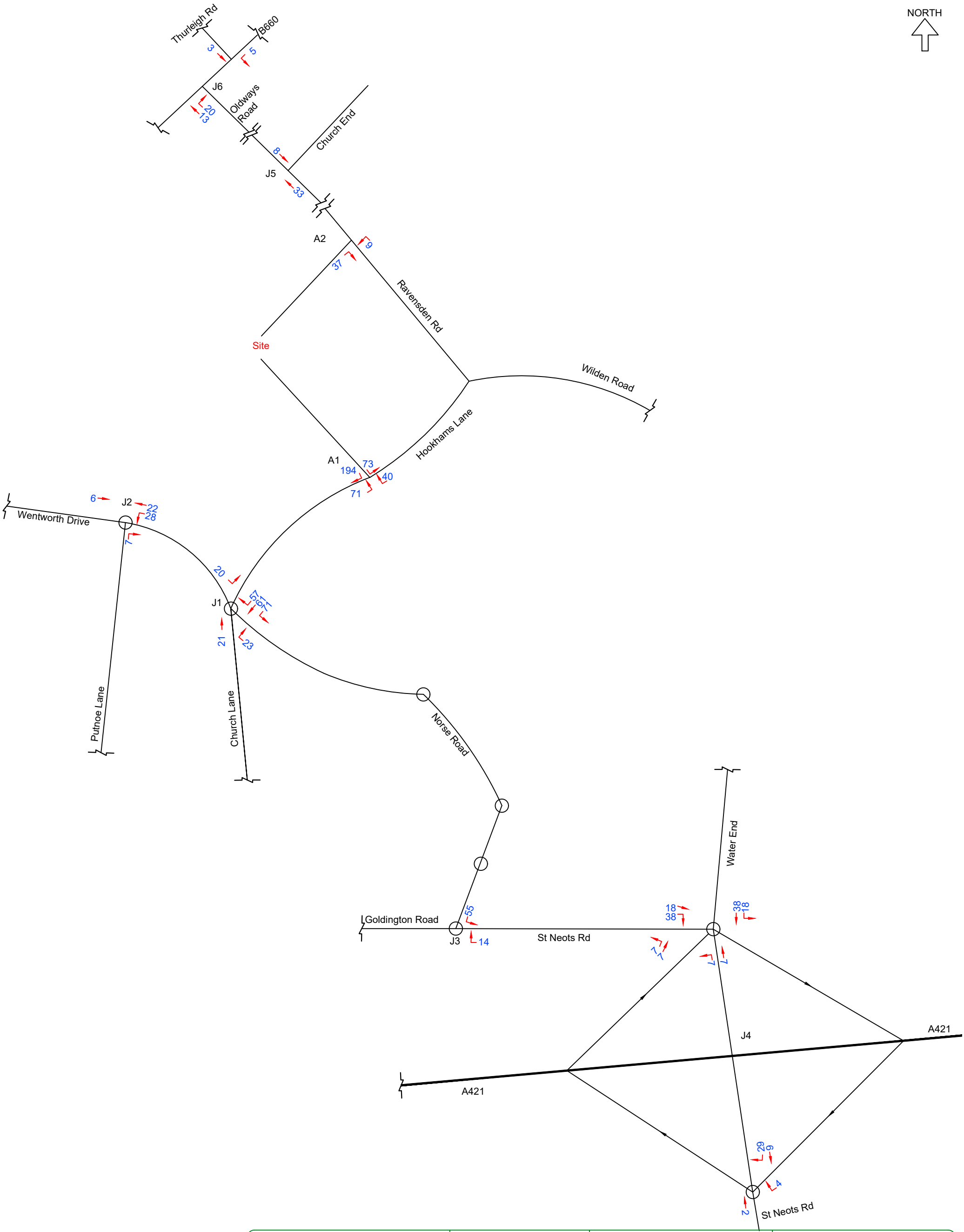
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes		Project: Land north of Hookhams Ln Salph End	
Title: Vehicle Trip Movement Diagram 2030 - AM Peak Background			Date: 21/01/20
			Drw: MJA
			Chk: MJA
Drawing No: 143-TA31	Revision: A		Scale: NTS
			Size: A3



Junctions:

A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lan
Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road
/ Norse Road
J4: A421 / St Neots Road / A4280

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- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes

Project: Land north of Hookhams Ln
Salph End

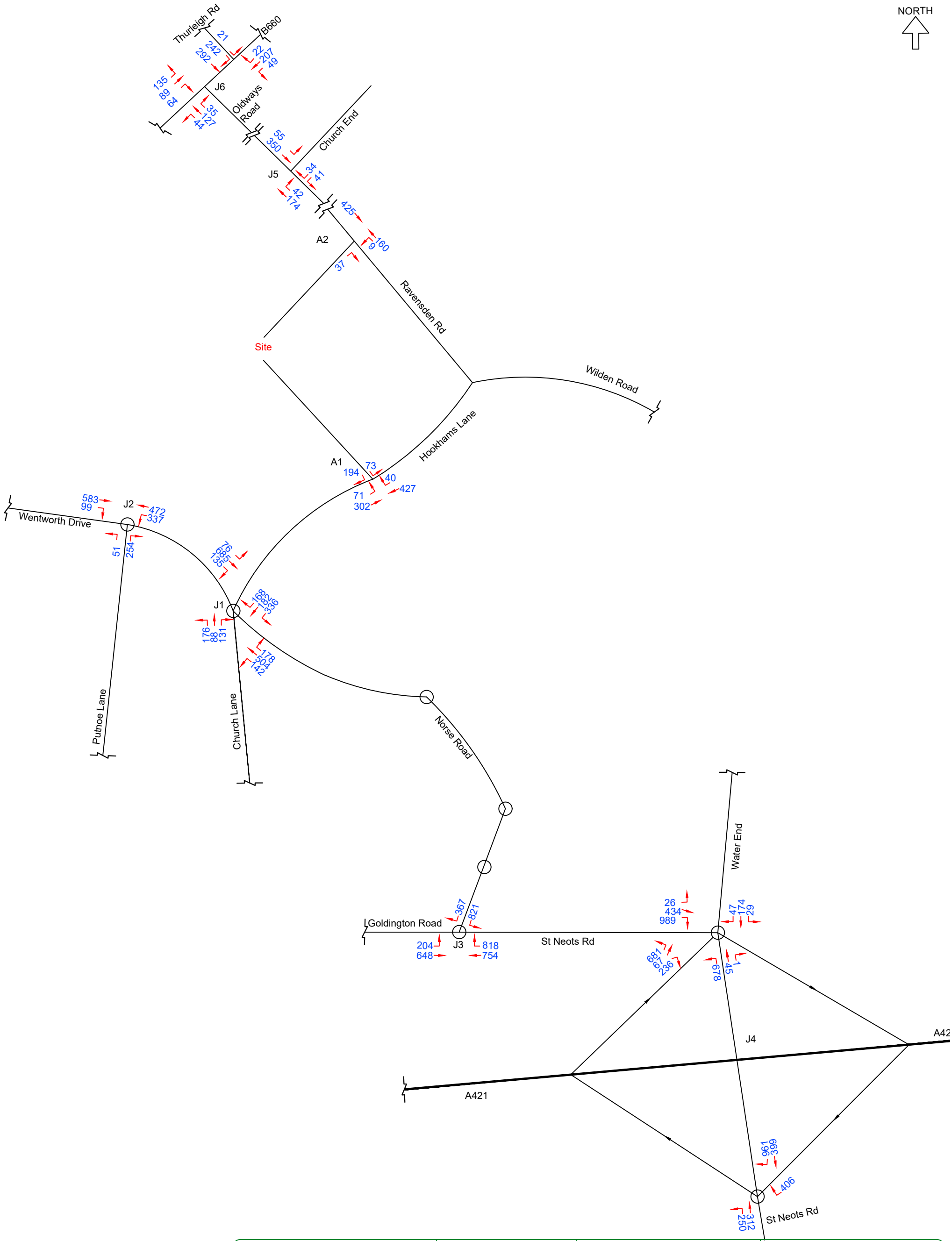
Title: Vehicle Trip Movement Diagram
2030 - AM Peak
Development

Date: 21/01/20
Drw: MJA
Chk: MJA

Drawing No: 143-TA33

Revision: A

Scale: NTS
Size: A3



Junctions:

A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lane / Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road
J4: A421 / St Neots Road / A4280

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- Transport Assessments
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes

Project: Land north of Hookhams Ln Salph End

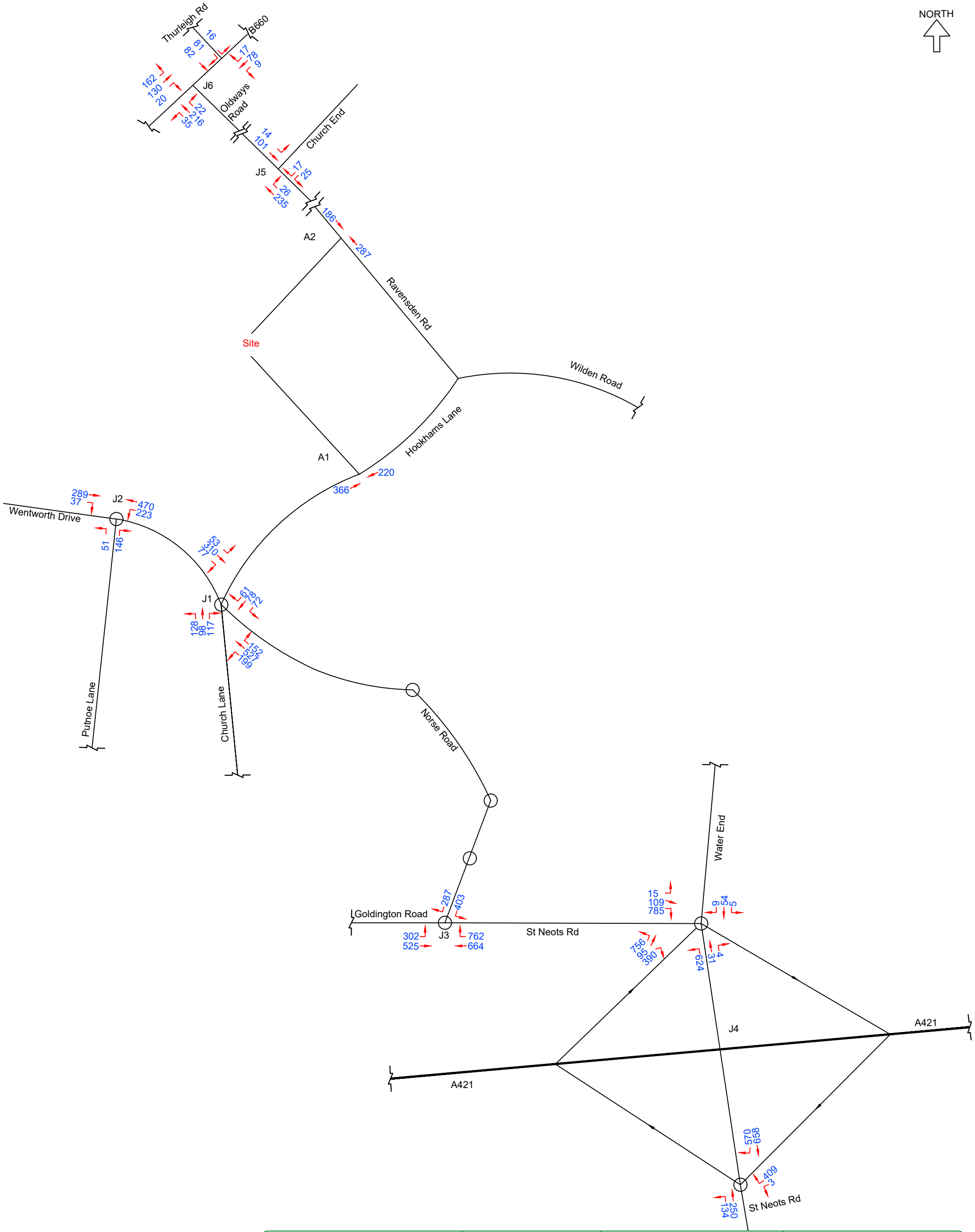
Title: Vehicle Trip Movement Diagram
2030 - AM Peak
Background - Committed - Development

Date: 21/01/20
Drw: MJA
Chk: MJA

Drawing No: 143-TA34

Revision: A

Scale: NTS
Size: A3



Junctions:

A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lane / Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road
J4: A421 / St Neots Road / A4280

T: 01604 340544 Northampton Office
E: info@mac-ltd.co.uk W: mac-ltd.co.uk
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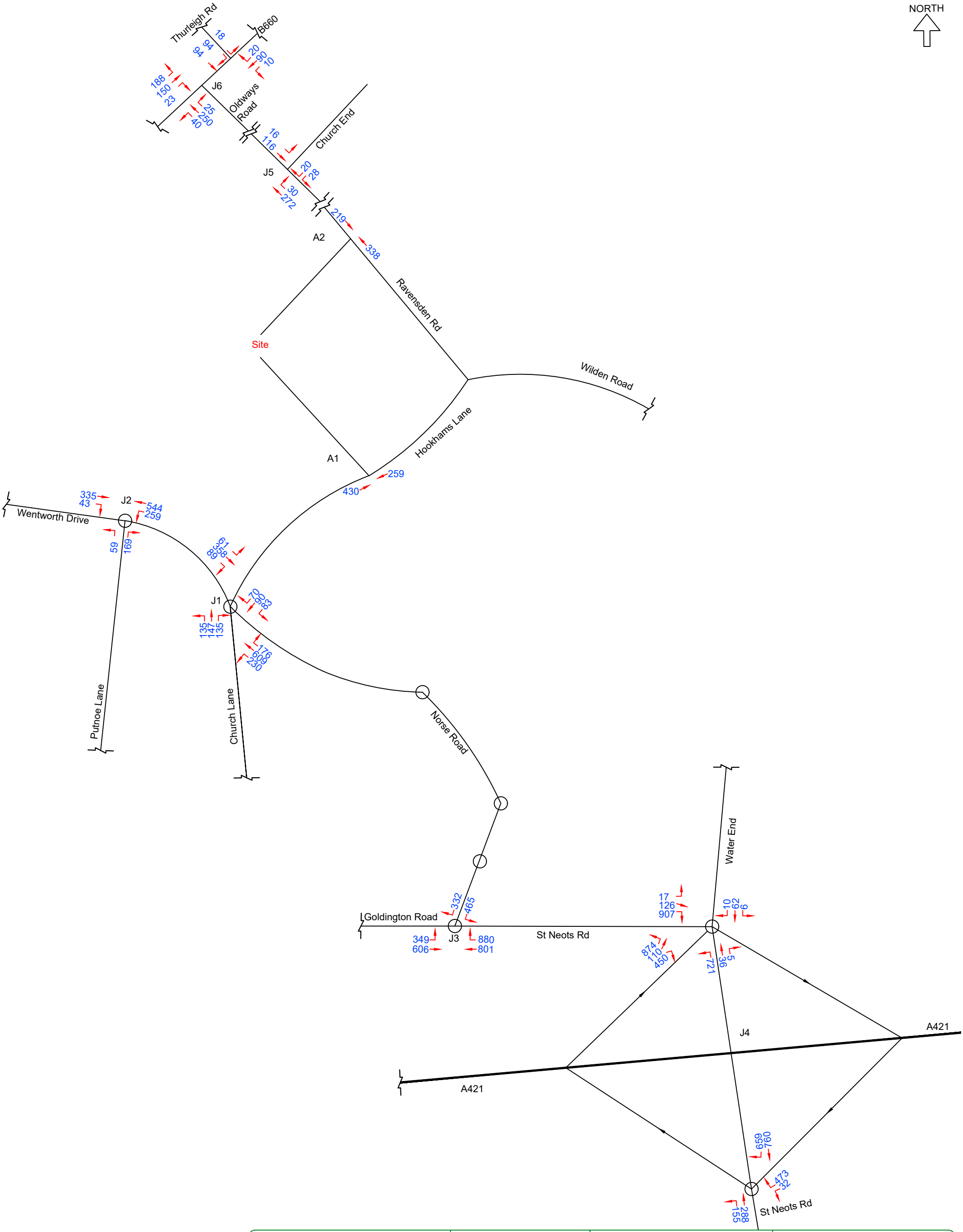
- Transport Assessments
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes		Project: Land north of Hookhams Ln Salph End	
Title: Vehicle Trip Movement Diagram 2019 - PM Peak Background			Date: 21/01/20
			Drw: MJA
			Chk: MJA
Drawing No: 143-TA40	Revision: a		Scale: NTS
			Size: A3



Junctions:

A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lane / Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road
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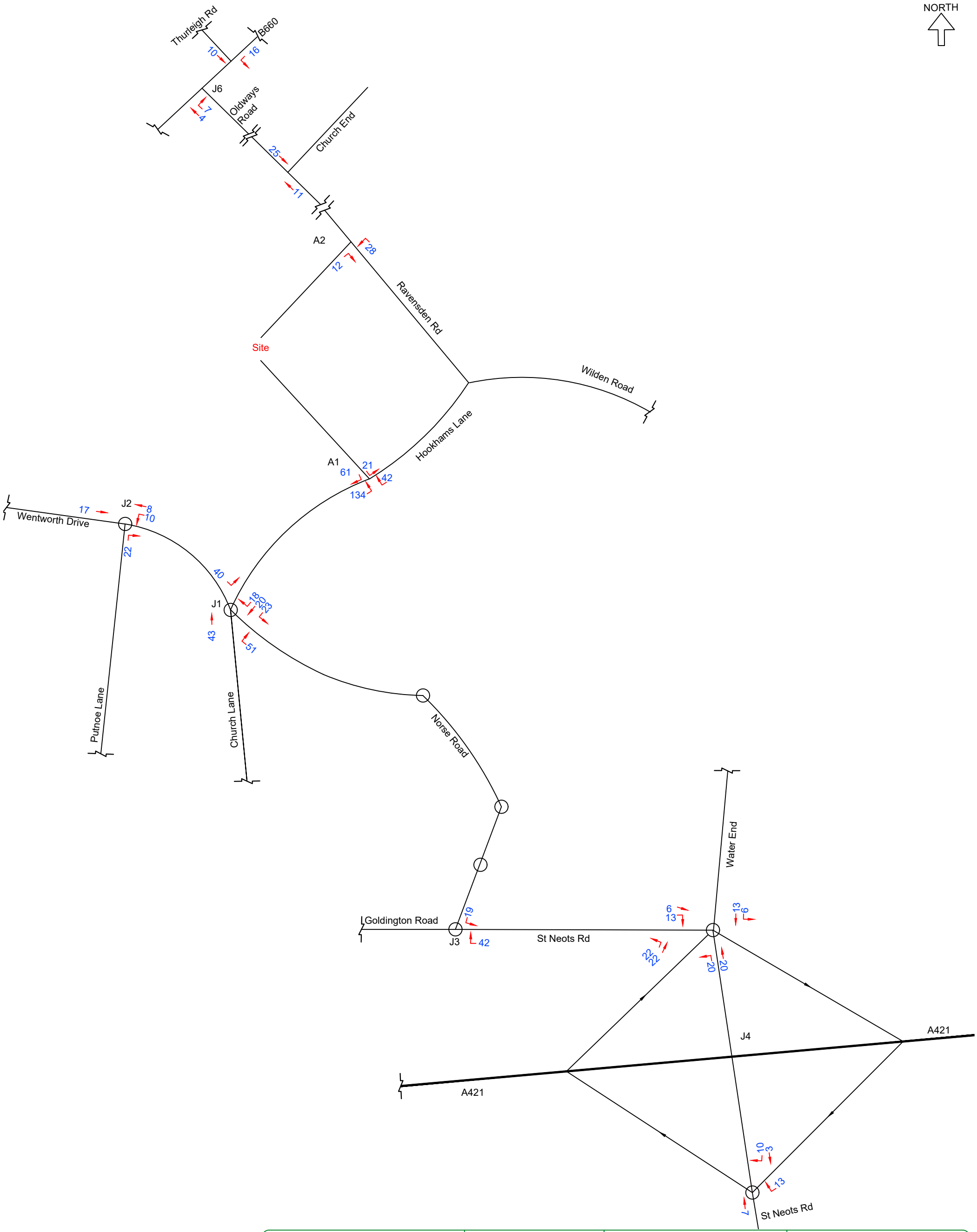
- Vehicle tracking

Client: Manor Oak Homes		Project: Land north of Hookhams Ln Salph End	
Title: Vehicle Trip Movement Diagram 2030 - PM Peak Background			Date: 21/01/20
			Drw: MJA
			Chk: MJA
Drawing No: 143-TA41	Revision: A		Scale: NTS
			Size: A3



Junctions:

A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lane / Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road
J4: A421 / St Neots Road / A4280

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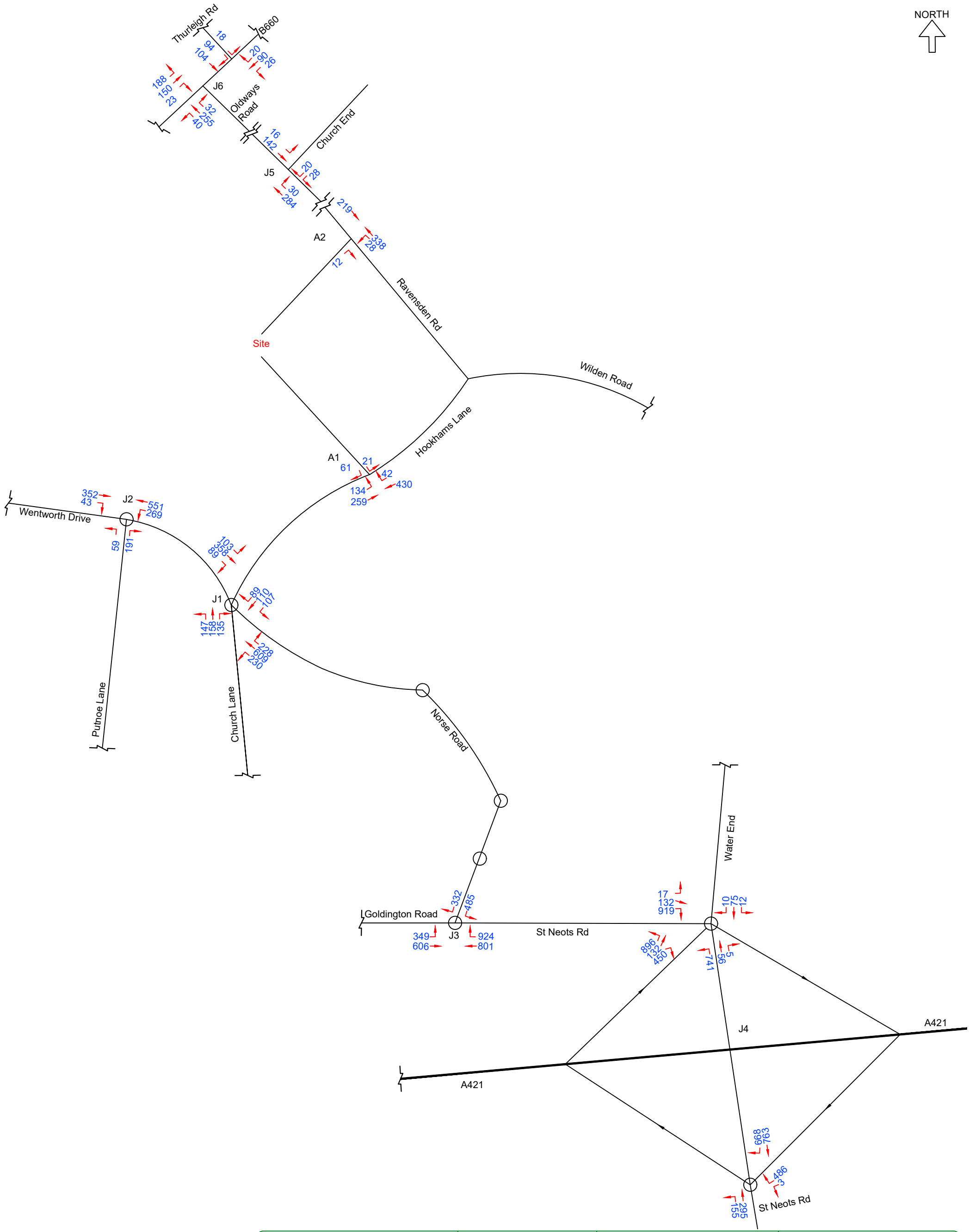
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes	Project: Land north of Hookhams Ln Salph End	
Title: Vehicle Trip Movement Diagram 2030 - PM Peak Development		Date: 21/01/20
		Drw: MJA
		Chk: MJA
Drawing No: 143-TA43	Revision: A	Scale: NTS
		Size: A3



Junctions:

A1: Hookhams Lane Access
A2: Ravensden Road Access
J1: Hookhams Lane / Norse Rd / Church Lane / Wentworth Drive
J2: Wentworth Drive / Putnoe Lane
J3: A4280 St Neots Road / A4280 Goldington Road / Norse Road
J4: A421 / St Neots Road / A4280

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- Transport Assessments
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes

Project: Land north of Hookhams Ln Salph End

Title: Vehicle Trip Movement Diagram
2030 - PM Peak
Background - Committed - Development

Date: 21/01/20
Drw: MJA
Chk: MJA

Drawing No: 143-TA44

Revision: A

Scale: NTS
Size: A3

Appendix L

Traffic Count Data

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4) Hookhams Lane / Norse Road / Church Lane / Wentworth Drive

Approach: Hookhams Lane

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	B - Left to Norse Road								C - Ahead to Church Lane								D - Right to Wentworth Drive							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	8	4	1	0	0	**13**	0	0	5	1	0	0	0	**6**	0	0	3	1	0	0	0	**4**
0715 - 0730	0	0	24	5	0	0	0	**29**	0	0	7	1	0	0	0	**8**	0	0	2	1	1	0	0	**4**
0730 - 0745	0	0	33	4	0	0	0	**37**	0	0	10	3	0	0	0	**13**	0	0	10	2	0	0	0	**12**
0745 - 0800	0	0	42	7	1	0	0	**50**	0	0	16	4	0	0	0	**20**	0	0	9	1	0	0	0	**10**
Hourly Total	**0**	**0**	**107**	**20**	**2**	**0**	**0**	**129**	**0**	**0**	**38**	**9**	**0**	**0**	**0**	**47**	**0**	**0**	**24**	**5**	**1**	**0**	**0**	**30**
0800 - 0815	0	0	36	6	0	0	0	**42**	0	0	17	4	1	0	0	**22**	0	0	29	3	0	0	1	**33**
0815 - 0830	0	0	64	6	2	0	0	**72**	0	0	16	5	0	0	1	**22**	0	0	29	1	2	0	0	**32**
0830 - 0845	0	0	43	8	0	0	2	**53**	0	0	26	6	0	0	0	**32**	0	0	16	1	0	0	0	**17**
0845 - 0900	0	0	52	9	0	0	0	**61**	0	0	26	1	0	0	0	**27**	0	0	10	2	0	0	0	**12**
Hourly Total	**0**	**0**	**195**	**29**	**2**	**0**	**2**	**228**	**0**	**0**	**85**	**16**	**1**	**0**	**1**	**103**	**0**	**0**	**84**	**7**	**2**	**0**	**1**	**94**
	0	**0**	**195**	**29**	**3**	**0**	**4**	**231**	**0**	**0**	**85**	**16**	**1.5**	**0**	**2**	**104.5**	**0**	**0**	**84**	**7**	**3**	**0**	**2**	**96**
0900 - 0915	0	0	41	3	0	0	1	**45**	0	0	20	2	0	0	0	**22**	0	0	7	2	0	0	0	**9**
0915 - 0930	0	0	29	3	1	0	0	**33**	0	0	17	0	2	0	0	**19**	0	0	6	3	1	0	0	**10**
0930 - 0945	0	0	15	2	1	0	0	**18**	0	0	10	2	0	0	0	**12**	0	0	7	0	0	0	0	**7**
0945 - 1000	0	0	12	3	2	0	0	**17**	0	0	10	3	1	0	0	**14**	0	0	14	0	0	0	0	**14**
Hourly Total	**0**	**0**	**97**	**11**	**4**	**0**	**1**	**113**	**0**	**0**	**57**	**7**	**3**	**0**	**0**	**67**	**0**	**0**	**34**	**5**	**1**	**0**	**0**	**40**
Session Total	**0**	**0**	**399**	**60**	**8**	**0**	**3**	**470**	**0**	**0**	**180**	**32**	**4**	**0**	**1**	**217**	**0**	**0**	**142**	**17**	**4**	**0**	**1**	**164**
1600 - 1615	0	0	15	6	0	0	0	**21**	0	0	16	4	0	0	1	**21**	0	0	8	3	0	0	0	**11**
1615 - 1630	0	0	13	6	0	0	0	**19**	0	0	13	2	0	0	0	**15**	0	0	14	2	0	0	0	**16**
1630 - 1645	0	0	21	0	0	0	0	**21**	0	0	6	1	0	0	0	**7**	0	0	16	2	0	0	0	**18**
1645 - 1700	0	0	20	1	1	0	0	**22**	0	0	24	1	0	0	0	**25**	0	0	13	0	0	0	0	**13**
Hourly Total	**0**	**0**	**69**	**13**	**1**	**0**	**0**	**83**	**0**	**0**	**59**	**8**	**0**	**0**	**1**	**68**	**0**	**0**	**51**	**7**	**0**	**0**	**0**	**58**
1700 - 1715	0	0	15	2	1	0	0	**18**	1	0	13	1	1	0	1	**17**	0	0	6	3	0	0	0	**9**
1715 - 1730	0	0	18	4	0	0	0	**22**	0	0	20	0	0	0	1	**21**	0	0	10	2	0	0	0	**12**
1730 - 1745	0	0	16	0	0	0	0	**16**	0	0	18	1	0	0	0	**19**	0	0	12	1	0	0	0	**13**
1745 - 1800	0	0	14	0	1	0	0	**15**	0	0	16	2	0	0	0	**18**	0	0	25	2	0	0	0	**27**
Hourly Total	**0**	**0**	**63**	**6**	**2**	**0**	**0**	**71**	**1**	**0**	**67**	**4**	**1**	**0**	**2**	**75**	**0**	**0**	**53**	**8**	**0**	**0**	**0**	**61**
	0	**0**	**63**	**6**	**3**	**0**	**0**	**72**	**1**	**0**	**67**	**4**	**1.5**	**0**	**4**	**77.5**	**0**	**0**	**53**	**8**	**0**	**0**	**0**	**61**
1800 - 1815	0	0	11	0	0	0	0	**11**	0	0	10	2	0	0	0	**12**	0	0	16	0	0	0	0	**16**
1815 - 1830	0	0	8	0	0	0	0	**8**	0	0	9	2	0	0	0	**11**	0	0	5	0	0	0	0	**5**
1830 - 1845	0	0	8	1	0	0	0	**9**	0	0	6	0	0	0	0	**6**	0	0	4	1	0	0	0	**5**
1845 - 1900	0	0	12	0	0	0	0	**12**	0	0	7	1	0	0	0	**8**	0	0	9	0	0	0	0	**9**
Hourly Total	**0**	**0**	**39**	**1**	**0**	**0**	**0**	**40**	**0**	**0**	**32**	**5**	**0**	**0**	**0**	**37**	**0**	**0**	**34**	**1**	**0**	**0**	**0**	**35**
Session Total	**0**	**0**	**171**	**20**	**3**	**0**	**0**	**194**	**1**	**0**	**158**	**17**	**1**	**0**	**3**	**180**	**0**	**0**	**138**	**16**	**0**	**0**	**0**	**154**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4) Hookhams Lane / Norse Road / Church Lane / Wentworth Drive

Approach: Norse Road

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	C - Left to Church Lane								D - Ahead to Wentworth Drive								A - Right to Hookhams Lane							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	5	1	0	0	1	**7**	0	1	24	4	2	0	0	**31**	0	0	6	2	1	0	0	**9**
0715 - 0730	0	0	6	0	0	0	1	**7**	0	0	50	5	1	1	1	**58**	0	0	3	2	0	0	0	**5**
0730 - 0745	0	0	9	2	0	0	1	**12**	0	0	55	11	4	0	0	**70**	0	0	12	4	0	0	0	**16**
0745 - 0800	0	0	19	2	1	0	2	**24**	0	0	96	16	1	1	0	**114**	0	0	23	3	1	0	0	**27**
Hourly Total	**0**	**0**	**39**	**5**	**1**	**0**	**5**	**50**	**0**	**1**	**225**	**36**	**8**	**2**	**1**	**273**	**0**	**0**	**44**	**11**	**2**	**0**	**0**	**57**
0800 - 0815	0	0	17	1	1	0	2	**21**	0	0	102	8	1	1	1	**113**	0	0	25	8	0	0	0	**33**
0815 - 0830	0	0	26	3	0	0	1	**30**	0	1	119	12	0	0	0	**132**	0	0	22	3	2	0	1	**28**
0830 - 0845	0	0	35	2	0	0	0	**37**	1	0	80	7	4	1	0	**93**	0	0	24	6	1	0	0	**31**
0845 - 0900	0	0	27	1	1	0	2	**31**	0	0	81	14	3	0	0	**98**	0	0	39	0	0	0	1	**40**
Hourly Total	**0**	**0**	**105**	**7**	**2**	**0**	**5**	**119**	**1**	**1**	**382**	**41**	**8**	**2**	**1**	**436**	**0**	**0**	**110**	**17**	**3**	**0**	**2**	**132**
	0	**0**	**105**	**7**	**3**	**0**	**10**	**125**	**1**	**0.4**	**382**	**41**	**12**	**4.6**	**2**	**443**	**0**	**0**	**110**	**17**	**4.5**	**0**	**4**	**135.5**
0900 - 0915	0	0	13	0	0	0	0	**13**	0	0	54	4	4	2	2	**66**	0	0	13	5	0	0	0	**18**
0915 - 0930	0	0	12	1	1	0	2	**16**	0	0	38	10	3	1	0	**52**	0	0	6	6	1	0	0	**13**
0930 - 0945	0	0	17	1	1	0	1	**20**	0	1	37	6	0	0	1	**45**	0	0	7	3	1	0	0	**11**
0945 - 1000	0	0	7	1	0	0	2	**10**	0	0	47	9	3	1	0	**60**	0	0	10	4	1	0	1	**16**
Hourly Total	**0**	**0**	**49**	**3**	**2**	**0**	**5**	**59**	**0**	**1**	**176**	**29**	**10**	**4**	**3**	**223**	**0**	**0**	**36**	**18**	**3**	**0**	**1**	**58**
Session Total	**0**	**0**	**193**	**15**	**5**	**0**	**15**	**228**	**1**	**3**	**783**	**106**	**26**	**8**	**5**	**932**	**0**	**0**	**190**	**46**	**8**	**0**	**3**	**247**
1600 - 1615	0	2	44	6	0	0	4	**56**	0	0	99	24	0	3	1	**127**	0	0	33	6	0	0	0	**39**
1615 - 1630	0	3	44	8	0	0	1	**56**	0	0	105	27	3	1	0	**136**	0	0	31	6	3	0	0	**40**
1630 - 1645	0	0	38	6	0	0	0	**44**	0	4	119	17	2	0	0	**142**	0	0	36	6	1	1	0	**44**
1645 - 1700	0	0	40	7	0	0	1	**48**	0	0	116	21	1	1	0	**139**	0	0	31	7	0	0	0	**38**
Hourly Total	**0**	**5**	**166**	**27**	**0**	**0**	**6**	**204**	**0**	**4**	**439**	**89**	**6**	**5**	**1**	**544**	**0**	**0**	**131**	**25**	**4**	**1**	**0**	**161**
1700 - 1715	0	0	42	4	0	0	2	**48**	0	0	130	13	0	0	0	**143**	0	0	51	2	0	0	0	**53**
1715 - 1730	0	1	49	9	1	0	2	**62**	0	0	110	18	1	0	0	**129**	0	0	37	3	0	0	1	**41**
1730 - 1745	0	0	46	4	1	0	1	**52**	0	1	126	7	1	0	0	**135**	0	0	37	2	0	0	0	**39**
1745 - 1800	0	0	26	4	0	0	1	**31**	0	0	107	11	1	0	0	**119**	0	0	16	2	0	0	0	**18**
Hourly Total	**0**	**1**	**163**	**21**	**2**	**0**	**6**	**193**	**0**	**1**	**473**	**49**	**3**	**0**	**0**	**526**	**0**	**0**	**141**	**9**	**0**	**0**	**1**	**151**
	0	**0.4**	**163**	**21**	**3**	**0**	**12**	**199.4**	**0**	**0.4**	**473**	**49**	**4.5**	**0**	**0**	**526.9**	**0**	**0**	**141**	**9**	**0**	**0**	**2**	**152**
1800 - 1815	0	1	41	2	0	0	1	**45**	0	0	116	9	0	0	0	**125**	0	0	27	0	0	0	0	**27**
1815 - 1830	0	0	34	1	0	0	2	**37**	0	0	91	7	0	0	0	**98**	0	0	27	0	0	0	0	**27**
1830 - 1845	0	0	27	1	0	0	0	**28**	0	0	105	10	1	0	0	**116**	0	0	20	0	0	0	0	**20**
1845 - 1900	0	0	24	0	0	0	1	**25**	0	1	106	6	2	0	0	**115**	0	0	11	2	0	0	0	**13**
Hourly Total	**0**	**1**	**126**	**4**	**0**	**0**	**4**	**135**	**0**	**1**	**418**	**32**	**3**	**0**	**0**	**454**	**0**	**0**	**85**	**2**	**0**	**0**	**0**	**87**
Session Total	**0**	**7**	**455**	**52**	**2**	**0**	**16**	**532**	**0**	**6**	**1330**	**170**	**12**	**5**	**1**	**1524**	**0**	**0**	**357**	**36**	**4**	**1**	**1**	**399**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4) Hookhams Lane / Norse Road / Church Lane / Wentworth Drive

Approach: Church Lane

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	D - Left to Wentworth Drive								A - Ahead to Hookhams Lane								B - Right to Norse Road							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	3	0	0	0	1	**4**	0	0	7	3	1	0	1	**12**	0	0	10	5	0	1	1	**17**
0715 - 0730	0	0	7	0	1	0	1	**9**	0	0	11	5	0	0	0	**16**	0	0	11	2	0	0	1	**14**
0730 - 0745	0	1	7	2	0	0	1	**11**	1	0	7	6	0	0	1	**15**	0	1	17	3	0	0	2	**23**
0745 - 0800	0	0	24	1	0	0	0	**25**	0	0	8	2	0	0	0	**10**	0	0	14	3	0	0	1	**18**
Hourly Total	**0**	**1**	**41**	**3**	**1**	**0**	**3**	**49**	**1**	**0**	**33**	**16**	**1**	**0**	**2**	**53**	**0**	**1**	**52**	**13**	**0**	**1**	**5**	**72**
0800 - 0815	0	0	50	2	1	0	2	**55**	0	0	12	0	0	0	0	**12**	0	0	20	2	0	0	1	**23**
0815 - 0830	0	0	47	3	0	0	1	**51**	0	0	13	1	0	0	0	**14**	0	0	20	1	0	0	1	**22**
0830 - 0845	0	0	16	1	0	0	0	**17**	0	0	14	2	0	0	0	**16**	0	0	24	3	1	0	1	**29**
0845 - 0900	0	0	25	2	1	0	0	**28**	0	0	17	0	0	0	0	**17**	0	0	32	1	0	1	1	**35**
Hourly Total	**0**	**0**	**138**	**8**	**2**	**0**	**3**	**151**	**0**	**0**	**56**	**3**	**0**	**0**	**0**	**59**	**0**	**0**	**96**	**7**	**1**	**1**	**4**	**109**
	0	**0**	**138**	**8**	**3**	**0**	**6**	**155**	**0**	**0**	**56**	**3**	**0**	**0**	**0**	**59**	**0**	**0**	**96**	**7**	**1.5**	**2.3**	**8**	**114.8**
0900 - 0915	0	0	26	0	0	0	2	**28**	0	0	12	4	1	0	0	**17**	0	0	18	3	0	0	2	**23**
0915 - 0930	0	0	21	0	0	0	0	**21**	1	0	6	0	1	0	0	**8**	0	0	10	4	0	0	1	**15**
0930 - 0945	0	0	12	1	3	0	1	**17**	0	0	15	3	0	0	0	**18**	0	0	8	1	1	0	1	**11**
0945 - 1000	0	0	23	4	0	0	0	**27**	1	0	12	2	1	0	0	**16**	0	0	11	0	0	0	2	**13**
Hourly Total	**0**	**0**	**82**	**5**	**3**	**0**	**3**	**93**	**2**	**0**	**45**	**9**	**3**	**0**	**0**	**59**	**0**	**0**	**47**	**8**	**1**	**0**	**6**	**62**
Session Total	**0**	**1**	**261**	**16**	**6**	**0**	**9**	**293**	**3**	**0**	**134**	**28**	**4**	**0**	**2**	**171**	**0**	**1**	**195**	**28**	**2**	**2**	**15**	**243**
1600 - 1615	1	0	23	1	2	0	1	**28**	0	0	14	2	1	0	0	**17**	0	0	29	2	0	0	1	**32**
1615 - 1630	0	0	23	4	0	0	0	**27**	0	0	22	3	0	0	1	**26**	0	2	37	4	0	0	0	**43**
1630 - 1645	1	0	28	1	0	0	2	**32**	0	0	18	5	0	0	0	**23**	0	0	28	5	0	0	1	**34**
1645 - 1700	0	1	27	2	0	0	0	**30**	0	0	46	4	0	0	1	**51**	0	2	28	3	0	0	2	**35**
Hourly Total	**2**	**1**	**101**	**8**	**2**	**0**	**3**	**117**	**0**	**0**	**100**	**14**	**1**	**0**	**2**	**117**	**0**	**4**	**122**	**14**	**0**	**0**	**4**	**144**
1700 - 1715	0	0	32	3	0	0	1	**36**	0	0	19	4	0	0	0	**23**	0	0	21	0	0	0	2	**23**
1715 - 1730	0	0	26	1	1	0	0	**28**	0	0	16	3	0	0	0	**19**	0	0	25	1	1	0	1	**28**
1730 - 1745	0	0	23	1	0	0	1	**25**	0	0	30	1	1	0	0	**32**	0	0	26	1	0	0	1	**28**
1745 - 1800	0	0	32	4	0	0	0	**36**	0	0	18	4	1	0	0	**23**	0	0	27	4	0	0	1	**32**
Hourly Total	**0**	**0**	**113**	**9**	**1**	**0**	**2**	**125**	**0**	**0**	**83**	**12**	**2**	**0**	**0**	**97**	**0**	**0**	**99**	**6**	**1**	**0**	**5**	**111**
uk	**0**	**0**	**113**	**9**	**1.5**	**0**	**4**	**127.5**	**0**	**0**	**83**	**12**	**3**	**0**	**0**	**98**	**0**	**0**	**99**	**6**	**1.5**	**0**	**10**	**116.5**
1800 - 1815	0	0	13	2	0	0	1	**16**	0	0	11	3	1	0	0	**15**	0	0	25	0	0	0	1	**26**
1815 - 1830	0	0	28	1	0	0	0	**29**	0	0	9	1	0	0	0	**10**	0	0	24	3	0	0	2	**29**
1830 - 1845	0	0	18	2	0	0	1	**21**	0	0	15	1	0	0	0	**16**	0	0	25	0	0	0	1	**26**
1845 - 1900	0	0	11	3	0	0	0	**14**	0	0	54	10	1	0	1	**66**	0	0	22	3	1	0	1	**27**
Hourly Total	**0**	**0**	**70**	**8**	**0**	**0**	**2**	**80**	**0**	**0**	**89**	**15**	**2**	**0**	**1**	**107**	**0**	**0**	**96**	**6**	**1**	**0**	**5**	**108**
Session Total	**2**	**1**	**284**	**25**	**3**	**0**	**7**	**322**	**0**	**0**	**272**	**41**	**5**	**0**	**3**	**321**	**0**	**4**	**317**	**26**	**2**	**0**	**14**	**363**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4) Hookhams Lane / Norse Road / Church Lane / Wentworth Drive

