TRANSPORT ASSESSMENT

For

GRAHAM ANTHONY ASSOCIATES

PROPOSED RESIDENTIAL DEVELOPMENT

at

SCHOOL LANE, FORTON.

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Client:		Graham Anthony Associates	
Project Name:		School Lane, Forton	
Project Number:		2016-F-027	
Report Title:		Transport Assessment: Proposed Residential Development.	
Created by:	Ed Pope	**Date:**	June 2017
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Approved by:	Carl Tonks carl@tonks-consulting.co.uk	**Date:**	June 2017

1. INTRODUCTION

1.1 **cTc** is commissioned by Graham Anthony Associates to provide traffic and transportation advice relating to their proposed development at School Lane, Forton, Lancashire.

1.2 This report describes the assessments undertaken to demonstrate the trip generation associated with the proposals, and reviews the local infrastructure with an emphasis on sustainable travel and road safety. It concludes that the proposed development is located in a safe and sustainable position, and is supportive of local and National development transport policy.

1.3 This report is structured such that;

- **Chapter Two** will describe the site location and adjacent infrastructure, both in terms of availability of transport choice and accessibility of facilities which generate regular trip requirements. This will also discuss the extant permission on this site, which confirms that the principle of residential development of this site is established and that this location is therefore suitable and sustainable for residential use;

- **Chapter Three** will discuss the current development proposals and will provide a forecast of associated trip generation;

- **Chapter Four** will consider relevant transport related policy issues;

- forecast future operation of local transport infrastructure is assessed in **Chapter Five**;

- **Chapter Six** considers Green Travel issues pertinent to the proposals; and,

- a summary of the report is presented in **Chapter Seven**, which subsequently draws conclusions from this assessment.

2. SITE LOCATION AND LOCAL INFRASTRUCTURE

Site Location

2.1 The proposed development site is located on the western side of School Lane, on the western edge of the village of Forton. A Site Location Plan is shown in Figure 2.1

Local Highway

2.2 School Lane is a typical narrow rural lane bound by verge and hedgerow. At the proposed site frontage the 30mph speed-limit becomes National Speed Limit (60mph).

2.3 To the north, School Lane terminates at the Cockerham Road which runs east to west. To the east it links with the A6 and beyond this lies the M6 motorway.

2.4 **cTc** has commissioned a bespoke Automatic Traffic Count (ATC) survey of School Lane in the vicinity of the proposed development site frontage and this has identified existing (2016) traffic flows as summarised in Table 2.1, below and illustrated in Figure 2.2. The full ATC report is included as Appendix A.

Table 2.1; Summary of ATC Results for School Lane, Forton.

Period	Southbound Traffic Flow	Northbound Traffic Flow
AM Peak Hour	14	14
PM Peak Hour	11	12

2.5 This ATC survey also permitted identification of existing vehicle speeds, as summarised in Table 2.2, below. The speeds quoted are inter-peak speeds and are weighted to reflect the traffic flow in each hour, such as to prevent undue influence of times exhibiting low flows.

Table 2.2; Observed Traffic Speeds on School Lane, Forton.

Period	Southbound Speeds (mph / kph)		Northbound Speeds (mph / kph)	
	Mean	85th %ile	Mean	85th %ile
Inter-peak	19.2 / 29.3	23.7 / 38.1	14.1 / 22.6	23.3 / 37.5

2.6 The above survey results confirm low traffic flows and speeds which neither exceed nor come even close to the 30mph speed limit; it is noted that the survey was taken at the commencement of the existing 60mph speed limit. This confirms that vehicles are maintaining low speeds due to the rural nature of the road in both directions.

Road Safety

2.7 **cTc** obtained Personal Injury Accident (PIA) data from Lancashire County Council's MARIO database.

2.8 The data shows that in the latest five-year period no accidents occurred and the highway safety record of School Lane is therefore excellent.

2.9 The data record confirming the absence of PIA events is shown at Appendix B.

Local Amenities

2.10 The proposed development site is within walking distance of the centre of Forton village. Forton is typical of a rural village and contains a modest number of amenities, including:

- Bus stops;
- Places of worship;
- Cricket club;

- Bowls club;
- Public house (on the southern outskirts); and,
- Forton Primary School.