Approach: Wentworth Drive

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	A - Left to Hookhams Lane								B - Ahead to Norse Road								C - Right to Church Lane							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	2	0	0	0	0	**2**	0	0	70	15	1	1	0	**87**	0	0	3	0	0	0	0	**3**
0715 - 0730	0	0	4	0	0	0	0	**4**	0	0	60	10	0	0	0	**70**	0	0	8	1	1	0	1	**11**
0730 - 0745	0	0	5	0	0	0	0	**5**	0	0	71	16	2	0	0	**89**	0	0	13	0	1	0	0	**14**
0745 - 0800	0	0	8	2	2	0	0	**12**	0	0	91	15	0	2	0	**108**	0	0	20	4	0	0	1	**25**
Hourly Total	**0**	**0**	**19**	**2**	**2**	**0**	**0**	**23**	**0**	**0**	**292**	**56**	**3**	**3**	**0**	**354**	**0**	**0**	**44**	**5**	**2**	**0**	**2**	**53**
0800 - 0815	0	0	11	0	0	0	0	**11**	0	0	122	17	1	0	1	**141**	0	0	32	2	0	0	0	**34**
0815 - 0830	0	0	13	2	0	0	0	**15**	0	0	146	14	1	1	3	**165**	0	0	37	1	0	0	2	**40**
0830 - 0845	0	0	13	1	0	0	0	**14**	0	1	140	19	2	2	2	**166**	0	0	26	1	0	0	0	**27**
0845 - 0900	0	0	8	1	0	0	0	**9**	0	0	102	14	1	0	1	**118**	0	0	15	1	0	0	0	**16**
Hourly Total	**0**	**0**	**45**	**4**	**0**	**0**	**0**	**49**	**0**	**1**	**510**	**64**	**5**	**3**	**7**	**590**	**0**	**0**	**110**	**5**	**0**	**0**	**2**	**117**
	0	**0**	**45**	**4**	**0**	**0**	**0**	**49**	**0**	**0.4**	**510**	**64**	**7.5**	**6.9**	**14**	**602.8**	**0**	**0**	**110**	**5**	**0**	**0**	**4**	**119**
0900 - 0915	0	0	5	2	0	0	0	**7**	0	0	78	12	5	0	0	**95**	0	0	25	2	0	0	0	**27**
0915 - 0930	3	0	5	2	1	0	0	**11**	0	0	66	6	5	0	0	**77**	0	0	14	0	0	0	2	**16**
0930 - 0945	2	0	2	0	1	0	0	**5**	0	0	53	10	1	2	0	**66**	0	0	26	3	0	0	0	**29**
0945 - 1000	0	0	7	0	0	1	0	**8**	0	0	49	6	2	1	0	**58**	0	0	17	2	1	0	1	**21**
Hourly Total	**5**	**0**	**19**	**4**	**2**	**1**	**0**	**31**	**0**	**0**	**246**	**34**	**13**	**3**	**0**	**296**	**0**	**0**	**82**	**7**	**1**	**0**	**3**	**93**
Session Total	**5**	**0**	**83**	**10**	**4**	**1**	**0**	**103**	**0**	**1**	**1048**	**154**	**21**	**9**	**7**	**1240**	**0**	**0**	**236**	**17**	**3**	**0**	**7**	**263**
1600 - 1615	0	0	10	0	0	0	0	**10**	0	0	86	12	4	0	1	**103**	0	1	30	2	0	0	0	**33**
1615 - 1630	0	0	16	2	0	0	0	**18**	0	0	62	17	5	0	0	**84**	0	0	14	0	0	0	1	**15**
1630 - 1645	0	0	9	5	0	0	0	**14**	0	1	83	12	1	0	0	**97**	0	0	16	1	0	0	1	**18**
1645 - 1700	0	0	15	2	0	0	0	**17**	0	0	72	17	0	0	1	**90**	0	0	20	1	0	0	1	**22**
Hourly Total	**0**	**0**	**50**	**9**	**0**	**0**	**0**	**59**	**0**	**1**	**303**	**58**	**10**	**0**	**2**	**374**	**0**	**1**	**80**	**4**	**0**	**0**	**3**	**88**
1700 - 1715	0	0	12	3	0	0	0	**15**	0	0	66	14	1	0	0	**81**	0	0	17	0	0	0	1	**18**
1715 - 1730	0	0	18	1	0	0	0	**19**	0	0	66	6	0	0	0	**72**	0	0	18	1	0	0	1	**20**
1730 - 1745	1	0	11	0	0	0	0	**12**	0	0	70	9	0	0	0	**79**	0	0	19	1	0	0	0	**20**
1745 - 1800	0	0	7	0	0	0	0	**7**	0	1	69	8	0	0	0	**78**	0	0	15	2	0	0	0	**17**
Hourly Total	**1**	**0**	**48**	**4**	**0**	**0**	**0**	**53**	**0**	**1**	**271**	**37**	**1**	**0**	**0**	**310**	**0**	**0**	**69**	**4**	**0**	**0**	**2**	**75**
	1	**0**	**48**	**4**	**0**	**0**	**0**	**53**	**0**	**0.4**	**271**	**37**	**1.5**	**0**	**0**	**309.9**	**0**	**0**	**69**	**4**	**0**	**0**	**4**	**77**
1800 - 1815	0	0	3	0	0	0	0	**3**	0	0	72	4	2	0	0	**78**	0	0	20	1	1	0	1	**23**
1815 - 1830	0	0	5	0	0	0	0	**5**	0	0	55	5	0	0	1	**61**	0	0	16	1	0	0	1	**18**
1830 - 1845	0	0	4	1	0	0	0	**5**	0	0	47	3	0	0	1	**51**	0	0	21	0	1	0	0	**22**
1845 - 1900	0	0	6	0	0	0	0	**6**	0	0	34	3	0	0	0	**37**	0	0	17	1	0	0	1	**19**
Hourly Total	**0**	**0**	**18**	**1**	**0**	**0**	**0**	**19**	**0**	**0**	**208**	**15**	**2**	**0**	**2**	**227**	**0**	**0**	**74**	**3**	**2**	**0**	**3**	**82**
Session Total	**1**	**0**	**116**	**14**	**0**	**0**	**0**	**131**	**0**	**2**	**782**	**110**	**13**	**0**	**4**	**911**	**0**	**1**	**223**	**11**	**2**	**0**	**8**	**245**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (2) Wentworth Drive / Putnoe Lane

Approach: Wentworth Drive (East)

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	B - Left to Putnoe Lane								C - Ahead to Wentworth Drive (West)								A - U-Turn							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	15	0	1	0	0	**16**	0	0	18	4	1	0	1	**24**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	0	21	2	1	0	1	**25**	0	0	40	5	3	1	1	**50**	0	0	0	0	0	0	0	**0**
0730 - 0745	0	0	33	3	1	0	0	**37**	0	0	46	10	2	1	1	**60**	0	0	1	0	0	0	0	**1**
0745 - 0800	0	0	64	10	0	0	0	**74**	0	1	53	7	0	1	1	**63**	0	0	1	1	0	0	0	**2**
Hourly Total	**0**	**0**	**133**	**15**	**3**	**0**	**1**	**152**	**0**	**1**	**157**	**26**	**6**	**3**	**4**	**197**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**3**
0800 - 0815	1	0	69	6	1	1	0	**78**	0	0	75	13	1	0	2	**91**	0	0	2	1	0	0	0	**3**
0815 - 0830	0	1	81	4	0	0	0	**86**	0	0	93	11	2	0	0	**106**	0	0	7	0	0	0	0	**7**
0830 - 0845	0	0	61	4	0	0	1	**66**	0	0	90	7	5	1	1	**104**	0	0	0	0	0	0	0	**0**
0845 - 0900	0	0	29	8	1	0	0	**38**	1	0	72	9	1	1	0	**84**	0	0	0	0	0	0	0	**0**
Hourly Total	**1**	**1**	**240**	**22**	**2**	**1**	**1**	**268**	**1**	**0**	**330**	**40**	**9**	**2**	**3**	**385**	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**10**
	1	**0.4**	**240**	**22**	**3**	**2.3**	**2**	**270.7**	**1**	**0**	**330**	**40**	**13.5**	**4.6**	**6**	**395.1**	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**10**
0900 - 0915	0	1	33	0	0	0	1	**35**	0	0	61	6	3	3	1	**74**	0	0	0	0	0	0	0	**0**
0915 - 0930	0	0	26	1	3	0	1	**31**	0	0	31	10	1	1	0	**43**	0	0	0	0	0	0	0	**0**
0930 - 0945	0	1	28	4	0	0	0	**33**	0	0	43	5	2	0	2	**52**	0	0	0	0	0	0	0	**0**
0945 - 1000	0	0	29	2	2	0	0	**33**	0	0	45	8	3	1	0	**57**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**2**	**116**	**7**	**5**	**0**	**2**	**132**	**0**	**0**	**180**	**29**	**9**	**5**	**3**	**226**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**1**	**3**	**489**	**44**	**10**	**1**	**4**	**552**	**1**	**1**	**667**	**95**	**24**	**10**	**10**	**808**	**0**	**0**	**11**	**2**	**0**	**0**	**0**	**13**
1600 - 1615	1	0	40	5	1	0	1	**48**	0	0	87	17	2	3	1	**110**	0	0	2	0	0	0	0	**2**
1615 - 1630	0	0	39	4	1	0	0	**44**	0	0	90	22	2	1	0	**115**	0	0	2	0	0	0	0	**2**
1630 - 1645	0	0	55	7	1	0	0	**63**	2	1	107	15	1	1	1	**128**	0	0	0	0	0	0	0	**0**
1645 - 1700	0	3	36	6	1	0	0	**46**	0	0	95	13	0	1	0	**109**	0	0	0	0	0	0	0	**0**
Hourly Total	**1**	**3**	**170**	**22**	**4**	**0**	**1**	**201**	**2**	**1**	**379**	**67**	**5**	**6**	**2**	**462**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**
1700 - 1715	1	0	64	8	0	0	0	**73**	0	0	103	10	0	0	1	**114**	0	0	0	0	0	0	0	**0**
1715 - 1730	0	0	37	5	0	0	0	**42**	0	0	97	17	2	0	0	**116**	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	55	3	0	0	0	**58**	0	1	104	5	1	0	1	**112**	0	0	0	0	0	0	0	**0**
1745 - 1800	0	0	46	4	0	0	0	**50**	0	0	114	10	1	0	0	**125**	0	0	1	1	0	0	0	**2**
Hourly Total	**1**	**0**	**202**	**20**	**0**	**0**	**0**	**223**	**0**	**1**	**418**	**42**	**4**	**0**	**2**	**467**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**
	1	**0**	**202**	**20**	**0**	**0**	**0**	**223**	**0**	**0.4**	**418**	**42**	**6**	**0**	**4**	**470.4**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**
1800 - 1815	0	0	51	2	0	0	0	**53**	0	0	92	10	0	0	1	**103**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	43	3	0	0	0	**46**	0	0	79	4	0	0	0	**83**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	0	37	1	0	0	0	**38**	0	0	86	9	1	0	1	**97**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	31	2	1	0	0	**34**	0	1	89	5	1	0	0	**96**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**162**	**8**	**1**	**0**	**0**	**171**	**0**	**1**	**346**	**28**	**2**	**0**	**2**	**379**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**2**	**3**	**534**	**50**	**5**	**0**	**1**	**595**	**2**	**3**	**1143**	**137**	**11**	**6**	**6**	**1308**	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**6**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (2) Wentworth Drive / Putnoe Lane

Approach: Putnoe Lane

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	C - Left to Wentworth Drive (West)								A - Right to Wentworth Drive (East)							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**
0700 - 0715	0	0	1	0	0	0	0	**1**	0	0	11	1	1	0	0	**13**
0715 - 0730	0	0	2	3	0	0	0	**5**	0	0	15	1	0	0	0	**16**
0730 - 0745	0	1	12	0	0	0	0	**13**	0	0	18	4	0	0	0	**22**
0745 - 0800	0	0	5	1	0	0	0	**6**	0	0	35	2	0	1	0	**38**
Hourly Total	**0**	**1**	**20**	**4**	**0**	**0**	**0**	**25**	**0**	**0**	**79**	**8**	**1**	**1**	**0**	**89**
0800 - 0815	0	0	7	0	0	0	0	**7**	0	1	53	2	0	0	1	**57**
0815 - 0830	0	0	11	3	0	0	0	**14**	0	0	58	7	2	0	0	**67**
0830 - 0845	0	0	10	0	0	0	0	**10**	0	0	51	3	1	0	0	**55**
0845 - 0900	0	0	11	3	0	0	0	**14**	0	0	32	4	0	0	0	**36**
Hourly Total	**0**	**0**	**39**	**6**	**0**	**0**	**0**	**45**	**0**	**1**	**194**	**16**	**3**	**0**	**1**	**215**
	0	**0**	**39**	**6**	**0**	**0**	**0**	**45**	**0**	**0.4**	**194**	**16**	**4.5**	**0**	**2**	**216.9**
0900 - 0915	0	0	6	0	0	0	0	**6**	0	0	32	1	3	0	0	**36**
0915 - 0930	0	1	3	1	0	0	0	**5**	0	0	24	2	0	0	0	**26**
0930 - 0945	0	0	10	0	0	0	0	**10**	0	0	19	3	1	1	0	**24**
0945 - 1000	0	0	5	0	2	0	0	**7**	0	1	36	1	0	0	0	**38**
Hourly Total	**0**	**1**	**24**	**1**	**2**	**0**	**0**	**28**	**0**	**1**	**111**	**7**	**4**	**1**	**0**	**124**
Session Total	**0**	**2**	**83**	**11**	**2**	**0**	**0**	**98**	**0**	**2**	**384**	**31**	**8**	**2**	**1**	**428**
1600 - 1615	0	0	12	1	0	0	0	**13**	0	0	32	6	0	0	0	**38**
1615 - 1630	0	0	5	1	0	0	0	**6**	0	0	38	10	2	0	0	**50**
1630 - 1645	0	0	9	0	0	0	0	**9**	0	0	37	4	0	0	0	**41**
1645 - 1700	0	0	11	1	0	0	0	**12**	0	1	42	6	0	0	0	**49**
Hourly Total	**0**	**0**	**37**	**3**	**0**	**0**	**0**	**40**	**0**	**1**	**149**	**26**	**2**	**0**	**0**	**178**
1700 - 1715	0	0	11	0	0	0	0	**11**	0	0	32	4	0	0	0	**36**
1715 - 1730	0	0	11	1	0	0	0	**12**	0	0	36	5	0	0	0	**41**
1730 - 1745	0	0	10	2	0	0	0	**12**	1	0	38	2	0	0	0	**41**
1745 - 1800	0	0	13	3	0	0	0	**16**	0	0	28	0	0	0	0	**28**
Hourly Total	**0**	**0**	**45**	**6**	**0**	**0**	**0**	**51**	**1**	**0**	**134**	**11**	**0**	**0**	**0**	**146**
	0	**0**	**45**	**6**	**0**	**0**	**0**	**51**	**1**	**0**	**134**	**11**	**0**	**0**	**0**	**146**
1800 - 1815	0	0	7	1	0	0	0	**8**	0	0	27	2	1	0	0	**30**
1815 - 1830	0	0	7	1	0	0	0	**8**	0	0	27	5	0	0	0	**32**
1830 - 1845	0	0	6	1	0	0	0	**7**	0	0	27	0	0	0	0	**27**
1845 - 1900	0	0	7	2	0	0	0	**9**	0	0	35	1	0	0	0	**36**
Hourly Total	**0**	**0**	**27**	**5**	**0**	**0**	**0**	**32**	**0**	**0**	**116**	**8**	**1**	**0**	**0**	**125**
Session Total	**0**	**0**	**109**	**14**	**0**	**0**	**0**	**123**	**1**	**1**	**399**	**45**	**3**	**0**	**0**	**449**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (2) Wentworth Drive / Putnoe Lane

Approach: Wentworth Drive (West)

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	A - Ahead to Wentworth Drive (East)								B - Right to Putnoe Lane							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**
0700 - 0715	0	0	65	15	0	1	0	**81**	0	0	2	8	0	0	0	**10**
0715 - 0730	0	0	52	7	2	0	1	**62**	0	0	5	0	0	0	0	**5**
0730 - 0745	0	0	78	11	1	0	0	**90**	0	0	1	0	0	0	0	**1**
0745 - 0800	0	0	105	19	1	1	1	**127**	0	0	7	5	0	0	0	**12**
Hourly Total	**0**	**0**	**300**	**52**	**4**	**2**	**2**	**360**	**0**	**0**	**15**	**13**	**0**	**0**	**0**	**28**
0800 - 0815	0	0	114	15	1	0	1	**131**	0	0	18	2	0	0	0	**20**
0815 - 0830	0	0	122	14	0	1	3	**140**	0	0	21	3	2	0	0	**26**
0830 - 0845	0	1	104	12	2	1	1	**121**	0	0	28	1	1	0	0	**30**
0845 - 0900	0	0	95	9	1	0	1	**106**	0	0	9	1	0	0	0	**10**
Hourly Total	**0**	**1**	**435**	**50**	**4**	**2**	**6**	**498**	**0**	**0**	**76**	**7**	**3**	**0**	**0**	**86**
	0	**0.4**	**435**	**50**	**6**	**4.6**	**12**	**508**	**0**	**0**	**76**	**7**	**4.5**	**0**	**0**	**87.5**
0900 - 0915	0	0	74	13	3	0	0	**90**	0	0	5	4	0	0	0	**9**
0915 - 0930	5	0	56	6	5	0	1	**73**	0	0	8	0	0	0	0	**8**
0930 - 0945	0	0	50	12	1	1	0	**64**	0	0	2	0	0	0	0	**2**
0945 - 1000	0	0	44	4	3	2	1	**54**	0	0	7	0	0	0	0	**7**
Hourly Total	**5**	**0**	**224**	**35**	**12**	**3**	**2**	**281**	**0**	**0**	**22**	**4**	**0**	**0**	**0**	**26**
Session Total	**5**	**1**	**959**	**137**	**20**	**7**	**10**	**1139**	**0**	**0**	**113**	**24**	**3**	**0**	**0**	**140**
1600 - 1615	0	0	74	10	2	0	1	**87**	0	0	6	4	0	0	0	**10**
1615 - 1630	0	0	53	9	4	0	1	**67**	0	0	7	2	0	0	0	**9**
1630 - 1645	1	1	74	9	0	0	1	**86**	0	0	8	1	0	0	0	**9**
1645 - 1700	0	0	73	11	1	0	2	**87**	0	1	7	1	0	0	1	**10**
Hourly Total	**1**	**1**	**274**	**39**	**7**	**0**	**5**	**327**	**0**	**1**	**28**	**8**	**0**	**0**	**1**	**38**
1700 - 1715	0	0	61	12	0	0	0	**73**	0	0	5	0	0	0	0	**5**
1715 - 1730	0	0	64	7	0	0	1	**72**	0	0	12	0	0	0	0	**12**
1730 - 1745	0	0	66	8	0	0	0	**74**	0	0	7	2	0	0	0	**9**
1745 - 1800	0	0	61	8	0	0	0	**69**	0	0	7	4	0	0	0	**11**
Hourly Total	**0**	**0**	**252**	**35**	**0**	**0**	**1**	**288**	**0**	**0**	**31**	**6**	**0**	**0**	**0**	**37**
	0	**0**	**252**	**35**	**0**	**0**	**2**	**289**	**0**	**0**	**31**	**6**	**0**	**0**	**0**	**37**
1800 - 1815	1	0	68	3	2	0	0	**74**	0	0	7	1	0	0	0	**8**
1815 - 1830	0	0	55	6	0	0	0	**61**	0	0	8	1	0	0	0	**9**
1830 - 1845	0	0	40	3	1	0	0	**44**	0	0	8	0	1	0	0	**9**
1845 - 1900	0	0	41	4	0	0	1	**46**	0	0	4	0	0	0	0	**4**
Hourly Total	**1**	**0**	**204**	**16**	**3**	**0**	**1**	**225**	**0**	**0**	**27**	**2**	**1**	**0**	**0**	**30**
Session Total	**2**	**1**	**730**	**90**	**10**	**0**	**7**	**840**	**0**	**1**	**86**	**16**	**1**	**0**	**1**	**105**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (5) Norse Road / St Neots Road / Southern Arm / A4280

Approach: St Neots Road

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	B - Left to Southern Arm								C - Ahead to A4280								D - Right to Norse Road							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	0	0	0	0	0	**0**	0	0	40	14	5	2	0	**61**	0	1	51	15	5	1	0	**73**
0715 - 0730	0	0	0	0	0	0	0	**0**	0	0	70	16	2	1	1	**90**	0	0	86	11	3	4	1	**105**
0730 - 0745	0	0	0	0	0	0	0	**0**	0	0	94	19	1	0	0	**114**	0	0	93	29	8	5	0	**135**
0745 - 0800	0	0	0	1	0	0	0	**1**	0	0	133	24	4	1	3	**165**	0	0	143	33	4	2	0	**182**
Hourly Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**337**	**73**	**12**	**4**	**4**	**430**	**0**	**1**	**373**	**88**	**20**	**12**	**1**	**495**
0800 - 0815	0	0	0	1	0	0	0	**1**	0	0	139	16	3	2	1	**161**	0	0	129	19	4	2	1	**155**
0815 - 0830	0	0	0	0	0	0	0	**0**	0	1	147	16	2	1	0	**167**	0	0	150	25	4	2	0	**181**
0830 - 0845	0	0	0	1	0	0	0	**1**	0	0	129	16	4	1	1	**151**	0	0	130	24	8	4	1	**167**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	137	22	5	3	0	**167**	0	0	138	27	6	4	0	**175**
Hourly Total	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**1**	**552**	**70**	**14**	**7**	**2**	**646**	**0**	**0**	**547**	**95**	**22**	**12**	**2**	**678**
	0	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0.4**	**552**	**70**	**21**	**16.1**	**4**	**663.5**	**0**	**0**	**547**	**95**	**33**	**27.6**	**4**	**706.6**
0900 - 0915	0	0	0	1	0	0	0	**1**	0	0	73	17	0	0	0	**90**	0	0	85	17	7	6	2	**117**
0915 - 0930	0	0	1	0	0	0	0	**1**	2	0	86	10	1	1	1	**101**	0	0	67	20	4	3	0	**94**
0930 - 0945	0	0	0	0	0	0	0	**0**	0	0	69	6	3	2	2	**82**	0	0	74	9	10	2	1	**96**
0945 - 1000	0	0	0	0	0	0	0	**0**	0	0	69	9	2	4	0	**84**	0	0	52	22	4	5	1	**84**
Hourly Total	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**2**	**0**	**297**	**42**	**6**	**7**	**3**	**357**	**0**	**0**	**278**	**68**	**25**	**16**	**4**	**391**
Session Total	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**5**	**2**	**1**	**1186**	**185**	**32**	**18**	**9**	**1433**	**0**	**1**	**1198**	**251**	**67**	**40**	**7**	**1564**
1600 - 1615	0	0	0	0	0	0	0	**0**	0	0	132	20	1	0	0	**153**	0	0	123	25	5	1	1	**155**
1615 - 1630	0	0	0	2	1	0	0	**3**	0	1	145	12	0	1	1	**160**	0	1	147	52	7	4	0	**211**
1630 - 1645	0	0	1	0	1	0	0	**2**	0	0	150	14	2	0	2	**168**	0	0	131	26	5	0	0	**162**
1645 - 1700	0	0	0	0	0	0	0	**0**	0	1	181	19	4	1	0	**206**	0	0	145	37	7	1	0	**190**
Hourly Total	**0**	**0**	**1**	**2**	**2**	**0**	**0**	**5**	**0**	**2**	**608**	**65**	**7**	**2**	**3**	**687**	**0**	**1**	**546**	**140**	**24**	**6**	**1**	**718**
1700 - 1715	0	0	1	1	0	0	0	**2**	0	0	149	25	1	0	0	**175**	0	0	159	21	6	1	0	**187**
1715 - 1730	0	0	0	0	0	0	0	**0**	0	1	158	14	1	1	1	**176**	0	1	148	22	5	1	0	**177**
1730 - 1745	0	0	0	0	0	0	0	**0**	0	0	153	16	2	0	0	**171**	0	0	183	11	3	1	0	**198**
1745 - 1800	0	0	0	0	0	0	0	**0**	0	0	145	19	1	0	1	**166**	0	0	156	20	3	4	0	**183**
Hourly Total	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**1**	**605**	**74**	**5**	**1**	**2**	**688**	**0**	**1**	**646**	**74**	**17**	**7**	**0**	**745**
	0	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0.4**	**605**	**74**	**7.5**	**2.3**	**4**	**693.2**	**0**	**0.4**	**646**	**74**	**25.5**	**16.1**	**0**	**762**
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	178	18	1	0	0	**197**	0	1	135	9	3	3	0	**151**
1815 - 1830	0	0	0	0	0	0	0	**0**	0	0	147	15	0	1	1	**164**	0	0	112	10	3	1	0	**126**
1830 - 1845	0	0	0	0	0	0	0	**0**	0	1	112	12	0	0	1	**126**	0	0	114	11	3	1	0	**129**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	129	6	2	1	3	**141**	0	1	111	11	1	0	0	**124**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**566**	**51**	**3**	**2**	**5**	**628**	**0**	**2**	**472**	**41**	**10**	**5**	**0**	**530**
Session Total	**0**	**0**	**2**	**3**	**2**	**0**	**0**	**7**	**0**	**4**	**1779**	**190**	**15**	**5**	**10**	**2003**	**0**	**4**	**1664**	**255**	**51**	**18**	**1**	**1993**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (5) Norse Road / St Neots Road / Southern Arm / A4280

Approach: Southern Arm

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	C - Left to A4280								D - Ahead to Norse Road								A - Right to St Neots Road							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**
0700 - 0715	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**
0730 - 0745	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0745 - 0800	0	0	1	0	0	0	0	**1**	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**3**	**0**	**0**	**0**	**0**	3	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
0800 - 0815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**
0815 - 0830	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0830 - 0845	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**	0	0	2	1	0	0	0	**3**
Hourly Total	**0**	**0**	**2**	**0**	**0**	**0**	**0**	2	**0**	**0**	**3**	**0**	**0**	**0**	**0**	3	**0**	**0**	**3**	**1**	**0**	**0**	**0**	4
	0	**0**	**2**	**0**	**0**	**0**	**0**	2	**0**	**0**	**3**	**0**	**0**	**0**	**0**	3	**0**	**0**	**3**	**1**	**0**	**0**	**0**	4
0900 - 0915	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0915 - 0930	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0930 - 0945	0	0	0	1	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	0	0	1	0	0	**1**
0945 - 1000	0	0	1	1	0	0	0	**2**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**2**	**2**	**0**	**0**	**0**	4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	**0**	**0**	**0**	**0**	**1**	**0**	**0**	1
Session Total	**0**	**0**	**7**	**2**	**0**	**0**	**0**	9	**0**	**0**	**5**	**0**	**0**	**0**	**0**	5	**0**	**0**	**4**	**1**	**1**	**0**	**0**	6
1600 - 1615	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**
1615 - 1630	0	0	1	1	0	0	0	**2**	0	0	1	1	0	0	0	**2**	0	0	0	0	0	0	0	**0**
1630 - 1645	1	0	2	0	0	0	0	**3**	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	1	0	0	0	0	**1**	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**
Hourly Total	**1**	**0**	**6**	**1**	**0**	**0**	**0**	8	**0**	**0**	**3**	**1**	**0**	**0**	**0**	4	**0**	**0**	**1**	**0**	**0**	**0**	**0**	1
1700 - 1715	0	0	1	0	0	0	0	**1**	0	0	1	0	0	0	0	**1**	0	0	2	0	0	0	0	**2**
1715 - 1730	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	4	0	0	0	0	**4**	0	0	0	1	0	0	0	**1**	0	0	1	0	0	0	0	**1**
1745 - 1800	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**
Hourly Total	**0**	**0**	**6**	**0**	**0**	**0**	**0**	6	**0**	**0**	**1**	**1**	**0**	**0**	**0**	2	**0**	**0**	**4**	**0**	**0**	**0**	**0**	4
	0	**0**	**6**	**0**	**0**	**0**	**0**	6	**0**	**0**	**1**	**1**	**0**	**0**	**0**	2	**0**	**0**	**4**	**0**	**0**	**0**	**0**	4
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
Session Total	**1**	**0**	**12**	**1**	**0**	**0**	**0**	14	**0**	**0**	**4**	**2**	**0**	**0**	**0**	6	**0**	**0**	**5**	**0**	**0**	**0**	**0**	5

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (5) Norse Road / St Neots Road / Southern Arm / A4280

Approach: A4280

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	D - Left to Norse Road								A - Ahead to St Neots Road								B - Right to Southern Arm							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	12	4	0	0	0	**16**	0	1	111	18	3	0	1	**134**	0	0	1	1	0	0	0	**2**
0715 - 0730	0	0	15	3	1	0	0	**19**	0	0	94	14	2	2	0	**112**	0	0	1	0	0	0	0	**1**
0730 - 0745	0	0	22	4	2	0	0	**28**	0	0	104	15	7	2	1	**129**	0	0	0	1	0	0	0	**1**
0745 - 0800	0	1	39	6	0	0	0	**46**	0	0	96	14	9	0	0	**119**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**1**	**88**	**17**	**3**	**0**	**0**	**109**	**0**	**1**	**405**	**61**	**21**	**4**	**2**	**494**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**4**
0800 - 0815	0	0	26	8	0	0	1	**35**	0	0	110	32	4	2	0	**148**	0	0	0	0	0	0	0	**0**
0815 - 0830	0	0	37	4	0	0	1	**42**	0	0	107	17	6	2	0	**132**	0	0	0	0	0	0	0	**0**
0830 - 0845	0	0	39	4	1	0	0	**44**	0	0	125	19	3	2	1	**150**	0	0	0	0	0	0	0	**0**
0845 - 0900	0	0	47	7	1	0	0	**55**	0	0	92	20	4	1	2	**119**	0	0	2	0	0	0	0	**2**
Hourly Total	**0**	**0**	**149**	**23**	**2**	**0**	**2**	**176**	**0**	**0**	**434**	**88**	**17**	**7**	**3**	**549**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**
	0	**0**	**149**	**23**	**3**	**0**	**4**	**179**	**0**	**0**	**434**	**88**	**25.5**	**16.1**	**6**	**569.6**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**
0900 - 0915	0	0	39	8	0	1	0	**48**	0	0	60	15	2	1	1	**79**	0	0	0	1	0	0	0	**1**
0915 - 0930	0	0	28	6	0	0	0	**34**	0	0	74	14	4	3	0	**95**	0	0	0	0	0	0	0	**0**
0930 - 0945	0	0	34	6	0	0	0	**40**	0	0	69	11	4	1	0	**85**	0	0	1	0	1	0	0	**2**
0945 - 1000	0	0	38	6	0	1	1	**46**	1	0	59	14	8	2	1	**85**	0	0	2	0	0	0	0	**2**
Hourly Total	**0**	**0**	**139**	**26**	**0**	**2**	**1**	**168**	**1**	**0**	**262**	**54**	**18**	**7**	**2**	**344**	**0**	**0**	**3**	**1**	**1**	**0**	**0**	**5**
Session Total	**0**	**1**	**376**	**66**	**5**	**2**	**3**	**453**	**1**	**1**	**1101**	**203**	**56**	**18**	**7**	**1387**	**0**	**0**	**7**	**3**	**1**	**0**	**0**	**11**
1600 - 1615	1	0	63	11	0	0	0	**75**	0	2	119	12	1	0	2	**136**	0	0	0	2	0	0	0	**2**
1615 - 1630	0	2	62	8	0	0	0	**72**	0	0	114	17	4	0	0	**135**	0	0	0	1	0	0	0	**1**
1630 - 1645	0	0	62	8	0	0	0	**70**	0	1	121	13	4	0	1	**140**	0	0	1	1	0	0	0	**2**
1645 - 1700	0	0	73	6	1	0	0	**80**	0	0	116	13	1	1	0	**131**	0	0	1	1	0	0	0	**2**
Hourly Total	**1**	**2**	**260**	**33**	**1**	**0**	**0**	**297**	**0**	**3**	**470**	**55**	**10**	**1**	**3**	**542**	**0**	**0**	**2**	**5**	**0**	**0**	**0**	**7**
1700 - 1715	0	0	67	4	1	0	0	**72**	0	1	127	13	1	0	2	**144**	0	0	1	0	0	0	0	**1**
1715 - 1730	0	1	72	6	0	0	1	**80**	0	0	121	13	0	2	0	**136**	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	74	5	0	0	0	**79**	0	1	114	14	0	0	0	**129**	0	0	0	0	1	0	0	**1**
1745 - 1800	0	2	64	3	0	1	0	**70**	0	0	100	9	2	0	0	**111**	0	0	0	1	0	0	0	**1**
Hourly Total	**0**	**3**	**277**	**18**	**1**	**1**	**1**	**301**	**0**	**2**	**462**	**49**	**3**	**2**	**2**	**520**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**3**
	0	**1.2**	**277**	**18**	**1.5**	**2.3**	**2**	**302**	**0**	**0.8**	**462**	**49**	**4.5**	**4.6**	**4**	**524.9**	**0**	**0**	**1**	**1**	**1.5**	**0**	**0**	**3.5**
1800 - 1815	0	0	62	2	0	1	0	**65**	0	0	93	11	1	1	1	**107**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	1	49	2	1	0	0	**53**	0	0	92	6	0	0	1	**99**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	2	75	2	1	0	0	**80**	0	1	90	6	0	0	4	**101**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	46	0	1	0	0	**47**	0	0	72	4	0	1	0	**77**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**3**	**232**	**6**	**3**	**1**	**0**	**245**	**0**	**1**	**347**	**27**	**1**	**2**	**6**	**384**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**1**	**8**	**769**	**57**	**5**	**2**	**1**	**843**	**0**	**6**	**1279**	**131**	**14**	**5**	**11**	**1446**	**0**	**0**	**3**	**6**	**1**	**0**	**0**	**10**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (5) Norse Road / St Neots Road / Southern Arm / A4280

Approach: Norse Road

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	A - Left to St Neots Road								B - Ahead to Southern Arm								C - Right to A4280							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	105	19	8	2	0	**134**	0	0	0	0	0	0	0	**0**	0	1	23	7	0	0	1	**32**
0715 - 0730	0	1	127	14	9	2	0	**153**	0	0	0	0	0	0	0	**0**	0	0	37	5	0	1	1	**44**
0730 - 0745	0	0	136	13	8	0	0	**157**	0	0	1	0	0	0	0	**1**	0	2	33	2	1	0	1	**39**
0745 - 0800	0	0	132	16	6	2	0	**156**	0	0	0	0	0	0	0	**0**	0	0	33	9	1	0	1	**44**
Hourly Total	**0**	**1**	**500**	**62**	**31**	**6**	**0**	**600**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**126**	**23**	**2**	**1**	**4**	**159**
0800 - 0815	0	0	129	17	9	2	0	**157**	0	0	0	0	0	0	0	**0**	0	0	61	8	1	0	2	**72**
0815 - 0830	0	0	142	19	2	1	2	**166**	0	0	0	0	0	0	0	**0**	0	0	60	20	2	2	1	**85**
0830 - 0845	0	1	141	24	6	2	3	**177**	0	0	0	0	0	0	0	**0**	0	0	60	11	3	0	2	**76**
0845 - 0900	0	0	111	15	12	2	2	**142**	0	0	1	0	0	0	0	**1**	0	1	67	10	0	0	1	**79**
Hourly Total	**0**	**1**	**523**	**75**	**29**	**7**	**7**	**642**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**248**	**49**	**6**	**2**	**6**	**312**
	0	**0.4**	**523**	**75**	**43.5**	**16.1**	**14**	**672**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0.4**	**248**	**49**	**9**	**4.6**	**12**	**323**
0900 - 0915	0	0	96	26	6	4	0	**132**	0	0	2	1	0	0	0	**3**	0	0	41	6	1	0	2	**50**
0915 - 0930	0	0	70	23	6	3	0	**102**	0	0	1	0	0	0	0	**1**	0	0	50	7	2	0	2	**61**
0930 - 0945	0	0	56	19	6	3	0	**84**	0	0	0	0	1	0	0	**1**	0	0	44	9	0	0	1	**54**
0945 - 1000	0	0	66	7	7	5	0	**85**	0	0	0	0	0	0	0	**0**	0	0	49	3	0	0	2	**54**
Hourly Total	**0**	**0**	**288**	**75**	**25**	**15**	**0**	**403**	**0**	**0**	**3**	**1**	**1**	**0**	**0**	**5**	**0**	**0**	**184**	**25**	**3**	**0**	**7**	**219**
Session Total	**0**	**2**	**1311**	**212**	**85**	**28**	**7**	**1645**	**0**	**0**	**5**	**1**	**1**	**0**	**0**	**7**	**0**	**4**	**558**	**97**	**11**	**3**	**17**	**690**
1600 - 1615	0	0	124	12	6	1	1	**144**	0	0	0	1	0	0	0	**1**	0	1	64	7	1	1	2	**76**
1615 - 1630	0	0	83	17	5	1	0	**106**	0	0	0	0	0	0	0	**0**	0	0	41	6	2	0	0	**49**
1630 - 1645	0	1	110	18	4	0	0	**133**	0	0	1	0	0	0	0	**1**	0	0	59	7	0	0	1	**67**
1645 - 1700	0	0	90	19	1	2	1	**113**	0	0	0	0	0	0	0	**0**	0	0	54	5	0	0	2	**61**
Hourly Total	**0**	**1**	**407**	**66**	**16**	**4**	**2**	**496**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**1**	**218**	**25**	**3**	**1**	**5**	**253**
1700 - 1715	0	1	89	12	0	2	0	**104**	0	0	0	0	0	0	0	**0**	0	0	65	7	1	0	0	**73**
1715 - 1730	0	0	84	16	0	0	0	**100**	0	0	0	0	0	0	0	**0**	0	0	69	2	0	1	3	**75**
1730 - 1745	0	0	90	10	2	1	0	**103**	0	0	0	0	0	0	0	**0**	0	1	64	1	0	0	1	**67**
1745 - 1800	0	1	73	12	1	2	0	**89**	0	0	0	0	0	0	0	**0**	0	0	65	2	0	0	0	**67**
Hourly Total	**0**	**2**	**336**	**50**	**3**	**5**	**0**	**396**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**263**	**12**	**1**	**1**	**4**	**282**
	0	**0.8**	**336**	**50**	**4.5**	**11.5**	**0**	**402.8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.4**	**263**	**12**	**1.5**	**2.3**	**8**	**287.2**
1800 - 1815	0	0	78	7	1	0	0	**86**	0	0	0	0	0	0	0	**0**	0	1	53	4	0	0	2	**60**
1815 - 1830	0	0	54	8	2	1	0	**65**	0	0	0	0	0	0	0	**0**	0	0	39	2	0	0	1	**42**
1830 - 1845	0	0	56	2	1	1	2	**62**	0	0	0	0	0	0	0	**0**	0	0	45	2	1	0	1	**49**
1845 - 1900	0	0	28	2	1	2	0	**33**	0	0	0	0	0	0	0	**0**	0	0	46	1	0	0	2	**49**
Hourly Total	**0**	**0**	**216**	**19**	**5**	**4**	**2**	**246**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**183**	**9**	**1**	**0**	**6**	**200**
Session Total	**0**	**3**	**959**	**135**	**24**	**13**	**4**	**1138**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	**664**	**46**	**5**	**2**	**15**	**735**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4-1) Water End / A421 On Slip / A421 Off Slip / A4280

Approach: A421 On Slip

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	B - First Left to Water End (South)								C - Second Left to A421 Off Slip								D - Ahead to A4280								E - Right to Water End (North)							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0730 - 0745	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0745 - 0800	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0815 - 0830	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0830 - 0845	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0900 - 0915	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0915 - 0930	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0930 - 0945	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0945 - 1000	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1615 - 1630	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1630 - 1645	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1715 - 1730	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1745 - 1800	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4-1) Water End / A421 On Slip / A421 Off Slip / A4280

Approach: Water End (South)

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	C - First Left to A421 Off Slip								D - Second Left to A4280								E - Ahead to Water End (North)								A - Right to A421 On Slip							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	0	0	0	0	0	**0**	0	2	51	15	2	4	1	**75**	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	0	0	0	0	0	0	**0**	0	0	76	16	5	4	1	**102**	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**
0730 - 0745	0	0	0	0	0	0	0	**0**	0	0	104	34	3	2	0	**143**	0	0	3	0	0	0	0	**3**	0	0	0	0	0	0	0	**0**
0745 - 0800	0	0	0	0	0	0	0	**0**	0	0	150	35	6	3	4	**198**	0	0	1	0	0	0	1	**2**	0	0	1	0	0	0	0	**1**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**381**	**100**	**16**	**13**	**6**	**518**	**0**	**0**	**7**	**0**	**0**	**0**	**1**	**8**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
0800 - 0815	0	0	0	0	0	0	0	**0**	0	0	150	20	0	4	1	**175**	0	0	7	4	2	0	0	**13**	0	0	0	0	0	0	0	**0**
0815 - 0830	0	0	0	0	0	0	0	**0**	0	0	104	23	3	2	1	**133**	0	0	5	4	0	0	0	**9**	0	0	0	0	0	0	0	**0**
0830 - 0845	0	0	0	0	0	0	0	**0**	0	0	98	22	7	4	0	**131**	0	0	6	1	0	0	0	**7**	0	0	0	1	0	0	0	**1**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	104	16	3	3	0	**126**	0	0	1	1	0	0	1	**3**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**456**	**81**	**13**	**13**	**2**	**565**	**0**	**0**	**19**	**10**	**2**	**0**	**1**	**32**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**456**	**81**	**19.5**	**29.9**	**4**	**590.4**	**0**	**0**	**19**	**10**	**3**	**0**	**2**	**34**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**
0900 - 0915	0	0	0	0	0	0	0	**0**	1	0	75	19	2	0	1	**98**	0	0	4	0	0	0	0	**4**	0	0	0	0	0	0	0	**0**
0915 - 0930	0	0	0	0	0	0	0	**0**	0	0	79	12	4	2	1	**98**	0	0	3	2	0	0	0	**5**	0	0	1	0	0	0	0	**1**
0930 - 0945	0	0	0	0	0	0	0	**0**	0	0	76	12	5	2	3	**98**	0	0	1	0	0	0	0	**1**	0	0	1	0	0	0	0	**1**
0945 - 1000	0	0	0	0	0	0	0	**0**	0	0	69	15	6	6	0	**96**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**299**	**58**	**17**	**10**	**5**	**390**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**1136**	**239**	**46**	**36**	**13**	**1473**	**0**	**0**	**34**	**12**	**2**	**0**	**2**	**50**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**
1600 - 1615	0	0	0	0	0	0	0	**0**	0	0	109	17	2	0	0	**128**	0	0	3	3	0	0	0	**6**	0	0	0	0	2	0	0	**2**
1615 - 1630	0	0	0	0	0	0	0	**0**	0	1	109	25	3	1	1	**140**	0	0	4	2	0	0	0	**6**	0	0	1	0	0	0	0	**1**
1630 - 1645	0	0	0	0	0	0	0	**0**	0	0	104	13	5	0	0	**122**	0	0	4	0	0	0	0	**4**	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	0	0	0	0	0	**0**	0	0	115	19	3	0	0	**137**	0	0	5	0	0	0	0	**5**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**437**	**74**	**13**	**1**	**1**	**527**	**0**	**0**	**16**	**5**	**0**	**0**	**0**	**21**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**3**
1700 - 1715	0	0	0	0	0	0	0	**0**	0	0	134	22	3	1	1	**161**	0	0	4	1	0	0	0	**5**	0	0	0	0	0	0	0	**0**
1715 - 1730	0	0	0	0	0	0	0	**0**	0	0	138	18	5	1	0	**162**	0	0	12	0	0	0	0	**12**	0	0	2	1	0	0	0	**3**
1730 - 1745	0	0	0	0	0	0	0	**0**	0	0	139	10	2	1	0	**152**	0	0	6	0	0	0	0	**6**	0	0	1	0	0	0	0	**1**
1745 - 1800	0	0	0	0	0	0	0	**0**	0	0	114	19	1	1	1	**136**	0	0	8	0	0	0	0	**8**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**525**	**69**	**11**	**4**	**2**	**611**	**0**	**0**	**30**	**1**	**0**	**0**	**0**	**31**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**525**	**69**	**16.5**	**9.2**	**4**	**623.7**	**0**	**0**	**30**	**1**	**0**	**0**	**0**	**31**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	107	12	3	2	0	**124**	0	0	7	0	1	0	0	**8**	0	0	1	1	0	0	0	**2**
1815 - 1830	0	0	0	0	0	0	0	**0**	0	0	123	9	2	1	0	**135**	0	0	3	0	0	0	0	**3**	0	0	1	1	0	0	0	**2**
1830 - 1845	0	0	0	0	0	0	0	**0**	0	0	111	10	2	1	0	**124**	0	0	4	0	0	0	0	**4**	0	0	2	0	0	0	0	**2**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	1	134	14	1	0	3	**153**	0	0	8	1	0	0	0	**9**	0	0	0	1	0	0	0	**1**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**475**	**45**	**8**	**4**	**3**	**536**	**0**	**0**	**22**	**1**	**1**	**0**	**0**	**24**	**0**	**0**	**4**	**3**	**0**	**0**	**0**	**7**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1437**	**188**	**32**	**9**	**6**	**1674**	**0**	**0**	**68**	**7**	**1**	**0**	**0**	**76**	**0**	**0**	**8**	**4**	**2**	**0**	**0**	**14**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4-1) Water End / A421 On Slip / A421 Off Slip / A4280

Approach: A421 Off Slip

	D - First Left to A4280								E - Second Left to Water End (North)								A - Right to A421 On Slip								B - Last Right to Water End (South)								C - Left to A4280(**Around Roundabout**)							
	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	43	14	5	1	0	**63**	0	0	1	1	0	0	1	**3**	0	0	0	0	0	0	0	**0**	0	0	8	6	2	0	0	**16**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	0	64	12	1	0	0	**77**	0	0	5	4	1	0	0	**10**	0	0	0	0	0	0	0	**0**	0	0	11	6	2	2	0	**21**	0	0	0	0	0	0	0	**0**
0730 - 0745	0	0	88	16	6	2	0	**112**	0	0	7	2	1	0	0	**10**	0	0	0	0	0	0	0	**0**	0	0	35	10	0	2	0	**47**	0	0	0	0	0	0	0	**0**
0745 - 0800	0	0	134	20	4	0	0	**158**	0	1	11	3	0	0	0	**15**	0	0	0	0	0	0	0	**0**	0	0	21	8	3	0	0	**32**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**329**	**62**	**16**	**3**	**0**	**410**	**0**	**1**	**24**	**10**	**2**	**0**	**1**	**38**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**75**	**30**	**7**	**4**	**0**	**116**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800 - 0815	0	0	121	17	4	0	0	**142**	0	0	13	4	0	0	0	**17**	0	0	0	0	0	0	0	**0**	0	0	55	11	3	0	0	**69**	0	0	16	0	0	0	0	**16**
0815 - 0830	0	1	121	10	6	4	1	**143**	0	0	11	3	1	0	0	**15**	0	0	0	0	0	0	0	**0**	0	0	59	4	0	0	0	**63**	0	0	38	6	0	0	0	**44**
0830 - 0845	0	0	125	21	5	0	0	**151**	0	0	12	3	0	0	0	**15**	0	0	0	0	0	0	0	**0**	0	0	47	9	0	0	0	**56**	0	0	20	3	0	0	0	**23**
0845 - 0900	0	0	102	28	6	2	0	**138**	0	0	4	1	0	0	0	**5**	0	0	0	0	0	0	0	**0**	0	0	10	3	1	0	1	**15**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**1**	**469**	**76**	**21**	**6**	**1**	**574**	**0**	**0**	**40**	**11**	**1**	**0**	**0**	**52**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**171**	**27**	**4**	**0**	**1**	**203**	**0**	**0**	**74**	**9**	**0**	**0**	**0**	**83**
	0	**0.4**	**469**	**76**	**31.5**	**13.8**	**2**	**592.7**	**0**	**0**	**40**	**11**	**1.5**	**0**	**0**	**52.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**171**	**27**	**6**	**0**	**2**	**206**	**0**	**0**	**74**	**9**	**0**	**0**	**0**	**83**
0900 - 0915	0	0	73	17	6	6	0	**102**	0	0	9	2	0	0	0	**11**	0	0	0	0	0	0	0	**0**	0	0	18	3	1	0	0	**22**	0	0	0	0	0	0	0	**0**
0915 - 0930	0	0	68	13	3	2	0	**86**	0	0	7	2	1	0	0	**10**	0	0	0	0	0	0	0	**0**	0	0	9	5	2	2	0	**18**	0	0	0	0	0	0	0	**0**
0930 - 0945	0	0	60	9	6	1	0	**76**	0	0	5	1	0	0	0	**6**	0	0	0	0	0	0	0	**0**	0	0	11	5	0	0	0	**16**	0	0	0	0	0	0	0	**0**
0945 - 1000	0	0	55	15	3	4	1	**78**	0	0	6	0	0	0	0	**6**	0	0	0	0	0	0	0	**0**	0	0	12	4	1	0	0	**17**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**256**	**54**	**18**	**13**	**1**	**342**	**0**	**0**	**27**	**5**	**1**	**0**	**0**	**33**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**50**	**17**	**4**	**2**	**0**	**73**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**1**	**1054**	**192**	**55**	**22**	**2**	**1326**	**0**	**1**	**91**	**26**	**4**	**0**	**1**	**123**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**296**	**74**	**15**	**6**	**1**	**392**	**0**	**0**	**74**	**9**	**0**	**0**	**0**	**83**
1600 - 1615	0	0	151	33	5	1	1	**191**	0	0	18	4	0	0	0	**22**	0	0	0	0	0	0	0	**0**	0	0	64	18	1	2	0	**85**	0	0	0	0	0	0	0	**0**
1615 - 1630	0	1	166	32	3	4	1	**207**	0	0	12	2	1	0	1	**16**	0	0	0	0	0	0	0	**0**	0	0	72	19	4	0	0	**95**	0	0	0	0	0	0	0	**0**
1630 - 1645	0	2	163	35	5	0	1	**206**	0	0	11	4	0	0	0	**15**	0	0	0	0	0	0	0	**0**	0	0	107	21	5	0	0	**133**	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	161	22	3	2	0	**188**	0	0	19	2	0	0	0	**21**	0	0	0	0	0	0	0	**0**	0	0	100	21	5	1	0	**127**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**3**	**641**	**122**	**16**	**7**	**3**	**792**	**0**	**0**	**60**	**12**	**1**	**0**	**1**	**74**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**343**	**79**	**15**	**3**	**0**	**440**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1700 - 1715	0	0	171	26	4	1	0	**202**	0	0	16	2	0	0	0	**18**	0	0	0	0	0	0	0	**0**	0	0	109	19	1	0	0	**129**	0	0	2	0	0	0	0	**2**
1715 - 1730	0	1	169	18	1	0	0	**189**	0	0	17	2	0	0	0	**19**	0	0	0	0	0	0	0	**0**	0	0	119	20	1	0	0	**140**	0	0	6	2	0	0	0	**8**
1730 - 1745	0	0	161	18	3	2	0	**184**	0	0	24	4	0	0	0	**28**	0	0	0	0	0	0	0	**0**	0	0	93	11	2	0	0	**106**	0	0	50	3	0	0	0	**53**
1745 - 1800	0	2	153	15	2	1	0	**173**	0	0	26	4	0	0	0	**30**	0	0	0	0	0	0	0	**0**	0	0	11	0	1	0	0	**12**	0	0	46	3	0	0	0	**49**
Hourly Total	**0**	**3**	**654**	**77**	**10**	**4**	**0**	**748**	**0**	**0**	**83**	**12**	**0**	**0**	**0**	**95**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**332**	**50**	**5**	**0**	**0**	**387**	0	0	104	8	0	0	0	112
	0	**1.2**	**654**	**77**	**15**	**9.2**	**0**	**756.4**	**0**	**0**	**83**	**12**	**0**	**0**	**0**	**95**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**332**	**50**	**7.5**	**0**	**0**	**389.5**	**0**	**0**	**104**	**8**	**0**	**0**	**0**	**112**
1800 - 1815	0	0	155	11	2	1	0	**169**	0	0	15	0	0	0	0	**15**	0	0	0	0	0	0	0	**0**	0	0	48	4	0	1	0	**53**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	1	120	11	2	1	1	**136**	0	0	15	1	0	0	0	**16**	0	0	0	0	0	0	0	**0**	0	0	22	7	0	0	0	**29**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	0	114	10	0	0	1	**125**	0	0	9	0	0	0	0	**9**	0	0	0	0	0	0	0	**0**	0	0	19	1	0	0	0	**20**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	72	9	1	1	0	**83**	0	0	12	1	0	0	0	**13**	0	0	0	0	0	0	0	**0**	0	0	26	2	0	0	0	**28**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**1**	**461**	**41**	**5**	**3**	**2**	**513**	**0**	**0**	**51**	**2**	**0**	**0**	**0**	**53**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**115**	**14**	**0**	**1**	**0**	**130**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**7**	**1756**	**240**	**31**	**14**	**5**	**2053**	**0**	**0**	**194**	**26**	**1**	**0**	**1**	**222**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**790**	**143**	**20**	**4**	**0**	**957**	**0**	**0**	**104**	**8**	**0**	**0**	**0**	**112**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4-1Water End / A421 On Slip / A421 Off Slip / A4280

Approach: A4280

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	E - Left to Water End (North)								A - Ahead to A421 On Slip								B - Right to Water End (South)								C - Last Right to A421 Off Slip							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	0	0	0	0	0	**0**	0	0	71	10	2	1	0	**84**	0	1	137	26	10	0	1	**175**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	0	2	1	0	0	0	**3**	0	0	58	11	1	2	0	**72**	0	1	145	13	7	1	0	**167**	0	0	0	0	0	0	0	**0**
0730 - 0745	0	0	1	0	0	0	0	**1**	0	0	58	7	6	2	0	**73**	0	0	142	19	9	1	1	**172**	0	0	0	0	0	0	0	**0**
0745 - 0800	0	0	2	0	0	0	0	**2**	0	0	64	8	2	1	0	**75**	0	0	217	20	8	2	0	**247**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**5**	**1**	**0**	**0**	**0**	**6**	**0**	**0**	**251**	**36**	**11**	**6**	**0**	**304**	**0**	**2**	**641**	**78**	**34**	**4**	**2**	**761**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800 - 0815	0	0	1	1	0	0	0	**2**	0	0	74	9	4	2	0	**89**	0	0	149	33	8	3	0	**193**	0	0	0	0	0	0	0	**0**
0815 - 0830	0	0	3	3	1	0	0	**7**	0	0	82	7	1	2	0	**92**	0	0	170	19	7	1	2	**199**	0	0	0	0	0	0	0	**0**
0830 - 0845	0	0	7	2	0	0	0	**9**	0	0	75	7	3	1	0	**86**	0	0	142	33	8	2	4	**189**	0	0	0	0	0	0	0	**0**
0845 - 0900	0	0	2	1	1	0	0	**4**	0	0	66	10	4	3	0	**83**	0	1	177	33	8	0	4	**223**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**13**	**7**	**2**	**0**	**0**	**22**	**0**	**0**	**297**	**33**	**12**	**8**	**0**	**350**	**0**	**1**	**638**	**118**	**31**	**6**	**10**	**804**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0**	**13**	**7**	**3**	**0**	**0**	**23**	**0**	**0**	**297**	**33**	**18**	**18.4**	**0**	**366.4**	**0**	**0.4**	**638**	**118**	**46.5**	**13.8**	**20**	**836.7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0900 - 0915	0	0	4	0	0	0	0	**4**	0	0	40	9	3	2	0	**54**	0	0	122	27	5	5	1	**160**	0	0	0	0	0	0	0	**0**
0915 - 0930	0	0	1	2	0	0	0	**3**	0	0	35	14	9	1	0	**59**	0	0	117	26	6	2	0	**151**	0	0	0	0	0	0	0	**0**
0930 - 0945	0	0	0	0	0	0	0	**0**	0	0	44	10	7	2	0	**63**	0	0	79	12	1	2	0	**94**	0	0	0	0	0	0	0	**0**
0945 - 1000	0	0	3	0	0	0	0	**3**	0	0	39	8	8	2	0	**57**	0	0	77	14	6	6	1	**104**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**0**	**0**	**158**	**41**	**27**	**7**	**0**	**233**	**0**	**0**	**395**	**79**	**18**	**15**	**2**	**509**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**0**	**26**	**10**	**2**	**0**	**0**	**38**	**0**	**0**	**706**	**110**	**50**	**21**	**0**	**887**	**0**	**3**	**1674**	**275**	**83**	**25**	**14**	**2074**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1600 - 1615	0	0	5	0	0	0	0	**5**	0	1	26	4	0	3	0	**34**	0	0	189	26	6	1	2	**224**	0	0	0	0	0	0	0	**0**
1615 - 1630	0	0	9	1	0	0	0	**10**	0	0	30	3	2	1	0	**36**	0	1	171	28	6	0	1	**207**	0	0	0	0	0	0	0	**0**
1630 - 1645	0	0	5	1	1	0	0	**7**	0	0	30	10	3	0	0	**43**	0	1	162	14	5	0	0	**182**	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	5	1	0	0	0	**6**	0	0	38	7	0	0	0	**45**	0	0	169	22	0	0	1	**192**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**24**	**3**	**1**	**0**	**0**	**28**	**0**	**1**	**124**	**24**	**5**	**4**	**0**	**158**	**0**	**2**	**691**	**90**	**17**	**1**	**4**	**805**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1700 - 1715	0	0	4	1	0	0	0	**5**	0	1	16	1	1	0	0	**19**	0	1	168	7	0	4	1	**181**	0	0	0	0	0	0	0	**0**
1715 - 1730	0	0	6	0	0	0	0	**6**	0	0	30	1	0	0	0	**31**	0	0	143	9	1	1	2	**156**	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	3	0	0	0	0	**3**	0	0	19	2	0	0	0	**21**	0	0	154	16	2	2	0	**174**	0	0	0	0	0	0	0	**0**
1745 - 1800	0	0	1	0	0	0	0	**1**	1	0	35	1	1	0	0	**38**	1	2	233	22	1	1	0	**260**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**14**	**1**	**0**	**0**	**0**	**15**	**1**	**1**	**100**	**5**	**2**	**0**	**0**	**109**	**1**	**3**	**698**	**54**	**4**	**8**	**3**	**771**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0**	**14**	**1**	**0**	**0**	**0**	**15**	**1**	**0.4**	**100**	**5**	**3**	**0**	**0**	**109.4**	**1**	**1.2**	**698**	**54**	**6**	**18.4**	**6**	**784.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1800 - 1815	0	0	3	0	0	0	0	**3**	0	0	33	2	1	1	0	**37**	0	0	130	14	3	0	1	**148**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	5	1	0	0	0	**6**	0	0	34	2	2	0	0	**38**	0	1	115	5	1	1	0	**123**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	0	6	0	0	0	0	**6**	0	0	26	1	0	0	1	**28**	0	0	92	5	2	1	5	**105**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	7	0	0	0	0	**7**	0	0	34	0	0	0	0	**34**	0	0	63	3	1	2	1	**70**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**21**	**1**	**0**	**0**	**0**	**22**	**0**	**0**	**127**	**5**	**3**	**1**	**1**	**137**	**0**	**1**	**400**	**27**	**7**	**4**	**7**	**446**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**0**	**59**	**5**	**1**	**0**	**0**	**65**	**1**	**2**	**351**	**34**	**10**	**5**	**1**	**404**	**1**	**6**	**1789**	**171**	**28**	**13**	**14**	**2022**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4-1) Water End / A421 On Slip / A421 Off Slip / A4280

Approach: Water End (North)

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	A - Left to A421 On Slip								B - Ahead to Water End (South)								C - Right to A421 Off Slip								D - Last Right to A4280							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	1	1	0	0	0	**2**	0	0	17	1	0	0	0	**18**	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**
0715 - 0730	0	0	4	0	0	0	0	**4**	0	0	19	4	0	0	0	**23**	0	0	0	0	0	0	0	**0**	0	0	3	0	0	0	0	**3**
0730 - 0745	0	0	2	0	0	0	0	**2**	0	0	23	1	0	0	0	**24**	0	0	0	0	0	0	0	**0**	0	0	4	0	0	0	0	**4**
0745 - 0800	0	0	2	0	0	0	0	**2**	0	0	17	4	2	0	0	**23**	0	0	0	0	0	0	0	**0**	0	0	3	0	0	0	0	**3**
Hourly Total	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**10**	**0**	**0**	**76**	**10**	**2**	**0**	**0**	**88**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**12**
0800 - 0815	0	0	2	0	0	0	0	**2**	0	0	30	3	0	0	0	**33**	0	0	0	0	0	0	0	**0**	0	0	10	1	1	0	0	**12**
0815 - 0830	0	0	2	0	0	0	0	**2**	0	0	35	3	0	0	0	**38**	0	0	0	0	0	0	0	**0**	0	0	5	2	0	0	0	**7**
0830 - 0845	0	0	2	2	0	0	0	**4**	0	0	22	2	0	1	0	**25**	0	0	0	0	0	0	0	**0**	0	0	5	1	0	0	1	**7**
0845 - 0900	0	0	2	0	0	0	0	**2**	0	0	16	4	2	0	0	**22**	0	0	0	0	0	0	0	**0**	0	0	11	3	0	0	0	**14**
Hourly Total	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**0**	**0**	**103**	**12**	**2**	**1**	**0**	**118**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**7**	**1**	**0**	**1**	**40**
	0	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**0**	**0**	**103**	**12**	**3**	**2.3**	**0**	**120.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**7**	**1.5**	**0**	**2**	**41.5**
0900 - 0915	0	0	1	1	0	0	0	**2**	0	0	12	2	2	0	0	**16**	0	0	0	0	0	0	0	**0**	0	0	12	0	0	0	1	**13**
0915 - 0930	0	0	2	1	0	0	0	**3**	0	0	8	1	0	0	0	**9**	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**
0930 - 0945	0	0	1	0	0	0	0	**1**	0	0	11	3	0	0	0	**14**	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**
0945 - 1000	0	0	4	0	0	0	0	**4**	0	0	7	1	0	0	0	**8**	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**
Hourly Total	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**0**	**0**	**38**	**7**	**2**	**0**	**0**	**47**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**0**	**0**	**0**	**1**	**19**
Session Total	**0**	**0**	**25**	**5**	**0**	**0**	**0**	**30**	**0**	**0**	**217**	**29**	**6**	**1**	**0**	**253**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**61**	**7**	**1**	**0**	**2**	**71**
1600 - 1615	0	0	0	0	0	0	0	**0**	0	0	9	7	1	0	0	**17**	0	0	0	0	0	0	0	**0**	0	0	7	1	0	0	0	**8**
1615 - 1630	0	0	1	1	0	0	0	**2**	0	0	14	1	0	0	0	**15**	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**
1630 - 1645	0	0	0	0	0	0	0	**0**	0	0	10	7	0	0	0	**17**	0	0	0	0	0	0	0	**0**	0	0	1	1	0	0	0	**2**
1645 - 1700	0	0	0	0	0	0	0	**0**	0	0	12	2	0	0	0	**14**	0	0	0	0	0	0	0	**0**	0	0	3	1	0	0	0	**4**
Hourly Total	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**45**	**17**	**1**	**0**	**0**	**63**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**3**	**0**	**0**	**0**	**16**
1700 - 1715	0	0	0	0	0	0	0	**0**	0	0	12	2	0	0	0	**14**	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**
1715 - 1730	0	0	2	0	0	0	0	**2**	0	0	14	1	0	0	0	**15**	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**
1730 - 1745	0	0	2	0	0	0	0	**2**	0	0	11	1	0	0	0	**12**	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**
1745 - 1800	0	0	0	1	0	0	0	**1**	0	0	11	0	0	0	1	**12**	0	0	0	0	0	0	0	**0**	0	0	4	0	0	0	0	**4**
Hourly Total	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**48**	**4**	**0**	**0**	**1**	**53**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**9**
	0	**0**	**4**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**48**	**4**	**0**	**0**	**2**	**54**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**9**
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	8	0	0	0	0	**8**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	1	0	0	0	0	**1**	0	0	6	0	0	0	0	**6**	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**
1830 - 1845	0	0	2	0	0	0	0	**2**	0	0	9	0	0	0	0	**9**	0	0	0	0	0	0	0	**0**	0	0	4	1	0	0	0	**5**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	8	1	0	0	0	**9**	0	0	0	0	0	0	0	**0**	0	0	6	0	0	0	0	**6**
Hourly Total	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**31**	**1**	**0**	**0**	**0**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**1**	**0**	**0**	**0**	**12**
Session Total	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**10**	**0**	**0**	**124**	**22**	**1**	**0**	**1**	**148**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**33**	**4**	**0**	**0**	**0**	**37**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4-2) Water End / A421 Off Slip / St Neots Road / A421 On Slip

Approach: A421 Off Slip

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	B - Left to St Neots Road								C - Ahead to A421 On Slip								D - Right to Water End							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	1	37	10	2	3	0	**53**
0715 - 0730	0	0	0	2	0	0	0	**2**	0	0	0	0	0	0	0	**0**	0	0	38	11	4	4	0	**57**
0730 - 0745	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	67	19	3	2	0	**91**
0745 - 0800	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	91	22	5	3	0	**121**
Hourly Total	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**233**	**62**	**14**	**12**	**0**	**322**
0800 - 0815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	70	13	0	2	1	**86**
0815 - 0830	0	0	0	1	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	61	21	3	2	0	**87**
0830 - 0845	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	59	14	6	4	0	**83**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	64	8	3	2	0	**77**
Hourly Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**254**	**56**	**12**	**10**	**1**	**333**
	0	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**254**	**56**	**18**	**23**	**2**	**353**
0900 - 0915	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	49	16	1	0	0	**66**
0915 - 0930	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	58	10	3	2	0	**73**
0930 - 0945	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	47	10	5	2	1	**65**
0945 - 1000	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	41	9	5	5	0	**60**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**195**	**45**	**14**	**9**	**1**	**264**
Session Total	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**682**	**163**	**40**	**31**	**2**	**919**
1600 - 1615	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	69	13	4	0	0	**86**
1615 - 1630	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	66	14	3	1	0	**84**
1630 - 1645	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	69	9	4	0	0	**82**
1645 - 1700	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	70	13	3	0	0	**86**
Hourly Total	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**274**	**49**	**14**	**1**	**0**	**338**
1700 - 1715	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	82	12	3	1	0	**98**
1715 - 1730	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	94	11	4	1	0	**110**
1730 - 1745	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	96	6	2	1	0	**105**
1745 - 1800	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	72	10	1	1	1	**85**
Hourly Total	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**344**	**39**	**10**	**4**	**1**	**398**
	0	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**344**	**39**	**15**	**9.2**	**2**	**409.2**
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	77	7	3	2	0	**89**
1815 - 1830	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	98	9	2	1	0	**110**
1830 - 1845	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	87	5	2	0	0	**94**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	1	99	14	1	0	0	**115**
Hourly Total	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**361**	**35**	**8**	**3**	**0**	**408**
Session Total	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**979**	**123**	**32**	**8**	**1**	**1144**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4-2) Water End / A421 Off Slip / St Neots Road / A421 On Slip

Approach: St Neots Road

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	C - Left to A421 On Slip								D - Ahead to Water End								A - Right to A421 Off Slip							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	38	7	2	2	1	**50**	0	1	16	5	0	1	1	**24**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	1	41	9	0	1	0	**52**	0	0	39	5	1	0	1	**46**	0	0	0	0	0	0	0	**0**
0730 - 0745	0	0	62	7	3	0	0	**72**	0	0	40	15	0	0	0	**55**	0	0	0	0	0	0	0	**0**
0745 - 0800	0	0	61	10	0	1	0	**72**	0	0	61	13	1	0	5	**80**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**1**	**202**	**33**	**5**	**4**	**1**	**246**	**0**	**1**	**156**	**38**	**2**	**1**	**7**	**205**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800 - 0815	0	0	51	10	1	0	0	**62**	0	0	87	11	2	2	0	**102**	0	0	0	0	0	0	0	**0**
0815 - 0830	0	1	45	10	2	0	0	**58**	0	0	48	6	0	0	1	**55**	0	0	0	0	0	0	0	**0**
0830 - 0845	0	0	41	5	3	0	0	**49**	0	0	45	10	1	0	0	**56**	0	0	0	0	0	0	0	**0**
0845 - 0900	0	0	35	7	1	2	0	**45**	0	0	41	9	0	1	1	**52**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**1**	**172**	**32**	**7**	**2**	**0**	**214**	**0**	**0**	**221**	**36**	**3**	**3**	**2**	**265**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0.4**	**172**	**32**	**10.5**	**4.6**	**0**	**219.5**	**0**	**0**	**221**	**36**	**4.5**	**6.9**	**4**	**272.4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0900 - 0915	0	0	25	5	1	1	1	**33**	1	0	30	3	1	0	1	**36**	0	0	0	0	0	0	0	**0**
0915 - 0930	0	1	19	6	0	2	0	**28**	0	0	25	4	1	0	1	**31**	0	0	0	0	0	0	0	**0**
0930 - 0945	0	0	13	4	1	0	0	**18**	0	0	31	2	0	0	2	**35**	0	0	0	0	0	0	0	**0**
0945 - 1000	0	0	21	2	0	0	0	**23**	0	0	28	6	1	1	0	**36**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**1**	**78**	**17**	**2**	**3**	**1**	**102**	**1**	**0**	**114**	**15**	**3**	**1**	**4**	**138**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**3**	**452**	**82**	**14**	**9**	**2**	**562**	**1**	**1**	**491**	**89**	**8**	**5**	**13**	**608**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1600 - 1615	0	0	12	110	1	0	0	**123**	0	0	43	7	0	0	0	**50**	0	0	0	0	0	0	0	**0**
1615 - 1630	0	0	24	10	1	0	1	**36**	0	1	48	13	0	0	1	**63**	0	0	0	0	0	0	0	**0**
1630 - 1645	0	0	29	10	1	3	0	**43**	0	0	39	4	1	0	0	**44**	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	29	6	1	0	0	**36**	0	0	50	6	0	0	0	**56**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**94**	**136**	**4**	**3**	**1**	**238**	**0**	**1**	**180**	**30**	**1**	**0**	**1**	**213**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1700 - 1715	0	0	32	9	1	0	0	**42**	0	0	56	11	0	0	1	**68**	0	0	0	0	0	0	0	**0**
1715 - 1730	0	0	28	2	0	0	0	**30**	0	0	58	8	1	0	0	**67**	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	37	4	0	0	0	**41**	0	0	50	4	0	0	0	**54**	0	0	0	0	0	0	0	**0**
1745 - 1800	0	0	17	2	1	0	0	**20**	0	0	50	9	0	0	0	**59**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**114**	**17**	**2**	**0**	**0**	**133**	**0**	**0**	**214**	**32**	**1**	**0**	**1**	**248**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0**	**114**	**17**	**3**	**0**	**0**	**134**	**0**	**0**	**214**	**32**	**1.5**	**0**	**2**	**249.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1800 - 1815	0	0	15	2	1	0	0	**18**	0	0	38	6	1	0	0	**45**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	17	1	0	0	0	**18**	0	0	29	1	0	0	0	**30**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	0	13	4	0	0	0	**17**	0	0	30	5	0	1	0	**36**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	13	0	0	0	0	**13**	0	0	43	2	0	0	3	**48**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**58**	**7**	**1**	**0**	**0**	**66**	**0**	**0**	**140**	**14**	**1**	**1**	**3**	**159**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**0**	**266**	**160**	**7**	**3**	**1**	**437**	**0**	**1**	**534**	**76**	**3**	**1**	**5**	**620**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4-2) Water End / A421 Off Slip / St Neots Road / A421 On Slip

Approach: A421 On Slip

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	D - Left to Water End								A - Ahead to A421 Off Slip								B - Right to St Neots Road							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**
0700 - 0715	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0730 - 0745	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0745 - 0800	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0815 - 0830	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0830 - 0845	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0900 - 0915	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0915 - 0930	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0930 - 0945	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0945 - 1000	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1615 - 1630	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1630 - 1645	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1715 - 1730	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1745 - 1800	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (4-2) Water End / A421 Off Slip / St Neots Road / A421 On Slip

Approach: Water End

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	A - Left to A421 Off Slip								B - Ahead to St Neots Road								C - Right to A421 On Slip							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	0	0	0	0	0	**0**	0	0	49	10	2	0	1	**62**	0	1	113	23	10	0	0	**147**
0715 - 0730	0	0	0	0	0	0	0	**0**	0	1	50	14	3	2	0	**70**	0	0	125	9	6	1	0	**141**
0730 - 0745	0	0	0	0	0	0	0	**0**	0	0	70	13	0	2	1	**86**	0	0	130	17	9	1	0	**157**
0745 - 0800	0	0	0	0	0	0	0	**0**	0	0	64	13	5	0	0	**82**	0	0	191	19	8	2	0	**220**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**233**	**50**	**10**	**4**	**2**	**300**	**0**	**1**	**559**	**68**	**33**	**4**	**0**	**665**
0800 - 0815	0	0	0	0	0	0	0	**0**	0	0	67	17	6	1	0	**91**	0	0	167	30	5	2	0	**204**
0815 - 0830	0	0	0	0	0	0	0	**0**	0	0	70	8	2	0	1	**81**	0	0	194	18	5	1	1	**219**
0830 - 0845	0	0	0	0	0	0	0	**0**	0	0	63	18	0	1	3	**85**	0	0	148	26	8	2	1	**185**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	51	12	3	0	4	**70**	0	1	152	28	8	0	1	**190**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**251**	**55**	**11**	**2**	**8**	**327**	**0**	**1**	**661**	**102**	**26**	**5**	**3**	**798**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**251**	**55**	**16.5**	**4.6**	**16**	**343.1**	**0**	**0.4**	**661**	**102**	**39**	**11.5**	**6**	**819.9**
0900 - 0915	0	0	0	0	0	0	0	**0**	0	0	39	8	2	1	1	**51**	0	0	113	24	6	4	0	**147**
0915 - 0930	0	0	0	0	0	0	0	**0**	0	0	33	9	3	0	0	**45**	0	0	101	23	5	4	0	**133**
0930 - 0945	0	0	0	0	0	0	0	**0**	0	0	32	10	0	1	0	**43**	0	0	69	10	1	1	0	**81**
0945 - 1000	0	0	0	0	0	0	0	**0**	0	0	32	10	1	0	1	**44**	0	0	64	9	6	6	0	**85**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**136**	**37**	**6**	**2**	**2**	**183**	**0**	**0**	**347**	**66**	**18**	**15**	**0**	**446**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**620**	**142**	**27**	**8**	**12**	**810**	**0**	**2**	**1567**	**236**	**77**	**24**	**3**	**1909**
1600 - 1615	0	0	0	0	0	0	0	**0**	0	0	128	30	3	2	2	**165**	0	0	134	21	5	1	0	**161**
1615 - 1630	0	0	0	0	0	0	0	**0**	0	0	132	27	4	0	1	**164**	0	1	125	21	6	0	0	**153**
1630 - 1645	0	0	0	0	0	0	0	**0**	0	1	181	25	8	0	0	**215**	0	0	98	17	2	0	0	**117**
1645 - 1700	0	0	0	0	0	0	0	**0**	0	0	156	32	4	1	1	**194**	0	0	125	13	1	0	0	**139**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**597**	**114**	**19**	**3**	**4**	**738**	**0**	**1**	**482**	**72**	**14**	**1**	**0**	**570**
1700 - 1715	0	0	0	0	0	0	0	**0**	0	0	181	20	1	0	0	**202**	0	1	108	8	0	4	1	**122**
1715 - 1730	0	0	0	0	0	0	0	**0**	0	0	168	16	2	1	2	**189**	0	0	108	14	0	0	0	**122**
1730 - 1745	0	0	0	0	0	0	0	**0**	0	0	132	9	2	0	0	**143**	0	0	126	19	2	2	0	**149**
1745 - 1800	0	0	0	0	0	0	0	**0**	0	2	105	9	1	0	1	**118**	1	0	150	13	1	1	0	**166**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**586**	**54**	**6**	**1**	**3**	**652**	**1**	**1**	**492**	**54**	**3**	**7**	**1**	**559**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.8**	**586**	**54**	**9**	**2.3**	**6**	**658.1**	**1**	**0.4**	**492**	**54**	**4.5**	**16.1**	**2**	**570**
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	98	7	0	1	1	**107**	0	0	88	11	3	0	0	**102**
1815 - 1830	0	0	0	0	0	0	0	**0**	0	1	68	4	1	0	0	**74**	0	0	75	8	0	1	0	**84**
1830 - 1845	0	0	0	0	0	0	0	**0**	0	0	60	2	0	0	4	**66**	0	0	60	4	2	1	1	**68**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	44	1	0	0	1	**46**	0	0	53	5	1	2	0	**61**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**270**	**14**	**1**	**1**	**6**	**293**	**0**	**0**	**276**	**28**	**6**	**4**	**1**	**315**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1453**	**182**	**26**	**5**	**13**	**1683**	**1**	**2**	**1250**	**154**	**23**	**12**	**2**	**1444**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (5) Oldways Road / Church End / Ravensden Roac

Approach: Oldways Road

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	B - Left to Church End								C - Ahead to Ravensden Road							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	1	0	0	0	0	**1**	0	0	22	3	1	0	0	**26**
0715 - 0730	0	0	2	1	0	0	0	**3**	0	0	32	9	0	0	0	**41**
0730 - 0745	0	0	1	0	0	0	0	**1**	0	0	41	4	1	0	0	**46**
0745 - 0800	0	0	9	0	0	0	0	**9**	0	0	65	8	2	0	0	**75**
Hourly Total	**0**	**0**	**13**	**1**	**0**	**0**	**0**	**14**	**0**	**0**	**160**	**24**	**4**	**0**	**0**	**188**
0800 - 0815	0	0	2	0	0	0	0	**2**	0	0	74	10	2	0	0	**86**
0815 - 0830	0	0	10	0	0	0	0	**10**	0	0	75	9	1	0	0	**85**
0830 - 0845	0	0	16	2	0	0	0	**18**	0	0	61	9	1	0	2	**73**
0845 - 0900	0	0	15	3	0	0	0	**18**	0	0	45	7	0	0	0	**52**
Hourly Total	**0**	**0**	**43**	**5**	**0**	**0**	**0**	**48**	**0**	**0**	**255**	**35**	**4**	**0**	**2**	**296**
	0	**0**	**43**	**5**	**0**	**0**	**0**	**48**	**0**	**0**	**255**	**35**	**6**	**0**	**4**	**300**
0900 - 0915	0	0	5	1	0	0	0	**6**	0	0	31	4	0	0	0	**35**
0915 - 0930	0	0	3	0	1	0	0	**4**	0	0	28	5	2	0	0	**35**
0930 - 0945	0	0	2	1	0	0	0	**3**	0	0	17	4	1	0	0	**22**
0945 - 1000	0	0	5	2	0	0	0	**7**	0	0	12	3	1	0	0	**16**
Hourly Total	**0**	**0**	**15**	**4**	**1**	**0**	**0**	**20**	**0**	**0**	**88**	**16**	**4**	**0**	**0**	**108**
Session Total	**0**	**0**	**71**	**10**	**1**	**0**	**0**	**82**	**0**	**0**	**503**	**75**	**12**	**0**	**2**	**592**
1600 - 1615	0	0	6	0	0	0	0	**6**	0	0	29	7	0	0	0	**36**
1615 - 1630	0	0	5	1	0	0	0	**6**	0	0	21	2	0	0	0	**23**
1630 - 1645	0	0	5	0	0	0	0	**5**	0	0	27	1	0	0	0	**28**
1645 - 1700	0	0	5	0	0	0	0	**5**	1	0	22	1	0	0	0	**24**
Hourly Total	**0**	**0**	**21**	**1**	**0**	**0**	**0**	**22**	**1**	**0**	**99**	**11**	**0**	**0**	**0**	**111**
1700 - 1715	0	0	2	0	0	0	0	**2**	1	0	22	0	1	0	0	**24**
1715 - 1730	0	0	5	1	0	0	0	**6**	0	0	21	0	1	0	1	**23**
1730 - 1745	0	0	1	0	0	0	0	**1**	0	0	25	0	0	0	0	**25**
1745 - 1800	0	0	5	0	0	0	0	**5**	0	0	24	1	1	0	0	**26**
Hourly Total	**0**	**0**	**13**	**1**	**0**	**0**	**0**	**14**	**1**	**0**	**92**	**1**	**3**	**0**	**1**	**98**
	0	**0**	**13**	**1**	**0**	**0**	**0**	**14**	**1**	**0**	**92**	**1**	**4.5**	**0**	**2**	**100.5**
1800 - 1815	0	0	1	0	0	0	0	**1**	0	0	17	0	0	0	0	**17**
1815 - 1830	0	1	2	0	0	0	0	**3**	0	0	15	0	0	0	0	**15**
1830 - 1845	1	0	2	0	1	0	0	**4**	0	0	18	0	0	0	0	**18**
1845 - 1900	0	0	3	0	0	0	0	**3**	0	0	8	0	0	0	0	**8**
Hourly Total	**1**	**1**	**8**	**0**	**1**	**0**	**0**	**11**	**0**	**0**	**58**	**0**	**0**	**0**	**0**	**58**
Session Total	**1**	**1**	**42**	**2**	**1**	**0**	**0**	**47**	**2**	**0**	**249**	**12**	**3**	**0**	**1**	**267**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (5) Oldways Road / Church End / Ravensden Roac

Approach: Church End

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	C - Left to Ravensden Road								A - Right to Oldways Road							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	2	2	0	0	0	**4**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	0	4	0	0	0	0	**4**	0	0	4	0	0	0	0	**4**
0730 - 0745	0	0	1	2	0	0	0	**3**	0	0	2	1	0	0	0	**3**
0745 - 0800	0	0	7	0	0	0	0	**7**	0	0	2	0	0	0	0	**2**
Hourly Total	**0**	**0**	**14**	**4**	**0**	**0**	**0**	**18**	**0**	**0**	**8**	**1**	**0**	**0**	**0**	**9**
0800 - 0815	0	0	5	0	0	0	1	**6**	0	0	5	1	0	0	0	**6**
0815 - 0830	0	0	7	0	0	0	0	**7**	0	1	2	0	0	0	0	**3**
0830 - 0845	0	0	3	1	0	0	0	**4**	0	0	3	0	0	1	0	**4**
0845 - 0900	0	0	18	0	0	0	0	**18**	0	0	16	0	0	0	0	**16**
Hourly Total	**0**	**0**	**33**	**1**	**0**	**0**	**1**	**35**	**0**	**1**	**26**	**1**	**0**	**1**	**0**	**29**
	0	**0**	**33**	**1**	**0**	**0**	**2**	**36**	**0**	**0.4**	**26**	**1**	**0**	**2.3**	**0**	**29.7**
0900 - 0915	0	0	16	1	0	0	1	**18**	0	0	11	0	1	0	0	**12**
0915 - 0930	0	0	3	0	1	0	0	**4**	0	0	2	2	0	0	0	**4**
0930 - 0945	0	0	3	0	0	0	0	**3**	0	0	5	1	0	0	0	**6**
0945 - 1000	0	0	6	0	0	0	0	**6**	0	0	2	1	0	0	0	**3**
Hourly Total	**0**	**0**	**28**	**1**	**1**	**0**	**1**	**31**	**0**	**0**	**20**	**4**	**1**	**0**	**0**	**25**
Session Total	**0**	**0**	**75**	**6**	**1**	**0**	**2**	**84**	**0**	**1**	**54**	**6**	**1**	**1**	**0**	**63**
1600 - 1615	0	0	4	1	0	0	0	**5**	0	0	9	2	0	0	0	**11**
1615 - 1630	0	0	6	1	0	0	0	**7**	0	0	3	0	0	0	0	**3**
1630 - 1645	0	0	5	0	0	0	0	**5**	0	0	5	1	0	0	0	**6**
1645 - 1700	0	0	14	0	1	0	0	**15**	0	0	1	0	0	0	0	**1**
Hourly Total	**0**	**0**	**29**	**2**	**1**	**0**	**0**	**32**	**0**	**0**	**18**	**3**	**0**	**0**	**0**	**21**
1700 - 1715	0	0	6	2	0	0	0	**8**	0	0	6	1	0	0	0	**7**
1715 - 1730	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	9	0	0	0	0	**9**	0	0	5	1	0	0	0	**6**
1745 - 1800	0	0	4	0	1	0	0	**5**	0	0	4	0	0	0	0	**4**
Hourly Total	**0**	**0**	**21**	**2**	**1**	**0**	**0**	**24**	**0**	**0**	**15**	**2**	**0**	**0**	**0**	**17**
	0	**0**	**21**	**2**	**1.5**	**0**	**0**	**24.5**	**0**	**0**	**15**	**2**	**0**	**0**	**0**	**17**
1800 - 1815	0	0	1	0	0	0	0	**1**	0	0	2	0	0	0	0	**2**
1815 - 1830	0	0	3	0	0	0	0	**3**	0	0	3	2	0	0	0	**5**
1830 - 1845	0	0	4	0	0	0	0	**4**	0	0	6	0	0	0	0	**6**
1845 - 1900	0	0	4	0	0	0	0	**4**	0	0	3	0	0	0	0	**3**
Hourly Total	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**14**	**2**	**0**	**0**	**0**	**16**
Session Total	**0**	**0**	**62**	**4**	**2**	**0**	**0**	**68**	**0**	**0**	**47**	**7**	**0**	**0**	**0**	**54**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (5) Oldways Road / Church End / Ravensden Roac

Approach: Ravensden Road

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	A - Ahead to Oldways Road								B - Right to Church End							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	14	2	1	0	1	**18**	0	0	1	3	0	0	0	**4**
0715 - 0730	0	0	11	6	0	0	0	**17**	0	0	1	2	0	0	0	**3**
0730 - 0745	1	0	16	4	0	0	0	**21**	0	0	0	2	0	0	0	**2**
0745 - 0800	0	0	24	7	1	0	0	**32**	0	1	4	1	0	0	0	**6**
Hourly Total	**1**	**0**	**65**	**19**	**2**	**0**	**1**	**88**	**0**	**1**	**6**	**8**	**0**	**0**	**0**	**15**
0800 - 0815	0	0	27	6	1	0	0	**34**	0	0	5	2	0	0	0	**7**
0815 - 0830	0	0	29	5	1	0	0	**35**	0	0	6	1	0	0	0	**7**
0830 - 0845	0	0	24	4	0	0	0	**28**	0	0	10	0	0	0	0	**10**
0845 - 0900	0	0	19	4	1	0	0	**24**	0	0	13	0	0	0	0	**13**
Hourly Total	**0**	**0**	**99**	**19**	**3**	**0**	**0**	**121**	**0**	**0**	**34**	**3**	**0**	**0**	**0**	**37**
	0	**0**	**99**	**19**	**4.5**	**0**	**0**	**122.5**	**0**	**0**	**34**	**3**	**0**	**0**	**0**	**37**
0900 - 0915	0	0	19	6	0	0	0	**25**	0	0	6	1	0	0	0	**7**
0915 - 0930	1	0	16	2	1	0	0	**20**	0	0	4	1	0	0	0	**5**
0930 - 0945	0	0	13	6	0	0	0	**19**	0	0	3	1	0	0	0	**4**
0945 - 1000	1	0	11	1	2	0	0	**15**	0	0	2	2	0	0	1	**5**
Hourly Total	**2**	**0**	**59**	**15**	**3**	**0**	**0**	**79**	**0**	**0**	**15**	**5**	**0**	**0**	**1**	**21**
Session Total	**3**	**0**	**223**	**53**	**8**	**0**	**1**	**288**	**0**	**1**	**55**	**16**	**0**	**0**	**1**	**73**
1600 - 1615	0	0	39	6	0	0	0	**45**	0	0	4	0	0	0	0	**4**
1615 - 1630	0	0	39	6	2	0	0	**47**	0	0	5	1	0	0	0	**6**
1630 - 1645	0	0	47	11	2	0	0	**60**	0	0	6	2	1	0	0	**9**
1645 - 1700	0	0	40	13	2	0	0	**55**	0	0	4	0	0	0	0	**4**
Hourly Total	**0**	**0**	**165**	**36**	**6**	**0**	**0**	**207**	**0**	**0**	**19**	**3**	**1**	**0**	**0**	**23**
1700 - 1715	0	0	65	5	0	0	0	**70**	0	0	2	0	0	0	0	**2**
1715 - 1730	0	0	45	4	0	0	0	**49**	0	0	6	1	0	0	0	**7**
1730 - 1745	0	0	59	1	0	0	0	**60**	0	0	10	2	0	0	1	**13**
1745 - 1800	0	1	51	5	0	0	0	**57**	0	0	3	0	0	0	0	**3**
Hourly Total	**0**	**1**	**220**	**15**	**0**	**0**	**0**	**236**	**0**	**0**	**21**	**3**	**0**	**0**	**1**	**25**
	0	**0.4**	**220**	**15**	**0**	**0**	**0**	**235.4**	**0**	**0**	**21**	**3**	**0**	**0**	**2**	**26**
1800 - 1815	0	0	38	2	0	0	0	**40**	0	0	4	0	0	0	0	**4**
1815 - 1830	0	0	37	2	1	0	0	**40**	0	0	3	0	0	0	0	**3**
1830 - 1845	0	0	29	1	0	0	0	**30**	0	0	7	0	0	0	0	**7**
1845 - 1900	1	0	20	2	0	0	0	**23**	0	0	3	0	0	0	0	**3**
Hourly Total	**1**	**0**	**124**	**7**	**1**	**0**	**0**	**133**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**17**
Session Total	**1**	**1**	**509**	**58**	**7**	**0**	**0**	**576**	**0**	**0**	**57**	**6**	**1**	**0**	**1**	**65**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (6) B660 / Access / Oldways Road / Thurleigh Road

Approach: B660 (North)