2.11 The above facilities are all located near to the proposed development and readily accessible on foot, by bicycle and by public transport, confirming that the proposals are well located in regard to accessibility of facilities generating regular journeys.

BUS SERVICES

2.12 There are existing bus stops approximately 600m from the proposed site access. The services operating from these stops are summarised in *Table 2.3*, below.

Table 2.3: Summary of Bus Services.

Service	Route Summary	Approximate Frequency		
		Mon – Fri	Saturday	Sunday
40	Morecambe - Lancaster - Garstang - Preston	30 mins	60 mins	60 mins
41	Morecambe - Lancaster - Garstang - Preston	60 mins	60 mins	-
42	Blackpool – Garstang – Lancaster	60 mins	60 mins	60 mins
554	Galgate – Garstang – Preesall	1 return journey	-	-
940	Lancaster Uni. – Galgate – Garstang – Catterall – Preston Bus Station	1 return journey	-	-
941	Lancaster Girls Grammar School - Galgate – Garstang – Catterall – Preston Bus Station	1 return journey	-	-

Continued…/

Continued				
942	Garstang - Catterall – Lancaster	Single morning journey	-	-

2.13 For a village location, this represents a high level of public transport service, offering convenient access to the below range of facilities and making bus travel a realistic option for travel to nearby major urban areas;

- Secondary and higher education;
- Employment;
- Retail; and,
- Leisure.

2.14 In summary, the proposed development site is located within walking distance of the centre of Forton village and the nearby bus stops. This provides practical existing public transport options for travel associated with residents and visitors to the site on foot and by bus, making this a sustainable location for development.

EXTANT PERMISSION

2.15 The proposed development site benefits from extant planning permission for 12 dwellings, taking its access from the same location under the current proposals.

2.16 It is clear that the extant permission for development of this site confirms that the site is appropriate in principle for residential development. This confirms agreement to the site's sustainable location and that additional trip attraction by all modes, including traffic, is acceptable on this site.

3. DEVELOPMENT PROPOSALS AND ASSOCIATED TRIP GENERATION

PROPOSED DEVELOPMENT

3.1 The proposals comprise a residential development of 54 dwellings with access on to School Lane. It is noted that this comprises an increase of 42 dwellings over and above the extant planning permission.

FORECAST TRIP GENERATION

3.2 Trip generation for the proposed residential development has been forecast using the industry standard TRICS database. This takes into consideration factors such as development type, location and size to produce a trip rate which can be used to calculate the level of trips a new development can be expected to generate.

3.3 The TRICS output reports are included at Appendix C.

3.4 *Table 3.1,* below, shows the forecast trip generation for all modes associated with the proposed development during the AM Peak Hour (8-9am) and PM Peak Hour (5-6pm). The rates are quoted per dwelling.

3.5 Given the relative attraction of the A6 to the south and the Lancaster Road to the north it would be expected that trip distribution to and from the site would be split approximately 50/50. This is confirmed in the observed distribution of existing traffic recorded in the ATC on School Lane.

Table 3.1: Residential Multimodal Trip Generation.

Period	Mode	Rate		Units	Trips		
		Arr	Dep		Arr	Dep	TOTAL
AM	Vehicle	0.135	0.38	54	7	21	28
	Vehicle Occupants	0.186	0.561		10	30	40
	Cyclists	0.006	0.003		0	0	0
	Pedestrians	0.054	0.158		3	9	11
	Public Transport	0.006	0		0	0	0
PM	Vehicle	0.293	0.161		16	9	25
	Vehicle Occupants	0.389	0.194		21	10	31
	Cyclists	0.011	0.008		1	0	1
	Pedestrians	0.065	0.034		4	2	5
	Public Transport	0.003	0.008		0	0	1

3.6 The forecast generated traffic is illustrated as flow diagrams in Figure 3.1.

3.7 It is important to consider the above forecasts in relation to the extant Planning Permission for 12 units on this site, which would attract (using the same trip rates described above) peak hour traffic movements of;

- AM Peak – 2 veh in and 5 veh out; and,
- PM Peak – 4 veh in and 2 veh out.