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	First Left to Access								B - Second Left to Oldways Road								C - Ahead to B660 (South)								D - Right to Thurleigh Road							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	0	0	0	0	0	**0**	0	0	3	0	0	0	0	**3**	0	0	7	0	0	1	0	**8**	0	0	3	0	0	0	0	**3**
0715 - 0730	0	0	0	0	0	0	0	**0**	0	0	3	1	0	0	0	**4**	0	0	16	0	0	0	1	**17**	0	0	4	2	0	0	0	**6**
0730 - 0745	0	0	0	0	0	0	0	**0**	0	0	5	0	0	0	0	**5**	0	0	35	5	0	0	0	**40**	0	0	2	2	0	0	0	**4**
0745 - 0800	0	0	0	0	0	0	0	**0**	0	0	4	0	0	0	0	**4**	0	0	32	4	0	0	1	**37**	0	0	2	2	0	1	0	**5**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**1**	**0**	**0**	**0**	**16**	**0**	**0**	**90**	**9**	**0**	**1**	**2**	**102**	**0**	**0**	**11**	**6**	**0**	**1**	**0**	**18**
0800 - 0815	0	0	0	0	0	0	0	**0**	0	0	11	1	1	0	0	**13**	0	0	49	4	3	0	0	**56**	0	0	6	1	0	0	0	**7**
0815 - 0830	0	0	0	0	0	0	0	**0**	0	0	10	3	0	0	0	**13**	0	0	48	3	2	0	3	**56**	0	0	4	1	0	0	0	**5**
0830 - 0845	0	0	0	0	0	0	0	**0**	0	0	7	2	0	0	0	**9**	0	0	24	1	2	2	0	**29**	0	0	4	2	0	0	0	**6**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	3	0	0	0	0	**3**	0	0	27	3	0	0	1	**31**	0	0	1	0	0	0	0	**1**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**6**	**1**	**0**	**0**	**38**	**0**	**0**	**148**	**11**	**7**	**2**	**4**	**172**	**0**	**0**	**15**	**4**	**0**	**0**	**0**	**19**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**6**	**1.5**	**0**	**0**	**38.5**	**0**	**0**	**148**	**11**	**10.5**	**4.6**	**8**	**182.1**	**0**	**0**	**15**	**4**	**0**	**0**	**0**	**19**
0900 - 0915	0	0	0	0	0	0	0	**0**	0	0	3	0	0	0	0	**3**	0	0	20	1	0	1	0	**22**	0	0	1	0	0	0	0	**1**
0915 - 0930	0	0	0	0	0	0	0	**0**	0	0	4	2	0	0	0	**6**	0	0	12	0	0	1	0	**13**	0	0	0	0	0	1	0	**1**
0930 - 0945	0	0	0	0	0	0	0	**0**	0	0	3	1	0	0	0	**4**	0	0	14	4	0	2	0	**20**	0	0	2	2	1	0	0	**5**
0945 - 1000	0	0	0	0	0	0	0	**0**	0	0	4	3	1	0	0	**8**	0	0	11	1	1	0	0	**13**	0	0	1	0	0	0	0	**1**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**6**	**1**	**0**	**0**	**21**	**0**	**0**	**57**	**6**	**1**	**4**	**0**	**68**	**0**	**0**	**4**	**2**	**1**	**1**	**0**	**8**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**60**	**13**	**2**	**0**	**0**	**75**	**0**	**0**	**295**	**26**	**8**	**7**	**6**	**342**	**0**	**0**	**30**	**12**	**1**	**2**	**0**	**45**
1600 - 1615	0	0	0	0	0	0	0	**0**	0	0	3	1	0	0	0	**4**	0	0	14	2	2	0	1	**19**	0	0	3	0	1	0	0	**4**
1615 - 1630	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	6	3	1	0	1	**11**	0	0	3	0	0	0	0	**3**
1630 - 1645	0	0	0	0	0	0	0	**0**	0	0	8	1	0	0	0	**9**	0	0	14	3	0	0	0	**17**	0	0	3	2	1	0	0	**6**
1645 - 1700	0	0	0	0	0	0	0	**0**	0	0	6	0	0	0	0	**6**	0	0	20	4	1	0	0	**25**	0	0	5	1	0	0	0	**6**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**17**	**2**	**0**	**0**	**0**	**19**	**0**	**0**	**54**	**12**	**4**	**0**	**2**	**72**	**0**	**0**	**14**	**3**	**2**	**0**	**0**	**19**
1700 - 1715	0	0	0	0	0	0	0	**0**	0	0	2	3	0	0	0	**5**	0	0	12	2	0	1	0	**15**	0	0	3	0	0	0	0	**3**
1715 - 1730	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**	0	0	14	2	0	0	0	**16**	0	0	6	1	0	0	0	**7**
1730 - 1745	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	19	2	1	0	0	**22**	0	0	3	1	0	0	0	**4**
1745 - 1800	0	0	0	0	0	0	0	**0**	0	0	1	1	0	0	0	**2**	0	0	21	2	0	0	0	**23**	0	0	3	0	0	0	0	**3**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**4**	**0**	**0**	**0**	**9**	**0**	**0**	**66**	**8**	**1**	**1**	**0**	**76**	**0**	**0**	**15**	**2**	**0**	**0**	**0**	**17**
	0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**4**	**0**	**0**	**0**	**9**	**0**	**0**	**66**	**8**	**1.5**	**2.3**	**0**	**77.8**	**0**	**0**	**15**	**2**	**0**	**0**	**0**	**17**
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**	0	0	13	2	0	0	0	**15**	0	0	3	1	0	0	0	**4**
1815 - 1830	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**	0	0	10	0	0	0	0	**10**	0	0	2	0	0	0	0	**2**
1830 - 1845	0	0	0	0	0	0	0	**0**	0	0	4	0	0	0	0	**4**	0	0	14	0	0	0	0	**14**	0	0	1	0	0	0	0	**1**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**	0	0	9	2	0	0	0	**11**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**46**	**4**	**0**	**0**	**0**	**50**	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**7**
Session Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**30**	**6**	**0**	**0**	**0**	**36**	**0**	**0**	**166**	**24**	**5**	**1**	**2**	**198**	**0**	**0**	**35**	**6**	**2**	**0**	**0**	**43**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (6) B660 / Access / Oldways Road / Thurleigh Road

Approach: Oldways Road

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	C - First Left to B660 (South)								D - Second Left to Thurleigh Road								A - Right to B660 (North)								Last Right to Access							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	1	0	0	0	0	**1**	0	0	8	1	1	0	1	**11**	0	0	3	0	0	0	0	**3**	0	0	0	0	0	0	0	**0**
0715 - 0730	0	0	5	1	0	0	0	**6**	0	0	8	5	1	0	0	**14**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0730 - 0745	0	0	2	1	0	1	0	**4**	1	0	12	4	0	0	0	**17**	0	0	4	2	0	0	0	**6**	0	0	0	0	0	0	0	**0**
0745 - 0800	0	0	5	1	0	0	0	**6**	0	0	17	6	1	0	0	**24**	0	0	7	1	0	0	0	**8**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**13**	**3**	**0**	**1**	**0**	**17**	**1**	**0**	**45**	**16**	**3**	**0**	**1**	**66**	**0**	**0**	**14**	**3**	**0**	**0**	**0**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0800 - 0815	0	0	11	1	0	0	0	**12**	0	0	17	4	1	0	0	**22**	0	0	3	1	0	0	0	**4**	0	0	0	0	0	0	0	**0**
0815 - 0830	0	0	2	0	0	0	0	**2**	0	1	27	4	1	0	0	**33**	0	0	2	1	0	0	0	**3**	0	0	0	0	0	0	0	**0**
0830 - 0845	0	0	8	1	0	0	0	**9**	0	0	18	4	0	0	0	**22**	0	0	3	0	0	0	0	**3**	0	0	0	0	0	0	0	**0**
0845 - 0900	0	0	16	0	0	0	0	**16**	0	0	15	4	1	1	0	**21**	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**37**	**2**	**0**	**0**	**0**	**39**	**0**	**1**	**77**	**16**	**3**	**1**	**0**	**98**	**0**	**0**	**10**	**2**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0**	**37**	**2**	**0**	**0**	**0**	**39**	**0**	**0.4**	**77**	**16**	**4.5**	**2.3**	**0**	**100.2**	**0**	**0**	**10**	**2**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0900 - 0915	0	0	16	1	1	0	0	**18**	0	0	13	3	0	0	0	**16**	0	0	5	3	0	0	0	**8**	0	0	0	0	0	0	0	**0**
0915 - 0930	0	0	3	2	0	0	0	**5**	0	0	11	3	1	0	0	**15**	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**
0930 - 0945	0	0	10	0	0	0	0	**10**	0	0	7	6	0	0	0	**13**	0	0	4	0	0	0	0	**4**	0	0	0	0	0	0	0	**0**
0945 - 1000	0	0	2	1	0	1	0	**4**	7	0	12	0	0	0	0	**19**	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**31**	**4**	**1**	**1**	**0**	**37**	**7**	**0**	**43**	**12**	**1**	**0**	**0**	**63**	**0**	**0**	**11**	**3**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**0**	**0**	**81**	**9**	**1**	**2**	**0**	**93**	**8**	**1**	**165**	**44**	**7**	**1**	**1**	**227**	**0**	**0**	**35**	**8**	**0**	**0**	**0**	**43**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1600 - 1615	0	0	11	3	0	0	0	**14**	0	0	29	7	0	0	0	**36**	0	0	7	0	0	0	0	**7**	0	0	0	0	0	0	0	**0**
1615 - 1630	0	0	4	0	0	0	0	**4**	0	0	35	8	1	0	0	**44**	0	0	4	2	0	0	0	**6**	0	0	0	0	0	0	0	**0**
1630 - 1645	1	0	7	3	0	0	0	**11**	0	0	35	7	2	0	0	**44**	0	0	8	1	0	0	0	**9**	0	0	0	0	0	0	0	**0**
1645 - 1700	0	0	3	0	0	0	0	**3**	0	0	33	13	0	1	0	**47**	0	0	5	1	0	0	0	**6**	0	0	0	0	0	0	0	**0**
Hourly Total	**1**	**0**	**25**	**6**	**0**	**0**	**0**	**32**	**0**	**0**	**132**	**35**	**3**	**1**	**0**	**171**	**0**	**0**	**24**	**4**	**0**	**0**	**0**	**28**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1700 - 1715	0	0	7	0	1	0	0	**8**	0	0	54	10	0	0	0	**64**	0	0	10	1	0	0	0	**11**	0	0	0	0	0	0	0	**0**
1715 - 1730	0	0	5	1	0	0	0	**6**	0	0	44	8	0	0	0	**52**	0	0	2	0	1	0	0	**3**	0	0	0	0	0	0	0	**0**
1730 - 1745	0	0	7	1	0	0	0	**8**	0	0	41	4	0	0	0	**45**	0	0	5	0	0	0	0	**5**	0	0	0	0	0	0	0	**0**
1745 - 1800	0	0	9	3	0	0	0	**12**	0	1	54	1	0	0	0	**56**	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**28**	**5**	**1**	**0**	**0**	**34**	**0**	**1**	**193**	**23**	**0**	**0**	**0**	**217**	**0**	**0**	**19**	**1**	**1**	**0**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	0	**0**	**28**	**5**	**1.5**	**0**	**0**	**34.5**	**0**	**0.4**	**193**	**23**	**0**	**0**	**0**	**216.4**	**0**	**0**	**19**	**1**	**1.5**	**0**	**0**	**21.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1800 - 1815	0	0	8	0	0	0	0	**8**	0	0	28	1	0	0	0	**29**	0	0	7	0	0	0	0	**7**	0	0	0	0	0	0	0	**0**
1815 - 1830	0	0	4	1	0	0	0	**5**	0	0	30	2	0	0	0	**32**	0	0	3	0	1	0	0	**4**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	0	8	2	0	0	0	**10**	0	0	19	2	0	0	0	**21**	0	0	5	0	0	0	0	**5**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	4	0	0	0	0	**4**	0	0	16	2	0	0	0	**18**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**24**	**3**	**0**	**0**	**0**	**27**	**0**	**0**	**93**	**7**	**0**	**0**	**0**	**100**	**0**	**0**	**15**	**0**	**1**	**0**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**1**	**0**	**77**	**14**	**1**	**0**	**0**	**93**	**0**	**1**	**418**	**65**	**3**	**1**	**0**	**488**	**0**	**0**	**58**	**5**	**2**	**0**	**0**	**65**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (6) B660 / Access / Oldways Road / Thurleigh Road

Approach: B660 (South)

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	D - Left to Thurleigh Road								A - Ahead to B660 (North)								Right to Access								B - Last Right to Oldways Road							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	7	1	0	0	0	**8**	0	0	7	1	1	0	0	**9**	0	0	0	0	0	0	0	**0**	0	0	3	0	0	0	0	**3**
0715 - 0730	0	0	16	3	0	0	1	**20**	0	0	8	4	0	0	0	**12**	0	0	0	0	0	0	0	**0**	0	0	2	2	0	1	0	**5**
0730 - 0745	0	0	20	5	0	0	0	**25**	0	0	6	2	1	0	1	**10**	0	0	0	0	0	0	0	**0**	0	0	1	1	0	0	0	**2**
0745 - 0800	0	2	16	2	1	0	0	**21**	0	0	15	2	2	1	1	**21**	0	0	0	0	0	0	0	**0**	0	0	7	2	0	0	0	**9**
Hourly Total	**0**	**2**	**59**	**11**	**1**	**0**	**1**	**74**	**0**	**0**	**36**	**9**	**4**	**1**	**2**	**52**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**5**	**0**	**1**	**0**	**19**
0800 - 0815	0	0	27	6	1	0	0	**34**	1	0	11	2	1	1	0	**16**	0	0	0	0	0	0	0	**0**	0	0	7	0	0	0	0	**7**
0815 - 0830	0	0	30	2	0	0	0	**32**	0	0	13	0	0	0	1	**14**	0	0	0	0	0	0	0	**0**	0	0	11	1	0	0	0	**12**
0830 - 0845	0	0	27	0	1	0	0	**28**	0	0	19	1	2	0	0	**22**	0	0	0	0	0	0	0	**0**	0	0	23	1	0	0	0	**24**
0845 - 0900	0	0	18	4	1	0	0	**23**	0	0	16	4	0	1	0	**21**	0	0	0	0	0	0	0	**0**	0	0	11	2	0	0	0	**13**
Hourly Total	**0**	**0**	**102**	**12**	**3**	**0**	**0**	**117**	**1**	**0**	**59**	**7**	**3**	**2**	**1**	**73**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**52**	**4**	**0**	**0**	**0**	**56**
	0	**0**	**102**	**12**	**4.5**	**0**	**0**	**118.5**	**1**	**0**	**59**	**7**	**4.5**	**4.6**	**2**	**78.1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**52**	**4**	**0**	**0**	**0**	**56**
0900 - 0915	0	0	15	2	0	0	0	**17**	0	0	5	1	2	1	0	**9**	0	0	0	0	0	0	0	**0**	0	0	5	0	1	0	0	**6**
0915 - 0930	0	1	18	1	0	0	1	**21**	0	0	13	0	0	2	0	**15**	0	0	0	0	0	0	0	**0**	0	0	4	0	0	0	0	**4**
0930 - 0945	0	0	0	0	1	0	0	**1**	0	0	12	2	0	0	0	**14**	0	0	0	0	0	0	0	**0**	0	0	5	3	0	0	0	**8**
0945 - 1000	0	0	8	0	0	1	0	**9**	0	0	7	2	2	0	0	**11**	0	0	0	0	0	0	0	**0**	0	0	5	0	0	0	0	**5**
Hourly Total	**0**	**1**	**41**	**3**	**1**	**1**	**1**	**48**	**0**	**0**	**37**	**5**	**4**	**3**	**0**	**49**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**3**	**1**	**0**	**0**	**23**
Session Total	**0**	**3**	**202**	**26**	**5**	**1**	**2**	**239**	**1**	**0**	**132**	**21**	**11**	**6**	**3**	**174**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**84**	**12**	**1**	**1**	**0**	**98**
1600 - 1615	0	0	30	5	0	2	0	**37**	0	0	31	4	0	1	0	**36**	0	0	0	0	0	0	0	**0**	0	0	9	0	0	0	0	**9**
1615 - 1630	0	0	44	1	0	2	0	**47**	0	0	26	3	0	1	0	**30**	0	0	0	0	0	0	0	**0**	0	0	8	2	0	1	0	**11**
1630 - 1645	0	0	31	6	0	0	0	**37**	0	0	27	2	3	0	0	**32**	0	0	0	0	0	0	0	**0**	0	0	11	0	0	0	0	**11**
1645 - 1700	0	0	44	0	2	0	0	**46**	0	0	25	1	0	1	0	**27**	0	0	0	0	0	0	0	**0**	0	0	5	0	1	0	0	**6**
Hourly Total	**0**	**0**	**149**	**12**	**2**	**4**	**0**	**167**	**0**	**0**	**109**	**10**	**3**	**3**	**0**	**125**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**33**	**2**	**1**	**1**	**0**	**37**
1700 - 1715	0	0	39	0	1	0	0	**40**	0	0	28	2	0	0	1	**31**	0	0	0	0	0	0	0	**0**	0	0	4	0	0	0	0	**4**
1715 - 1730	0	0	49	0	0	0	0	**49**	0	0	37	2	0	0	0	**39**	0	0	0	0	0	0	0	**0**	0	0	7	1	0	0	0	**8**
1730 - 1745	0	1	34	0	1	0	0	**36**	0	0	29	0	0	0	0	**29**	0	0	0	0	0	0	0	**0**	0	0	3	0	0	0	0	**3**
1745 - 1800	0	0	35	0	0	0	1	**36**	0	0	30	0	0	0	0	**30**	0	0	0	0	0	0	0	**0**	0	0	5	0	0	0	0	**5**
Hourly Total	**0**	**1**	**157**	**0**	**2**	**0**	**1**	**161**	**0**	**0**	**124**	**4**	**0**	**0**	**1**	**129**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**1**	**0**	**0**	**0**	**20**
	0	**0.4**	**157**	**0**	**3**	**0**	**2**	**162.4**	**0**	**0**	**124**	**4**	**0**	**0**	**2**	**130**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**1**	**0**	**0**	**0**	**20**
1800 - 1815	0	0	28	1	0	0	0	**29**	0	0	19	1	0	0	0	**20**	0	0	0	0	0	0	0	**0**	0	0	3	0	0	0	0	**3**
1815 - 1830	0	0	17	0	0	0	0	**17**	0	0	15	1	0	0	0	**16**	0	0	0	0	0	0	0	**0**	1	0	4	0	0	0	0	**5**
1830 - 1845	0	0	18	0	0	0	0	**18**	0	0	11	0	0	0	0	**11**	0	0	0	0	0	0	0	**0**	1	0	3	0	0	0	0	**4**
1845 - 1900	0	0	13	0	0	0	0	**13**	0	0	9	0	0	0	0	**9**	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**
Hourly Total	**0**	**0**	**76**	**1**	**0**	**0**	**0**	**77**	**0**	**0**	**54**	**2**	**0**	**0**	**0**	**56**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**11**	**0**	**0**	**0**	**0**	**13**
Session Total	**0**	**1**	**382**	**13**	**4**	**4**	**1**	**405**	**0**	**0**	**287**	**16**	**3**	**3**	**1**	**310**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**63**	**3**	**1**	**1**	**0**	**70**

Salph End Bedford - Manual Traffic Survey, Wednesday 27th November 2019

Produced by Road Data Services Ltd.

Junction: (6) B660 / Access / Oldways Road / Thurleigh Road

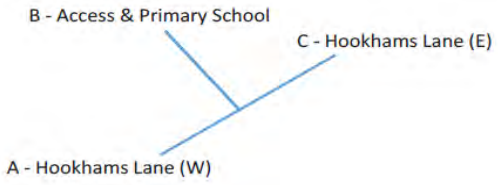
Approach: Thurleigh Road

	1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2		1	0.4	1	1	1.5	2.3	2	
	A - Left to B660 (North)								Ahead to Access								B - Right to Oldways Road								C - Last Right to B660 (South)							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0700 - 0715	0	0	2	0	1	0	0	**3**	0	0	0	0	0	0	0	**0**	0	0	15	5	1	0	0	**21**	0	1	10	0	0	0	0	**11**
0715 - 0730	0	0	1	3	0	0	0	**4**	0	0	0	0	0	0	0	**0**	0	0	30	10	0	0	0	**40**	0	0	21	1	0	1	0	**23**
0730 - 0745	0	0	1	2	1	0	0	**4**	0	0	0	0	0	0	0	**0**	0	0	38	5	1	0	0	**44**	0	0	58	12	0	0	0	**70**
0745 - 0800	0	0	2	2	0	0	0	**4**	0	0	0	0	0	0	0	**0**	0	0	55	8	1	0	0	**64**	0	0	67	11	0	0	0	**78**
Hourly Total	**0**	**0**	**6**	**7**	**2**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**138**	**28**	**3**	**0**	**0**	**169**	**0**	**1**	**156**	**24**	**0**	**1**	**0**	**182**
0800 - 0815	0	0	0	0	1	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	57	10	1	0	0	**68**	0	0	51	6	0	0	1	**58**
0815 - 0830	0	0	3	0	1	0	0	**4**	0	0	0	0	0	0	0	**0**	0	0	59	8	1	0	0	**68**	0	0	46	9	1	1	0	**57**
0830 - 0845	0	0	4	2	0	1	0	**7**	0	0	0	0	0	0	0	**0**	0	0	55	8	1	0	2	**66**	0	0	55	4	1	0	1	**61**
0845 - 0900	0	0	3	1	0	0	0	**4**	0	0	0	0	0	0	0	**0**	0	0	39	9	0	0	0	**48**	0	0	25	6	1	0	0	**32**
Hourly Total	**0**	**0**	**10**	**3**	**2**	**1**	**0**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**210**	**35**	**3**	**0**	**2**	**250**	**0**	**0**	**177**	**25**	**3**	**1**	**2**	**208**
	0	**0**	**10**	**3**	**3**	**2.3**	**0**	**18.3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**210**	**35**	**4.5**	**0**	**4**	**253.5**	**0**	**0**	**177**	**25**	**4.5**	**2.3**	**4**	**212.8**
0900 - 0915	0	0	2	1	0	0	0	**3**	0	0	0	0	0	0	0	**0**	0	0	28	5	0	0	0	**33**	0	0	20	4	3	0	0	**27**
0915 - 0930	0	0	2	0	1	0	0	**3**	0	0	0	0	0	0	0	**0**	0	0	28	2	3	0	0	**33**	0	0	11	4	1	0	0	**16**
0930 - 0945	0	0	1	1	1	0	0	**3**	0	0	0	0	0	0	0	**0**	0	0	17	2	1	0	0	**20**	0	0	16	5	2	0	1	**24**
0945 - 1000	0	0	1	0	0	1	0	**2**	0	0	0	0	0	0	0	**0**	0	0	10	4	1	0	0	**15**	0	0	13	3	0	0	0	**16**
Hourly Total	**0**	**0**	**6**	**2**	**2**	**1**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**83**	**13**	**5**	**0**	**0**	**101**	**0**	**0**	**60**	**16**	**6**	**0**	**1**	**83**
Session Total	**0**	**0**	**22**	**12**	**6**	**2**	**0**	**42**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**431**	**76**	**11**	**0**	**2**	**520**	**0**	**1**	**393**	**65**	**9**	**2**	**3**	**473**
1600 - 1615	0	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**	0	0	24	6	0	0	0	**30**	0	1	19	4	0	0	0	**24**
1615 - 1630	0	0	2	1	0	0	0	**3**	0	0	0	0	0	0	0	**0**	0	0	18	4	0	0	0	**22**	0	0	16	11	0	0	0	**27**
1630 - 1645	0	0	3	0	0	0	0	**3**	0	0	0	0	0	0	0	**0**	0	0	16	2	0	0	0	**18**	0	0	10	4	1	0	1	**16**
1645 - 1700	0	0	3	1	0	0	0	**4**	0	0	0	0	0	0	0	**0**	1	1	10	2	0	0	0	**14**	0	1	10	4	0	0	1	**16**
Hourly Total	**0**	**0**	**10**	**2**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**68**	**14**	**0**	**0**	**0**	**84**	**0**	**2**	**55**	**23**	**1**	**0**	**2**	**83**
1700 - 1715	0	0	3	0	1	0	0	**4**	0	0	0	0	0	0	0	**0**	0	0	17	1	1	0	0	**19**	0	0	21	4	0	0	0	**25**
1715 - 1730	0	0	1	1	0	0	0	**2**	0	0	0	0	0	0	0	**0**	0	0	14	0	1	0	1	**16**	0	0	18	2	0	0	0	**20**
1730 - 1745	0	0	4	2	0	0	0	**6**	0	0	0	0	0	0	0	**0**	0	0	27	0	0	0	0	**27**	0	0	17	1	0	0	0	**18**
1745 - 1800	0	0	2	1	0	0	0	**3**	0	0	0	0	0	0	0	**0**	0	0	16	0	1	0	0	**17**	0	0	18	0	0	0	0	**18**
Hourly Total	**0**	**0**	**10**	**4**	**1**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**74**	**1**	**3**	**0**	**1**	**79**	**0**	**0**	**74**	**7**	**0**	**0**	**0**	**81**
	0	**0**	**10**	**4**	**1.5**	**0**	**0**	**15.5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**74**	**1**	**4.5**	**0**	**2**	**81.5**	**0**	**0**	**74**	**7**	**0**	**0**	**0**	**81**
1800 - 1815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	16	0	0	0	0	**16**	0	0	10	1	0	0	0	**11**
1815 - 1830	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	12	1	0	0	0	**13**	0	0	16	0	0	0	0	**16**
1830 - 1845	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0	0	11	0	1	0	0	**12**	0	0	6	1	0	0	0	**7**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	0	6	1	0	0	0	**7**	0	0	6	1	0	0	0	**7**
Hourly Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**45**	**2**	**1**	**0**	**0**	**48**	**0**	**0**	**38**	**3**	**0**	**0**	**0**	**41**
Session Total	**0**	**0**	**21**	**6**	**1**	**0**	**0**	**28**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**187**	**17**	**4**	**0**	**1**	**211**	**0**	**2**	**167**	**33**	**1**	**0**	**2**	**205**

Appendix M

A1 – Hookhams Lane Access: Analysis – Input and Results

A1 Access to Hookhams Lane



Background 2017

AM	A	B	C
A			258
B			
C	365		

Background 2017

PM	A	B	C
A			366
B			
C	220		

Tempro 2017-2030

AM	A	B	C
A	1.170	1.170	1.170
B	1.170	1.170	1.170
C	1.170	1.170	1.170

Tempro 2017-2030

PM	A	B	C
A	1.176	1.176	1.176
B	1.176	1.176	1.176
C	1.176	1.176	1.176

Background 2030

AM	A	B	C
A	0	0	302
B	0	0	0
C	427	0	0

Background 2030

PM	A	B	C
A	0	0	430
B	0	0	0
C	259	0	0

Committed Development

AM	A	B	C
A	0	2	0
B	6	0	0
C	0	0	0

Committed Development

PM	A	B	C
A	0	5	0
B	2	0	0
C	0	0	0

Background 2030 + Committed

AM	A	B	C
A	0	2	302
B	6	0	0
C	427	0	0

Background 2030 + Committed

PM	A	B	C
A	0	5	430
B	2	0	0
C	259	0	0

Development

AM	A	B	C
A	0	71	0
B	194	0	73
C	0	40	0

Development

PM	A	B	C
A	0	134	0
B	61	0	21
C	0	42	0

Background 2030 + Development

AM	A	B	C
A	0	72	302
B	200	0	73
C	427	40	0

Background 2030 + Development

PM	A	B	C
A	0	139	430
B	63	0	21
C	259	42	0

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: A1 Hookhams Lane Access.j9
Path: C:\Users\Martin\OneDrive - Martin Andrews Consulting Ltd\Projects 200 - 299\248 - Salph End, Bedford\Reports\TA\Junction Analysis
Report generation date: 20/01/2020 13:31:39

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2030-Base+Comm+Dev							
Stream B-C	0.3	14.69	0.25	B	0.1	8.64	0.05	A
Stream B-A	1.7	28.63	0.64	D	0.3	13.38	0.20	B
Stream C-AB	0.3	4.96	0.11	A	0.2	5.97	0.12	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	24/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	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
D5	2030-Base+Comm+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Base+Comm+Dev	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

2030-Base+Comm+Dev, 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
A1	Access to Hookhams Lane	T-Junction	Two-way		6.45	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Hookhams Ln (W)		Major
B	Access		Minor
C	Hookhams Ln (E)		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			93.0	✓	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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	7.08	3.28	3.00	3.00	3.00		1.00	25	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
A1	B-A	528	0.096	0.243	0.153	0.348
A1	B-C	589	0.090	0.228	-	-
A1	C-B	628	0.243	0.243	-	-

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
D5	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	374	100.000
B		ONE HOUR	✓	273	100.000
C		ONE HOUR	✓	467	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	72	302
	B	200	0	73
	C	427	40	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.25	14.69	0.3	B	67	100
B-A	0.64	28.63	1.7	D	184	275
C-AB	0.11	4.96	0.3	A	72	109
C-A					356	534
A-B					66	99
A-C					277	416

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	14	462	0.119	54	0.0	0.1	8.819	A
B-A	151	38	407	0.370	148	0.0	0.6	13.823	B
C-AB	51	13	781	0.066	51	0.0	0.1	4.952	A
C-A	300	75			300				
A-B	54	14			54				
A-C	227	57			227				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	66	16	417	0.157	65	0.1	0.2	10.233	B
B-A	180	45	381	0.471	179	0.6	0.9	17.646	C
C-AB	68	17	814	0.084	68	0.1	0.2	4.852	A
C-A	351	88			351				
A-B	65	16			65				
A-C	271	68			271				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	80	20	330	0.243	80	0.2	0.3	14.347	B
B-A	220	55	345	0.638	217	0.9	1.6	27.422	D
C-AB	98	24	860	0.113	97	0.2	0.3	4.745	A
C-A	417	104			417				
A-B	79	20			79				
A-C	333	83			333				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	80	20	325	0.247	80	0.3	0.3	14.689	B
B-A	220	55	345	0.638	220	1.6	1.7	28.632	D
C-AB	98	24	860	0.114	98	0.3	0.3	4.752	A
C-A	416	104			416				
A-B	79	20			79				
A-C	333	83			333				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	66	16	412	0.159	66	0.3	0.2	10.418	B
B-A	180	45	381	0.472	183	1.7	0.9	18.424	C
C-AB	69	17	814	0.084	69	0.3	0.2	4.863	A
C-A	351	88			351				
A-B	65	16			65				
A-C	271	68			271				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	14	459	0.120	55	0.2	0.1	8.915	A
B-A	151	38	406	0.371	152	0.9	0.6	14.225	B
C-AB	51	13	781	0.066	52	0.2	0.1	4.960	A
C-A	300	75			300				
A-B	54	14			54				
A-C	227	57			227				

2030-Base+Comm+Dev, 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
A1	Access to Hookhams Lane	T-Junction	Two-way		1.49	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
D6	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	569	100.000
B		ONE HOUR	✓	84	100.000
C		ONE HOUR	✓	301	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	139	430
	B	63	0	21
	C	259	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	8.64	0.1	A	19	29
B-A	0.20	13.38	0.3	B	58	87
C-AB	0.12	5.97	0.2	A	61	91
C-A					215	323
A-B					128	191
A-C					395	592

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	4	490	0.032	16	0.0	0.0	7.584	A
B-A	47	12	399	0.119	47	0.0	0.1	10.217	B
C-AB	45	11	662	0.068	44	0.0	0.1	5.845	A
C-A	182	45			182				
A-B	105	26			105				
A-C	324	81			324				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	470	0.040	19	0.0	0.0	7.987	A
B-A	57	14	373	0.152	56	0.1	0.2	11.354	B
C-AB	58	14	671	0.086	58	0.1	0.2	5.892	A
C-A	213	53			213				
A-B	125	31			125				
A-C	387	97			387				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	440	0.053	23	0.0	0.1	8.638	A
B-A	69	17	338	0.205	69	0.2	0.3	13.352	B
C-AB	79	20	685	0.116	79	0.2	0.2	5.964	A
C-A	252	63			252				
A-B	153	38			153				
A-C	473	118			473				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	6	440	0.053	23	0.1	0.1	8.643	A
B-A	69	17	338	0.205	69	0.3	0.3	13.381	B
C-AB	80	20	686	0.116	80	0.2	0.2	5.974	A
C-A	252	63			252				
A-B	153	38			153				
A-C	473	118			473				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	469	0.040	19	0.1	0.0	7.993	A
B-A	57	14	373	0.152	57	0.3	0.2	11.390	B
C-AB	58	15	671	0.087	58	0.2	0.2	5.904	A
C-A	212	53			212				
A-B	125	31			125				
A-C	387	97			387				

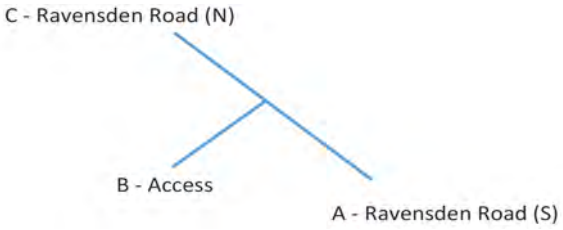
18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	4	490	0.032	16	0.0	0.0	7.596	A
B-A	47	12	399	0.119	48	0.2	0.1	10.263	B
C-AB	45	11	662	0.068	45	0.2	0.1	5.859	A
C-A	182	45			182				
A-B	105	26			105				
A-C	324	81			324				

Appendix N

A2 – Access to Ravensden Road: Analysis – Input and Results

A2 Access to Ravensden Rd



Background 2017

AM	A	B	C
A			137
B			
C	363		

Background 2017

PM	A	B	C
A			287
B			
C	186		

Tempro 2017-2030

AM	A	B	C
A	1.170	1.170	1.170
B	1.170	1.170	1.170
C	1.170	1.170	1.170

Tempro 2017-2030

PM	A	B	C
A	1.176	1.176	1.176
B	1.176	1.176	1.176
C	1.176	1.176	1.176

Background 2030

AM	A	B	C
A	0	0	160
B	0	0	0
C	425	0	0

Background 2030

PM	A	B	C
A	0	0	338
B	0	0	0
C	219	0	0

Committed Development

AM	A	B	C
A	0	0	0
B	0	0	1
C	0	0	0

Committed Development

PM	A	B	C
A	0	0	0
B	0	0	0
C	0	1	0

Background 2030 + Committed

AM	A	B	C
A	0	0	160
B	0	0	1
C	425	0	0

Background 2030 + Committed

PM	A	B	C
A	0	0	338
B	0	0	0
C	219	1	0

Development

AM	A	B	C
A	0	0	0
B	0	0	37
C	0	9	0

Development

PM	A	B	C
A	0	0	0
B	0	0	12
C	0	28	0

Background 2030 + Development

AM	A	B	C
A	0	0	160
B	0	0	38
C	425	10	0

Background 2030 + Development

PM	A	B	C
A	0	0	338
B	0	0	13
C	219	29	0

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: A2 Ravensden Road Access.j9
Path: C:\Users\Martin\OneDrive - Martin Andrews Consulting Ltd\Projects 200 - 299\248 - Salph End, Bedford\Reports\TA\Junction Analysis
Report generation date: 24/07/2019 10:27:59

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2030-Base+Comm+Dev							
Stream B-C	0.1	6.09	0.07	A	0.0	6.35	0.02	A
Stream B-A	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-AB	0.0	4.44	0.02	A	0.1	5.43	0.07	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	Ravensden Access
Site number	
Date	24/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	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
D5	2030-Base+Comm+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Base+Comm+Dev	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

2030-Base+Comm+Dev, 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
A2	Access to Ravensden Road	T-Junction	Two-way		0.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Ravensden Rd (N)		Major
B	Access		Minor
C	Ravensden Rd (N)		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			125.0	✓	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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	9.25	3.33	3.00	3.00	3.00		1.00	25	40

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
A2	B-A	569	0.104	0.262	0.165	0.374
A2	B-C	679	0.104	0.263	-	-
A2	C-B	646	0.250	0.250	-	-

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
D5	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	160	100.000
B		ONE HOUR	✓	38	100.000
C		ONE HOUR	✓	435	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	160
	B	0	0	38
	C	425	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.07	6.09	0.1	A	35	52
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.02	4.44	0.0	A	17	26
C-A					382	573
A-B					0	0
A-C					147	220

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	648	0.044	28	0.0	0.0	5.812	A
B-A	0	0	482	0.000	0	0.0	0.0	0.000	A
C-AB	12	3	827	0.015	12	0.0	0.0	4.437	A
C-A	315	79			315				
A-B	0	0			0				
A-C	120	30			120				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	9	642	0.053	34	0.0	0.1	5.926	A
B-A	0	0	465	0.000	0	0.0	0.0	0.000	A
C-AB	16	4	863	0.019	16	0.0	0.0	4.269	A
C-A	375	94			375				
A-B	0	0			0				
A-C	144	36			144				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	42	10	633	0.066	42	0.1	0.1	6.088	A
B-A	0	0	441	0.000	0	0.0	0.0	0.000	A
C-AB	23	6	914	0.025	23	0.0	0.0	4.059	A
C-A	456	114			456				
A-B	0	0			0				
A-C	176	44			176				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	42	10	633	0.066	42	0.1	0.1	6.088	A
B-A	0	0	441	0.000	0	0.0	0.0	0.000	A
C-AB	23	6	914	0.025	23	0.0	0.0	4.060	A
C-A	456	114			456				
A-B	0	0			0				
A-C	176	44			176				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	9	642	0.053	34	0.1	0.1	5.929	A
B-A	0	0	465	0.000	0	0.0	0.0	0.000	A
C-AB	16	4	863	0.019	16	0.0	0.0	4.272	A
C-A	375	94			375				
A-B	0	0			0				
A-C	144	36			144				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	29	7	648	0.044	29	0.1	0.0	5.817	A
B-A	0	0	482	0.000	0	0.0	0.0	0.000	A
C-AB	12	3	827	0.015	12	0.0	0.0	4.441	A
C-A	315	79			315				
A-B	0	0			0				
A-C	120	30			120				

2030-Base+Comm+Dev, 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
A2	Access to Ravensden Road	T-Junction	Two-way		0.51	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
D6	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	338	100.000
B		ONE HOUR	✓	13	100.000
C		ONE HOUR	✓	248	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	0	338
	B	0	0	13
	C	219	29	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.02	6.35	0.0	A	12	18
B-A	0.00	0.00	0.0	A	0	0
C-AB	0.07	5.43	0.1	A	38	57
C-A					190	285
A-B					0	0
A-C					310	465

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	2	612	0.016	10	0.0	0.0	5.973	A
B-A	0	0	467	0.000	0	0.0	0.0	0.000	A
C-AB	29	7	694	0.041	28	0.0	0.1	5.419	A
C-A	158	40			158				
A-B	0	0			0				
A-C	254	64			254				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	12	3	599	0.020	12	0.0	0.0	6.124	A
B-A	0	0	447	0.000	0	0.0	0.0	0.000	A
C-AB	36	9	705	0.051	36	0.1	0.1	5.398	A
C-A	187	47			187				
A-B	0	0			0				
A-C	304	76			304				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	14	4	581	0.025	14	0.0	0.0	6.347	A
B-A	0	0	419	0.000	0	0.0	0.0	0.000	A
C-AB	48	12	720	0.067	48	0.1	0.1	5.372	A
C-A	225	56			225				
A-B	0	0			0				
A-C	372	93			372				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	14	4	581	0.025	14	0.0	0.0	6.347	A
B-A	0	0	419	0.000	0	0.0	0.0	0.000	A
C-AB	48	12	720	0.067	48	0.1	0.1	5.376	A
C-A	225	56			225				
A-B	0	0			0				
A-C	372	93			372				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	12	3	599	0.020	12	0.0	0.0	6.125	A
B-A	0	0	447	0.000	0	0.0	0.0	0.000	A
C-AB	36	9	705	0.051	36	0.1	0.1	5.404	A
C-A	187	47			187				
A-B	0	0			0				
A-C	304	76			304				

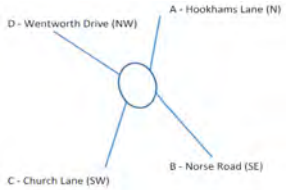
18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	10	2	612	0.016	10	0.0	0.0	5.975	A
B-A	0	0	467	0.000	0	0.0	0.0	0.000	A
C-AB	29	7	694	0.041	29	0.1	0.1	5.427	A
C-A	158	40			158				
A-B	0	0			0				
A-C	254	64			254				

Appendix O

J1 – Hookhams Lane / Norse Road / Church Lane / Wentworth Drive: Analysis – Input and Results

J1: Hookhams Lane / Norse Road / Church Lane / Wentworth Drive



Background 2019

AM	A	B	C	D
A	0	231	105	96
B	136	0	125	443
C	59	115	0	155
D	49	603	119	0

Background 2019

PM	A	B	C	D
A	0	72	78	61
B	152	0	199	527
C	98	117	0	128
D	53	310	77	0

HGV%age

AM	A	B	C	D
A	0%	1%	1%	1%
B	2%	0%	4%	1%
C	0%	5%	0%	2%
D	0%	2%	2%	0%

Tempro 2019-2030

AM	A	B	C	D
A	1.1369	1.1369	1.1369	1.1369
B	1.1369	1.1369	1.1369	1.1369
C	1.1369	1.1369	1.1369	1.1369
D	1.1369	1.1369	1.1369	1.1369

Tempro 2019-2030

PM	A	B	C	D
A	1.1554	1.1554	1.1554	1.1554
B	1.1554	1.1554	1.1554	1.1554
C	1.1554	1.1554	1.1554	1.1554
D	1.1554	1.1554	1.1554	1.1554

HGV%age

PM	A	B	C	D
A	0%	0%	3%	0%
B	1%	0%	3%	0%
C	0%	5%	0%	2%
D	0%	0%	3%	0%

Background 2030

AM	A	B	C	D
A	0	263	119	109
B	154	0	142	504
C	67	131	0	176
D	56	685	135	0

Background 2030

PM	A	B	C	D
A	0	83	90	70
B	176	0	230	609
C	113	135	0	147
D	61	358	89	0

Committed Development

AM	A	B	C	D
A	0	2	2	2
B	1	0	0	0
C	0	0	0	0
D	0	0	0	0

Committed Development

PM	A	B	C	D
A	0	1	1	1
B	2	0	0	0
C	2	0	0	0
D	1	0	0	0

Background 2030 + Committed

AM	A	B	C	D
A	0	265	121	111
B	155	0	142	504
C	68	131	0	176
D	56	685	135	0

Background 2030 + Committed

PM	A	B	C	D
A	0	84	90	71
B	177	0	230	609
C	115	135	0	147
D	63	358	89	0

Development

AM	A	B	C	D
A	0	71	61	57
B	23	0	0	0
C	21	0	0	0
D	20	0	0	0

Development

PM	A	B	C	D
A	0	23	20	18
B	51	0	0	0
C	43	0	0	0
D	40	0	0	0

Background 2030 + Development

AM	A	B	C	D
A	0	336	182	168
B	178	0	142	504
C	88	131	0	176
D	76	685	135	0

Background 2030 + Development

PM	A	B	C	D
A	0	107	110	89
B	228	0	230	609
C	158	135	0	147
D	103	358	89	0

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J1 Hookhams Ln.j9
Path: C:\Users\Martin\OneDrive - Martin Andrews Consulting Ltd\Projects 200 - 299\248 - Salph End, Bedford\Reports\TA\Junction Analysis
Report generation date: 20/01/2020 13:48:08

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019-Base							
Arm A	1.0	7.53	0.50	A	0.3	4.01	0.20	A
Arm B	1.2	5.66	0.55	A	1.9	6.99	0.65	A
Arm C	0.4	3.89	0.28	A	0.4	4.12	0.30	A
Arm D	1.3	5.53	0.56	A	0.5	3.64	0.33	A
	2030-Base+Comm							
Arm A	1.6	10.40	0.61	B	0.3	4.40	0.25	A
Arm B	1.7	7.16	0.63	A	3.2	10.46	0.76	B
Arm C	0.5	4.39	0.33	A	0.6	4.82	0.36	A
Arm D	1.9	7.02	0.65	A	0.6	4.10	0.39	A
	2030-Base+Comm+Dev							
Arm A	4.9	24.60	0.84	C	0.4	4.78	0.31	A
Arm B	2.2	8.83	0.69	A	4.3	13.46	0.81	B
Arm C	0.6	4.78	0.36	A	0.7	5.44	0.42	A
Arm D	2.1	7.70	0.67	A	0.8	4.61	0.44	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	
Location	
Site number	
Date	24/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	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	2019-Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019-Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030-Base+Comm	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030-Base+Comm	PM	ONE HOUR	16:45	18:15	15	✓
D5	2030-Base+Comm+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Base+Comm+Dev	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

2019-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	J2 Hookhams Lane / Norse Road / Church Lane / Wentworth Drive	Standard Roundabout		A, B, C, D	5.72	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	Hookhams Ln	
B	Norse Rd	
C	Church Ln	
D	Wentworth Rd	

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
A	2.79	6.20	11.7	23.1	64.0	25.0	
B	3.04	6.13	17.5	25.0	60.2	14.0	
C	3.64	6.29	26.0	26.6	61.9	31.0	
D	3.60	6.68	20.9	20.9	64.0	36.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.493	1413
B	0.559	1619
C	0.553	1723
D	0.529	1693

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 segment length (min)	Run automatically
D1	2019-Base	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	432	100.000
B		ONE HOUR	✓	704	100.000
C		ONE HOUR	✓	329	100.000
D		ONE HOUR	✓	771	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	231	105	96
	B	136	0	125	443
	C	59	115	0	155
	D	49	603	119	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	1	1	1
	B	2	0	4	1
	C	0	5	0	2
	D	0	2	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.50	7.53	1.0	A	396	595
B	0.55	5.66	1.2	A	646	969
C	0.28	3.89	0.4	A	302	453
D	0.56	5.53	1.3	A	707	1061

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	325	81	628	1103	0.295	324	183	0.0	0.4	4.654	A
B	530	133	240	1485	0.357	528	711	0.0	0.6	3.820	A
C	248	62	506	1444	0.172	247	262	0.0	0.2	3.087	A
D	580	145	233	1570	0.370	578	520	0.0	0.6	3.688	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	388	97	752	1042	0.373	388	219	0.4	0.6	5.549	A
B	633	158	287	1458	0.434	632	852	0.6	0.8	4.428	A
C	296	74	606	1388	0.213	296	313	0.2	0.3	3.381	A
D	693	173	278	1545	0.449	692	623	0.6	0.8	4.294	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	476	119	920	959	0.496	474	268	0.6	1.0	7.469	A
B	775	194	351	1422	0.545	773	1042	0.8	1.2	5.629	A
C	362	91	741	1313	0.276	362	383	0.3	0.4	3.882	A
D	849	212	341	1512	0.561	847	762	0.8	1.3	5.496	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	476	119	922	958	0.496	476	269	1.0	1.0	7.531	A
B	775	194	352	1422	0.545	775	1045	1.2	1.2	5.662	A
C	362	91	743	1312	0.276	362	384	0.4	0.4	3.888	A
D	849	212	341	1512	0.561	849	764	1.3	1.3	5.529	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	388	97	754	1041	0.373	390	220	1.0	0.6	5.597	A
B	633	158	289	1457	0.434	635	856	1.2	0.8	4.461	A
C	296	74	609	1387	0.213	296	315	0.4	0.3	3.389	A
D	693	173	279	1545	0.449	695	626	1.3	0.8	4.323	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	325	81	631	1102	0.295	326	184	0.6	0.4	4.691	A
B	530	133	241	1484	0.357	531	716	0.8	0.6	3.846	A
C	248	62	509	1442	0.172	248	263	0.3	0.2	3.095	A
D	580	145	234	1569	0.370	581	523	0.8	0.6	3.715	A

2019-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	J2 Hookhams Lane / Norse Road / Church Lane / Wentworth Drive	Standard Roundabout		A, B, C, D	5.34	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	2019-Base	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	211	100.000
B		ONE HOUR	✓	878	100.000
C		ONE HOUR	✓	343	100.000
D		ONE HOUR	✓	440	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	72	78	61
	B	152	0	199	527
	C	98	117	0	128
	D	53	310	77	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	1	0	3	0
	C	0	5	0	2
	D	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.20	4.01	0.3	A	194	290
B	0.65	6.99	1.9	A	806	1209
C	0.30	4.12	0.4	A	315	472
D	0.33	3.64	0.5	A	404	606

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	159	40	378	1226	0.130	158	227	0.0	0.1	3.405	A
B	661	165	162	1528	0.433	658	374	0.0	0.8	4.158	A
C	258	65	555	1417	0.182	257	265	0.0	0.2	3.180	A
D	331	83	275	1547	0.214	330	537	0.0	0.3	2.970	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	190	47	453	1190	0.159	190	272	0.1	0.2	3.638	A
B	789	197	194	1510	0.523	788	448	0.8	1.1	5.017	A
C	308	77	664	1356	0.227	308	318	0.2	0.3	3.517	A
D	396	99	330	1518	0.261	395	643	0.3	0.4	3.221	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	232	58	554	1140	0.204	232	333	0.2	0.3	4.009	A
B	967	242	238	1486	0.651	964	549	1.1	1.8	6.913	A
C	378	94	812	1274	0.296	377	389	0.3	0.4	4.108	A
D	484	121	403	1479	0.327	484	786	0.4	0.5	3.633	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	232	58	555	1139	0.204	232	334	0.3	0.3	4.012	A
B	967	242	238	1486	0.651	967	549	1.8	1.9	6.991	A
C	378	94	815	1273	0.297	378	390	0.4	0.4	4.117	A
D	484	121	404	1479	0.328	484	788	0.5	0.5	3.637	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	190	47	454	1189	0.160	190	273	0.3	0.2	3.642	A
B	789	197	194	1510	0.523	792	449	1.9	1.1	5.080	A
C	308	77	668	1354	0.228	309	319	0.4	0.3	3.530	A
D	396	99	331	1518	0.261	396	646	0.5	0.4	3.229	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	159	40	380	1226	0.130	159	228	0.2	0.2	3.414	A
B	661	165	163	1528	0.433	662	376	1.1	0.8	4.203	A
C	258	65	558	1415	0.183	259	267	0.3	0.2	3.188	A
D	331	83	277	1546	0.214	332	540	0.4	0.3	2.979	A

2030-Base+Comm, 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	J2 Hookhams Lane / Norse Road / Church Lane / Wentworth Drive	Standard Roundabout		A, B, C, D	7.34	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	2030-Base+Comm	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	497	100.000
B		ONE HOUR	✓	801	100.000
C		ONE HOUR	✓	375	100.000
D		ONE HOUR	✓	876	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	265	121	111
	B	155	0	142	504
	C	68	131	0	176
	D	56	685	135	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	1	1	1
	B	2	0	4	1
	C	0	5	0	2
	D	0	2	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.61	10.40	1.6	B	456	684
B	0.63	7.16	1.7	A	735	1103
C	0.33	4.39	0.5	A	344	516
D	0.65	7.02	1.9	A	804	1206

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	374	94	713	1061	0.353	372	209	0.0	0.5	5.275	A
B	603	151	275	1465	0.412	600	810	0.0	0.7	4.221	A
C	282	71	577	1404	0.201	281	298	0.0	0.3	3.287	A
D	659	165	265	1552	0.425	657	593	0.0	0.7	4.081	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	447	112	854	992	0.450	446	250	0.5	0.8	6.643	A
B	720	180	329	1435	0.502	719	970	0.7	1.0	5.108	A
C	337	84	691	1341	0.251	337	357	0.3	0.3	3.679	A
D	788	197	318	1525	0.517	786	710	0.7	1.1	4.957	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	547	137	1044	898	0.609	544	306	0.8	1.5	10.199	B
B	882	220	402	1394	0.633	879	1186	1.0	1.7	7.075	A
C	413	103	845	1256	0.329	412	437	0.3	0.5	4.376	A
D	964	241	389	1487	0.649	961	868	1.1	1.8	6.939	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	547	137	1047	896	0.610	547	307	1.5	1.6	10.399	B
B	882	220	404	1393	0.633	882	1190	1.7	1.7	7.164	A
C	413	103	848	1255	0.329	413	438	0.5	0.5	4.389	A
D	964	241	390	1486	0.649	964	871	1.8	1.9	7.022	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	447	112	858	990	0.451	450	252	1.6	0.8	6.769	A
B	720	180	332	1433	0.502	723	976	1.7	1.0	5.174	A
C	337	84	695	1339	0.252	338	359	0.5	0.3	3.695	A
D	788	197	319	1524	0.517	791	714	1.9	1.1	5.023	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	374	94	717	1059	0.353	375	210	0.8	0.6	5.325	A
B	603	151	277	1464	0.412	604	816	1.0	0.7	4.266	A
C	282	71	581	1402	0.201	283	300	0.3	0.3	3.301	A
D	659	165	267	1551	0.425	661	597	1.1	0.8	4.123	A

2030-Base+Comm, 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	J2 Hookhams Lane / Norse Road / Church Lane / Wentworth Drive	Standard Roundabout		A, B, C, D	7.24	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	2030-Base+Comm	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	245	100.000
B		ONE HOUR	✓	1016	100.000
C		ONE HOUR	✓	397	100.000
D		ONE HOUR	✓	510	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	84	90	71
	B	177	0	230	609
	C	115	135	0	147
	D	63	358	89	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	1	0	3	0
	C	0	5	0	2
	D	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.25	4.40	0.3	A	225	337
B	0.76	10.46	3.2	B	932	1398
C	0.36	4.82	0.6	A	364	546
D	0.39	4.10	0.6	A	468	702

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	184	46	437	1198	0.154	184	266	0.0	0.2	3.587	A
B	765	191	187	1514	0.505	761	433	0.0	1.0	4.795	A
C	299	75	642	1368	0.218	298	306	0.0	0.3	3.440	A
D	384	96	320	1523	0.252	383	620	0.0	0.3	3.167	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	220	55	523	1155	0.191	220	319	0.2	0.2	3.890	A
B	913	228	225	1493	0.612	911	518	1.0	1.6	6.214	A
C	357	89	769	1298	0.275	356	367	0.3	0.4	3.912	A
D	458	115	383	1490	0.308	458	742	0.3	0.4	3.504	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	270	67	640	1097	0.246	269	389	0.2	0.3	4.393	A
B	1119	280	275	1465	0.764	1112	634	1.6	3.1	10.122	B
C	437	109	939	1204	0.363	436	449	0.4	0.6	4.794	A
D	562	140	469	1445	0.389	561	906	0.4	0.6	4.090	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	270	67	641	1097	0.246	270	391	0.3	0.3	4.399	A
B	1119	280	275	1465	0.764	1118	635	3.1	3.2	10.458	B
C	437	109	943	1202	0.364	437	450	0.6	0.6	4.820	A
D	562	140	470	1444	0.389	562	910	0.6	0.6	4.100	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	220	55	524	1154	0.191	221	321	0.3	0.2	3.898	A
B	913	228	225	1493	0.612	920	520	3.2	1.6	6.400	A
C	357	89	775	1295	0.276	358	369	0.6	0.4	3.938	A
D	458	115	385	1489	0.308	459	748	0.6	0.4	3.519	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	184	46	439	1197	0.154	185	268	0.2	0.2	3.598	A
B	765	191	188	1513	0.505	767	435	1.6	1.0	4.880	A
C	299	75	647	1366	0.219	299	309	0.4	0.3	3.457	A
D	384	96	322	1522	0.252	384	624	0.4	0.3	3.180	A

2030-Base+Comm+Dev, 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	J2 Hookhams Lane / Norse Road / Church Lane / Wentworth Drive	Standard Roundabout		A, B, C, D	11.75	B

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
D5	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	684	100.000
B		ONE HOUR	✓	823	100.000
C		ONE HOUR	✓	395	100.000
D		ONE HOUR	✓	896	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	334	182	168
	B	177	0	142	504
	C	88	131	0	176
	D	76	685	135	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	1	1	1
	B	2	0	4	1
	C	0	5	0	2
	D	0	2	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.84	24.60	4.9	C	628	941
B	0.69	8.83	2.2	A	755	1133
C	0.36	4.78	0.6	A	362	544
D	0.67	7.70	2.1	A	822	1233

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	515	129	713	1061	0.485	511	256	0.0	0.9	6.564	A
B	620	155	363	1416	0.438	616	861	0.0	0.8	4.564	A
C	297	74	636	1372	0.217	296	344	0.0	0.3	3.428	A
D	675	169	297	1536	0.439	671	635	0.0	0.8	4.226	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	615	154	853	992	0.620	612	306	0.9	1.6	9.509	A
B	740	185	434	1376	0.538	738	1031	0.8	1.2	5.731	A
C	355	89	761	1302	0.273	355	411	0.3	0.4	3.892	A
D	805	201	355	1505	0.535	804	761	0.8	1.2	5.222	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	753	188	1044	898	0.838	741	374	1.6	4.6	21.707	C
B	906	227	527	1324	0.685	902	1257	1.2	2.1	8.606	A
C	435	109	929	1210	0.359	434	501	0.4	0.6	4.751	A
D	987	247	435	1463	0.674	983	928	1.2	2.1	7.584	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	753	188	1047	896	0.840	752	375	4.6	4.9	24.598	C
B	906	227	533	1320	0.686	906	1265	2.1	2.2	8.825	A
C	435	109	934	1207	0.360	435	505	0.6	0.6	4.780	A
D	987	247	436	1462	0.675	986	933	2.1	2.1	7.703	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	615	154	858	989	0.621	628	308	4.9	1.7	10.382	B
B	740	185	443	1371	0.540	744	1043	2.2	1.2	5.876	A
C	355	89	770	1298	0.274	356	417	0.6	0.4	3.922	A
D	805	201	357	1504	0.536	809	768	2.1	1.2	5.303	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	515	129	718	1059	0.486	518	257	1.7	1.0	6.754	A
B	620	155	367	1414	0.438	621	869	1.2	0.8	4.631	A
C	297	74	641	1369	0.217	298	347	0.4	0.3	3.446	A
D	675	169	299	1535	0.440	676	640	1.2	0.8	4.278	A

2030-Base+Comm+Dev, 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	J2 Hookhams Lane / Norse Road / Church Lane / Wentworth Drive	Standard Roundabout		A, B, C, D	8.78	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
D6	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	305	100.000
B		ONE HOUR	✓	1066	100.000
C		ONE HOUR	✓	440	100.000
D		ONE HOUR	✓	550	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	106	110	89
	B	227	0	230	609
	C	158	135	0	147
	D	103	358	89	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	3	0
	B	1	0	3	0
	C	0	5	0	2
	D	0	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.31	4.78	0.4	A	280	420
B	0.81	13.46	4.3	B	978	1467
C	0.42	5.44	0.7	A	404	606
D	0.44	4.61	0.8	A	505	757

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	230	57	436	1198	0.192	229	366	0.0	0.2	3.751	A
B	803	201	216	1498	0.536	798	449	0.0	1.1	5.153	A
C	331	83	693	1340	0.247	330	321	0.0	0.3	3.634	A
D	414	104	390	1487	0.279	413	633	0.0	0.4	3.363	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	274	69	523	1155	0.237	274	438	0.2	0.3	4.127	A
B	958	240	259	1474	0.650	956	538	1.1	1.8	6.964	A
C	396	99	829	1265	0.313	395	385	0.3	0.5	4.225	A
D	494	124	467	1446	0.342	494	758	0.4	0.5	3.797	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	336	84	640	1097	0.306	335	535	0.3	0.4	4.770	A
B	1174	293	317	1442	0.814	1165	658	1.8	4.1	12.699	B
C	484	121	1011	1164	0.416	483	470	0.5	0.7	5.393	A
D	606	151	570	1391	0.435	605	925	0.5	0.8	4.593	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	336	84	641	1097	0.306	336	537	0.4	0.4	4.780	A
B	1174	293	317	1441	0.814	1173	659	4.1	4.3	13.457	B
C	484	121	1018	1161	0.417	484	472	0.7	0.7	5.439	A
D	606	151	572	1390	0.436	606	930	0.8	0.8	4.611	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	274	69	524	1154	0.238	275	441	0.4	0.3	4.138	A
B	958	240	259	1474	0.650	968	540	4.3	1.9	7.305	A
C	396	99	839	1259	0.314	397	388	0.7	0.5	4.268	A
D	494	124	470	1444	0.342	495	765	0.8	0.5	3.819	A

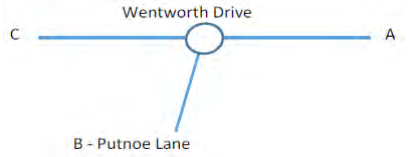
18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	230	57	439	1197	0.192	230	368	0.3	0.2	3.767	A
B	803	201	217	1497	0.536	805	452	1.9	1.2	5.270	A
C	331	83	699	1337	0.248	332	324	0.5	0.3	3.662	A
D	414	104	392	1485	0.279	415	638	0.5	0.4	3.380	A

Appendix P

J2 – Wentworth Drive / Putnoe Lane: Analysis – Input and Results

J2: Wentworth Drive / Putnoe Lane



Background 2019

AM	A	B	C
A	10	271	395
B	217	0	45
C	508	88	0

Background 2019

PM	A	B	C
A	2	223	470
B	146	0	51
C	289	37	0

HGV%age

AM	A	B	C
A	0%	1%	1%
B	0%	0%	0%
C	2%	0%	0%

Tempro 2019-2030

AM	A	B	C
A	1.1369	1.1369	1.1369
B	1.1369	1.1369	1.1369
C	1.1369	1.1369	1.1369

Tempro 2019-2030

PM	A	B	C
A	1.1554	1.1554	1.1554
B	1.1554	1.1554	1.1554
C	1.1554	1.1554	1.1554

HGV%age

PM	A	B	C
A	0%	0%	0%
B	0%	0%	0%
C	0%	0%	0%

Background 2030

AM	A	B	C
A	11	308	449
B	247	0	51
C	578	99	0

Background 2030

PM	A	B	C
A	2	258	544
B	169	0	59
C	334	43	0

Committed Development

AM	A	B	C
A	0	1	1
B	0	0	0
C	0	0	0

Committed Development

PM	A	B	C
A	0	2	0
B	1	0	0
C	1	0	0

10

Background 2030 + Committed

AM	A	B	C
A	11	309	450
B	247	0	51
C	578	99	0

Background 2030 + Committed

PM	A	B	C
A	2	259	544
B	169	0	59
C	335	43	0

Development

AM	A	B	C
A	0	28	22
B	7	0	0
C	6	0	0

Development

PM	A	B	C
A	0	10	8
B	22	0	0
C	17	0	0

Background 2030 + Development

AM	A	B	C
A	11	337	472
B	254	0	51
C	583	99	0

Background 2030 + Development

PM	A	B	C
A	2	269	551
B	191	0	59
C	352	43	0

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J2-Wentworth _ Putnoe-MAC GEo.j9
Path: C:\Users\Martin\OneDrive - Martin Andrews Consulting Ltd\Projects 200 - 299\248 - Salph End, Bedford\Reports\TA\Junction Analysis
Report generation date: 29/03/2020 20:42:01

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019-Base							
Arm A	1.7	8.07	0.62	A	1.6	7.71	0.62	A
Arm B	0.8	9.47	0.43	A	0.5	8.92	0.35	A
Arm C	4.9	28.60	0.84	D	0.7	7.55	0.43	A
	2030-Base+Comm							
Arm A	2.5	10.68	0.71	B	2.5	10.54	0.72	B
Arm B	1.1	11.98	0.52	B	0.8	11.37	0.44	B
Arm C	16.5	81.91	0.98	F	1.0	8.92	0.51	A
	2030-Base+Comm+Dev							
Arm A	3.1	12.71	0.76	B	2.7	11.15	0.74	B
Arm B	1.2	12.99	0.55	B	0.9	12.52	0.49	B
Arm C	18.9	91.97	1.00	F	1.2	9.76	0.54	A

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.

File summary

File Description

Title	
Location	J2 Wentworth Rd / Putnoe Ln
Site number	
Date	24/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	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	2019-Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019-Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030-Base+Comm	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030-Base+Comm	PM	ONE HOUR	16:45	18:15	15	✓
D5	2030-Base+Comm+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Base+Comm+Dev	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

2019-Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 82% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2	Wentworth Dr / Putnoe Ln	Mini-roundabout		A, B, C	16.29	C

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Wentworth Rd (E)	
B	Putnoe Rd	
C	Wentworth Rd (W)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	3.55	3.55	6.40	20.0	12.06	9.01	0.0	
B	3.75	3.75	7.35	3.3	12.72	8.20	0.0	
C	3.29	3.29	3.29	0.0	17.35	16.22	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.687	1260
B	0.650	958
C	0.647	941

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 segment length (min)	Run automatically
D1	2019-Base	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	676	100.000
B		ONE HOUR	✓	262	100.000
C		ONE HOUR	✓	596	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	10	271	395
	B	217	0	45
	C	508	88	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.62	8.07	1.7	A	620	930
B	0.43	9.47	0.8	A	240	361
C	0.84	28.60	4.9	D	547	820

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	509	127	66	1215	0.419	506	548	0.0	0.7	5.100	A
B	197	49	303	761	0.259	196	268	0.0	0.3	6.353	A
C	449	112	170	831	0.540	444	329	0.0	1.2	9.336	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	608	152	79	1206	0.504	607	658	0.7	1.0	6.042	A
B	236	59	363	722	0.326	235	322	0.3	0.5	7.385	A
C	536	134	204	809	0.662	533	395	1.2	1.9	13.077	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	744	186	95	1194	0.623	742	799	1.0	1.6	7.974	A
B	288	72	444	669	0.431	287	393	0.5	0.7	9.400	A
C	656	164	249	780	0.841	645	483	1.9	4.6	25.343	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	744	186	97	1193	0.624	744	808	1.6	1.7	8.075	A
B	288	72	446	668	0.432	288	395	0.7	0.8	9.473	A
C	656	164	250	779	0.842	655	484	4.6	4.9	28.598	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	608	152	81	1204	0.505	610	671	1.7	1.0	6.133	A
B	236	59	366	721	0.327	237	325	0.8	0.5	7.452	A
C	536	134	205	809	0.663	547	397	4.9	2.1	14.557	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	509	127	67	1214	0.419	510	557	1.0	0.7	5.164	A
B	197	49	306	760	0.260	198	271	0.5	0.4	6.414	A
C	449	112	171	830	0.540	452	332	2.1	1.2	9.758	A

2019-Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 83% of the total flow for the roundabout for one or more time segments]
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
2	Wentworth Dr / Putnoe Ln	Mini-roundabout		A, B, C	7.87	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2019-Base	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	695	100.000
B		ONE HOUR	✓	197	100.000
C		ONE HOUR	✓	326	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	223	470
	B	146	0	51
	C	289	37	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

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.62	7.71	1.6	A	638	957
B	0.35	8.92	0.5	A	181	271
C	0.43	7.55	0.7	A	299	449

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	523	131	28	1241	0.422	520	327	0.0	0.7	4.978	A
B	148	37	353	728	0.204	147	195	0.0	0.3	6.184	A
C	245	61	111	870	0.282	244	390	0.0	0.4	5.740	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	625	156	33	1237	0.505	624	392	0.7	1.0	5.860	A
B	177	44	424	683	0.259	177	233	0.3	0.3	7.108	A
C	293	73	133	855	0.343	293	467	0.4	0.5	6.393	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	765	191	41	1232	0.621	763	480	1.0	1.6	7.638	A
B	217	54	518	621	0.349	216	285	0.3	0.5	8.866	A
C	359	90	162	836	0.429	358	572	0.5	0.7	7.517	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	765	191	41	1232	0.621	765	481	1.6	1.6	7.714	A
B	217	54	520	620	0.350	217	286	0.5	0.5	8.920	A
C	359	90	163	836	0.430	359	574	0.7	0.7	7.549	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	625	156	33	1237	0.505	627	394	1.6	1.0	5.930	A
B	177	44	426	681	0.260	178	235	0.5	0.4	7.161	A
C	293	73	134	855	0.343	294	470	0.7	0.5	6.429	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	523	131	28	1240	0.422	524	330	1.0	0.7	5.037	A
B	148	37	356	727	0.204	149	196	0.4	0.3	6.234	A
C	245	61	112	869	0.282	246	393	0.5	0.4	5.783	A

2030-Base+Comm, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 82% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2	Wentworth Dr / Putnoe Ln	Mini-roundabout		A, B, C	38.54	E

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2030-Base+Comm	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	770	100.000
B		ONE HOUR	✓	298	100.000
C		ONE HOUR	✓	677	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	11	309	450
	B	247	0	51
	C	578	99	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.71	10.68	2.5	B	707	1060
B	0.52	11.98	1.1	B	273	410
C	0.98	81.91	16.5	F	621	932

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	580	145	74	1209	0.479	576	622	0.0	0.9	5.697	A
B	224	56	345	734	0.306	223	305	0.0	0.4	7.015	A
C	510	127	193	816	0.624	503	375	0.0	1.6	11.453	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	692	173	88	1199	0.577	690	746	0.9	1.4	7.108	A
B	268	67	413	689	0.389	267	365	0.4	0.6	8.508	A
C	609	152	231	791	0.769	603	449	1.6	3.1	18.782	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	848	212	104	1188	0.713	844	888	1.4	2.4	10.389	B
B	328	82	505	630	0.521	326	442	0.6	1.1	11.790	B
C	745	186	283	758	0.983	709	549	3.1	12.2	52.945	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	848	212	107	1187	0.715	848	906	2.4	2.5	10.684	B
B	328	82	507	628	0.522	328	447	1.1	1.1	11.978	B
C	745	186	284	757	0.984	728	551	12.2	16.5	81.910	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	692	173	96	1193	0.580	696	796	2.5	1.4	7.361	A
B	268	67	417	687	0.390	270	376	1.1	0.6	8.657	A
C	609	152	233	790	0.770	659	453	16.5	3.8	35.273	E

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	580	145	76	1208	0.480	582	637	1.4	0.9	5.811	A
B	224	56	348	732	0.307	225	309	0.6	0.4	7.115	A
C	510	127	195	815	0.625	518	378	3.8	1.8	12.623	B

2030-Base+Comm, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 83% of the total flow for the roundabout for one or more time segments]
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
2	Wentworth Dr / Putnoe Ln	Mini-roundabout		A, B, C	10.24	B

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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	2030-Base+Comm	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	805	100.000
B		ONE HOUR	✓	228	100.000
C		ONE HOUR	✓	378	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	259	544
	B	169	0	59
	C	335	43	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

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.72	10.54	2.5	B	739	1108
B	0.44	11.37	0.8	B	209	314
C	0.51	8.92	1.0	A	347	520

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	606	152	32	1238	0.490	602	378	0.0	0.9	5.632	A
B	172	43	408	693	0.248	170	226	0.0	0.3	6.876	A
C	285	71	128	858	0.332	283	451	0.0	0.5	6.230	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	724	181	39	1233	0.587	722	454	0.9	1.4	7.015	A
B	205	51	490	640	0.320	204	271	0.3	0.5	8.254	A
C	340	85	153	842	0.404	339	541	0.5	0.7	7.149	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	886	222	47	1227	0.722	882	555	1.4	2.5	10.291	B
B	251	63	598	569	0.441	250	331	0.5	0.8	11.219	B
C	416	104	187	820	0.508	415	661	0.7	1.0	8.855	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	886	222	47	1227	0.722	886	557	2.5	2.5	10.540	B
B	251	63	601	568	0.442	251	332	0.8	0.8	11.367	B
C	416	104	188	819	0.508	416	664	1.0	1.0	8.925	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	724	181	39	1233	0.587	728	457	2.5	1.4	7.190	A
B	205	51	494	637	0.322	206	273	0.8	0.5	8.374	A
C	340	85	155	841	0.404	341	545	1.0	0.7	7.219	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	606	152	32	1237	0.490	608	382	1.4	1.0	5.738	A
B	172	43	412	690	0.249	172	228	0.5	0.3	6.960	A
C	285	71	129	858	0.332	285	455	0.7	0.5	6.301	A

2030-Base+Comm+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 83% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2	Wentworth Dr / Putnoe Ln	Mini-roundabout		A, B, C	42.67	E

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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
D5	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	820	100.000
B		ONE HOUR	✓	305	100.000
C		ONE HOUR	✓	682	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	11	337	472
	B	254	0	51
	C	583	99	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.76	12.71	3.1	B	752	1129
B	0.55	12.99	1.2	B	280	420
C	1.00	91.97	18.9	F	626	939

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	617	154	74	1209	0.511	613	631	0.0	1.0	6.047	A
B	230	57	361	723	0.317	228	326	0.0	0.5	7.238	A
C	513	128	198	813	0.631	507	391	0.0	1.7	11.699	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	737	184	88	1199	0.615	735	756	1.0	1.6	7.791	A
B	274	69	433	677	0.405	273	390	0.5	0.7	8.904	A
C	613	153	237	787	0.779	607	469	1.7	3.3	19.559	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	903	226	103	1189	0.759	897	897	1.6	3.0	12.191	B
B	336	84	528	615	0.546	334	472	0.7	1.2	12.722	B
C	751	188	290	753	0.997	710	572	3.3	13.5	57.154	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	903	226	106	1187	0.761	902	915	3.0	3.1	12.710	B
B	336	84	532	613	0.548	336	477	1.2	1.2	12.985	B
C	751	188	292	752	0.998	729	576	13.5	18.9	91.966	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	737	184	98	1193	0.618	743	815	3.1	1.7	8.168	A
B	274	69	438	674	0.407	276	403	1.2	0.7	9.098	A
C	613	153	240	786	0.780	672	474	18.9	4.1	42.109	E

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	617	154	76	1208	0.511	620	647	1.7	1.1	6.195	A
B	230	57	365	721	0.319	231	331	0.7	0.5	7.353	A
C	513	128	200	812	0.633	522	395	4.1	1.8	13.024	B

2030-Base+Comm+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 82% of the total flow for the roundabout for one or more time segments]
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
2	Wentworth Dr / Putnoe Ln	Mini-roundabout		A, B, C	11.01	B

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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
D6	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	822	100.000
B		ONE HOUR	✓	250	100.000
C		ONE HOUR	✓	395	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	269	551
	B	191	0	59
	C	352	43	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

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.74	11.15	2.7	B	754	1131
B	0.49	12.52	0.9	B	229	344
C	0.54	9.76	1.2	A	362	544

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	619	155	32	1238	0.500	615	407	0.0	1.0	5.747	A
B	188	47	414	689	0.273	187	233	0.0	0.4	7.143	A
C	297	74	144	848	0.351	295	456	0.0	0.5	6.490	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	739	185	39	1233	0.599	737	489	1.0	1.5	7.226	A
B	225	56	496	636	0.353	224	280	0.4	0.5	8.727	A
C	355	89	173	829	0.428	354	547	0.5	0.7	7.568	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	905	226	47	1227	0.737	900	597	1.5	2.7	10.842	B
B	275	69	606	565	0.488	274	342	0.5	0.9	12.309	B
C	435	109	211	804	0.541	433	668	0.7	1.2	9.653	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	905	226	47	1227	0.738	905	600	2.7	2.7	11.148	B
B	275	69	609	563	0.489	275	343	0.9	0.9	12.518	B
C	435	109	212	804	0.541	435	671	1.2	1.2	9.756	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	739	185	39	1233	0.599	744	493	2.7	1.5	7.433	A
B	225	56	500	633	0.355	226	282	0.9	0.6	8.885	A
C	355	89	175	828	0.429	357	552	1.2	0.8	7.662	A

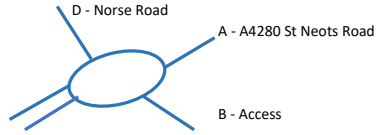
18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	619	155	32	1237	0.500	621	412	1.5	1.0	5.861	A
B	188	47	418	687	0.274	189	236	0.6	0.4	7.244	A
C	297	74	146	847	0.351	298	461	0.8	0.5	6.572	A

Appendix Q

J3 – A4280 St Neots Road / A4280 Goldington Road / Norse Road: Analysis – Input and Results

J3: Norse Rd / A4280 St Neots Road / A4280 Goldington Rd



C - A4280 Goldington Road

Background 2019

AM	A	B	C	D
A	0	2	664	707
B	4	0	2	3
C	570	2	0	179
D	672	1	323	0

Background 2019

PM	A	B	C	D
A	0	2	693	762
B	4	0	6	2
C	525	4	0	302
D	403	0	287	0

HGV%age

AM	A	B	C	D
A	0%	0%	1%	2%
B	0%	0%	0%	0%
C	2%	0%	0%	1%
D	2%	0%	3%	0%

Tempro 2019-2030

AM	A	B	C	D
A	1.1369	1.1369	1.1369	1.1369
B	1.1369	1.1369	1.1369	1.1369
C	1.1369	1.1369	1.1369	1.1369
D	1.1369	1.1369	1.1369	1.1369

Tempro 2019-2030

PM	A	B	C	D
A	1.1554	1.1554	1.1554	1.1554
B	1.1554	1.1554	1.1554	1.1554
C	1.1554	1.1554	1.1554	1.1554
D	1.1554	1.1554	1.1554	1.1554

HGV%age

PM	A	B	C	D
A	0%	0%	0%	1%
B	0%	0%	0%	0%
C	1%	0%	0%	1%
D	1%	0%	2%	0%

Background 2030

AM	A	B	C	D
A	0	2	754	803
B	5	0	2	3
C	648	2	0	204
D	764	1	367	0

Background 2030

PM	A	B	C	D
A	0	2	801	880
B	5	0	7	2
C	606	4	0	349
D	465	0	332	0

Committed Development

AM	A	B	C	D
A	0	0	0	0
B	0	0	0	0
C	0	0	0	0
D	2	0	0	0

Committed Development

PM	A	B	C	D
A	0	0	0	1
B	0	0	0	0
C	0	0	0	0
D	1	0	0	0

Background 2030 + Committed

AM	A	B	C	D
A	0	2	754	804
B	5	0	2	3
C	648	2	0	204
D	766	1	367	0

Background 2030 + Committed

PM	A	B	C	D
A	0	2	801	882
B	5	0	7	2
C	606	4	0	349
D	466	0	332	0

Development

AM	A	B	C	D
A	0	0	0	14
B	0	0	0	0
C	0	0	0	0
D	55	0	0	0

Development

PM	A	B	C	D
A	0	0	0	42
B	0	0	0	0
C	0	0	0	0
D	19	0	0	0

Background 2030 + Development

AM	A	B	C	D
A	0	2	754	818
B	5	0	2	3
C	648	2	0	204
D	821	1	367	0

Background 2030 + Development

PM	A	B	C	D
A	0	2	801	924
B	5	0	7	2
C	606	4	0	349
D	485	0	332	0

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J3-St Neots_Norse Rd-Jan 2020.j9
Path: C:\Users\Martin\OneDrive - Martin Andrews Consulting Ltd\Projects 200 - 299\248 - Salph End, Bedford\Reports\TA\Junction Analysis
Report generation date: 17/01/2020 13:52:40

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019-Base							
Arm A	8.8	22.12	0.91	C	14.0	33.51	0.95	D
Arm B	0.4	147.01	0.29	F	1.4	369.24	0.82	F
Arm C	0.9	3.79	0.46	A	1.1	4.31	0.52	A
Arm D	2.7	8.90	0.73	A	1.0	4.70	0.49	A
	2030-Base+Comm							
Arm A	54.9	105.29	1.05	F	108.4	187.89	1.12	F
Arm B	5.8	1255.58	9999999999.00	F	11.1	2419.04	9999999999.00	F
Arm C	1.2	4.48	0.53	A	1.5	5.32	0.61	A
Arm D	5.7	17.07	0.86	C	1.5	6.01	0.59	A
	2030-Base+Comm+Dev							
Arm A	60.6	114.17	1.06	F	131.1	244.04	1.14	F
Arm B	7.9	2301.53	9999999999.00	F	11.2	3807.63	9999999999.00	F
Arm C	1.2	4.51	0.54	A	1.6	5.42	0.61	A
Arm D	7.8	22.82	0.90	C	1.5	6.21	0.60	A

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.

File summary

File Description

Title	J3
Location	St Neots _ Putnoe
Site number	
Date	24/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	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	2019-Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019-Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030-Base+Comm	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030-Base+Comm	PM	ONE HOUR	16:45	18:15	15	✓
D5	2030-Base+Comm+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Base+Comm+Dev	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

2019-Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	St Neots _ Putnoe	Standard Roundabout		A, B, C, D	13.87	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	St Neots Rd	
B	Southern Access	
C	Goldington Rd	
D	Norse Rd	

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
A	3.79	7.03	30.8	14.0	60.8	25.0	
B	2.00	5.39	2.0	10.0	60.8	34.0	
C	7.82	7.91	0.1	14.7	60.8	34.0	
D	5.03	6.44	8.0	32.4	60.8	21.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.582	1876
B	0.367	717
C	0.648	2302
D	0.598	1887

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 segment length (min)	Run automatically
D1	2019-Base	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1373	100.000
B		ONE HOUR	✓	9	100.000
C		ONE HOUR	✓	751	100.000
D		ONE HOUR	✓	996	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	664	707
	B	4	0	2	3
	C	570	2	0	179
	D	672	1	323	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	2
	B	0	0	0	0
	C	2	0	0	1
	D	1	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.91	22.12	8.8	C	1260	1890
B	0.29	147.01	0.4	F	8	12
C	0.46	3.79	0.9	A	689	1034
D	0.73	8.90	2.7	A	914	1371

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1034	258	244	1734	0.596	1028	934	0.0	1.5	5.134	A
B	7	2	1268	252	0.027	7	4	0.0	0.0	14.688	B
C	565	141	534	1955	0.289	564	741	0.0	0.4	2.628	A
D	750	187	432	1629	0.460	746	666	0.0	0.9	4.143	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1234	309	292	1706	0.724	1230	1118	1.5	2.6	7.607	A
B	8	2	1518	160	0.051	8	4	0.0	0.1	23.665	C
C	675	169	640	1887	0.358	675	886	0.4	0.6	3.018	A
D	895	224	517	1578	0.567	894	797	0.9	1.3	5.347	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1512	378	357	1668	0.906	1490	1367	2.6	8.0	18.589	C
B	10	2	1842	41	0.241	9	5	0.1	0.3	109.815	F
C	827	207	774	1800	0.459	826	1077	0.6	0.9	3.754	A
D	1097	274	633	1509	0.727	1091	967	1.3	2.6	8.680	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1512	378	359	1667	0.907	1509	1372	8.0	8.8	22.120	C
B	10	2	1862	34	0.295	10	6	0.3	0.4	147.006	F
C	827	207	784	1794	0.461	827	1087	0.9	0.9	3.788	A
D	1097	274	634	1508	0.727	1096	977	2.6	2.7	8.900	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1234	309	295	1705	0.724	1258	1125	8.8	2.7	8.609	A
B	8	2	1549	149	0.054	9	5	0.4	0.1	26.019	D
C	675	169	655	1877	0.360	676	903	0.9	0.6	3.055	A
D	895	224	519	1577	0.568	901	812	2.7	1.4	5.468	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1034	258	246	1733	0.597	1039	940	2.7	1.5	5.301	A
B	7	2	1281	247	0.027	7	4	0.1	0.0	14.999	B
C	565	141	540	1952	0.290	566	748	0.6	0.4	2.646	A
D	750	187	434	1628	0.461	752	672	1.4	0.9	4.199	A

2019-Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	St Neots _ Putnoe	Standard Roundabout		A, B, C, D	20.09	C

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	2019-Base	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1457	100.000
B		ONE HOUR	✓	12	100.000
C		ONE HOUR	✓	831	100.000
D		ONE HOUR	✓	690	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	693	762
	B	4	0	6	2
	C	525	4	0	302
	D	403	0	287	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.95	33.51	14.0	D	1337	2005
B	0.82	369.24	1.4	F	11	17
C	0.52	4.31	1.1	A	763	1144
D	0.49	4.70	1.0	A	633	950

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1097	274	218	1749	0.627	1090	699	0.0	1.7	5.440	A
B	9	2	1304	239	0.038	9	4	0.0	0.0	15.665	C
C	626	156	575	1929	0.324	624	738	0.0	0.5	2.781	A
D	519	130	400	1648	0.315	518	798	0.0	0.5	3.224	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1310	327	261	1724	0.760	1304	837	1.7	3.1	8.506	A
B	11	3	1560	144	0.075	11	5	0.0	0.1	26.852	D
C	747	187	687	1856	0.402	746	883	0.5	0.7	3.274	A
D	620	155	479	1601	0.387	620	955	0.5	0.6	3.718	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1604	401	320	1690	0.949	1569	1024	3.1	11.9	24.757	C
B	13	3	1882	26	0.503	11	7	0.1	0.7	213.459	F
C	915	229	826	1767	0.518	913	1067	0.7	1.1	4.253	A
D	760	190	585	1537	0.494	758	1154	0.6	1.0	4.677	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1604	401	320	1690	0.949	1596	1025	11.9	14.0	33.509	D
B	13	3	1909	16	0.816	10	7	0.7	1.4	369.236	F
C	915	229	840	1758	0.521	915	1080	1.1	1.1	4.314	A
D	760	190	586	1537	0.494	760	1169	1.0	1.0	4.696	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1310	327	262	1723	0.760	1353	841	14.0	3.3	10.808	B
B	11	3	1609	126	0.085	16	5	1.4	0.1	33.878	D
C	747	187	715	1838	0.406	749	910	1.1	0.7	3.340	A
D	620	155	482	1599	0.388	622	982	1.0	0.6	3.739	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1097	274	219	1748	0.627	1103	703	3.3	1.7	5.663	A
B	9	2	1318	233	0.039	9	5	0.1	0.0	16.078	C
C	626	156	582	1925	0.325	626	746	0.7	0.5	2.801	A
D	519	130	402	1647	0.315	520	806	0.6	0.5	3.241	A

2030-Base+Comm, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	St Neots _ Putnoe	Standard Roundabout		A, B, C, D	56.21	F

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	2030-Base+Comm	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1560	100.000
B		ONE HOUR	✓	10	100.000
C		ONE HOUR	✓	854	100.000
D		ONE HOUR	✓	1134	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	754	804
	B	5	0	2	3
	C	648	2	0	204
	D	766	1	367	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	2
	B	0	0	0	0
	C	2	0	0	1
	D	1	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.05	105.29	54.9	F	1431	2147
B	9999999999.00	1255.58	5.8	F	9	14
C	0.53	4.48	1.2	A	784	1175
D	0.86	17.07	5.7	C	1041	1561

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1174	294	277	1715	0.685	1166	1064	0.0	2.2	6.558	A
B	8	2	1439	189	0.040	7	4	0.0	0.0	19.812	C
C	643	161	607	1909	0.337	641	840	0.0	0.5	2.884	A
D	854	213	491	1593	0.536	849	756	0.0	1.2	4.899	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1402	351	332	1683	0.833	1392	1273	2.2	4.7	12.151	B
B	9	2	1719	86	0.104	9	4	0.0	0.1	46.381	E
C	768	192	724	1832	0.419	767	1004	0.5	0.7	3.434	A
D	1019	255	588	1536	0.664	1016	903	1.2	2.0	7.020	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1718	429	403	1642	1.046	1605	1546	4.7	32.9	52.476	F
B	11	3	2002	0	9999999999.000	0	5	0.1	2.9	1255.576	F
C	940	235	827	1766	0.532	939	1175	0.7	1.1	4.419	A
D	1249	312	714	1460	0.855	1235	1051	2.0	5.4	15.433	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1718	429	407	1639	1.048	1629	1556	32.9	54.9	105.289	F
B	11	3	2031	0	9999999999.000	0	5	2.9	5.6	216.449	F
C	940	235	840	1758	0.535	940	1191	1.1	1.2	4.481	A
D	1249	312	716	1459	0.856	1247	1064	5.4	5.7	17.067	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1402	351	337	1680	0.835	1597	1286	54.9	6.2	61.532	F
B	9	2	1930	9	1.033	8	5	5.6	5.8	1001.220	F
C	768	192	830	1764	0.435	769	1108	1.2	0.8	3.686	A
D	1019	255	590	1535	0.664	1034	1009	5.7	2.1	7.528	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1174	294	280	1713	0.685	1190	1083	6.2	2.3	7.186	A
B	8	2	1466	179	0.042	31	4	5.8	0.0	28.144	D
C	643	161	638	1888	0.340	644	859	0.8	0.5	2.945	A
D	854	213	506	1585	0.539	857	776	2.1	1.2	5.064	A

2030-Base+Comm, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	St Neots _ Putnoe	Standard Roundabout		A, B, C, D	104.27	F

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	2030-Base+Comm	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1685	100.000
B		ONE HOUR	✓	14	100.000
C		ONE HOUR	✓	959	100.000
D		ONE HOUR	✓	798	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	801	882
	B	5	0	7	2
	C	606	4	0	349
	D	466	0	332	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.12	187.89	108.4	F	1546	2319
B	9999999999.00	2419.04	11.1	F	13	19
C	0.61	5.32	1.5	A	880	1320
D	0.59	6.01	1.5	A	732	1098

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1269	317	252	1729	0.734	1258	808	0.0	2.7	7.512	A
B	11	3	1505	165	0.064	10	4	0.0	0.1	23.284	C
C	722	180	664	1872	0.386	719	852	0.0	0.6	3.149	A
D	601	150	461	1611	0.373	598	922	0.0	0.6	3.593	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1515	379	302	1701	0.891	1497	967	2.7	7.0	16.543	C
B	13	3	1794	59	0.214	12	5	0.1	0.2	75.774	F
C	862	216	790	1790	0.482	861	1016	0.6	0.9	3.908	A
D	717	179	552	1557	0.461	716	1099	0.6	0.9	4.336	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1855	464	369	1661	1.117	1646	1177	7.0	59.3	81.897	F
B	15	4	2009	0	9999999999.000	0	6	0.2	4.1	2419.040	F
C	1056	264	862	1743	0.606	1053	1147	0.9	1.5	5.252	A
D	879	220	670	1487	0.591	876	1245	0.9	1.4	5.959	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1855	464	370	1661	1.117	1659	1180	59.3	108.4	187.886	F
B	15	4	2022	0	9999999999.000	0	6	4.1	8.0	1724.298	F
C	1056	264	868	1739	0.607	1056	1154	1.5	1.5	5.320	A
D	879	220	672	1486	0.591	879	1253	1.4	1.5	6.013	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1515	379	303	1700	0.891	1684	966	108.4	66.1	187.626	F
B	13	3	1982	0	9999999999.000	0	6	8.0	11.1	1010.724	F
C	862	216	882	1731	0.498	864	1100	1.5	1.0	4.207	A
D	717	179	550	1559	0.460	720	1196	1.5	0.9	4.364	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1269	317	253	1729	0.734	1521	828	66.1	3.0	42.225	E
B	11	3	1770	68	0.156	54	5	11.1	0.2	336.034	F
C	722	180	823	1768	0.408	723	1000	1.0	0.7	3.482	A
D	601	150	479	1601	0.375	602	1067	0.9	0.6	3.660	A