3.8 The above traffic forecasts overstate the net impact by approximately 21%, allowing for the committed extant scheme.

4 POLICY

4.1 This Chapter will consider transport related policy and guidance, as set out in the Lancashire Local Transport Plan 2011 – 2021 (LTP) and the National Planning Policy Framework (NPPF). The proposed development will be considered in light of key policy goals and priorities in order to confirm policy compliance of the proposals.

Lancashire Local Transport Plan 2011 – 2021 (LTP)

4.2 The LTP states seven clearly defined "Transport Goals" which are reviewed below in relation to the proposed development at School Lane, Forton.

4.3 ***"To help to secure a strong economic future by making transport and travel into and between our major economic centres more effective and efficient and by improving links to neighbouring major economic centres and beyond."*** The proposed development is within walking distance of local bus stops and will therefore be sustainably linked to major economic centres, including Lancaster, Preston and Blackpool. Furthermore, new residents of the proposed development will provide additional patronage to these services thereby contributing to future viability.

4.4 ***"To provide all sections of the community with safe and convenient access to the services, jobs, health and educational opportunities that they need."*** The proposed development will comprise residential dwellings located near to the centre of Forton, which will provide safe and convenient access to the facilities that the village has to offer.

4.5 ***"To improve the accessibility, availability and affordability of transport as a contribution to the development of strong and cohesive communities."*** The proposed development site is close to bus facilities, making this an attractive mode of travel to and from the site. On this basis, the proposed development will provide future patronage for these services and thus assist to maintain their viability.

4.6 ***"To create more attractive neighbourhoods by reducing the impact of transport on our quality of life and by improving our public realm."*** The location of the proposed development site with nearby links to the village centre accessible by pedestrians and cyclists as well as opportunities for longer distance travel by bus, provides a sustainable development opportunity with a choice of means of travel other than the private motorcar.

4.7 ***"To reduce the carbon impact of Lancashire's transport requirements, whilst delivering sustainable value for money transport options to those who need them."*** The proposed development would locate residential dwellings in the vicinity of the village centre, with access to sustainable transport options, thus limiting the carbon impact of associated travel

4.8 ***"To make walking and cycling more safe, convenient and attractive, … bringing improvements in the health of Lancashire's residents."*** Walking and cycling to the village facilities of Forton is a convenient and practical option from the proposed development site. There is continuous footway on the eastern side of School Lane from the site access into the village and beyond. Whilst there is no separate cycleway, School Lane is reasonably straight with good visibility for cyclists, and surveyed vehicle speeds are extremely low, creating a safe and attractive environment for cyclists.

4.9 ***"…prioritising the maintenance and improvement of Lancashire's existing transport infrastructure where it can help to deliver our transport goals."*** The existing transport infrastructure in Forton includes bus service provision. The proposed development on School Lane will deliver increased patronage of these facilities, thereby assisting the delivery, and maintenance of Lancashire's existing transport infrastructure.

National Planning Policy Framework (NPPF)

4.10 National planning policy is specified in the National Planning Policy Framework (NPPF), published in March 2012 this document sets out the Government's requirements for planning policy in England.

4.11 In Chapter 1; Introduction, NPPF sets out its own role as ***"The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. It sets out the Government's requirements for the planning system only to the extent that is relevant, proportionate and necessary to do so. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities."*** Thus, NPPF provides an outline within which local policy is intended to operate. Local policy and design documents should comply with NPPF but it is not intended that NPPF should unnecessarily constrain locally distinctive policy.

4.12 Paragraph 14 of NPPF states ***"At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking.***

…

For decision-taking this means

- ***approving development proposals that accord with the development plan without delay; and***
- ***where the development plan is absent, silent or relevant policies are out of date, granting permission unless:***

  any adverse impacts of doing so would significantly or demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or

  specific policies in this Framework indicate development should be restricted."

4.13 The presumption in favour of sustainable development applies to these proposals in Forton, which are demonstrably sustainable (in travel terms).

4.14 In terms of key transport-related planning policies identified in NPPF, Paragraph 17 states that planning should ***"actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable."*** Chapter Two, above, identifies that the proposed development site is well served by public transport and the centre of Forton is readily accessible on foot and by bicycle. It is clear that the presumption in favour of sustainable development applies to these proposals in Forton.

4.15 In Paragraph 32, NPPF identifies that ***"All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:***

- ***the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;***
- ***safe and suitable access to the site can be achieved for all people; and,***
- ***improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of the development are severe."***

4.16 The proposed development at Forton is located conveniently for existing public transport services and provides safe and suitable access by all modes to and from venues generating regular trips.

4.17 Forecast traffic generation (Chapter 3 of this report) and highway operational assessment (Chapter 5) have confirmed no material levels of traffic impact and there are therefore no required highway improvements.

4.18 At Paragraph 35, NPPF identifies that ***"…developments should be located and designed where practical to***

….

- ***give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;***
- ***create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;***

…."

4.19 The proposed development is served by an existing effective public transport network. It is clear from the review above that the proposals are wholly compliant with transport issues discussed in NPPF and the presumption in favour of sustainable development clearly applies.

5. OPERATIONAL ASSESSMENT

PEDESTRIAN

5.1 There is continuous footway on the eastern side of School Lane from the site access, southwards into the village and beyond – including to the local bus stops. The internal road network will be provided with a combination of footways on both sides and shared surface design.

5.2 The historic accident data record shows no accidents involving pedestrians and cyclists; the zero return of all PIA events is in confirmed in Chapter Two.

PUBLIC TRANSPORT

5.3 The bus services reviewed in Chapter Two provide a convenient and attractive sustainable transport option from within the vicinity of the proposed development site and provide access to a wide range of facilities which generate regular visits.

TRAFFIC

5.4 Despite only nominal traffic flows, both existing and forecast generated, for completeness capacity analyses using PICADY for the proposed site access junction on School Lane have been undertaken using Automatic Traffic Count (ATC) data factored to the year 2022 (five years hence from the assumed development date) using TEMPro. Forecast trip generation illustrated in Figure 3.1 has been added to the growthed base flows to produce forecast total traffic demand at the proposed site access junctions and this is illustrated in Figure 5.1.

5.5 As the PICADY software will only accept major carriageway widths above 6m, this minimum requirement has been entered into the model; this will result in a robust worst case scenario as the effects of this constrained carriageway will be to cause platooning of approaching vehicles, thereby providing increased gaps in passing traffic over and above the situation modelled. Detailed PICADY outputs from these analyses are included at Appendix D. A summary of the PICADY capacity analyses is shown below, in *Table 5.1.*

5.6 It is clear that there is significant spare capacity in the proposed access junction onto School Lane to accommodate the proposed development.

Table 5.1: Summary of PICADY Analysis.

Scenario	Period	Arm	Max RFC	Max Queue
2022 + Development	AM Peak Hour	Site Access	0.05	0.1
		School Lane	0.01	0.0
	PM Peak Hour	Site Access	0.02	0.0
		School Lane	0.02	0.0

5.7 **cTc** has examined visibility splays appropriate to the current traffic speeds on School Lane. Manual for Streets (MfS) includes research into vehicle Stopping Sight Distances (SSD), which in turn defines required visibility. Research undertaken in preparation of MfS identifies the following regression equation for SSD:

$$SSD = vt + \frac{v^2}{(2\,(d + 0.1a))}$$

v = 85th percentile (km/h)
t = reaction time = 1.5s
d = deceleration = 4.41ms^{-2}
a = gradient = +/-2.3%

5.8 The above equation is calculated using Interpeak Hour 85th percentile speeds weighted by hourly traffic flow, as shown in Table 2.2.

5.9 Entering these observed speeds into the above regression equation produces the following values for safe Stopping Site Distances (SSD), which have then be translated into safe visibility splays to serve the development. The results are summarised in Table 5.2, below.

Table 5,2; Calculation of Required Safe Visibility Splays for a Proposed Site Access Junction on Accrington Road

Direction	SSD	Visibility Splay
Northbound	17.9m	2.4m x 20.3 m
Southbound	19.8m	2.4m x 22.2m

5.10 Figure 5.2 shows a plan of the proposed access junction with the available visibility splays illustrated, which far exceeds the requirements of MfS.

6. SUSTAINABILITY AND GREEN TRAVEL PLAN

6.1 Sustainability

6.1.1 Table 2.3, above, confirms that the development is well served by public transport, making facilities attracting regular journeys readily accessible by sustainable modes. Footpaths on the eastern side of School Lane are accessed directly from the site.