2030-Base+Comm+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	St Neots _ Putnoe	Standard Roundabout		A, B, C, D	64.44	F

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
D5	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1573	100.000
B		ONE HOUR	✓	10	100.000
C		ONE HOUR	✓	854	100.000
D		ONE HOUR	✓	1187	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	754	817
	B	5	0	2	3
	C	648	2	0	204
	D	819	1	367	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	2
	B	0	0	0	0
	C	2	0	0	1
	D	1	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.06	114.17	60.6	F	1443	2165
B	9999999999.00	2301.53	7.9	F	9	14
C	0.54	4.51	1.2	A	784	1175
D	0.90	22.82	7.8	C	1089	1634

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1184	296	277	1715	0.691	1175	1103	0.0	2.2	6.671	A
B	8	2	1449	185	0.041	7	4	0.0	0.0	20.197	C
C	643	161	616	1902	0.338	641	840	0.0	0.5	2.898	A
D	894	223	491	1593	0.561	888	766	0.0	1.3	5.167	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1414	354	331	1683	0.840	1403	1320	2.2	4.9	12.588	B
B	9	2	1730	82	0.110	9	4	0.0	0.1	48.894	E
C	768	192	736	1825	0.421	767	1003	0.5	0.7	3.458	A
D	1067	267	588	1536	0.695	1063	915	1.3	2.3	7.699	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1732	433	401	1643	1.054	1609	1600	4.9	35.5	55.523	F
B	11	3	2005	0	9999999999.000	0	5	0.1	2.9	2301.531	F
C	940	235	836	1760	0.534	939	1169	0.7	1.2	4.450	A
D	1307	327	714	1460	0.895	1287	1060	2.3	7.2	19.335	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1732	433	407	1639	1.056	1632	1613	35.5	60.6	114.166	F
B	11	3	2033	0	9999999999.000	0	5	2.9	5.6	1458.439	F
C	940	235	847	1753	0.536	940	1185	1.2	1.2	4.508	A
D	1307	327	716	1459	0.896	1304	1072	7.2	7.8	22.817	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1414	354	339	1679	0.842	1628	1335	60.6	7.1	74.475	F
B	9	2	1963	0	9999999999.000	0	5	5.6	7.9	610.126	F
C	768	192	846	1754	0.438	769	1117	1.2	0.8	3.728	A
D	1067	267	585	1537	0.694	1089	1029	7.8	2.4	8.560	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1184	296	280	1713	0.691	1203	1128	7.1	2.3	7.424	A
B	8	2	1479	174	0.043	39	4	7.9	0.0	33.183	D
C	643	161	656	1877	0.343	644	862	0.8	0.5	2.976	A
D	894	223	510	1583	0.565	898	791	2.4	1.3	5.388	A

2030-Base+Comm+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm A - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
3	St Neots _ Putnoe	Standard Roundabout		A, B, C, D	137.92	F

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
D6	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1726	100.000
B		ONE HOUR	✓	14	100.000
C		ONE HOUR	✓	959	100.000
D		ONE HOUR	✓	816	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	801	923
	B	5	0	7	2
	C	606	4	0	349
	D	484	0	332	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.14	244.04	131.1	F	1584	2376
B	9999999999.00	3807.63	11.2	F	13	19
C	0.61	5.42	1.6	A	880	1320
D	0.60	6.21	1.5	A	749	1123

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1299	325	252	1729	0.751	1288	821	0.0	2.9	7.995	A
B	11	3	1535	154	0.069	10	4	0.0	0.1	25.055	D
C	722	180	694	1852	0.390	719	852	0.0	0.6	3.203	A
D	614	154	461	1611	0.381	612	952	0.0	0.6	3.643	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1552	388	302	1701	0.912	1530	983	2.9	8.4	19.094	C
B	13	3	1826	47	0.268	12	5	0.1	0.3	99.665	F
C	862	216	824	1768	0.488	861	1014	0.6	1.0	4.002	A
D	734	183	552	1557	0.471	732	1133	0.6	0.9	4.420	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1900	475	369	1661	1.144	1651	1197	8.4	70.9	95.448	F
B	15	4	2013	0	9999999999.000	0	6	0.3	4.2	3265.560	F
C	1056	264	883	1730	0.610	1053	1131	1.0	1.6	5.356	A
D	898	225	670	1487	0.604	896	1266	0.9	1.5	6.155	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1900	475	370	1661	1.144	1660	1200	70.9	131.1	224.141	F
B	15	4	2023	0	9999999999.000	0	6	4.2	8.0	3571.213	F
C	1056	264	887	1727	0.612	1056	1136	1.6	1.6	5.419	A
D	898	225	672	1486	0.605	898	1272	1.5	1.5	6.215	A

17:45 - 18:00

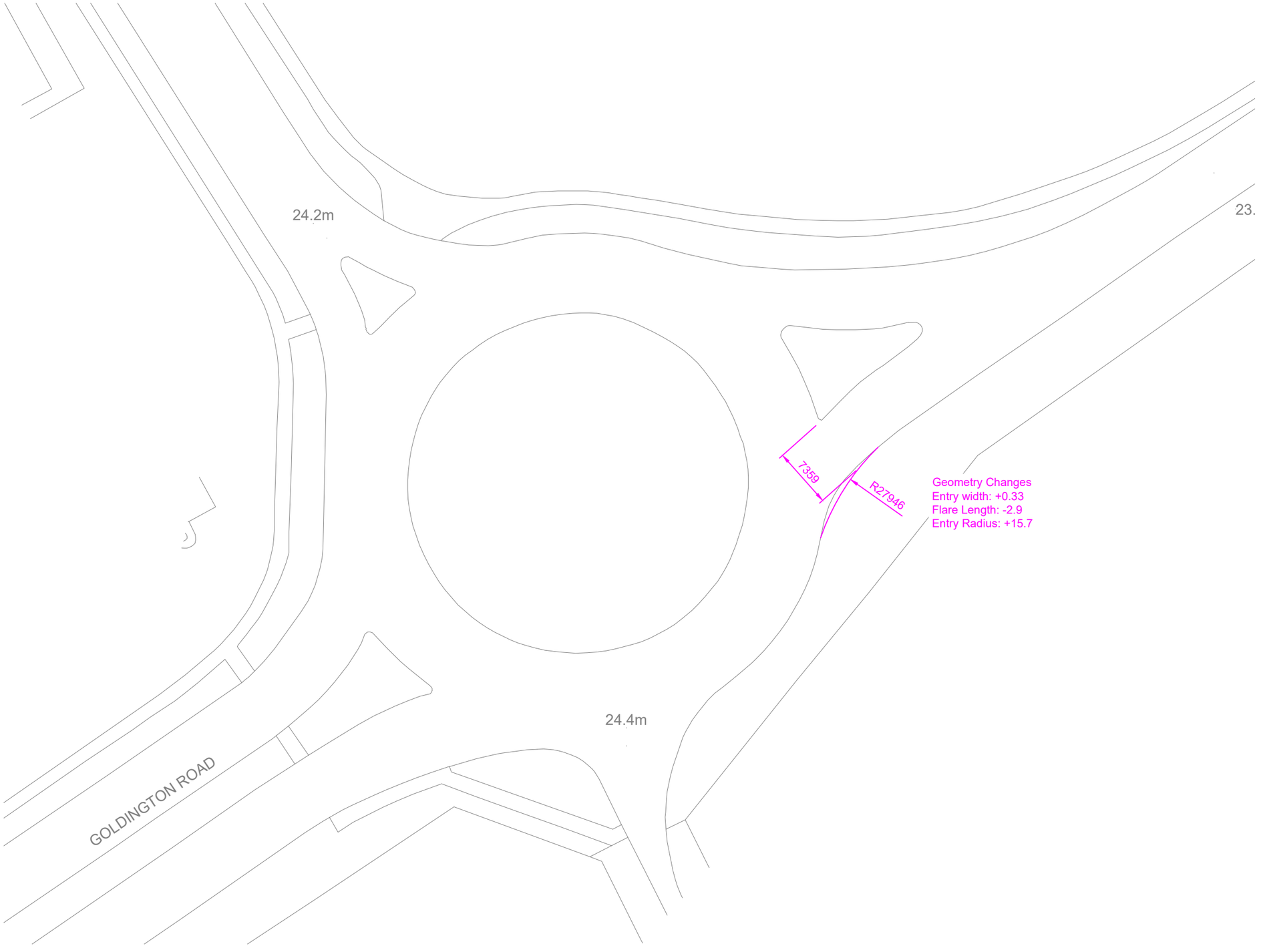
Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1552	388	303	1700	0.913	1687	983	131.1	97.3	244.042	F
B	13	3	1984	0	9999999999.000	0	6	8.0	11.2	3766.247	F
C	862	216	902	1717	0.502	864	1082	1.6	1.0	4.274	A
D	734	183	550	1559	0.471	736	1217	1.5	0.9	4.451	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1299	325	253	1729	0.752	1674	826	97.3	3.7	102.232	F
B	11	3	1922	12	0.916	11	5	11.2	11.2	3807.628	F
C	722	180	900	1718	0.420	723	1032	1.0	0.7	3.656	A
D	614	154	464	1610	0.382	615	1160	0.9	0.6	3.676	A

Appendix R

J3 – Nil Detriment Improvements
MAC drawing no. 248-TA20



Notes

1. Based on Ordnance Survey mapping. ©Crown Copyright and database rights 2019 OS 100019980

Key

Nil Detriment Improvements

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Martin Andrews Consulting Ltd

- Transport Assessments
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes	Project: Land North of Hookhams Lane, Salph End	
Title: J3 - Nil Detriment Improvements		Date: 25/07/19
		Drw: MJA
		Chk: MJA
Drawing No: 248-TA20	Revision: -	Scale: 1:500
		Size: A3

Appendix S

J3 – Nil Detriment: Analysis – Input and Results

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J3-St Neots_Norse Rd-Jan 2020-Nil Det.j9
Path: C:\Users\Martin\OneDrive - Martin Andrews Consulting Ltd\Projects 200 - 299\248 - Salph End, Bedford\Reports\TA\Junction Analysis
Report generation date: 17/01/2020 14:00:10

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2030-Base+Comm+Dev							
Arm A	29.2	60.34	1.00	F	85.5	144.00	1.08	F
Arm B	5.6	1582.22	9999999999.00	F	11.2	2358.29	9999999999.00	F
Arm C	1.2	4.63	0.54	A	1.7	5.68	0.62	A
Arm D	7.8	22.82	0.90	C	1.5	6.21	0.60	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	J3
Location	St Neots _ Putnoe
Site number	
Date	24/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	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
D5	2030-Base+Comm+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Base+Comm+Dev	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

2030-Base+Comm+Dev, 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
3	St Neots _ Putnoe	Standard Roundabout		A, B, C, D	39.12	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	St Neots Rd	
B	Southern Access	
C	Goldington Rd	
D	Norse Rd	

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
A	3.79	7.36	27.9	29.7	60.8	25.0	
B	2.00	5.39	2.0	10.0	60.8	34.0	
C	7.82	7.91	0.1	14.7	60.8	34.0	
D	5.03	6.44	8.0	32.4	60.8	21.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.609	1980
B	0.367	717
C	0.648	2302
D	0.598	1887

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 segment length (min)	Run automatically
D5	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1573	100.000
B		ONE HOUR	✓	10	100.000
C		ONE HOUR	✓	854	100.000
D		ONE HOUR	✓	1187	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	754	817
	B	5	0	2	3
	C	648	2	0	204
	D	819	1	367	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	2
	B	0	0	0	0
	C	2	0	0	1
	D	1	0	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.00	60.34	29.2	F	1443	2165
B	9999999999.00	1582.22	5.6	F	9	14
C	0.54	4.63	1.2	A	784	1175
D	0.90	22.82	7.8	C	1089	1634

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1184	296	277	1811	0.654	1177	1103	0.0	1.9	5.696	A
B	8	2	1450	185	0.041	7	4	0.0	0.0	20.252	C
C	643	161	617	1902	0.338	641	840	0.0	0.5	2.900	A
D	894	223	491	1593	0.561	888	766	0.0	1.3	5.167	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1414	354	331	1778	0.795	1407	1320	1.9	3.8	9.653	A
B	9	2	1734	81	0.111	9	4	0.0	0.1	49.711	E
C	768	192	738	1824	0.421	767	1005	0.5	0.7	3.462	A
D	1067	267	588	1536	0.695	1063	916	1.3	2.3	7.699	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1732	433	401	1735	0.998	1665	1600	3.8	20.5	35.647	E
B	11	3	2061	0	9999999999.000	0	5	0.1	2.9	1582.222	F
C	940	235	865	1741	0.540	938	1196	0.7	1.2	4.552	A
D	1307	327	714	1460	0.895	1287	1089	2.3	7.2	19.332	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1732	433	407	1732	1.000	1697	1613	20.5	29.2	60.342	F
B	11	3	2098	0	9999999999.000	0	5	2.9	5.6	-8466.800	?
C	940	235	882	1731	0.543	940	1217	1.2	1.2	4.634	A
D	1307	327	716	1459	0.896	1304	1106	7.2	7.8	22.815	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1414	354	339	1773	0.798	1514	1350	29.2	4.3	19.005	C
B	9	2	1848	39	0.232	30	5	5.6	0.5	381.155	F
C	768	192	810	1777	0.432	769	1068	1.2	0.8	3.640	A
D	1067	267	600	1528	0.698	1089	979	7.8	2.4	8.734	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1184	296	280	1809	0.655	1194	1113	4.3	2.0	6.022	A
B	8	2	1470	178	0.042	9	4	0.5	0.0	21.546	C
C	643	161	627	1895	0.339	644	852	0.8	0.5	2.931	A
D	894	223	495	1591	0.562	898	776	2.4	1.3	5.324	A

2030-Base+Comm+Dev, 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
3	St Neots _ Putnoe	Standard Roundabout		A, B, C, D	83.09	F

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
D6	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	1726	100.000
B		ONE HOUR	✓	14	100.000
C		ONE HOUR	✓	959	100.000
D		ONE HOUR	✓	816	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	2	801	923
	B	5	0	7	2
	C	606	4	0	349
	D	484	0	332	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	1.08	144.00	85.5	F	1584	2376
B	9999999999.00	2358.29	11.2	F	13	19
C	0.62	5.68	1.7	A	880	1320
D	0.60	6.21	1.5	A	749	1123

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1299	325	252	1826	0.712	1290	821	0.0	2.4	6.634	A
B	11	3	1537	153	0.069	10	4	0.0	0.1	25.176	D
C	722	180	695	1851	0.390	719	853	0.0	0.6	3.205	A
D	614	154	461	1611	0.381	612	953	0.0	0.6	3.643	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1552	388	302	1796	0.864	1538	983	2.4	5.8	13.389	B
B	13	3	1834	44	0.288	11	5	0.1	0.3	108.621	F
C	862	216	828	1765	0.488	861	1018	0.6	1.0	4.015	A
D	734	183	552	1557	0.471	732	1138	0.6	0.9	4.420	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1900	475	369	1755	1.083	1732	1197	5.8	48.0	65.396	F
B	15	4	2094	0	9999999999.000	0	6	0.3	4.2	2358.287	F
C	1056	264	926	1702	0.620	1053	1168	1.0	1.6	5.582	A
D	898	225	670	1487	0.604	896	1309	0.9	1.5	6.154	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1900	475	370	1754	1.083	1750	1200	48.0	85.5	143.998	F
B	15	4	2114	0	9999999999.000	0	6	4.2	8.1	1585.795	F
C	1056	264	936	1695	0.623	1056	1178	1.6	1.7	5.683	A
D	898	225	672	1486	0.605	898	1320	1.5	1.5	6.215	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1552	388	303	1795	0.864	1774	983	85.5	29.8	119.942	F
B	13	3	2072	0	9999999999.000	0	6	8.1	11.2	801.604	F
C	862	216	949	1687	0.511	864	1123	1.7	1.1	4.434	A
D	734	183	550	1558	0.471	736	1263	1.5	0.9	4.453	A

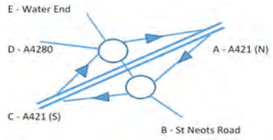
18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	1299	325	253	1825	0.712	1409	842	29.8	2.6	11.162	B
B	11	3	1657	109	0.097	55	5	11.2	0.1	120.659	F
C	722	180	781	1796	0.402	724	932	1.1	0.7	3.397	A
D	614	154	480	1600	0.384	615	1024	0.9	0.6	3.709	A

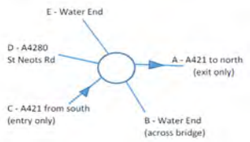
Appendix T

J4 – A421 / St Neots Road / A4280: Analysis – Input and Results

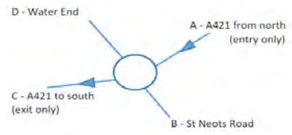
J4: A421 (N) / St Neots Rd / A421 (S) / A4280



J4: Roundabout 1 - North



J4: Roundabout 2 - South



Roundabout 1

Background 2019

AM	A	B	C	D	E
A	0	0	0	0	0
B	1	0	0	590	34
C	0	206	83	593	53
D	366	837	0	0	23
E	10	120	0	42	0

Background 2019

PM	A	B	C	D	E
A	0	0	0	0	0
B	4	0	0	624	31
C	0	390	112	756	95
D	109	785	0	0	15
E	5	54	0	9	0

Tempro 2019-2030

AM	A	B	C	D	E
A	1.1369	1.1369	1.1369	1.1369	1.1369
B	1.1369	1.1369	1.1369	1.1369	1.1369
C	1.1369	1.1369	1.1369	1.1369	1.1369
D	1.1369	1.1369	1.1369	1.1369	1.1369
E	1.1369	1.1369	1.1369	1.1369	1.1369

Tempro 2019-2030

PM	A	B	C	D	E
A	1.1554	1.1554	1.1554	1.1554	1.1554
B	1.1554	1.1554	1.1554	1.1554	1.1554
C	1.1554	1.1554	1.1554	1.1554	1.1554
D	1.1554	1.1554	1.1554	1.1554	1.1554
E	1.1554	1.1554	1.1554	1.1554	1.1554

Background 2030

AM	A	B	C	D	E
A	0	0	0	0	0
B	1	0	0	671	39
B	0	234	94	674	60
D	417	951	0	0	26
E	11	137	0	47	0

Background 2030

PM	A	B	C	D	E
A	0	0	0	0	0
B	5	0	0	721	36
C	0	450	129	874	110
D	126	907	0	0	17
E	6	62	0	10	0

Committed Development

AM	A	B	C	D	E
A	0	0	0	0	0
B	0	0	0	0	0
C	0	0	0	0	0
D	1	1	0	0	0
E	0	0	0	0	0

Committed Development

PM	A	B	C	D	E
A	0	0	0	0	0
B	0	0	0	1	0
C	0	0	0	1	0
D	0	0	0	0	0
E	0	0	0	0	0

Background 2030 + Committed

AM	A	B	C	D	E
A	0	0	0	0	0
B	1	0	0	671	39
C	1	236	94	674	60
D	417	951	0	0	26
E	11	137	0	47	0

Background 2030 + Committed

PM	A	B	C	D	E
A	0	0	0	1	0
B	5	0	0	721	36
C	0	450	129	874	110
D	126	907	0	0	17
E	6	62	0	10	0

Development

AM	A	B	C	D	E
A	0	0	0	0	0
B	0	0	0	7	7
C	0	0	0	7	7
D	18	38	0	0	0
E	18	38	0	0	0

Development

PM	A	B	C	D	E
A	0	0	0	0	0
B	0	0	0	20	20
C	0	0	0	22	22
D	6	13	0	0	0
E	6	13	0	0	0

Background 2030 + Development

AM	A	B	C	D	E
A	0	0	0	0	0
B	1	0	0	678	45
C	1	236	94	681	67
D	434	989	0	0	26
E	29	174	0	47	0

Background 2030 + Development

PM	A	B	C	D	E
A	0	0	0	1	0
B	5	0	0	741	56
C	0	450	129	896	132
D	132	919	0	0	17
E	12	75	0	10	0

Roundabout 2

Background 2019

PM	A	B	C	D
A	0	1	0	353
B	0	0	220	272
C	0	0	0	0
D	0	343	820	0

Background 2019

PM	A	B	C	D
A	0	3	0	409
B	0	0	134	250
C	0	0	0	0
D	0	658	570	0

Tempro 2019-2030

AM	A	B	C	D
A	1.1369	1.1369	1.1369	1.1369
B	1.1369	1.1369	1.1369	1.1369
C	1.1369	1.1369	1.1369	1.1369
D	1.1369	1.1369	1.1369	1.1369

Tempro 2019-2030

PM	A	B	C	D
A	1.1554	1.1554	1.1554	1.1554
B	1.1554	1.1554	1.1554	1.1554
C	1.1554	1.1554	1.1554	1.1554
D	1.1554	1.1554	1.1554	1.1554

Background 2030

AM	A	B	C	D
A	0	1	0	401
B	0	0	250	310
B	0	0	0	0
D	0	390	932	0
E	0	0	0	0

Background 2030

PM	A	B	C	D
A	0	3	0	473
B	0	0	155	288
C	0	0	0	0
D	0	760	659	0
E	0	0	0	0

Committed Development

AM	A	B	C	D
A	0	0	0	0
B	0	0	0	0
C	0	0	0	0
D	0	0	1	0

Committed Development

PM	A	B	C	D
A	0	0	0	0
B	0	0	0	0
C	0	0	0	0
D	0	0	1	0

Background 2030 + Committed

AM	A	B	C	D
A	0	1	0	401
B	0	0	250	310
C	0	0	1	0
D	0	390	932	0

Background 2030 + Committed

PM	A	B	C	D
A	0	3	0	473
B	0	0	155	288
C	0	0	1	0
D	0	760	659	0

Development

AM	A	B	C	D
A	0	0	0	4
B	0	0	0	2
C	0	0	0	0
D	0	9	29	0

Development

PM	A	B	C	D
A	0	0	0	13
B	0	0	0	7
C	0	0	0	0
D	0	3	10	0

Background 2030 + Development

AM	A	B	C	D
A	0	1	0	406
B	0	0	250	312
C	0	0	1	0
D	0	399	961	0

Background 2030 + Development

PM	A	B	C	D
A	0	3	0	486
B	0	0	155	295
C	0	0	1	0
D	0	763	668	0

HGV %age

AM	A	B	C	D	E
A	0%	0%	0%	0%	0%
B	0%	0%	0%	1%	0%
C	0%	0%	0%	1%	0%
D	2%	2%	0%	0%	0%
E	0%	1%	0%	3%	0%

HGV %age

PM	A	B	C	D
A	0%	0%	0%	3%
B	0%	0%	1%	2%
C	0%	0%	0%	0%
D	0%	3%	1%	0%

HGV %age

PM	A	B	C	D	E
A	0%	0%	0%	0%	0%
B	0%	0%	0%	1%	0%
C	0%	0%	0%	1%	0%
D	0%	1%	0%	0%	0%
E	0%	2%	0%	0%	0%

HGV %age

PM	A	B	C	D
A	0%	0%	0%	1%
B	0%	0%	0%	0%
C	0%	0%	0%	0%
D	0%	1%	1%	0%

0

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J4 A421 (N) _ St Neots Rd _ A421 (S) _ A4280-Jan 2020.j9
Path: C:\Users\Martin\OneDrive - Martin Andrews Consulting Ltd\Projects 200 - 299\248 - Salph End, Bedford\Reports\TA\Junction Analysis
Report generation date: 17/01/2020 15:22:31

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019-Base							
Junction J4-1 - Arm 1-B	0.4	2.06	0.28	A	0.5	2.24	0.34	A
Junction J4-1 - Arm 1-C	0.6	2.12	0.38	A	1.9	3.91	0.65	A
Junction J4-1 - Arm 1-D	2.7	7.28	0.73	A	2.4	7.63	0.71	A
Junction J4-1 - Arm 1-E	0.3	6.59	0.26	A	0.1	6.20	0.13	A
Junction J4-2 - Arm 2-A	0.3	3.22	0.25	A	0.4	3.52	0.31	A
Junction J4-2 - Arm 2-B	1.0	6.90	0.51	A	0.5	4.59	0.35	A
Junction J4-2 - Arm 2-D	1.1	3.09	0.52	A	1.2	3.25	0.55	A
	2030-Base+Comm							
Junction J4-1 - Arm 1-B	0.5	2.19	0.32	A	0.5	2.24	0.34	A
Junction J4-1 - Arm 1-C	0.8	2.44	0.44	A	1.9	3.91	0.65	A
Junction J4-1 - Arm 1-D	5.3	12.81	0.84	B	2.4	7.63	0.71	A
Junction J4-1 - Arm 1-E	0.5	8.84	0.34	A	0.1	6.20	0.13	A
Junction J4-2 - Arm 2-A	0.5	3.85	0.31	A	0.7	4.55	0.40	A
Junction J4-2 - Arm 2-B	1.8	10.82	0.65	B	0.8	5.91	0.44	A
Junction J4-2 - Arm 2-D	1.5	3.62	0.59	A	1.7	4.01	0.63	A
	2030-Base+Comm+Dev							
Junction J4-1 - Arm 1-B	0.5	2.21	0.33	A	0.6	2.29	0.36	A
Junction J4-1 - Arm 1-C	0.8	2.48	0.45	A	2.1	4.28	0.68	A
Junction J4-1 - Arm 1-D	7.0	16.52	0.88	C	2.7	8.45	0.73	A
Junction J4-1 - Arm 1-E	0.8	11.23	0.46	B	0.2	6.54	0.16	A
Junction J4-2 - Arm 2-A	0.5	4.00	0.33	A	0.7	4.69	0.41	A
Junction J4-2 - Arm 2-B	2.0	11.72	0.67	B	0.8	6.14	0.46	A
Junction J4-2 - Arm 2-D	1.6	3.78	0.61	A	1.8	4.07	0.64	A

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.

File summary

File Description

Title	
Location	
Site number	
Date	24/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	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	2019-Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019-Base	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030-Base+Comm	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030-Base+Comm	PM	ONE HOUR	16:45	18:15	15	✓
D5	2030-Base+Comm+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Base+Comm+Dev	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

2019-Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction J4-1 - Arm 1-C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction J4-1 - Arm 1-D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J4-1	North roundabout	Standard Roundabout		1-A, 1-B, 1-C, 1-D, 1-E	4.50	A
J4-2	South roundabout	Standard Roundabout		2-A, 2-B, 2-C, 2-D	4.04	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description
J4-1	1-A	A421 - Exit Only	
	1-B	Water End - Bridge	
	1-C	A421 (S)	
	1-D	A4280 St Neots Road	
	1-E	Water End	
J4-2	2-A	A421 (N)	
	2-B	St Neots Road	
	2-C	A421 (S) Exit only	
	2-D	Water End	

Roundabout Geometry

Junction	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
J4-1	1-A							✓
	1-B	7.28	8.84	8.8	30.0	68.8	30.0	
	1-C	7.53	11.85	30.3	20.4	68.8	19.0	
	1-D	3.85	8.01	33.5	23.2	68.8	29.0	
	1-E	3.38	6.52	9.1	40.3	68.8	18.0	
J4-2	2-A	7.05	8.64	9.7	39.3	49.9	27.0	
	2-B	3.67	9.05	15.1	40.2	49.9	31.0	
	2-C							✓
	2-D	7.31	8.12	7.2	37.6	49.9	28.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
J4-1	1-A		
	1-B	0.650	2548
	1-C	0.775	3305
	1-D	0.575	2090
	1-E	0.507	1574
J4-2	2-A	0.777	2537
	2-B	0.655	1913
	2-C		
	2-D	0.763	2467

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 segment length (min)	Run automatically
D1	2019-Base	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
J4-1	1-A					
	1-B		ONE HOUR	✓	625	100.000
	1-C		ONE HOUR	✓	935	100.000
	1-D		ONE HOUR	✓	1226	100.000
	1-E		ONE HOUR	✓	172	100.000
J4-2	2-A		ONE HOUR	✓	354	100.000
	2-B		ONE HOUR	✓	492	100.000
	2-C					
	2-D		ONE HOUR	✓	1163	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	1	0	0	590	34
	1-C	0	206	83	593	53
	1-D	366	837	0	0	23
	1-E	10	120	0	42	0

Demand (PCU/hr)

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	1	0	353
	2-B	0	0	220	272
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	343	820	0

Vehicle Mix

Junction J4-1

Heavy Vehicle Percentages

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	0	0	0	2	0
	1-C	0	0	0	1	0
	1-D	1	1	0	0	8
	1-E	0	1	0	0	0

Junction J4-2

Heavy Vehicle Percentages

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	0	0	3
	2-B	0	0	1	1
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	3	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
J4-1	1-A						
	1-B	0.28	2.06	0.4	A	574	860
	1-C	0.38	2.12	0.6	A	858	1287
	1-D	0.73	7.28	2.7	A	1125	1687
	1-E	0.26	6.59	0.3	A	158	237
J4-2	2-A	0.25	3.22	0.3	A	325	487
	2-B	0.51	6.90	1.0	A	451	677
	2-C						
	2-D	0.52	3.09	1.1	A	1067	1601

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			966				283				
	1-B	471	118	94	2487	0.189	470	872	0.0	0.2	1.811	A
	1-C	704	176	501	2916	0.241	703	62	0.0	0.3	1.634	A
	1-D	923	231	283	1927	0.479	919	920	0.0	0.9	3.608	A
	1-E	129	32	1120	1006	0.129	129	83	0.0	0.1	4.140	A
J4-2	2-A	267	67	873	1858	0.143	266	0	0.0	0.2	2.327	A
	2-B	370	93	881	1336	0.277	369	258	0.0	0.4	3.742	A
	2-C			469				781				
	2-D	876	219	0	2467	0.355	873	469	0.0	0.6	2.295	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1156				338				
	1-B	562	140	112	2475	0.227	562	1044	0.2	0.3	1.908	A
	1-C	841	210	599	2840	0.296	840	75	0.3	0.4	1.808	A
	1-D	1102	276	339	1895	0.582	1100	1101	0.9	1.4	4.581	A
	1-E	155	39	1340	895	0.173	154	99	0.1	0.2	4.908	A
J4-2	2-A	318	80	1045	1725	0.185	318	0	0.2	0.2	2.635	A
	2-B	442	111	1054	1223	0.362	442	309	0.4	0.6	4.639	A
	2-C			561				934				
	2-D	1046	261	0	2467	0.424	1045	561	0.6	0.7	2.573	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1414				414				
	1-B	688	172	137	2459	0.280	688	1277	0.3	0.4	2.063	A
	1-C	1029	257	734	2736	0.376	1029	91	0.4	0.6	2.118	A
	1-D	1350	337	415	1851	0.729	1345	1348	1.4	2.7	7.136	A
	1-E	189	47	1639	743	0.255	189	121	0.2	0.3	6.549	A
J4-2	2-A	390	97	1279	1543	0.253	389	0	0.2	0.3	3.212	A
	2-B	542	135	1290	1068	0.507	540	378	0.6	1.0	6.846	A
	2-C			687				1143				
	2-D	1280	320	0	2467	0.519	1279	687	0.7	1.1	3.080	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1418				415				
	1-B	688	172	138	2459	0.280	688	1280	0.4	0.4	2.063	A
	1-C	1029	257	734	2735	0.376	1029	91	0.6	0.6	2.120	A
	1-D	1350	337	415	1851	0.729	1350	1349	2.7	2.7	7.275	A
	1-E	189	47	1644	741	0.256	189	121	0.3	0.3	6.589	A
J4-2	2-A	390	97	1280	1542	0.253	390	0	0.3	0.3	3.218	A
	2-B	542	135	1291	1067	0.508	542	379	1.0	1.0	6.904	A
	2-C			688				1145				
	2-D	1280	320	0	2467	0.519	1280	688	1.1	1.1	3.085	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1162				340				
	1-B	562	140	113	2475	0.227	562	1049	0.4	0.3	1.909	A
	1-C	841	210	600	2840	0.296	841	75	0.6	0.4	1.810	A
	1-D	1102	276	339	1895	0.582	1107	1102	2.7	1.4	4.663	A
	1-E	155	39	1347	891	0.174	155	99	0.3	0.2	4.942	A
J4-2	2-A	318	80	1047	1723	0.185	319	0	0.3	0.2	2.640	A
	2-B	442	111	1056	1221	0.362	444	310	1.0	0.6	4.676	A
	2-C			563				937				
	2-D	1046	261	0	2467	0.424	1047	563	1.1	0.8	2.582	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			971				284				
	1-B	471	118	94	2487	0.189	471	877	0.3	0.2	1.811	A
	1-C	704	176	502	2915	0.241	704	63	0.4	0.3	1.638	A
	1-D	923	231	284	1926	0.479	925	923	1.4	0.9	3.652	A
	1-E	129	32	1126	1003	0.129	130	83	0.2	0.2	4.161	A
J4-2	2-A	267	67	876	1856	0.144	267	0	0.2	0.2	2.335	A
	2-B	370	93	884	1334	0.278	371	259	0.6	0.4	3.771	A
	2-C			471				784				
	2-D	876	219	0	2467	0.355	876	471	0.8	0.6	2.304	A

2019-Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction J4-1 - Arm 1-C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction J4-1 - Arm 1-D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J4-1	North roundabout	Standard Roundabout		1-A, 1-B, 1-C, 1-D, 1-E	4.72	A
J4-2	South roundabout	Standard Roundabout		2-A, 2-B, 2-C, 2-D	3.56	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	2019-Base	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
J4-1	1-A					
	1-B		ONE HOUR	✓	762	100.000
	1-C		ONE HOUR	✓	1563	100.000
	1-D		ONE HOUR	✓	1050	100.000
	1-E		ONE HOUR	✓	78	100.000
J4-2	2-A		ONE HOUR	✓	412	100.000
	2-B		ONE HOUR	✓	384	100.000
	2-C					
	2-D		ONE HOUR	✓	1228	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	5	0	0	721	36
	1-C	0	450	129	874	110
	1-D	126	907	0	0	17
	1-E	6	62	0	10	0

Demand (PCU/hr)

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	3	0	409
	2-B	0	0	134	250
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	658	570	0

Vehicle Mix

Heavy Vehicle Percentages

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	0	0	0	0	0
	1-C	0	0	0	1	0
	1-D	0	0	0	1	1
	1-E	2	1	0	0	0

Heavy Vehicle Percentages

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	0	0	1
	2-B	0	0	0	0
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
J4-1	1-A						
	1-B	0.34	2.24	0.5	A	699	1049
	1-C	0.65	3.91	1.9	A	1434	2151
	1-D	0.71	7.63	2.4	A	963	1445
	1-E	0.13	6.20	0.1	A	72	107
J4-2	2-A	0.31	3.52	0.4	A	378	567
	2-B	0.35	4.59	0.5	A	352	529
	2-C						
	2-D	0.55	3.25	1.2	A	1127	1690

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1169				103				
	1-B	574	143	104	2480	0.231	572	1065	0.0	0.3	1.886	A
	1-C	1177	294	580	2855	0.412	1174	97	0.0	0.7	2.146	A
	1-D	790	198	548	1774	0.446	787	1206	0.0	0.8	3.636	A
	1-E	59	15	1213	959	0.061	58	122	0.0	0.1	4.035	A
J4-2	2-A	310	78	922	1820	0.170	309	0	0.0	0.2	2.405	A
	2-B	289	72	735	1431	0.202	288	496	0.0	0.3	3.145	A
	2-C			495				529				
	2-D	925	231	0	2467	0.375	922	495	0.0	0.6	2.345	A

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1399				123				
	1-B	685	171	125	2467	0.278	685	1274	0.3	0.4	2.019	A
	1-C	1405	351	694	2767	0.508	1404	116	0.7	1.0	2.649	A
	1-D	944	236	656	1712	0.551	942	1442	0.8	1.2	4.664	A
	1-E	70	18	1452	838	0.084	70	146	0.1	0.1	4.732	A
J4-2	2-A	370	93	1103	1679	0.221	370	0	0.2	0.3	2.776	A
	2-B	345	86	879	1337	0.258	345	594	0.3	0.3	3.629	A
	2-C			592				632				
	2-D	1104	276	0	2467	0.448	1103	592	0.6	0.8	2.658	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1710				150				
	1-B	839	210	153	2449	0.343	838	1557	0.4	0.5	2.235	A
	1-C	1721	430	849	2646	0.650	1718	142	1.0	1.8	3.879	A
	1-D	1156	289	802	1628	0.710	1151	1765	1.2	2.4	7.481	A
	1-E	86	21	1775	675	0.127	86	179	0.1	0.1	6.172	A
J4-2	2-A	454	113	1350	1487	0.305	453	0	0.3	0.4	3.514	A
	2-B	423	106	1077	1208	0.350	422	727	0.3	0.5	4.579	A
	2-C			724				774				
	2-D	1352	338	0	2467	0.548	1350	724	0.8	1.2	3.245	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1715				151				
	1-B	839	210	153	2449	0.343	839	1562	0.5	0.5	2.235	A
	1-C	1721	430	850	2646	0.650	1721	142	1.8	1.9	3.907	A
	1-D	1156	289	804	1627	0.710	1156	1767	2.4	2.4	7.634	A
	1-E	86	21	1780	672	0.128	86	179	0.1	0.1	6.205	A
J4-2	2-A	454	113	1352	1486	0.305	454	0	0.4	0.4	3.521	A
	2-B	423	106	1078	1207	0.350	423	728	0.5	0.5	4.591	A
	2-C			726				775				
	2-D	1352	338	0	2467	0.548	1352	726	1.2	1.2	3.253	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1406				124				
	1-B	685	171	125	2467	0.278	686	1281	0.5	0.4	2.021	A
	1-C	1405	351	695	2766	0.508	1408	116	1.9	1.0	2.667	A
	1-D	944	236	658	1711	0.552	949	1445	2.4	1.2	4.749	A
	1-E	70	18	1459	834	0.084	70	147	0.1	0.1	4.759	A
J4-2	2-A	370	93	1106	1677	0.221	371	0	0.4	0.3	2.785	A
	2-B	345	86	881	1336	0.258	346	595	0.5	0.4	3.642	A
	2-C			594				634				
	2-D	1104	276	0	2467	0.448	1106	594	1.2	0.8	2.669	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1175				103				
	1-B	574	143	105	2480	0.231	574	1070	0.4	0.3	1.887	A
	1-C	1177	294	582	2854	0.412	1178	97	1.0	0.7	2.159	A
	1-D	790	198	550	1773	0.446	792	1209	1.2	0.8	3.679	A
	1-E	59	15	1220	956	0.061	59	123	0.1	0.1	4.054	A
J4-2	2-A	310	78	925	1817	0.171	310	0	0.3	0.2	2.412	A
	2-B	289	72	738	1430	0.202	289	498	0.4	0.3	3.157	A
	2-C			497				531				
	2-D	925	231	0	2467	0.375	925	497	0.8	0.6	2.354	A

2030-Base+Comm, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction J4-1 - Arm 1-C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction J4-1 - Arm 1-D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J4-1	North roundabout	Standard Roundabout		1-A, 1-B, 1-C, 1-D, 1-E	7.05	A
J4-2	South roundabout	Standard Roundabout		2-A, 2-B, 2-C, 2-D	5.42	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	2030-Base+Comm	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
J4-1	1-A					
	1-B		ONE HOUR	✓	711	100.000
	1-C		ONE HOUR	✓	1065	100.000
	1-D		ONE HOUR	✓	1394	100.000
	1-E		ONE HOUR	✓	195	100.000
J4-2	2-A		ONE HOUR	✓	402	100.000
	2-B		ONE HOUR	✓	560	100.000
	2-C					
	2-D		ONE HOUR	✓	1322	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	1	0	0	671	39
	1-C	1	236	94	674	60
	1-D	417	951	0	0	26
	1-E	11	137	0	47	0

Demand (PCU/hr)

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	1	0	401
	2-B	0	0	250	310
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	390	932	0

Vehicle Mix

Heavy Vehicle Percentages

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	0	0	0	2	0
	1-C	0	0	0	1	0
	1-D	1	1	0	0	8
	1-E	0	1	0	0	0

Heavy Vehicle Percentages

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	0	0	3
	2-B	0	0	1	1
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	3	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
J4-1	1-A						
	1-B	0.32	2.19	0.5	A	652	979
	1-C	0.44	2.44	0.8	A	977	1466
	1-D	0.84	12.81	5.3	B	1279	1919
	1-E	0.34	8.84	0.5	A	179	268
J4-2	2-A	0.31	3.85	0.5	A	369	553
	2-B	0.65	10.82	1.8	B	514	771
	2-C						
	2-D	0.59	3.62	1.5	A	1213	1820

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1098				322				
	1-B	535	134	106	2480	0.216	534	993	0.0	0.3	1.878	A
	1-C	802	200	569	2863	0.280	800	71	0.0	0.4	1.754	A
	1-D	1049	262	324	1903	0.551	1045	1046	0.0	1.2	4.225	A
	1-E	147	37	1275	928	0.158	146	94	0.0	0.2	4.645	A
J4-2	2-A	303	76	993	1765	0.171	302	0	0.0	0.2	2.532	A
	2-B	422	105	1001	1257	0.335	420	294	0.0	0.5	4.318	A
	2-C			533				887				
	2-D	995	249	0	2467	0.403	993	533	0.0	0.7	2.479	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1314				386				
	1-B	639	160	127	2466	0.259	639	1188	0.3	0.4	2.000	A
	1-C	957	239	681	2777	0.345	957	84	0.4	0.5	1.988	A
	1-D	1253	313	387	1867	0.671	1250	1251	1.2	2.0	5.884	A
	1-E	175	44	1525	801	0.219	175	112	0.2	0.3	5.801	A
J4-2	2-A	361	90	1187	1614	0.224	361	0	0.2	0.3	2.959	A
	2-B	503	126	1197	1129	0.446	502	351	0.5	0.8	5.779	A
	2-C			638				1061				
	2-D	1188	297	0	2467	0.482	1187	638	0.7	0.9	2.859	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1603				470				
	1-B	783	196	155	2448	0.320	782	1449	0.4	0.5	2.194	A
	1-C	1173	293	834	2658	0.441	1172	103	0.5	0.8	2.433	A
	1-D	1535	384	474	1817	0.845	1523	1531	2.0	5.1	11.928	B
	1-E	215	54	1859	632	0.340	214	137	0.3	0.5	8.682	A
J4-2	2-A	443	111	1454	1407	0.315	442	0	0.3	0.5	3.839	A
	2-B	617	154	1466	953	0.647	613	430	0.8	1.8	10.542	B
	2-C			780				1298				
	2-D	1456	364	0	2467	0.590	1454	780	0.9	1.4	3.605	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1612				473				
	1-B	783	196	155	2447	0.320	783	1457	0.5	0.5	2.194	A
	1-C	1173	293	835	2658	0.441	1173	103	0.8	0.8	2.435	A
	1-D	1535	384	475	1817	0.845	1534	1533	5.1	5.3	12.812	B
	1-E	215	54	1871	626	0.343	215	138	0.5	0.5	8.842	A
J4-2	2-A	443	111	1456	1406	0.315	443	0	0.5	0.5	3.850	A
	2-B	617	154	1468	951	0.648	616	430	1.8	1.8	10.816	B
	2-C			783				1301				
	2-D	1456	364	0	2467	0.590	1456	783	1.4	1.5	3.619	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1327				390				
	1-B	639	160	127	2466	0.259	640	1200	0.5	0.4	2.001	A
	1-C	957	239	682	2776	0.345	958	85	0.8	0.5	1.993	A
	1-D	1253	313	388	1867	0.671	1266	1253	5.3	2.1	6.197	A
	1-E	175	44	1541	793	0.221	176	113	0.5	0.3	5.905	A
J4-2	2-A	361	90	1190	1611	0.224	362	0	0.5	0.3	2.970	A
	2-B	503	126	1200	1126	0.447	507	352	1.8	0.8	5.894	A
	2-C			642				1066				
	2-D	1188	297	0	2467	0.482	1190	642	1.5	1.0	2.874	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1106				325				
	1-B	535	134	106	2479	0.216	536	999	0.4	0.3	1.882	A
	1-C	802	200	571	2862	0.280	802	71	0.5	0.4	1.756	A
	1-D	1049	262	325	1903	0.552	1053	1049	2.1	1.3	4.310	A
	1-E	147	37	1283	924	0.159	147	94	0.3	0.2	4.686	A
J4-2	2-A	303	76	996	1762	0.172	303	0	0.3	0.2	2.540	A
	2-B	422	105	1005	1255	0.336	423	295	0.8	0.5	4.364	A
	2-C			536				891				
	2-D	995	249	0	2467	0.403	996	536	1.0	0.7	2.491	A