6.1.2 Clearly, this development site is sustainable in travel terms.

6.2 Green Travel Plan

6.2.1 In addition to the inherent sustainable character of this location, in order to further promote use of sustainable modes for required travel associated with this development, a Residential Travel Plan is proposed, along with a travel pack to be provided for residents of the proposed development.

6.2.2 In order to accurately reflect the travel requirements of residents, the detail of the Travel Plan should be compiled after the development is occupied and it is proposed that a detailed travel survey be undertaken within 6 months of full occupation of the development. This survey should illustrate in detail the actual travel requirements of residents, including;

- frequency of travel;
- destination;
- reason for travel;
- time of travel;
- number of residents undertaking the same (or similar) journeys;
- mode of travel;

- reason for mode-choice;
- car ownership;
- bicycle ownership and proficiency; and,
- willingness and ability to change travel patterns.

6.2.3 Based on the findings from the travel survey, a Residential Travel Plan will be developed to the satisfaction of Lancashire County Council, as local Highway Authority.

6.2.4 Travel Plan initiatives to be considered will be determined in detail by the results of the surveys, but may include some or all of the following;

- a public transport information pack for all residents;
- the development will be designed to encourage sustainable modes for local travel;
- information on health benefits of cycling to be provided for all residents;
- each house to have a specific location for storing a bicycle or bicycles;
- each property will be provided with good quality communication systems, including fast broadband which will facilitate working from home and thereby reducing the need to travel to work;
- opportunities for walking to the local primary school, including “walking bus” will be publicised amongst residents of the development; and,
- residents will be encouraged to car share and from the travel survey a database can be compiled to engage residents with others undertaking similar journeys and at similar times (for example, journeys to work).

6.2.5 The above is intended to be neither restrictive, nor constraining, but is indicative of the kind of initiative which may be applied.

7. SUMMARY AND CONCLUSION

Summary

7.1 This report has demonstrated that the proposed residential development is sustainably located within walking and cycling distance of the centre of the village and local bus stops.

7.2 It has shown that the site is well provided for by convenient and accessible public transport provision.

7.3 A review of the historic accident record shows that there are no existing highway safety concerns resulting from highway design or traffic flow, neither are there likely to be in the future.

7.4 In light of extant permission on this site the level of net trip generation associated with the proposed development is low, the impact on the available spare capacity of School Lane is insignificant.