2030-Base+Comm, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction J4-1 - Arm 1-C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction J4-1 - Arm 1-D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J4-1	North roundabout	Standard Roundabout		1-A, 1-B, 1-C, 1-D, 1-E	4.72	A
J4-2	South roundabout	Standard Roundabout		2-A, 2-B, 2-C, 2-D	4.48	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	2030-Base+Comm	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
J4-1	1-A					
	1-B		ONE HOUR	✓	762	100.000
	1-C		ONE HOUR	✓	1563	100.000
	1-D		ONE HOUR	✓	1050	100.000
	1-E		ONE HOUR	✓	78	100.000
J4-2	2-A		ONE HOUR	✓	476	100.000
	2-B		ONE HOUR	✓	443	100.000
	2-C					
	2-D		ONE HOUR	✓	1419	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	5	0	0	721	36
	1-C	0	450	129	874	110
	1-D	126	907	0	0	17
	1-E	6	62	0	10	0

Demand (PCU/hr)

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	3	0	473
	2-B	0	0	155	288
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	760	659	0

Vehicle Mix

Heavy Vehicle Percentages

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	0	0	0	0	0
	1-C	0	0	0	1	0
	1-D	0	0	0	1	1
	1-E	2	1	0	0	0

Heavy Vehicle Percentages

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	0	0	1
	2-B	0	0	0	0
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
J4-1	1-A						
	1-B	0.34	2.24	0.5	A	699	1049
	1-C	0.65	3.91	1.9	A	1434	2151
	1-D	0.71	7.63	2.4	A	963	1445
	1-E	0.13	6.20	0.1	A	72	107
J4-2	2-A	0.40	4.55	0.7	A	437	655
	2-B	0.44	5.91	0.8	A	407	610
	2-C						
	2-D	0.63	4.01	1.7	A	1302	1953

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1169				103				
	1-B	574	143	104	2480	0.231	572	1065	0.0	0.3	1.886	A
	1-C	1177	294	580	2855	0.412	1174	97	0.0	0.7	2.146	A
	1-D	790	198	548	1774	0.446	787	1206	0.0	0.8	3.636	A
	1-E	59	15	1213	959	0.061	58	122	0.0	0.1	4.035	A
J4-2	2-A	358	90	1065	1709	0.210	357	0	0.0	0.3	2.686	A
	2-B	334	83	850	1356	0.246	332	573	0.0	0.3	3.510	A
	2-C			571				611				
	2-D	1068	267	0	2467	0.433	1065	571	0.0	0.8	2.583	A

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1399				123				
	1-B	685	171	125	2467	0.278	685	1274	0.3	0.4	2.019	A
	1-C	1405	351	694	2767	0.508	1404	116	0.7	1.0	2.649	A
	1-D	944	236	656	1712	0.551	942	1442	0.8	1.2	4.664	A
	1-E	70	18	1452	838	0.084	70	146	0.1	0.1	4.732	A
J4-2	2-A	428	107	1274	1546	0.277	427	0	0.3	0.4	3.247	A
	2-B	398	100	1017	1247	0.319	398	685	0.3	0.5	4.236	A
	2-C			683				731				
	2-D	1276	319	0	2467	0.517	1274	683	0.8	1.1	3.039	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1710				150				
	1-B	839	210	153	2449	0.343	838	1557	0.4	0.5	2.235	A
	1-C	1721	430	849	2646	0.650	1718	142	1.0	1.8	3.879	A
	1-D	1156	289	802	1628	0.710	1151	1765	1.2	2.4	7.481	A
	1-E	86	21	1775	675	0.127	86	179	0.1	0.1	6.172	A
J4-2	2-A	524	131	1560	1325	0.396	523	0	0.4	0.7	4.531	A
	2-B	488	122	1244	1098	0.444	486	839	0.5	0.8	5.876	A
	2-C			836				895				
	2-D	1562	391	0	2467	0.633	1560	836	1.1	1.7	3.988	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1715				151				
	1-B	839	210	153	2449	0.343	839	1562	0.5	0.5	2.235	A
	1-C	1721	430	850	2646	0.650	1721	142	1.8	1.9	3.907	A
	1-D	1156	289	804	1627	0.710	1156	1767	2.4	2.4	7.634	A
	1-E	86	21	1780	672	0.128	86	179	0.1	0.1	6.205	A
J4-2	2-A	524	131	1562	1323	0.396	524	0	0.7	0.7	4.553	A
	2-B	488	122	1246	1096	0.445	488	840	0.8	0.8	5.914	A
	2-C			838				896				
	2-D	1562	391	0	2467	0.633	1562	838	1.7	1.7	4.010	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1406				124				
	1-B	685	171	125	2467	0.278	686	1281	0.5	0.4	2.021	A
	1-C	1405	351	695	2766	0.508	1408	116	1.9	1.0	2.667	A
	1-D	944	236	658	1711	0.552	949	1445	2.4	1.2	4.749	A
	1-E	70	18	1459	834	0.084	70	147	0.1	0.1	4.759	A
J4-2	2-A	428	107	1278	1543	0.277	429	0	0.7	0.4	3.265	A
	2-B	398	100	1020	1245	0.320	400	687	0.8	0.5	4.266	A
	2-C			686				733				
	2-D	1276	319	0	2467	0.517	1278	686	1.7	1.1	3.057	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1175				103				
	1-B	574	143	105	2480	0.231	574	1070	0.4	0.3	1.887	A
	1-C	1177	294	582	2854	0.412	1178	97	1.0	0.7	2.159	A
	1-D	790	198	550	1773	0.446	792	1209	1.2	0.8	3.679	A
	1-E	59	15	1220	956	0.061	59	123	0.1	0.1	4.054	A
J4-2	2-A	358	90	1070	1705	0.210	359	0	0.4	0.3	2.702	A
	2-B	334	83	853	1354	0.246	334	575	0.5	0.3	3.533	A
	2-C			574				614				
	2-D	1068	267	0	2467	0.433	1070	574	1.1	0.8	2.597	A

2030-Base+Comm+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction J4-1 - Arm 1-C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction J4-1 - Arm 1-D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J4-1	North roundabout	Standard Roundabout		1-A, 1-B, 1-C, 1-D, 1-E	8.85	A
J4-2	South roundabout	Standard Roundabout		2-A, 2-B, 2-C, 2-D	5.73	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
D5	2030-Base+Comm+Dev	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
J4-1	1-A					
	1-B		ONE HOUR	✓	724	100.000
	1-C		ONE HOUR	✓	1079	100.000
	1-D		ONE HOUR	✓	1447	100.000
	1-E		ONE HOUR	✓	248	100.000
J4-2	2-A		ONE HOUR	✓	406	100.000
	2-B		ONE HOUR	✓	562	100.000
	2-C					
	2-D		ONE HOUR	✓	1360	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	1	0	0	678	45
	1-C	1	236	94	681	67
	1-D	432	989	0	0	26
	1-E	27	174	0	47	0

Demand (PCU/hr)

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	1	0	405
	2-B	0	0	250	312
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	399	961	0

Vehicle Mix

Heavy Vehicle Percentages

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	0	0	0	2	0
	1-C	0	0	0	1	0
	1-D	1	1	0	0	8
	1-E	0	1	0	0	0

Heavy Vehicle Percentages

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	0	0	3
	2-B	0	0	1	1
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	3	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
J4-1	1-A						
	1-B	0.33	2.21	0.5	A	664	997
	1-C	0.45	2.48	0.8	A	990	1485
	1-D	0.88	16.52	7.0	C	1328	1992
	1-E	0.46	11.23	0.8	B	228	341
J4-2	2-A	0.33	4.00	0.5	A	373	559
	2-B	0.67	11.72	2.0	B	516	774
	2-C						
	2-D	0.61	3.78	1.6	A	1248	1872

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1154				345				
	1-B	545	136	106	2480	0.220	544	1048	0.0	0.3	1.887	A
	1-C	812	203	579	2856	0.284	811	71	0.0	0.4	1.769	A
	1-D	1089	272	334	1898	0.574	1084	1056	0.0	1.3	4.454	A
	1-E	187	47	1314	908	0.206	186	104	0.0	0.3	5.025	A
J4-2	2-A	306	76	1021	1743	0.175	305	0	0.0	0.2	2.576	A
	2-B	423	106	1025	1241	0.341	421	300	0.0	0.5	4.411	A
	2-C			538				909				
	2-D	1024	256	0	2467	0.415	1021	538	0.0	0.7	2.527	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1381				413				
	1-B	651	163	127	2466	0.264	651	1255	0.3	0.4	2.012	A
	1-C	970	242	693	2768	0.350	969	84	0.4	0.5	2.012	A
	1-D	1301	325	399	1860	0.699	1297	1263	1.3	2.3	6.435	A
	1-E	223	56	1572	777	0.287	222	124	0.3	0.4	6.544	A
J4-2	2-A	365	91	1222	1587	0.230	365	0	0.2	0.3	3.032	A
	2-B	505	126	1227	1109	0.456	504	359	0.5	0.8	5.980	A
	2-C			644				1087				
	2-D	1223	306	0	2467	0.496	1222	644	0.7	1.0	2.937	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1682				502				
	1-B	797	199	155	2448	0.326	797	1527	0.4	0.5	2.213	A
	1-C	1188	297	848	2647	0.449	1187	103	0.5	0.8	2.477	A
	1-D	1593	398	488	1809	0.881	1576	1547	2.3	6.6	14.706	B
	1-E	273	68	1913	604	0.452	271	152	0.4	0.8	10.862	B
J4-2	2-A	447	112	1495	1375	0.325	446	0	0.3	0.5	3.990	A
	2-B	619	155	1502	929	0.666	614	440	0.8	1.9	11.366	B
	2-C			786				1330				
	2-D	1497	374	0	2467	0.607	1495	786	1.0	1.6	3.761	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1694				507				
	1-B	797	199	155	2447	0.326	797	1539	0.5	0.5	2.213	A
	1-C	1188	297	849	2647	0.449	1188	103	0.8	0.8	2.480	A
	1-D	1593	398	489	1808	0.881	1592	1548	6.6	7.0	16.521	C
	1-E	273	68	1929	597	0.458	273	152	0.8	0.8	11.228	B
J4-2	2-A	447	112	1497	1373	0.326	447	0	0.5	0.5	4.003	A
	2-B	619	155	1504	928	0.667	619	440	1.9	2.0	11.720	B
	2-C			789				1333				
	2-D	1497	374	0	2467	0.607	1497	789	1.6	1.6	3.775	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1399				420				
	1-B	651	163	127	2466	0.264	651	1272	0.5	0.4	2.015	A
	1-C	970	242	694	2767	0.351	971	85	0.8	0.5	2.015	A
	1-D	1301	325	400	1860	0.699	1319	1265	7.0	2.4	6.967	A
	1-E	223	56	1594	766	0.291	225	124	0.8	0.4	6.737	A
J4-2	2-A	365	91	1225	1585	0.230	366	0	0.5	0.3	3.042	A
	2-B	505	126	1230	1107	0.456	510	360	2.0	0.9	6.115	A
	2-C			648				1092				
	2-D	1223	306	0	2467	0.496	1225	648	1.6	1.0	2.952	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1163				348				
	1-B	545	136	106	2479	0.220	545	1057	0.4	0.3	1.891	A
	1-C	812	203	581	2854	0.285	813	71	0.5	0.4	1.774	A
	1-D	1089	272	334	1897	0.574	1094	1059	2.4	1.4	4.562	A
	1-E	187	47	1324	903	0.207	187	104	0.4	0.3	5.083	A
J4-2	2-A	306	76	1025	1740	0.176	306	0	0.3	0.2	2.585	A
	2-B	423	106	1030	1238	0.342	424	301	0.9	0.5	4.461	A
	2-C			541				913				
	2-D	1024	256	0	2467	0.415	1025	541	1.0	0.7	2.540	A

2030-Base+Comm+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction J4-1 - Arm 1-C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction J4-1 - Arm 1-D - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
J4-1	North roundabout	Standard Roundabout		1-A, 1-B, 1-C, 1-D, 1-E	5.14	A
J4-2	South roundabout	Standard Roundabout		2-A, 2-B, 2-C, 2-D	4.59	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
D6	2030-Base+Comm+Dev	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
J4-1	1-A					
	1-B		ONE HOUR	✓	800	100.000
	1-C		ONE HOUR	✓	1607	100.000
	1-D		ONE HOUR	✓	1068	100.000
	1-E		ONE HOUR	✓	96	100.000
J4-2	2-A		ONE HOUR	✓	488	100.000
	2-B		ONE HOUR	✓	450	100.000
	2-C					
	2-D		ONE HOUR	✓	1431	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	5	0	0	740	55
	1-C	0	450	129	896	132
	1-D	132	919	0	0	17
	1-E	11	75	0	10	0

Demand (PCU/hr)

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	3	0	485
	2-B	0	0	155	295
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	763	668	0

Vehicle Mix

Heavy Vehicle Percentages

Junction J4-1

		To				
		1-A	1-B	1-C	1-D	1-E
From	1-A	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	1-B	0	0	0	0	0
	1-C	0	0	0	1	0
	1-D	0	0	0	1	1
	1-E	2	1	0	0	0

Heavy Vehicle Percentages

Junction J4-2

		To			
		2-A	2-B	2-C	2-D
From	2-A	0	0	0	1
	2-B	0	0	0	0
	2-C	Exit-only	Exit-only	Exit-only	Exit-only
	2-D	0	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
J4-1	1-A						
	1-B	0.36	2.29	0.6	A	734	1101
	1-C	0.68	4.28	2.1	A	1475	2212
	1-D	0.73	8.45	2.7	A	980	1470
	1-E	0.16	6.54	0.2	A	88	132
J4-2	2-A	0.41	4.69	0.7	A	448	672
	2-B	0.46	6.14	0.8	A	413	619
	2-C						
	2-D	0.64	4.07	1.8	A	1313	1970

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1188				111				
	1-B	602	151	104	2480	0.243	601	1083	0.0	0.3	1.915	A
	1-C	1210	302	608	2833	0.427	1207	97	0.0	0.7	2.219	A
	1-D	804	201	579	1757	0.458	801	1236	0.0	0.8	3.755	A
	1-E	72	18	1227	952	0.076	72	153	0.0	0.1	4.130	A
J4-2	2-A	367	92	1074	1702	0.216	366	0	0.0	0.3	2.719	A
	2-B	339	85	865	1346	0.252	337	575	0.0	0.3	3.564	A
	2-C			585				618				
	2-D	1077	269	0	2467	0.437	1074	585	0.0	0.8	2.599	A

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1421				133				
	1-B	719	180	125	2467	0.292	719	1296	0.3	0.4	2.059	A
	1-C	1445	361	728	2741	0.527	1443	116	0.7	1.1	2.783	A
	1-D	960	240	692	1691	0.568	958	1479	0.8	1.3	4.900	A
	1-E	86	22	1467	830	0.104	86	183	0.1	0.1	4.888	A
J4-2	2-A	439	110	1285	1538	0.285	438	0	0.3	0.4	3.304	A
	2-B	405	101	1035	1235	0.328	404	688	0.3	0.5	4.331	A
	2-C			700				739				
	2-D	1286	322	0	2467	0.521	1285	700	0.8	1.1	3.067	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1737				162				
	1-B	881	220	153	2449	0.360	880	1584	0.4	0.6	2.295	A
	1-C	1769	442	891	2614	0.677	1765	142	1.1	2.1	4.240	A
	1-D	1176	294	847	1602	0.734	1170	1810	1.3	2.7	8.128	A
	1-E	106	26	1793	665	0.159	105	224	0.1	0.2	6.496	A
J4-2	2-A	537	134	1573	1314	0.409	536	0	0.4	0.7	4.666	A
	2-B	495	124	1267	1083	0.458	494	842	0.5	0.8	6.100	A
	2-C			857				904				
	2-D	1576	394	0	2467	0.639	1573	857	1.1	1.8	4.045	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1743				163				
	1-B	881	220	153	2449	0.360	881	1590	0.6	0.6	2.295	A
	1-C	1769	442	892	2613	0.677	1769	142	2.1	2.1	4.281	A
	1-D	1176	294	849	1601	0.734	1176	1812	2.7	2.7	8.450	A
	1-E	106	26	1800	662	0.160	106	225	0.2	0.2	6.540	A
J4-2	2-A	537	134	1576	1312	0.409	537	0	0.7	0.7	4.691	A
	2-B	495	124	1269	1081	0.458	495	843	0.8	0.8	6.145	A
	2-C			859				906				
	2-D	1576	394	0	2467	0.639	1576	859	1.8	1.8	4.069	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1429				134				
	1-B	719	180	125	2467	0.292	720	1304	0.6	0.4	2.062	A
	1-C	1445	361	729	2740	0.527	1449	116	2.1	1.1	2.806	A
	1-D	960	240	695	1690	0.568	966	1482	2.7	1.3	5.010	A
	1-E	86	22	1477	826	0.105	87	184	0.2	0.1	4.925	A
J4-2	2-A	439	110	1289	1535	0.286	440	0	0.7	0.4	3.323	A
	2-B	405	101	1039	1232	0.328	406	690	0.8	0.5	4.364	A
	2-C			703				742				
	2-D	1286	322	0	2467	0.521	1289	703	1.8	1.1	3.086	A

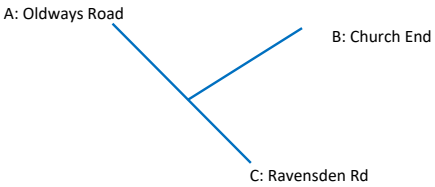
18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
J4-1	1-A			1194				112				
	1-B	602	151	105	2480	0.243	603	1089	0.4	0.3	1.919	A
	1-C	1210	302	610	2832	0.427	1211	97	1.1	0.8	2.233	A
	1-D	804	201	581	1755	0.458	806	1240	1.3	0.9	3.802	A
	1-E	72	18	1233	949	0.076	72	154	0.1	0.1	4.151	A
J4-2	2-A	367	92	1079	1698	0.216	368	0	0.4	0.3	2.735	A
	2-B	339	85	869	1344	0.252	339	577	0.5	0.3	3.589	A
	2-C			588				620				
	2-D	1077	269	0	2467	0.437	1079	588	1.1	0.8	2.614	A

Appendix U

J5: Ravensden Rd / Oldways Rd / Church End: Analysis – Input and Results

J5: Ravensden Rd / Oldways Rd / Church End



Background 2019

AM	A	B	C
A	0	48	300
B	30	0	36
C	123	37	0

Background 2019

PM	A	B	C
A	0	14	101
B	17	0	25
C	235	26	0

HGV%age

AM	A	B	C
A	0.0%	0.0%	0.7%
B	3.4%	0.0%	2.9%
C	0.0%	0.0%	0.0%

Tempro 2019-2030

AM	A	B	C
A	1.1369	1.1369	1.1369
B	1.1369	1.1369	1.1369
C	1.1369	1.1369	1.1369

Tempro 2019-2030

PM	A	B	C
A	1.1554	1.1554	1.1554
B	1.1554	1.1554	1.1554
C	1.1554	1.1554	1.1554

HGV%age

PM	A	B	C
A	0.0%	0.0%	1.0%
B	0.0%	0.0%	0.0%
C	0.0%	4.0%	0.0%

Background 2030

AM	A	B	C
A	0	55	341
B	34	0	41
C	139	42	0

Background 2030

PM	A	B	C
A	0	16	116
B	20	0	28
C	272	30	0

Committed Development

AM	A	B	C
A	0	0	0
B	0	0	0
C	1	0	0

Committed Development

PM	A	B	C
A	0	0	1
B	0	0	0
C	0	0	0

Background 2030 + Committed

AM	A	B	C
A	0	55	341
B	34	0	41
C	140	42	0

Background 2030 + Committed

PM	A	B	C
A	0	16	117
B	20	0	28
C	272	30	0

Development

AM	A	B	C
A	0	0	8
B	0	0	0
C	33	0	0

Development

PM	A	B	C
A	0	0	25
B	0	0	0
C	11	0	0

Background 2030 + Development

AM	A	B	C
A	0	55	350
B	34	0	41
C	174	42	0

Background 2030 + Development

PM	A	B	C
A	0	16	142
B	20	0	28
C	284	30	0

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: (new file)
Path:
Report generation date: 17/01/2020 15:37:34

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019							
Stream B-C	0.1	6.92	0.07	A	0.0	5.84	0.04	A
Stream B-A	0.1	9.34	0.08	A	0.0	7.88	0.04	A
Stream C-AB	0.1	6.00	0.08	A	0.1	5.12	0.05	A
	2030-Background+Comm							
Stream B-C	0.1	7.19	0.08	A	0.1	5.94	0.05	A
Stream B-A	0.1	9.90	0.09	A	0.0	8.17	0.05	A
Stream C-AB	0.1	6.09	0.09	A	0.1	5.04	0.06	A
	2030-Background+Comm+Dev							
Stream B-C	0.1	7.23	0.08	A	0.1	6.01	0.05	A
Stream B-A	0.1	10.14	0.09	B	0.1	8.35	0.05	A
Stream C-AB	0.2	5.89	0.10	A	0.1	5.03	0.07	A

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.

File summary

File Description

Title	J5: Oldways Rd_Church End_Ravensden Rd
Location	
Site number	J5
Date	17/01/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	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	2019	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030-Background+Comm	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030-Background+Comm	PM	ONE HOUR	16:45	18:15	15	✓
D5	2030-Background+Comm+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Background+Comm+Dev	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

2019, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
J5	J5: Oldways Rd_Church End_Ravensden Rd	T-Junction	Two-way		1.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Oldways Rd		Major
B	Church End		Minor
C	Ravensden Rd		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	5.50			146.0	✓	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 (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes	2.57	2.80	74	140

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
J5	B-A	561	0.104	0.264	0.166	0.377
J5	B-C	681	0.107	0.270	-	-
J5	C-B	659	0.261	0.261	-	-

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	2019	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	348	100.000
B		ONE HOUR	✓	66	100.000
C		ONE HOUR	✓	160	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	48	300
	B	30	0	36
	C	123	37	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	3	0	3
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.07	6.92	0.1	A	33	50
B-A	0.08	9.34	0.1	A	28	41
C-AB	0.08	6.00	0.1	A	41	62
C-A					105	158
A-B					44	66
A-C					275	413

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	7	609	0.044	27	0.0	0.0	6.366	A
B-A	23	6	471	0.048	22	0.0	0.1	8.256	A
C-AB	32	8	652	0.050	32	0.0	0.1	5.803	A
C-A	88	22			88				
A-B	36	9			36				
A-C	226	56			226				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	8	595	0.054	32	0.0	0.1	6.589	A
B-A	27	7	454	0.059	27	0.1	0.1	8.682	A
C-AB	40	10	652	0.061	40	0.1	0.1	5.881	A
C-A	104	26			104				
A-B	43	11			43				
A-C	270	67			270				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	575	0.069	40	0.1	0.1	6.921	A
B-A	33	8	430	0.077	33	0.1	0.1	9.337	A
C-AB	51	13	652	0.079	51	0.1	0.1	5.993	A
C-A	125	31			125				
A-B	53	13			53				
A-C	330	83			330				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	575	0.069	40	0.1	0.1	6.921	A
B-A	33	8	430	0.077	33	0.1	0.1	9.341	A
C-AB	52	13	652	0.079	52	0.1	0.1	5.995	A
C-A	125	31			125				
A-B	53	13			53				
A-C	330	83			330				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	32	8	595	0.054	32	0.1	0.1	6.591	A
B-A	27	7	454	0.059	27	0.1	0.1	8.690	A
C-AB	40	10	652	0.062	40	0.1	0.1	5.887	A
C-A	104	26			104				
A-B	43	11			43				
A-C	270	67			270				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	27	7	609	0.044	27	0.1	0.0	6.373	A
B-A	23	6	471	0.048	23	0.1	0.1	8.268	A
C-AB	33	8	652	0.050	33	0.1	0.1	5.810	A
C-A	88	22			88				
A-B	36	9			36				
A-C	226	56			226				

2019, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
J5	J5: Oldways Rd_Church End_Ravensden Rd	T-Junction	Two-way		1.12	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	2019	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	115	100.000
B		ONE HOUR	✓	42	100.000
C		ONE HOUR	✓	261	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	14	101
	B	17	0	25
	C	235	26	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	0	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.04	5.84	0.0	A	23	34
B-A	0.04	7.88	0.0	A	16	23
C-AB	0.05	5.12	0.1	A	33	50
C-A					206	309
A-B					13	19
A-C					93	139

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	656	0.029	19	0.0	0.0	5.653	A
B-A	13	3	503	0.025	13	0.0	0.0	7.345	A
C-AB	26	6	750	0.034	25	0.0	0.0	5.115	A
C-A	171	43			171				
A-B	11	3			11				
A-C	76	19			76				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	22	6	650	0.035	22	0.0	0.0	5.732	A
B-A	15	4	491	0.031	15	0.0	0.0	7.561	A
C-AB	32	8	769	0.042	32	0.0	0.1	5.031	A
C-A	202	51			202				
A-B	13	3			13				
A-C	91	23			91				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	643	0.043	27	0.0	0.0	5.845	A
B-A	19	5	476	0.039	19	0.0	0.0	7.875	A
C-AB	43	11	794	0.054	42	0.1	0.1	4.919	A
C-A	245	61			245				
A-B	15	4			15				
A-C	111	28			111				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	28	7	643	0.043	28	0.0	0.0	5.845	A
B-A	19	5	476	0.039	19	0.0	0.0	7.876	A
C-AB	43	11	794	0.054	43	0.1	0.1	4.916	A
C-A	245	61			245				
A-B	15	4			15				
A-C	111	28			111				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	22	6	650	0.035	23	0.0	0.0	5.735	A
B-A	15	4	491	0.031	15	0.0	0.0	7.565	A
C-AB	32	8	769	0.042	32	0.1	0.1	5.025	A
C-A	202	51			202				
A-B	13	3			13				
A-C	91	23			91				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	5	656	0.029	19	0.0	0.0	5.656	A
B-A	13	3	503	0.025	13	0.0	0.0	7.350	A
C-AB	26	6	750	0.034	26	0.1	0.0	5.115	A
C-A	171	43			171				
A-B	11	3			11				
A-C	76	19			76				

2030-Background+Comm, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
J5	J5: Oldways Rd_Church End_Ravensden Rd	T-Junction	Two-way		1.46	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	2030-Background+Comm	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	396	100.000
B		ONE HOUR	✓	75	100.000
C		ONE HOUR	✓	182	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	55	341
	B	34	0	41
	C	140	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	3	0	3
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.08	7.19	0.1	A	38	56
B-A	0.09	9.90	0.1	A	31	47
C-AB	0.09	6.09	0.1	A	48	73
C-A					119	178
A-B					50	76
A-C					313	469

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	599	0.052	31	0.0	0.1	6.521	A
B-A	26	6	459	0.056	25	0.0	0.1	8.544	A
C-AB	38	9	652	0.058	37	0.0	0.1	5.852	A
C-A	99	25			99				
A-B	41	10			41				
A-C	257	64			257				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	583	0.063	37	0.1	0.1	6.788	A
B-A	31	8	439	0.070	31	0.1	0.1	9.069	A
C-AB	47	12	652	0.072	47	0.1	0.1	5.947	A
C-A	117	29			117				
A-B	49	12			49				
A-C	307	77			307				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	561	0.081	45	0.1	0.1	7.193	A
B-A	37	9	412	0.091	37	0.1	0.1	9.892	A
C-AB	61	15	652	0.093	61	0.1	0.1	6.083	A
C-A	140	35			140				
A-B	61	15			61				
A-C	375	94			375				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	561	0.081	45	0.1	0.1	7.194	A
B-A	37	9	412	0.091	37	0.1	0.1	9.898	A
C-AB	61	15	652	0.093	61	0.1	0.1	6.088	A
C-A	140	35			140				
A-B	61	15			61				
A-C	375	94			375				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	583	0.063	37	0.1	0.1	6.790	A
B-A	31	8	439	0.070	31	0.1	0.1	9.078	A
C-AB	47	12	652	0.072	47	0.1	0.1	5.952	A
C-A	117	29			117				
A-B	49	12			49				
A-C	307	77			307				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	599	0.052	31	0.1	0.1	6.525	A
B-A	26	6	459	0.056	26	0.1	0.1	8.560	A
C-AB	38	9	652	0.058	38	0.1	0.1	5.863	A
C-A	99	25			99				
A-B	41	10			41				
A-C	257	64			257				

2030-Background+Comm, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
J5	J5: Oldways Rd_Church End_Ravensden Rd	T-Junction	Two-way		1.15	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	2030-Background+Comm	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	133	100.000
B		ONE HOUR	✓	48	100.000
C		ONE HOUR	✓	302	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	16	117
	B	20	0	28
	C	272	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	0	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	5.94	0.1	A	26	39
B-A	0.05	8.17	0.0	A	18	28
C-AB	0.06	5.04	0.1	A	41	61
C-A					236	354
A-B					15	22
A-C					107	161

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	5	651	0.032	21	0.0	0.0	5.708	A
B-A	15	4	494	0.031	15	0.0	0.0	7.519	A
C-AB	31	8	765	0.040	31	0.0	0.1	5.041	A
C-A	197	49			197				
A-B	12	3			12				
A-C	88	22			88				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	25	6	645	0.039	25	0.0	0.0	5.803	A
B-A	18	4	480	0.037	18	0.0	0.0	7.783	A
C-AB	39	10	787	0.050	39	0.1	0.1	4.952	A
C-A	232	58			232				
A-B	14	4			14				
A-C	105	26			105				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	637	0.048	31	0.0	0.1	5.937	A
B-A	22	6	462	0.048	22	0.0	0.0	8.171	A
C-AB	52	13	817	0.064	52	0.1	0.1	4.831	A
C-A	280	70			280				
A-B	18	4			18				
A-C	129	32			129				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	637	0.048	31	0.1	0.1	5.937	A
B-A	22	6	462	0.048	22	0.0	0.0	8.173	A
C-AB	52	13	817	0.064	52	0.1	0.1	4.828	A
C-A	280	70			280				
A-B	18	4			18				
A-C	129	32			129				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	25	6	645	0.039	25	0.1	0.0	5.804	A
B-A	18	4	480	0.037	18	0.0	0.0	7.785	A
C-AB	39	10	787	0.050	39	0.1	0.1	4.942	A
C-A	232	58			232				
A-B	14	4			14				
A-C	105	26			105				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	5	651	0.032	21	0.0	0.0	5.714	A
B-A	15	4	493	0.031	15	0.0	0.0	7.525	A
C-AB	31	8	765	0.040	31	0.1	0.1	5.040	A
C-A	196	49			196				
A-B	12	3			12				
A-C	88	22			88				

2030-Background+Comm+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
J5	J5: Oldways Rd_Church End_Ravensden Rd	T-Junction	Two-way		1.39	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
D5	2030-Background+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	405	100.000
B		ONE HOUR	✓	75	100.000
C		ONE HOUR	✓	216	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	55	350
	B	34	0	41
	C	174	42	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	3	0	3
	C	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.08	7.23	0.1	A	38	56
B-A	0.09	10.14	0.1	B	31	47
C-AB	0.10	5.89	0.2	A	51	77
C-A					147	221
A-B					50	76
A-C					321	482

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	597	0.052	31	0.0	0.1	6.543	A
B-A	26	6	453	0.057	25	0.0	0.1	8.665	A
C-AB	39	10	668	0.059	39	0.0	0.1	5.721	A
C-A	123	31			123				
A-B	41	10			41				
A-C	263	66			263				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	581	0.063	37	0.1	0.1	6.817	A
B-A	31	8	432	0.071	30	0.1	0.1	9.232	A
C-AB	49	12	671	0.073	49	0.1	0.1	5.789	A
C-A	145	36			145				
A-B	49	12			49				
A-C	315	79			315				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	558	0.081	45	0.1	0.1	7.234	A
B-A	37	9	403	0.093	37	0.1	0.1	10.129	B
C-AB	65	16	676	0.096	64	0.1	0.2	5.886	A
C-A	173	43			173				
A-B	61	15			61				
A-C	385	96			385				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	558	0.081	45	0.1	0.1	7.234	A
B-A	37	9	403	0.093	37	0.1	0.1	10.137	B
C-AB	65	16	676	0.096	65	0.2	0.2	5.891	A
C-A	173	43			173				
A-B	61	15			61				
A-C	385	96			385				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	581	0.063	37	0.1	0.1	6.822	A
B-A	31	8	432	0.071	31	0.1	0.1	9.240	A
C-AB	49	12	671	0.074	50	0.2	0.1	5.794	A
C-A	145	36			145				
A-B	49	12			49				
A-C	315	79			315				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	597	0.052	31	0.1	0.1	6.547	A
B-A	26	6	453	0.057	26	0.1	0.1	8.679	A
C-AB	39	10	668	0.059	40	0.1	0.1	5.732	A
C-A	123	31			123				
A-B	41	10			41				
A-C	263	66			263				

2030-Background+Comm+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	Arm C - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
J5	J5: Oldways Rd_Church End_Ravensden Rd	T-Junction	Two-way		1.08	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
D6	2030-Background+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	158	100.000
B		ONE HOUR	✓	48	100.000
C		ONE HOUR	✓	314	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	16	142
	B	20	0	28
	C	284	30	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	1
	B	0	0	0
	C	0	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.05	6.01	0.1	A	26	39
B-A	0.05	8.35	0.1	A	18	28
C-AB	0.07	5.03	0.1	A	42	62
C-A					246	370
A-B					15	22
A-C					130	195

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	5	646	0.033	21	0.0	0.0	5.755	A
B-A	15	4	487	0.031	15	0.0	0.0	7.622	A
C-AB	31	8	767	0.041	31	0.0	0.1	5.032	A
C-A	205	51			205				
A-B	12	3			12				
A-C	107	27			107				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	25	6	639	0.039	25	0.0	0.0	5.861	A
B-A	18	4	473	0.038	18	0.0	0.0	7.915	A
C-AB	40	10	789	0.051	40	0.1	0.1	4.940	A
C-A	242	61			242				
A-B	14	4			14				
A-C	128	32			128				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	630	0.049	31	0.0	0.1	6.012	A
B-A	22	6	453	0.049	22	0.0	0.1	8.350	A
C-AB	54	13	819	0.065	53	0.1	0.1	4.819	A
C-A	292	73			292				
A-B	18	4			18				
A-C	156	39			156				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	31	8	630	0.049	31	0.1	0.1	6.012	A
B-A	22	6	453	0.049	22	0.1	0.1	8.352	A
C-AB	54	13	819	0.065	54	0.1	0.1	4.818	A
C-A	292	73			292				
A-B	18	4			18				
A-C	156	39			156				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	25	6	639	0.039	25	0.1	0.0	5.864	A
B-A	18	4	473	0.038	18	0.1	0.0	7.918	A
C-AB	40	10	789	0.051	40	0.1	0.1	4.931	A
C-A	242	61			242				
A-B	14	4			14				
A-C	128	32			128				

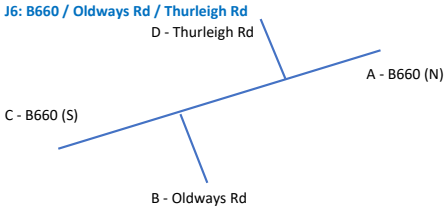
18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	21	5	646	0.033	21	0.0	0.0	5.761	A
B-A	15	4	487	0.031	15	0.0	0.0	7.628	A
C-AB	31	8	767	0.041	31	0.1	0.1	5.032	A
C-A	205	51			205				
A-B	12	3			12				
A-C	107	27			107				

Appendix V

J6: B660 / Oldaways Road / Thurleigh Road: Analysis – Input and Results

J6: B660 / Oldways Rd / Thurleigh Rd



Background 2019

AM	A	B	C	D
A	0	39	182	19
B	12	0	39	100
C	78	56	0	119
D	18	254	213	0

Background 2019

PM	A	B	C	D
A	0	9	78	17
B	22	0	35	216
C	130	20	0	162
D	16	82	81	0

HGV%age

AM	A	B	C	D
A	0.0	0.0	0.0	0.0
B	0.0	0.0	0.0	0.0
C	0.0	0.0	0.0	0.0
D	0.1	0.0	0.0	0.0

Tempro 2019-2030

AM	A	B	C	
A	1.1369	1.1369	1.1369	1.1369
B	1.1369	1.1369	1.1369	1.1369
C	1.1369	1.1369	1.1369	1.1369
D	1.1369	1.1369	1.1369	1.1369

Tempro 2019-2030

PM	A	B	C	D
A	1.1554	1.1554	1.1554	1.1554
B	1.1554	1.1554	1.1554	1.1554
C	1.1554	1.1554	1.1554	1.1554
D	1.1554	1.1554	1.1554	1.1554

HGV%age

PM	A	B	C	D
A	0.0%	0.0%	1.3%	0.0%
B	0.0%	0.0%	0.0%	0.0%
C	0.8%	0.0%	0.0%	0.6%
D	0.0%	1.3%	0.0%	0.0%

Background 2030

AM	A	B	C	D
A	0	44	207	22
B	14	0	44	114
C	89	64	0	135
D	21	288	242	0

Background 2030

PM	A	B	C	D
A	0	10	90	20
B	25	0	40	250
C	150	23	0	188
D	18	94	94	0

Committed Development

AM	A	B	C	D
A	0	0	0	0
B	1	0	0	0
C	0	0	0	0
D	0	0	0	0

Committed Development

PM	A	B	C	D
A	0	1	0	0
B	0	0	0	0
C	0	0	0	0
D	0	0	0	0

Background 2030 + Committed

AM	A	B	C	D
A	0	44	207	22
B	14	0	44	114
C	89	64	0	135
D	21	288	242	0

Background 2030 + Committed

PM	A	B	C	D
A	0	11	90	20
B	25	0	40	250
C	150	23	0	188
D	18	95	94	0

Development

AM	A	B	C	D
A	0	5	0	0
B	20	0	0	13
C	0	0	0	0
D	0	3	0	0

Development

PM	A	B	C	D
A	0	16	0	0
B	7	0	0	4
C	0	0	0	0
D	0	10	0	0

Background 2030 + Development

AM	A	B	C	D
A	0	49	207	22
B	35	0	44	127
C	89	64	0	135
D	21	292	242	0

Background 2030 + Development

PM	A	B	C	D
A	0	26	90	20
B	32	0	40	255
C	150	23	0	188
D	18	104	94	0

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: J6.j9
Path: C:\Users\Martin\OneDrive - Martin Andrews Consulting Ltd\Projects 200 - 299\248 - Salph End, Bedford\Reports\TA\Junction Analysis
Report generation date: 29/03/2020 12:44:11

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2019							
Stream B-ACD	0.9	20.19	0.48	C	2.6	33.10	0.74	D
Stream A-BCD	0.1	5.19	0.04	A	0.1	6.46	0.04	A
Stream D-A	0.4	74.47	0.30	F	0.0	7.85	0.04	A
Stream D-BC	8.5	64.05	0.92	F	0.5	10.09	0.33	B
Stream C-ABD	0.3	6.80	0.15	A	0.1	4.90	0.05	A
	2030-Background+Committed							
Stream B-ACD	1.5	28.99	0.61	D	5.9	66.69	0.89	F
Stream A-BCD	0.1	5.16	0.05	A	0.1	6.67	0.05	A
Stream D-A	2.7	505.67	1.10	F	0.0	8.31	0.04	A
Stream D-BC	32.0	189.03	1.08	F	0.7	11.70	0.40	B
Stream C-ABD	0.4	7.27	0.19	A	0.1	4.83	0.06	A
	2030-Background+Committed+Dev							
Stream B-ACD	2.6	44.56	0.75	E	7.9	84.62	0.93	F
Stream A-BCD	0.1	5.19	0.05	A	0.1	6.58	0.05	A
Stream D-A	2.9	541.62	1.13	F	0.0	8.46	0.04	A
Stream D-BC	38.3	223.33	1.11	F	0.7	12.35	0.43	B
Stream C-ABD	0.4	7.35	0.20	A	0.1	4.85	0.06	A

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.

File summary

File Description

Title	J6: B660 / Oldways Rd / Thurleigh Rd
Location	
Site number	
Date	17/01/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	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	2019	AM	ONE HOUR	07:45	09:15	15	✓
D2	2019	PM	ONE HOUR	16:45	18:15	15	✓
D3	2030-Background+Committed	AM	ONE HOUR	07:45	09:15	15	✓
D4	2030-Background+Committed	PM	ONE HOUR	16:45	18:15	15	✓
D5	2030-Background+Committed+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Background+Committed+Dev	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

2019, 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	Right-Left Stagger	Two-way		30.98	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	B660 N		Major
B	Oldways Road		Minor
C	B660 S		Major
D	Thurleigh Road		Minor

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)
A	6.50			150.0	✓	0.00
C	6.50			150.0	✓	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)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.90								19	22
D	One lane plus flare		10.00	8.90	5.90	5.07	5.07	✓	3.00	180	49

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	661	-	-	-	0.250	0.250	0.250	-	0.250	-	-
1	B-AD	490	0.087	0.221	-	-	-	0.139	0.315	0.139	0.087	0.221
1	B-C	631	0.095	0.239	-	-	-	-	-	-	0.095	0.239
1	C-B	661	0.250	0.250	-	-	-	-	-	-	0.250	0.250
1	D-A	592	-	-	-	0.224	0.089	0.224	-	0.089	-	-
1	D-BC	671	0.190	0.190	0.431	0.302	0.119	0.302	-	0.119	-	-

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	2019	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	240	100.000
B		ONE HOUR	✓	151	100.000
C		ONE HOUR	✓	253	100.000
D		ONE HOUR	✓	485	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	39	182	19
	B	12	0	39	100
	C	78	56	0	119
	D	18	254	213	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.48	20.19	0.9	C	139	208
A-BCD	0.04	5.19	0.1	A	24	37
A-B					35	52
A-C					161	242
D-A	0.30	74.47	0.4	F	17	25
D-BC	0.92	64.05	8.5	F	429	643
C-ABD	0.15	6.80	0.3	A	73	110
C-D					96	144
C-A					63	94

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	114	28	403	0.282	112	0.0	0.4	12.294	B
A-BCD	19	5	713	0.026	19	0.0	0.0	5.182	A
A-B	29	7			29				
A-C	133	33			133				
D-A	14	3	445	0.030	13	0.0	0.0	8.341	A
D-BC	352	88	593	0.593	346	0.0	1.4	14.290	B
C-ABD	55	14	636	0.087	54	0.0	0.1	6.191	A
C-D	82	20			82				
C-A	54	13			54				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	136	34	380	0.358	135	0.4	0.5	14.681	B
A-BCD	24	6	724	0.033	24	0.0	0.0	5.136	A
A-B	34	8			34				
A-C	158	40			158				
D-A	16	4	360	0.045	16	0.0	0.0	10.476	B
D-BC	420	105	577	0.727	416	1.4	2.5	21.669	C
C-ABD	70	18	632	0.111	70	0.1	0.2	6.405	A
C-D	95	24			95				
C-A	62	16			62				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	166	42	347	0.479	165	0.5	0.9	19.601	C
A-BCD	31	8	741	0.042	31	0.0	0.1	5.073	A
A-B	41	10			41				
A-C	192	48			192				
D-A	20	5	124	0.160	19	0.0	0.2	34.177	D
D-BC	514	129	556	0.924	496	2.5	7.1	48.414	E
C-ABD	94	24	629	0.150	94	0.2	0.3	6.730	A
C-D	111	28			111				
C-A	73	18			73				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	166	42	344	0.483	166	0.9	0.9	20.189	C
A-BCD	31	8	741	0.042	31	0.1	0.1	5.075	A
A-B	41	10			41				
A-C	192	48			192				
D-A	20	5	67	0.298	19	0.2	0.4	74.473	F
D-BC	514	129	556	0.924	509	7.1	8.5	64.048	F
C-ABD	95	24	625	0.152	95	0.3	0.3	6.797	A
C-D	111	28			111				
C-A	73	18			73				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	136	34	375	0.362	137	0.9	0.6	15.202	C
A-BCD	24	6	724	0.033	24	0.1	0.0	5.142	A
A-B	34	8			34				
A-C	158	40			158				
D-A	16	4	319	0.051	17	0.4	0.1	12.000	B
D-BC	420	105	577	0.728	442	8.5	2.9	30.097	D
C-ABD	71	18	626	0.113	71	0.3	0.2	6.497	A
C-D	95	24			95				
C-A	62	16			62				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	114	28	402	0.283	114	0.6	0.4	12.571	B
A-BCD	19	5	713	0.026	19	0.0	0.0	5.186	A
A-B	29	7			29				
A-C	133	33			133				
D-A	14	3	436	0.031	14	0.1	0.0	8.523	A
D-BC	352	88	592	0.593	357	2.9	1.5	15.643	C
C-ABD	55	14	633	0.087	55	0.2	0.1	6.236	A
C-D	82	20			82				
C-A	54	13			54				

2019, 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	Right-Left Stagger	Two-way		12.77	B

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	2019	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	104	100.000
B		ONE HOUR	✓	273	100.000
C		ONE HOUR	✓	312	100.000
D		ONE HOUR	✓	179	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	9	78	17
	B	22	0	35	216
	C	130	20	0	162
	D	16	82	81	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	0
	B	0	0	0	0
	C	1	0	0	1
	D	0	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.74	33.10	2.6	D	251	376
A-BCD	0.04	6.46	0.1	A	18	27
A-B					8	12
A-C					69	104
D-A	0.04	7.85	0.0	A	15	22
D-BC	0.33	10.09	0.5	B	150	224
C-ABD	0.05	4.90	0.1	A	28	43
C-D					143	215
C-A					115	172

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	206	51	438	0.469	202	0.0	0.9	15.031	C
A-BCD	14	4	606	0.024	14	0.0	0.0	6.090	A
A-B	7	2			7				
A-C	57	14			57				
D-A	12	3	518	0.023	12	0.0	0.0	7.117	A
D-BC	123	31	579	0.212	122	0.0	0.3	7.894	A
C-ABD	21	5	759	0.028	21	0.0	0.0	4.895	A
C-D	119	30			119				
C-A	95	24			95				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	245	61	425	0.577	244	0.9	1.3	19.601	C
A-BCD	18	4	595	0.030	18	0.0	0.0	6.235	A
A-B	8	2			8				
A-C	68	17			68				
D-A	14	4	501	0.029	14	0.0	0.0	7.399	A
D-BC	147	37	562	0.261	146	0.3	0.4	8.697	A
C-ABD	27	7	779	0.035	27	0.0	0.0	4.805	A
C-D	141	35			141				
C-A	113	28			113				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	301	75	408	0.738	296	1.3	2.5	30.894	D
A-BCD	22	6	582	0.039	22	0.0	0.1	6.441	A
A-B	10	2			10				
A-C	83	21			83				
D-A	18	4	477	0.037	18	0.0	0.0	7.836	A
D-BC	179	45	539	0.333	179	0.4	0.5	10.042	B
C-ABD	37	9	807	0.045	37	0.0	0.1	4.687	A
C-D	170	43			170				
C-A	137	34			137				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	301	75	407	0.738	300	2.5	2.6	33.095	D
A-BCD	22	6	581	0.039	22	0.1	0.1	6.457	A
A-B	10	2			10				
A-C	83	21			83				
D-A	18	4	476	0.037	18	0.0	0.0	7.847	A
D-BC	179	45	538	0.334	179	0.5	0.5	10.090	B
C-ABD	37	9	807	0.045	37	0.1	0.1	4.690	A
C-D	170	43			170				
C-A	137	34			137				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	245	61	425	0.577	250	2.6	1.4	21.099	C
A-BCD	18	4	594	0.030	18	0.1	0.0	6.258	A
A-B	8	2			8				
A-C	68	17			68				
D-A	14	4	500	0.029	14	0.0	0.0	7.414	A
D-BC	147	37	561	0.261	147	0.5	0.4	8.754	A
C-ABD	27	7	779	0.035	27	0.1	0.0	4.812	A
C-D	141	35			141				
C-A	113	28			113				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	206	51	438	0.469	208	1.4	0.9	15.754	C
A-BCD	14	4	605	0.024	14	0.0	0.0	6.107	A
A-B	7	2			7				
A-C	57	14			57				
D-A	12	3	517	0.023	12	0.0	0.0	7.133	A
D-BC	123	31	578	0.212	123	0.4	0.3	7.954	A
C-ABD	21	5	758	0.028	21	0.0	0.0	4.900	A
C-D	119	30			119				
C-A	95	24			95				

2030-Background+Committed, 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	Right-Left Stagger	Two-way		90.86	F

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	2030-Background+Committed	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	273	100.000
B		ONE HOUR	✓	172	100.000
C		ONE HOUR	✓	288	100.000
D		ONE HOUR	✓	551	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	44	207	22
	B	14	0	44	114
	C	89	64	0	135
	D	21	288	242	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.61	28.99	1.5	D	158	237
A-BCD	0.05	5.16	0.1	A	30	45
A-B					39	58
A-C					182	273
D-A	1.10	505.67	2.7	F	19	29
D-BC	1.08	189.03	32.0	F	486	730
C-ABD	0.19	7.27	0.4	A	90	135
C-D					105	158
C-A					69	104

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	129	32	387	0.335	128	0.0	0.5	13.771	B
A-BCD	22	6	721	0.031	22	0.0	0.0	5.152	A
A-B	32	8			32				
A-C	151	38			151				
D-A	16	4	395	0.040	16	0.0	0.0	9.477	A
D-BC	399	100	582	0.686	391	0.0	2.0	18.166	C
C-ABD	66	16	634	0.104	65	0.0	0.2	6.322	A
C-D	91	23			91				
C-A	60	15			60				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	155	39	360	0.430	154	0.5	0.7	17.400	C
A-BCD	29	7	734	0.039	29	0.0	0.1	5.103	A
A-B	38	10			38				
A-C	179	45			179				
D-A	19	5	241	0.078	19	0.0	0.1	16.215	C
D-BC	476	119	564	0.845	467	2.0	4.4	33.981	D
C-ABD	85	21	630	0.134	85	0.2	0.2	6.597	A
C-D	105	26			105				
C-A	69	17			69				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	189	47	322	0.589	187	0.7	1.3	26.240	D
A-BCD	38	10	753	0.051	38	0.1	0.1	5.036	A
A-B	46	11			46				
A-C	216	54			216				
D-A	23	6	21	1.097	15	0.1	2.2	393.831	F
D-BC	584	146	540	1.080	523	4.4	19.6	101.735	F
C-ABD	117	29	627	0.186	116	0.2	0.4	7.045	A
C-D	121	30			121				
C-A	80	20			80				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	189	47	312	0.607	189	1.3	1.5	28.993	D
A-BCD	38	10	753	0.051	38	0.1	0.1	5.042	A
A-B	46	11			46				
A-C	216	54			216				
D-A	23	6	26	0.890	21	2.2	2.7	505.674	F
D-BC	584	146	539	1.082	534	19.6	32.0	189.026	F
C-ABD	118	30	615	0.193	118	0.4	0.4	7.270	A
C-D	120	30			120				
C-A	79	20			79				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	155	39	341	0.454	157	1.5	0.9	19.827	C
A-BCD	29	7	733	0.039	29	0.1	0.1	5.112	A
A-B	38	9			38				
A-C	179	45			179				
D-A	19	5	28	0.680	19	2.7	2.6	369.161	F
D-BC	476	119	563	0.847	546	32.0	14.7	159.948	F
C-ABD	87	22	604	0.144	87	0.4	0.3	6.983	A
C-D	104	26			104				
C-A	68	17			68				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	129	32	378	0.343	131	0.9	0.5	14.650	B
A-BCD	23	6	720	0.031	23	0.1	0.0	5.159	A
A-B	32	8			32				
A-C	151	38			151				
D-A	16	4	321	0.049	26	2.6	0.1	12.620	B
D-BC	399	100	580	0.688	448	14.7	2.4	35.671	E
C-ABD	66	17	621	0.107	67	0.3	0.2	6.503	A
C-D	91	23			91				
C-A	60	15			60				

2030-Background+Committed, 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	Right-Left Stagger	Two-way		23.62	C

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	2030-Background+Committed	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	121	100.000
B		ONE HOUR	✓	315	100.000
C		ONE HOUR	✓	361	100.000
D		ONE HOUR	✓	207	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	11	90	20
	B	25	0	40	250
	C	150	23	0	188
	D	18	95	94	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	0
	B	0	0	0	0
	C	1	0	0	1
	D	0	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.89	66.69	5.9	F	289	434
A-BCD	0.05	6.67	0.1	A	22	33
A-B					10	15
A-C					79	119
D-A	0.04	8.31	0.0	A	17	25
D-BC	0.40	11.70	0.7	B	173	260
C-ABD	0.06	4.83	0.1	A	35	53
C-D					165	247
C-A					131	197

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	237	59	428	0.554	232	0.0	1.2	18.015	C
A-BCD	17	4	598	0.029	17	0.0	0.0	6.200	A
A-B	8	2			8				
A-C	66	16			66				
D-A	14	3	504	0.027	13	0.0	0.0	7.330	A
D-BC	142	36	566	0.252	141	0.0	0.3	8.492	A
C-ABD	26	6	775	0.033	26	0.0	0.0	4.820	A
C-D	137	34			137				
C-A	109	27			109				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	283	71	413	0.686	280	1.2	2.0	26.420	D
A-BCD	21	5	586	0.036	21	0.0	0.0	6.379	A
A-B	10	2			10				
A-C	78	19			78				
D-A	16	4	484	0.033	16	0.0	0.0	7.693	A
D-BC	170	42	546	0.311	169	0.3	0.4	9.602	A
C-ABD	33	8	799	0.042	33	0.0	0.1	4.723	A
C-D	162	40			162				
C-A	129	32			129				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	347	87	392	0.885	334	2.0	5.1	53.336	F
A-BCD	27	7	571	0.048	27	0.0	0.1	6.632	A
A-B	12	3			12				
A-C	94	24			94				
D-A	20	5	454	0.044	20	0.0	0.0	8.281	A
D-BC	208	52	519	0.401	207	0.4	0.7	11.582	B
C-ABD	46	11	833	0.055	46	0.1	0.1	4.594	A
C-D	196	49			196				
C-A	156	39			156				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	347	87	392	0.885	344	5.1	5.9	66.693	F
A-BCD	27	7	568	0.048	27	0.1	0.1	6.667	A
A-B	12	3			12				
A-C	94	24			94				
D-A	20	5	453	0.044	20	0.0	0.0	8.312	A
D-BC	208	52	517	0.402	208	0.7	0.7	11.697	B
C-ABD	46	11	832	0.055	46	0.1	0.1	4.598	A
C-D	196	49			196				
C-A	156	39			156				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	283	71	412	0.687	297	5.9	2.4	34.256	D
A-BCD	21	5	582	0.037	21	0.1	0.1	6.430	A
A-B	10	2			10				
A-C	78	19			78				
D-A	16	4	482	0.034	16	0.0	0.0	7.732	A
D-BC	170	42	544	0.313	171	0.7	0.5	9.728	A
C-ABD	34	8	798	0.042	34	0.1	0.1	4.729	A
C-D	162	40			162				
C-A	129	32			129				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	237	59	428	0.555	242	2.4	1.3	19.778	C
A-BCD	17	4	596	0.029	17	0.1	0.0	6.229	A
A-B	8	2			8				
A-C	66	16			66				
D-A	14	3	503	0.027	14	0.0	0.0	7.355	A
D-BC	142	36	564	0.252	143	0.5	0.3	8.590	A
C-ABD	26	6	775	0.033	26	0.1	0.0	4.826	A
C-D	137	34			137				
C-A	109	27			109				

2030-Background+Committed+Dev, 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	Right-Left Stagger	Two-way		106.03	F

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
D5	2030-Background+Committed+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	278	100.000
B		ONE HOUR	✓	206	100.000
C		ONE HOUR	✓	288	100.000
D		ONE HOUR	✓	555	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	49	207	22
	B	35	0	44	127
	C	89	64	0	135
	D	21	292	242	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.75	44.56	2.6	E	189	284
A-BCD	0.05	5.19	0.1	A	30	45
A-B					43	65
A-C					182	273
D-A	1.13	541.62	2.9	F	19	29
D-BC	1.11	223.33	38.3	F	490	735
C-ABD	0.20	7.35	0.4	A	90	135
C-D					105	157
C-A					69	104

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	155	39	381	0.407	152	0.0	0.7	15.596	C
A-BCD	23	6	718	0.032	22	0.0	0.0	5.178	A
A-B	36	9			36				
A-C	151	38			151				
D-A	16	4	384	0.041	16	0.0	0.0	9.767	A
D-BC	402	101	575	0.699	393	0.0	2.2	19.014	C
C-ABD	66	16	633	0.104	65	0.0	0.2	6.340	A
C-D	91	23			91				
C-A	60	15			60				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	185	46	353	0.525	184	0.7	1.1	21.058	C
A-BCD	29	7	730	0.040	29	0.0	0.1	5.133	A
A-B	42	11			42				
A-C	179	45			179				
D-A	19	5	214	0.088	19	0.0	0.1	18.422	C
D-BC	480	120	556	0.863	469	2.2	4.9	37.205	E
C-ABD	85	21	628	0.135	85	0.2	0.2	6.625	A
C-D	105	26			105				
C-A	69	17			69				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	227	57	315	0.721	222	1.1	2.3	37.001	E
A-BCD	39	10	749	0.052	39	0.1	0.1	5.071	A
A-B	51	13			51				
A-C	216	54			216				
D-A	23	6	21	1.127	14	0.1	2.3	410.678	F
D-BC	588	147	530	1.109	517	4.9	22.7	115.537	F
C-ABD	117	29	625	0.187	116	0.2	0.4	7.085	A
C-D	121	30			121				
C-A	80	20			80				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	227	57	304	0.747	225	2.3	2.6	44.563	E
A-BCD	39	10	748	0.052	39	0.1	0.1	5.079	A
A-B	51	13			51				
A-C	216	54			216				
D-A	23	6	25	0.922	21	2.3	2.9	541.620	F
D-BC	588	147	529	1.112	525	22.7	38.3	223.326	F
C-ABD	119	30	610	0.195	119	0.4	0.4	7.348	A
C-D	119	30			119				
C-A	79	20			79				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	185	46	331	0.560	190	2.6	1.3	26.490	D
A-BCD	29	7	729	0.040	29	0.1	0.1	5.147	A
A-B	42	11			42				
A-C	179	45			179				
D-A	19	5	27	0.708	19	2.9	2.8	395.237	F
D-BC	480	120	554	0.866	540	38.3	23.3	208.775	F
C-ABD	87	22	597	0.146	88	0.4	0.3	7.091	A
C-D	103	26			103				
C-A	68	17			68				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	155	39	366	0.423	157	1.3	0.8	17.427	C
A-BCD	23	6	717	0.032	23	0.1	0.0	5.187	A
A-B	36	9			36				
A-C	151	38			151				
D-A	16	4	240	0.066	27	2.8	0.1	17.765	C
D-BC	402	101	573	0.702	485	23.3	2.7	63.315	F
C-ABD	67	17	612	0.109	67	0.3	0.2	6.620	A
C-D	90	23			90				
C-A	60	15			60				

2030-Background+Committed+Dev, 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	Right-Left Stagger	Two-way		29.44	D

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
D6	2030-Background+Committed+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	136	100.000
B		ONE HOUR	✓	327	100.000
C		ONE HOUR	✓	361	100.000
D		ONE HOUR	✓	216	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	26	90	20
	B	32	0	40	255
	C	150	23	0	188
	D	18	104	94	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	1	0
	B	0	0	0	0
	C	1	0	0	1
	D	0	1	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.93	84.62	7.9	F	300	450
A-BCD	0.05	6.58	0.1	A	23	34
A-B					23	34
A-C					79	119
D-A	0.04	8.46	0.0	A	17	25
D-BC	0.43	12.35	0.7	B	182	273
C-ABD	0.06	4.85	0.1	A	35	53
C-D					165	247
C-A					131	197

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	246	62	426	0.578	241	0.0	1.3	19.005	C
A-BCD	18	4	604	0.029	17	0.0	0.0	6.143	A
A-B	19	5			19				
A-C	66	16			66				
D-A	14	3	501	0.027	13	0.0	0.0	7.388	A
D-BC	149	37	562	0.265	148	0.0	0.4	8.707	A
C-ABD	26	6	771	0.034	26	0.0	0.0	4.846	A
C-D	137	34			137				
C-A	109	27			109				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	294	73	410	0.717	290	1.3	2.3	28.994	D
A-BCD	22	5	593	0.037	22	0.0	0.1	6.308	A
A-B	23	6			23				
A-C	78	19			78				
D-A	16	4	479	0.034	16	0.0	0.0	7.774	A
D-BC	178	44	541	0.329	177	0.4	0.5	9.938	A
C-ABD	34	8	794	0.042	34	0.0	0.1	4.751	A
C-D	162	40			162				
C-A	129	32			129				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	360	90	389	0.926	343	2.3	6.4	63.064	F
A-BCD	28	7	580	0.049	28	0.1	0.1	6.538	A
A-B	27	7			27				
A-C	94	24			94				
D-A	20	5	447	0.044	20	0.0	0.0	8.418	A
D-BC	218	55	513	0.425	217	0.5	0.7	12.191	B
C-ABD	46	12	827	0.056	46	0.1	0.1	4.627	A
C-D	195	49			195				
C-A	156	39			156				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	360	90	389	0.926	354	6.4	7.9	84.615	F
A-BCD	28	7	576	0.049	28	0.1	0.1	6.585	A
A-B	27	7			27				
A-C	94	24			94				
D-A	20	5	445	0.045	20	0.0	0.0	8.460	A
D-BC	218	55	511	0.427	218	0.7	0.7	12.355	B
C-ABD	46	12	827	0.056	46	0.1	0.1	4.633	A
C-D	195	49			195				
C-A	156	39			156				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	294	73	410	0.717	314	7.9	2.8	42.899	E
A-BCD	22	5	588	0.037	22	0.1	0.1	6.374	A
A-B	22	6			22				
A-C	78	19			78				
D-A	16	4	476	0.034	16	0.0	0.0	7.828	A
D-BC	178	44	538	0.331	179	0.7	0.5	10.110	B
C-ABD	34	8	794	0.042	34	0.1	0.1	4.759	A
C-D	162	40			162				
C-A	129	32			129				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	246	62	425	0.579	252	2.8	1.4	21.356	C
A-BCD	18	4	602	0.029	18	0.1	0.0	6.173	A
A-B	19	5			19				
A-C	66	16			66				
D-A	14	3	499	0.027	14	0.0	0.0	7.416	A
D-BC	149	37	560	0.266	150	0.5	0.4	8.821	A
C-ABD	26	6	771	0.034	26	0.1	0.0	4.854	A
C-D	137	34			137				
C-A	109	27			109				

Appendix W

Road Safety Audit: Scenario 1 Access Only

safer roads for everyone

Land North of Hookhams Lane, Renhold, Bedford

(Drawing No. 248-TA11)

Road Safety Audit Stage 1

on behalf of Martin Andrews Consulting Ltd
(Manor Oak Homes)

TMS reference no: 15386

Date: 9th December 2019

Unit 1b, Sovereign Court 2,
University of Warwick Science Park,
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Land North of Hookhams Lane, Renhold Lane, Bedford

Drawing No. 248-TA11

Road Safety Audit Stage 1

1. Introduction

1.1 This report describes a Stage 1 Road Safety Audit carried out on a proposed priority junction at Land North of Hookhams Lane, Renhold, Bedford, on behalf of Martin Andrews Consulting Ltd (Manor Oak Homes). This audit relates to drawing number 248-TA11. The audit was carried out on 9th December 2019 in the offices of TMS Consultancy.

1.2 The audit team members were as follows:

Audit Team Leader

Darren Newbold – MSc, BSc (Hons), MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency
Principal Engineer, TMS Consultancy

Audit Team Member

Richard Cook - BA (Hons)
Graduate Engineer, TMS Consultancy

1.3 The audit comprised an examination of the documents listed in **Appendix A**.

1.4 The site was visited by the Audit Team on 9th December 2019 at 11.25 am. The weather was fine and dry. Traffic flows were very light. No pedestrian and cycle flows were observed.

1.5 The terms of reference of the Road Safety Audit are as described in GG 119 (GG 119 superseded HD 19/15 in November 2018). The team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the design to any other criteria.

1.6 All of the problems described in this report are considered by the audit team to require action in order to improve the safety of the scheme and minimise collision occurrence.

1.7 A scheme drawing is included in **Appendix B**, where the locations of specific problems are referenced. A location plan of the scheme is also included in this Appendix.

1.8 The scheme consists of proposed priority junction access for land at 25 Hookhams Lane, Renhold, Bedford consisting of 400 dwellings and a two-form entry Primary School.

1.9 **Road Safety Audit Response Report**

Following the completion of the road safety audit, the design team should prepare a road safety audit response report in collaboration with the Overseeing Organisation.

The response report should incorporate the following:

- **Decision Log** spreadsheet, where each Problem and Recommendation in the Safety Audit report is reiterated
- In the Decision Log, a response should be provided by the Design Team and Overseeing Organisation for each problem raised in the RSA report, together with an agreed action

Further information is provided in **GG 119 Sections 4.11 to 4.19** and **Appendix F** (where a road safety audit response report template is available).

The response report should be produced and finalised within *one month* of the issue of the RSA report. A copy of the response report should be issued to the Safety Audit Team for information.

2. Items resulting from this Stage 1 Audit

2.1 PROBLEM

Location – Hookhams Lane; site access junction

Summary: Potential darkness related vehicle collisions

There is no existing street lighting within the vicinity of the proposed site access at No. 25 Hookhams Lane. Given the introduction of the junction and a significant amount of additional traffic (and new turning manoeuvres), the lack of illumination may increase the potential for darkness related vehicle collisions.

RECOMMENDATION

At the detailed design stage, the site access junction should be illuminated.

2.2 PROBLEM

Location – Hookhams Lane

Summary: Potential trip hazard to pedestrians

There are shops on the south side of Hookhams Lane within the vicinity of the proposed site access junction, which is likely to introduce a pedestrian desire line to and from the development. Pedestrians wishing to cross Hookhams Lane will have to do so via full height kerbs, which may be a potential trip hazard to pedestrians, particularly to those with visual and mobility impairments.

RECOMMENDATION

At the detailed design stage, an uncontrolled pedestrian crossing point with dropped kerbs and tactile paving should be provided across Hookhams Lane adjacent to the site access junction.

Also, at the detailed design stage, an uncontrolled pedestrian crossing should be provided across the site access road adjacent to the junction with Hookhams Lane.

2.3 OTHER ISSUE

There is an existing BT cover and telegraph pole within the footway that will both be located within the proposed junction area. At the detailed design stage, both the service cover and telegraph poles should be appropriately relocated out of the carriageway into the footway.

3. Audit Team Statement

We certify that the terms of reference of the road safety audit are as described in GG 119 (formerly HD 19/15).

Audit Team Leader

Darren Newbold – MSc, BSc (Hons), MCIHT, MSoRSA
Highways England Approved RSA Certificate of Competency
Principal Engineer, TMS Consultancy

Signed 

Date 9th December 2019

Audit Team Member

Richard Cook - BA (Hons)
Graduate Engineer, TMS Consultancy

Signed 

Date 9th December 2019

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Appendix A

Documents Examined:

- 248-TA13-Hookhams Access--Both Accesses.pdf
- Salph End ACCIDENT PLAN.pdf
- Salph End ACCIDENT REPORTS.pdf
- 18+02496+MAF+V13-Transport Statement.pdf
- 18+02496+MAF+V26..pdf
- 18+02496+MAF+V26A..pdf
- 18+02496+MAF+V27..pdf
- 248-TA-01-0-Salph End.pdf
- 248-TA01A-Location Plan.pdf
- 248-TA11A-No. 25 Hookhams Lane Access Option 1.pdf

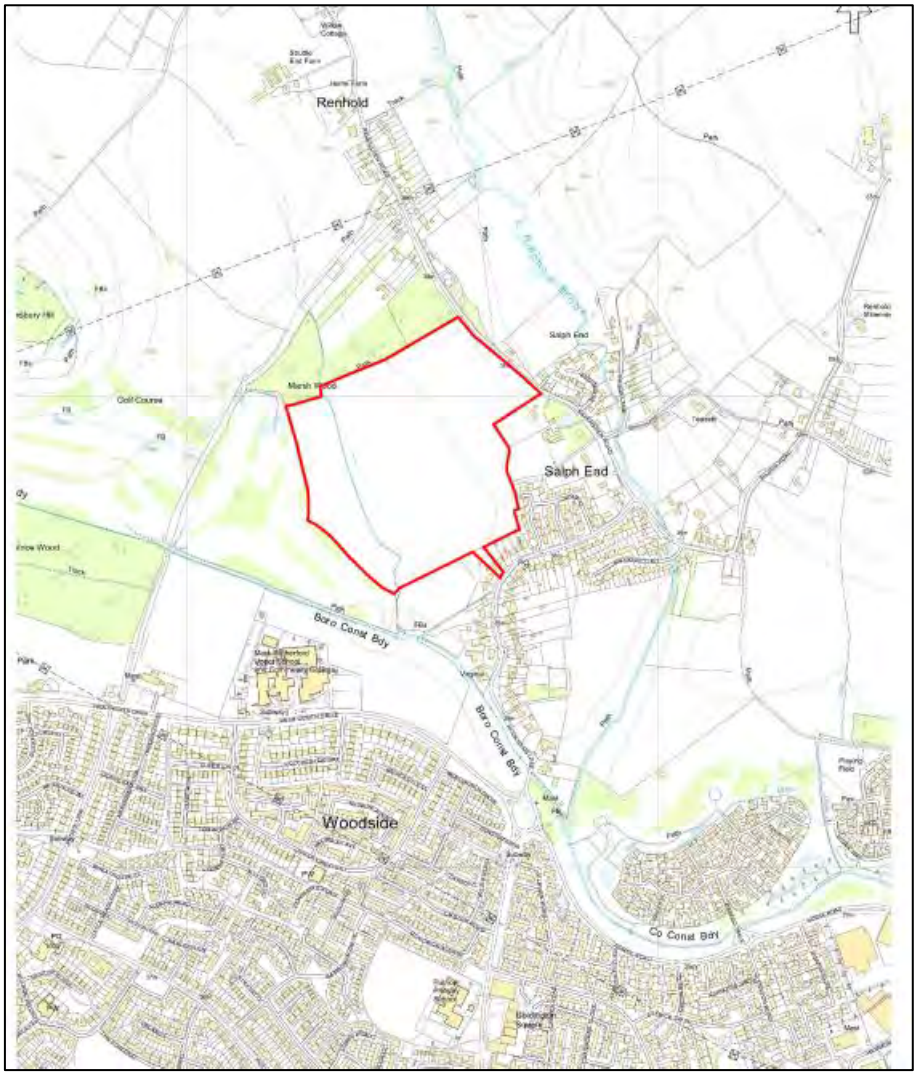
Other Information Provided:

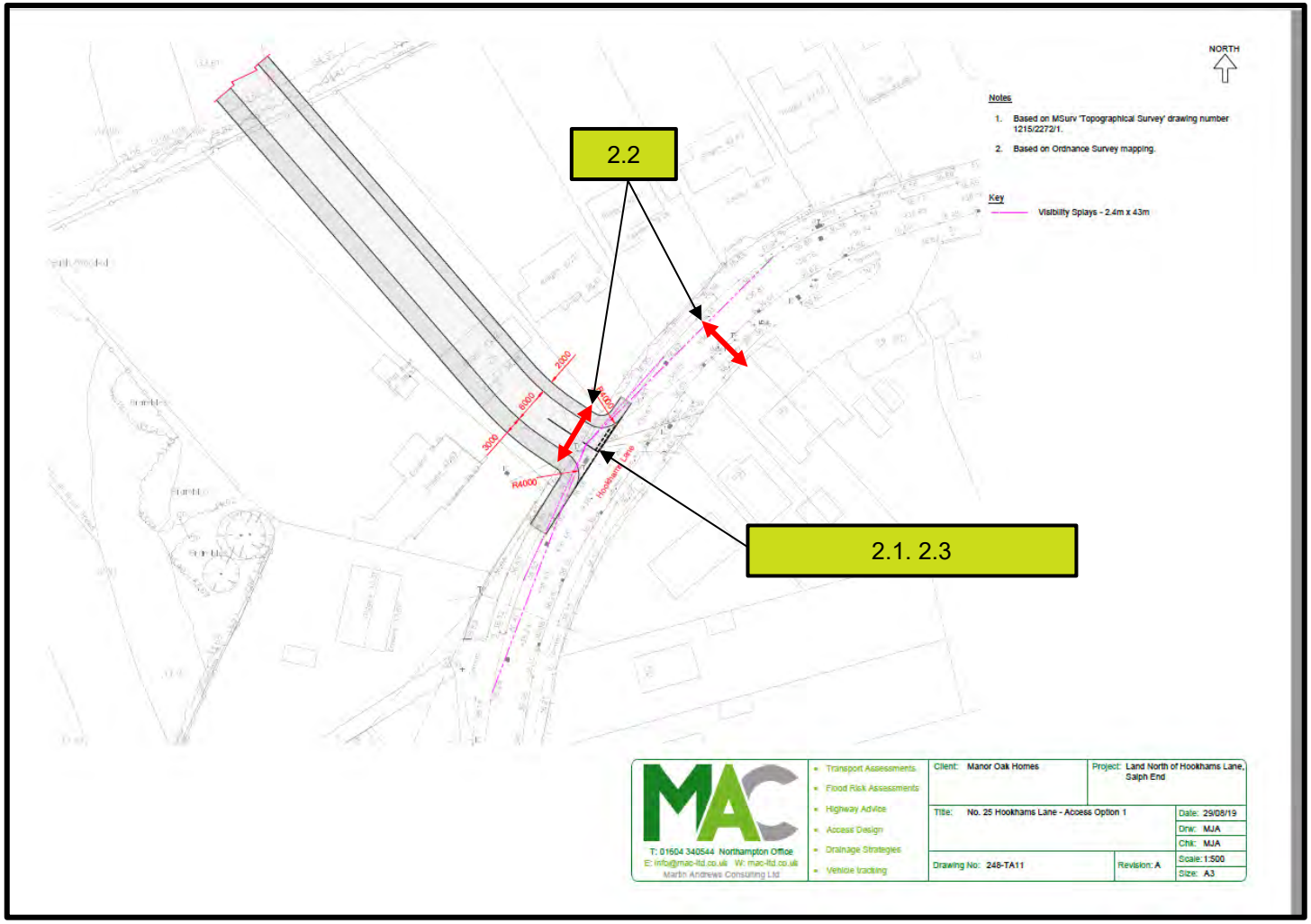
- RSA1 - Checklist of Information Required.docx

Appendix B

Please refer to the following page for a plan illustrating the locations of the problems identified as part of this audit (location numbers refer to paragraph numbers in the report).

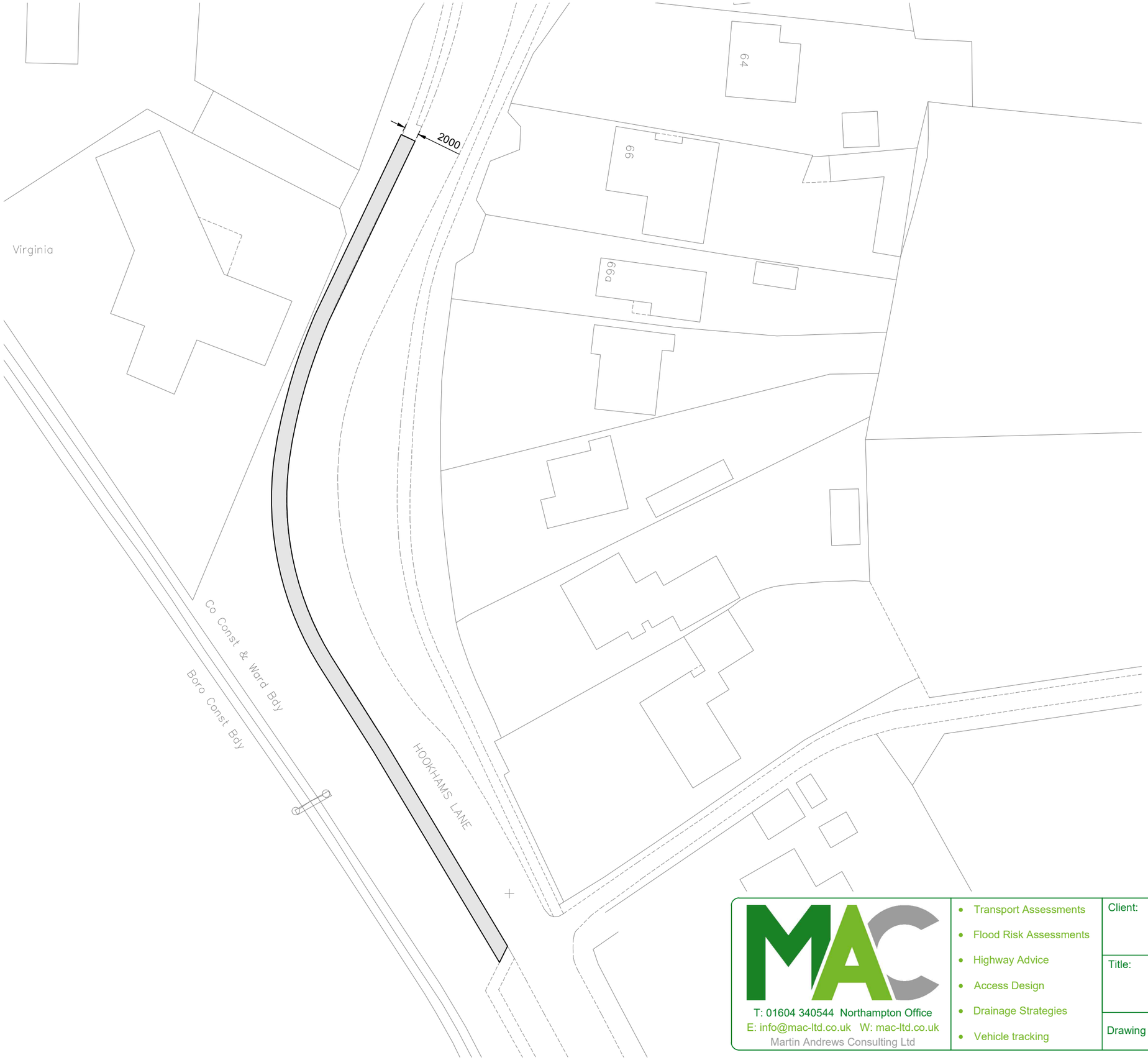
The location of the scheme is shown below:




NORTH
Notes
1. Based on MSurv 'Topographical Survey' drawing number 1215/2272/1.
2. Based on Ordnance Survey mapping.
Key
Visibility Splays - 2.4m x 43m
2.2
2.1. 2.3
2000
6000
3000
R4000
Hookhams Lane
T: 01604 340544 Northampton Office
E: info@mac-ltd.co.uk W: mac-ltd.co.uk
Martin Andrews Consulting Ltd
Transport Assessments
Flood Risk Assessments
Highway Advice
Access Design
Drainage Strategies
Vehicle tracking
Client: Manor Oak Homes
Project: Land North of Hookhams Lane, Salph End
Title: No. 25 Hookhams Lane - Access Option 1
Date: 29/08/19
Drw: MJA
Chk: MJA
Drawing No: 248-TA11
Revision: A
Scale: 1:500
Size: A3

Appendix X

Footway Improvements – South of 43 Hookhams Lane
MAC drawing no. 248-TA15



NORTH

Notes

1. Based on MSurv 'Topographical Survey' drawing number 1215/2272/1.
2. Based on Ordnance Survey mapping.

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E: info@mac-ltd.co.uk W: mac-ltd.co.uk
Martin Andrews Consulting Ltd

- Transport Assessments
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes		Project: Land North of Hookhams Lane, Salph End	
Title: Footway Improvements - South of 43 Hookhams Lane			Date: 27/03/20
			Drw: MJA
			Chk: MJA
Drawing No: 248-TA15	Revision:		Scale: 1:500
			Size: A3

Appendix Y

J2 Wentworth Road / Putnoe Lane Nil Detriment Improvements
MAC drawing no. 248-TA21

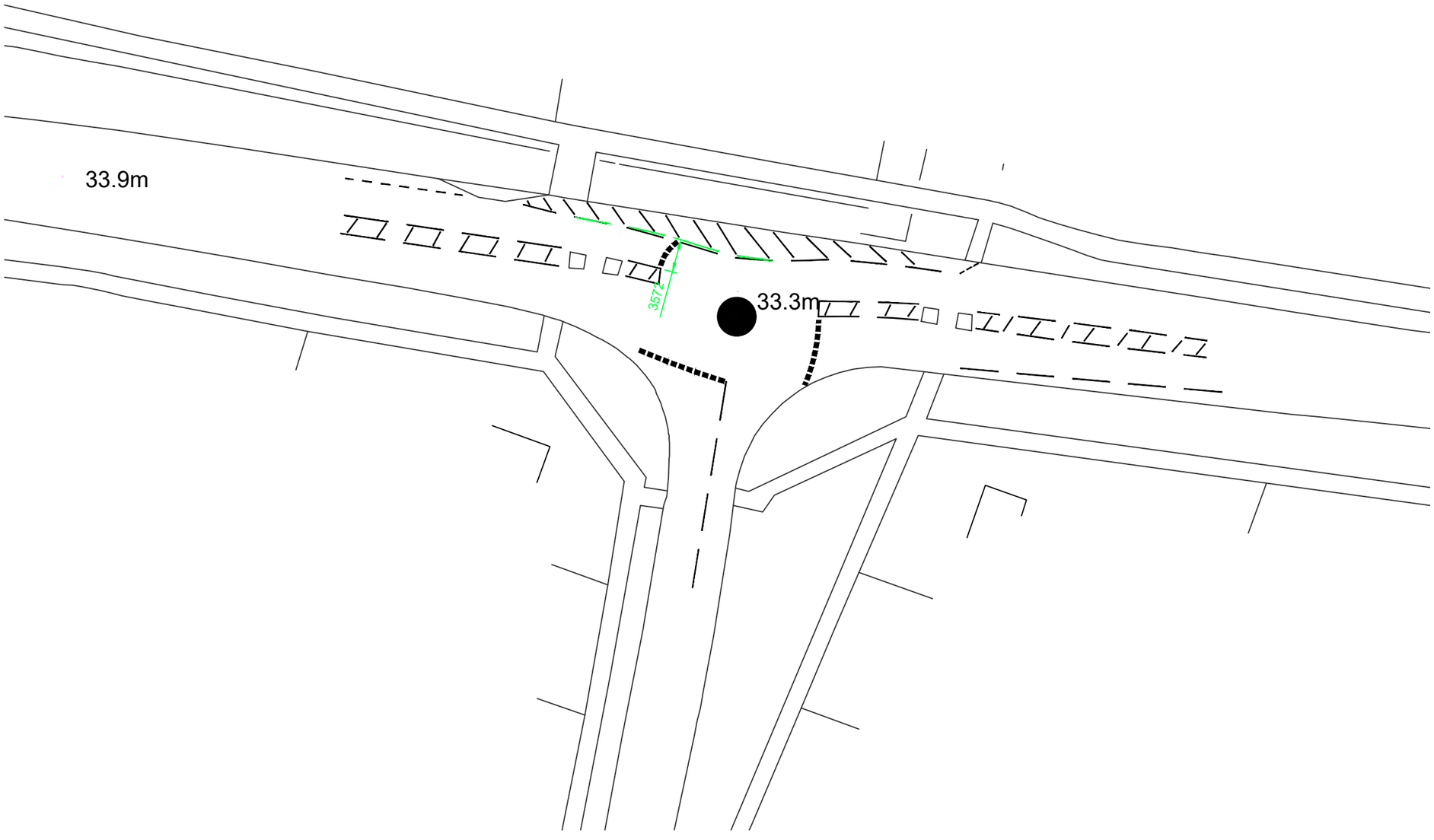
NORTH

Notes

1. Based on Ordnance Survey mapping. ©Crown Copyright and database rights 2019 OS 100019980

Key

Nil Detriment Improvements



T: 01604 340544 Northampton Office
E: info@mac-ltd.co.uk W: mac-ltd.co.uk
Martin Andrews Consulting Ltd

- Transport Assessments
- Flood Risk Assessments
- Highway Advice
- Access Design
- Drainage Strategies
- Vehicle tracking

Client: Manor Oak Homes		Project: Land North of Hookhams Lane, Salph End	
Title: J2: Wentworth Drive / Putnoe Lane Nil Detriment Improvement			Date: 30/03/20
			Drw: MJA
			Chk: MJA
Drawing No: 248-TA21	Revision: -		Scale: 1:500
			Size: A3

Appendix Z

J2 – Wentworth Drive / Putnoe Lane: Analysis Results – Nil Det

Junctions 9

ARCADY 9 - Roundabout Module

Filename: J2-Wentworth _ Putnoe-Nil Det.j9
Path: C:\Users\Martin\OneDrive - Martin Andrews Consulting Ltd\Projects 200 - 299\248 - Salph End, Bedford\Reports\TA\Junction Analysis
Report generation date: 29/03/2020 20:38:27

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	2030-Base+Comm+Dev							
Arm A	3.1	12.75	0.76	B	2.7	11.16	0.74	B
Arm B	1.2	12.98	0.55	B	0.9	12.51	0.49	B
Arm C	15.1	75.29	0.98	F	1.1	9.31	0.53	A

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.

File summary

File Description

Title	
Location	J2 Wentworth Rd / Putnoe Ln
Site number	
Date	24/07/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-2HPI2P9\Martin
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	perHour	s	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9	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
D5	2030-Base+Comm+Dev	AM	ONE HOUR	07:45	09:15	15	✓
D6	2030-Base+Comm+Dev	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

2030-Base+Comm+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 83% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
2	Wentworth Dr / Putnoe Ln	Mini-roundabout		A, B, C	36.39	E

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
A	Wentworth Rd (E)	
B	Putnoe Rd	
C	Wentworth Rd (W)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	3.55	3.55	6.40	20.0	12.06	9.01	0.0	
B	3.75	3.75	7.35	3.3	12.72	8.20	0.0	
C	3.29	3.29	3.57	0.5	17.35	16.22	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.686	1259
B	0.650	958
C	0.651	960

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 segment length (min)	Run automatically
D5	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	820	100.000
B		ONE HOUR	✓	305	100.000
C		ONE HOUR	✓	682	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	11	337	472
	B	254	0	51
	C	583	99	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.76	12.75	3.1	B	752	1129
B	0.55	12.98	1.2	B	280	420
C	0.98	75.29	15.1	F	626	939

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	617	154	74	1209	0.511	613	631	0.0	1.0	6.051	A
B	230	57	361	724	0.317	228	326	0.0	0.5	7.236	A
C	513	128	198	831	0.618	507	391	0.0	1.6	11.090	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	737	184	88	1199	0.615	735	757	1.0	1.6	7.784	A
B	274	69	433	677	0.405	273	390	0.5	0.7	8.902	A
C	613	153	237	805	0.761	607	469	1.6	3.0	17.983	C

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	903	226	104	1188	0.760	897	903	1.6	3.0	12.230	B
B	336	84	528	615	0.546	334	473	0.7	1.2	12.717	B
C	751	188	290	771	0.974	717	572	3.0	11.4	49.853	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	903	226	107	1186	0.761	902	921	3.0	3.1	12.753	B
B	336	84	532	613	0.548	336	478	1.2	1.2	12.980	B
C	751	188	292	770	0.975	736	576	11.4	15.1	75.293	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	737	184	96	1194	0.618	743	803	3.1	1.7	8.150	A
B	274	69	438	674	0.407	276	401	1.2	0.7	9.097	A
C	613	153	240	804	0.763	659	474	15.1	3.6	31.182	D

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	617	154	76	1207	0.511	620	646	1.7	1.1	6.199	A
B	230	57	365	721	0.318	231	330	0.7	0.5	7.354	A
C	513	128	200	829	0.619	521	395	3.6	1.7	12.136	B

2030-Base+Comm+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 82% of the total flow for the roundabout for one or more time segments]
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
2	Wentworth Dr / Putnoe Ln	Mini-roundabout		A, B, C	10.89	B

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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
D6	2030-Base+Comm+Dev	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 (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	822	100.000
B		ONE HOUR	✓	250	100.000
C		ONE HOUR	✓	395	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	2	269	551
	B	191	0	59
	C	352	43	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

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
A	0.74	11.16	2.7	B	754	1131
B	0.49	12.51	0.9	B	229	344
C	0.53	9.31	1.1	A	362	544

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	619	155	32	1237	0.500	615	407	0.0	1.0	5.750	A
B	188	47	414	689	0.273	187	233	0.0	0.4	7.142	A
C	297	74	144	866	0.343	295	456	0.0	0.5	6.286	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	739	185	39	1233	0.599	737	489	1.0	1.5	7.231	A
B	225	56	496	636	0.353	224	280	0.4	0.5	8.725	A
C	355	89	173	847	0.419	354	547	0.5	0.7	7.292	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	905	226	47	1227	0.738	900	597	1.5	2.7	10.853	B
B	275	69	606	565	0.487	274	342	0.5	0.9	12.304	B
C	435	109	211	822	0.529	433	668	0.7	1.1	9.219	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	905	226	47	1227	0.738	905	600	2.7	2.7	11.160	B
B	275	69	609	563	0.489	275	343	0.9	0.9	12.514	B
C	435	109	212	821	0.529	435	671	1.1	1.1	9.308	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	739	185	39	1233	0.599	744	492	2.7	1.5	7.438	A
B	225	56	500	633	0.355	226	282	0.9	0.6	8.884	A
C	355	89	175	846	0.420	357	552	1.1	0.7	7.380	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
A	619	155	32	1237	0.500	621	412	1.5	1.0	5.861	A
B	188	47	418	687	0.274	189	236	0.6	0.4	7.240	A
C	297	74	146	865	0.344	298	461	0.7	0.5	6.362	A