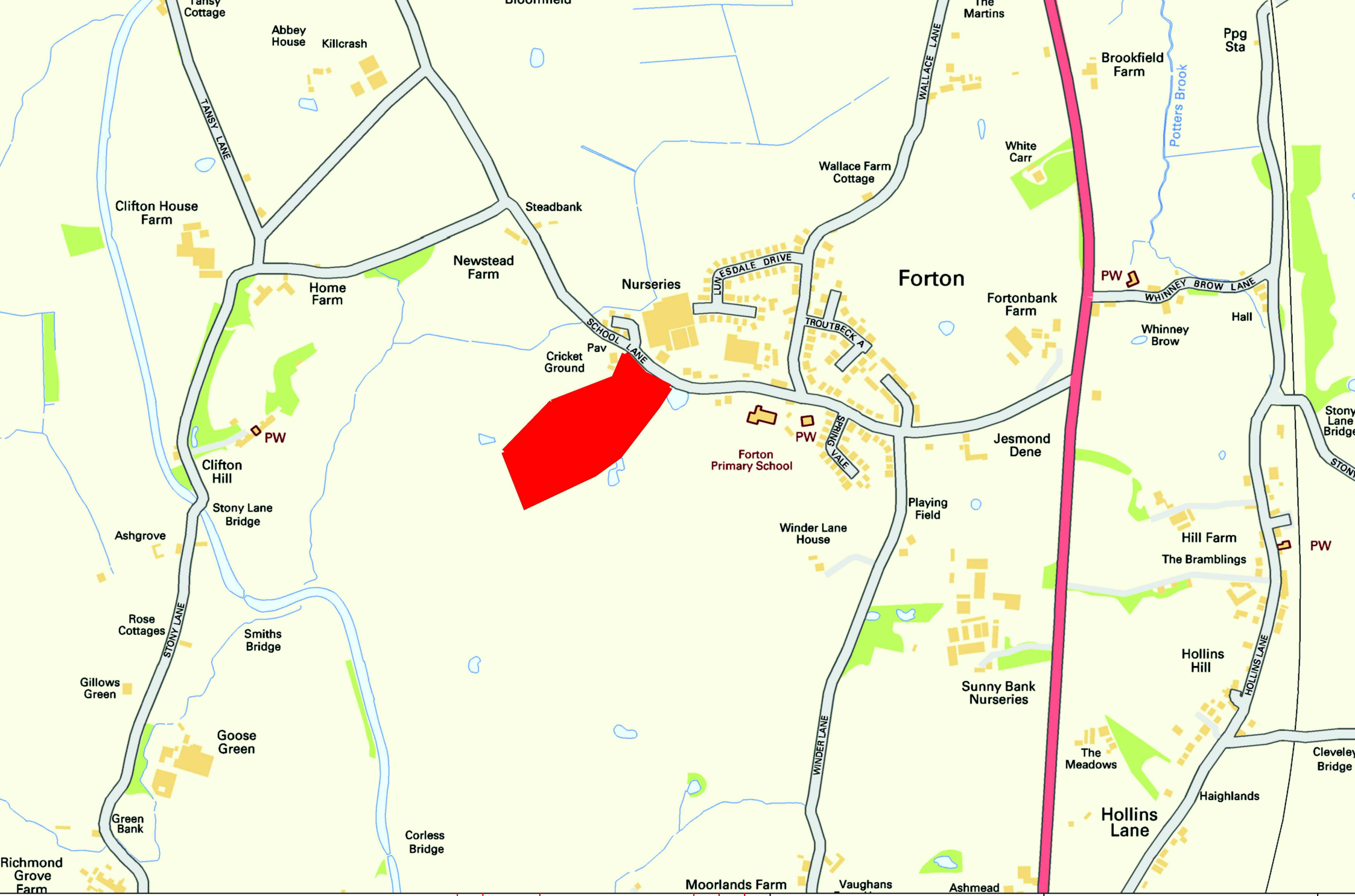
7.5 A review of local and national policy has confirmed that the proposals are compliant with the aims and requirements of both.

7.6 A residential Green Travel Plan is applicable to these proposals, along with a Travel Pack to be provided for residents. These should be based on survey data collected from residents of the competed development and therefore reflect actual trip generation.

Conclusion

7.7 For the reasons detailed in this report, and summarised above, the proposals are appropriate, sustainable and as such the presumption in favour of sustainable development in NPPF applies to the proposed development at School Lane, Forton. There are no defensible reasons for objection on transportation or traffic grounds and planning permission should be granted for these proposals.

FIGURES



Key.

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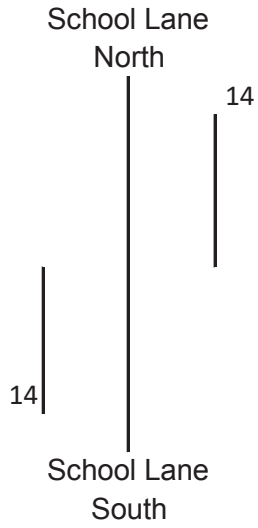
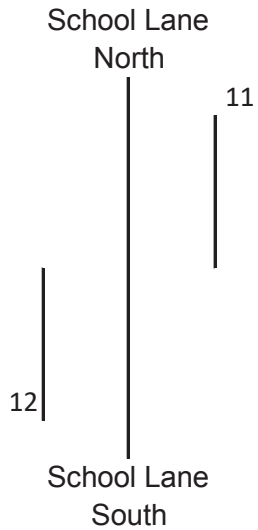
Figure 2.1
Indicative Site Location

AM Peak Hour
08:00 - 09:00



PM Peak Hour
17:00 - 18:00

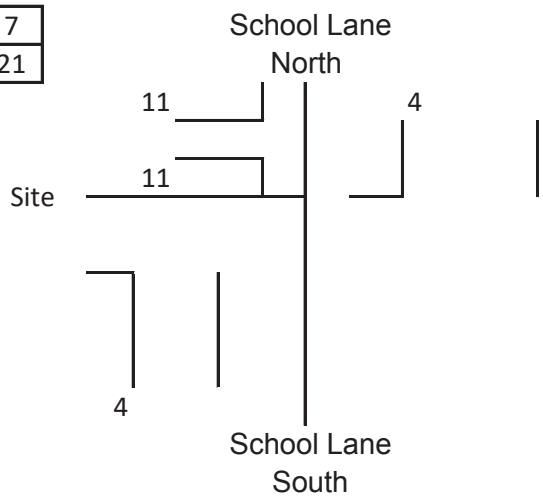


Project:	Forton	523 Horizon Broad Weir Bristol BS1 3DJ 0117 382 0507 www.tonks-consulting.co.uk
Number:	2016-F-027	
Report Title:	Transport Assessment	
Figure Number:	2.1	
Title:	Observed Traffic Flow	

AM Peak Hour
08:00 - 09:00

Distribution to/from North (%): 50
Distribution to/from South (%): 50

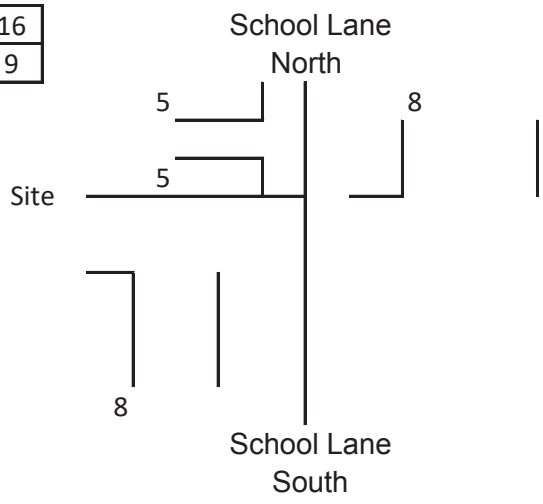
Arrivals	7
Departures	21



PM Peak Hour
17:00 - 18:00

Distribution to/from North (%): 50
Distribution to/from South (%): 50

Arrivals	16
Departures	9



Project:	Forton
Number:	2016-F-027
Report Title:	Transport Assessment
Figure Number:	3.1
Title:	Development Trips.

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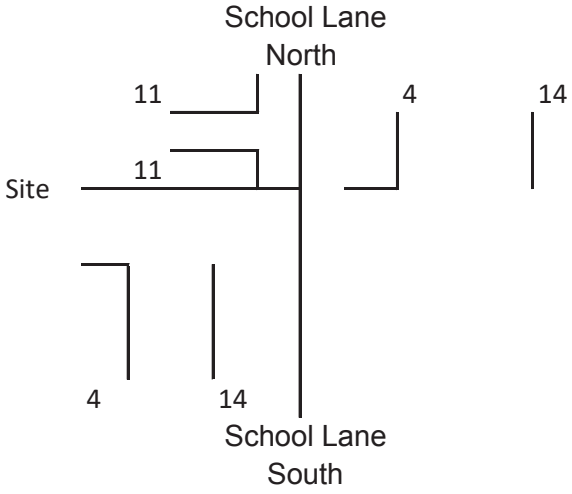
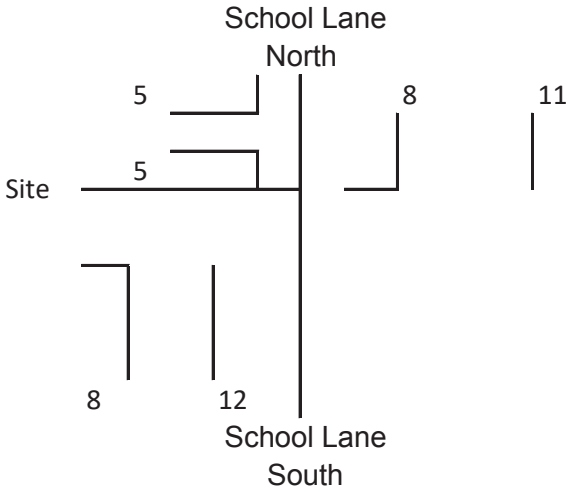
AM Peak Hour
08:00 - 09:00



PM Peak Hour
17:00 - 18:00



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Number:	2016-F-027	Broad Weir
Report Title:	Transport Assessment	Bristol
		BS1 3DJ
		0117 382 0507
Figure Number:	5.1	
Title:	2022 + Development Trips.	www.tonks-consulting.co.uk

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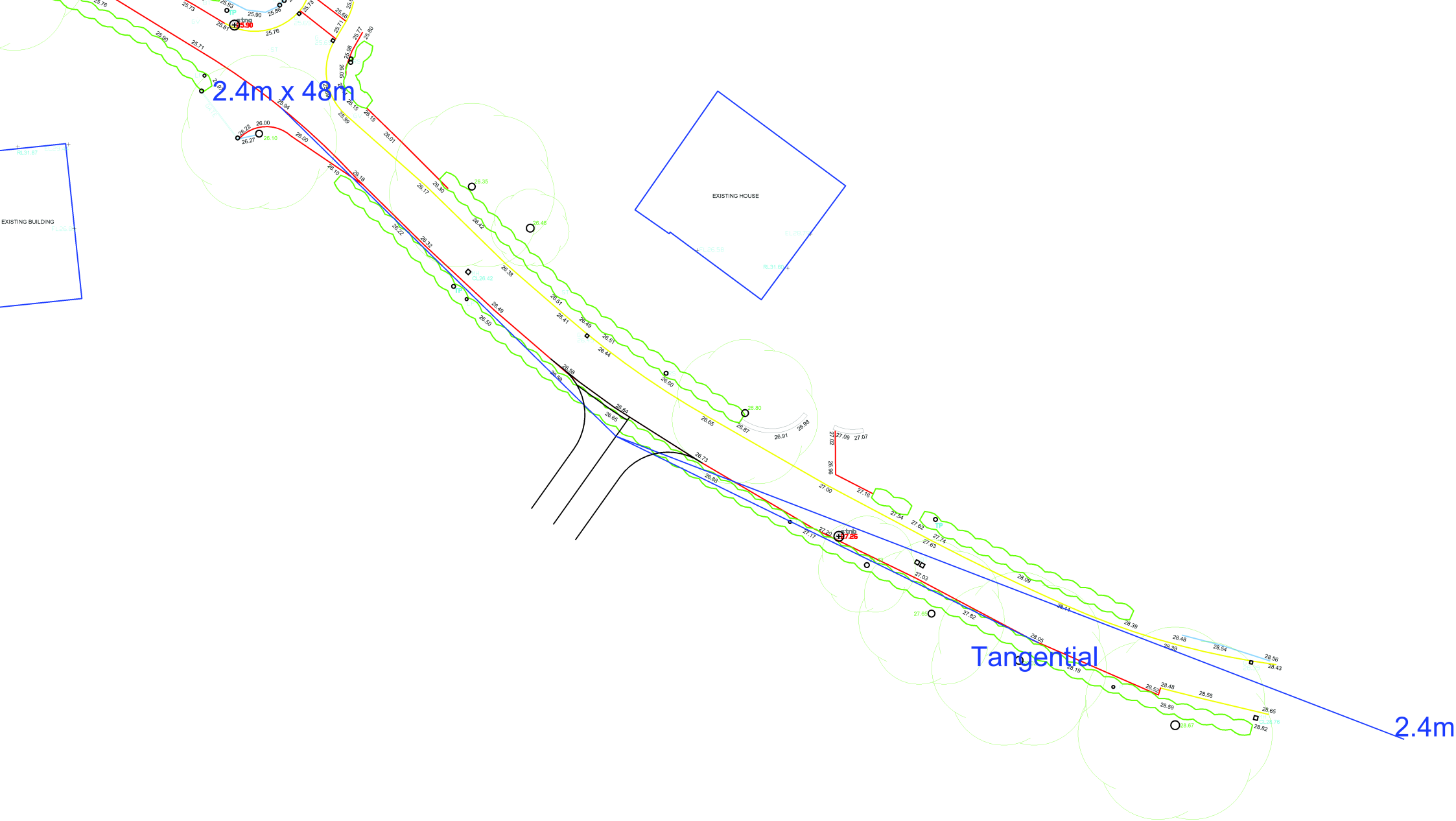

C	02.06.17	Development schedule updated. Drawing scale changed	EP	CT	CT

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Figure 5.2
Access Options and

APPENDICES

APPENDIX A

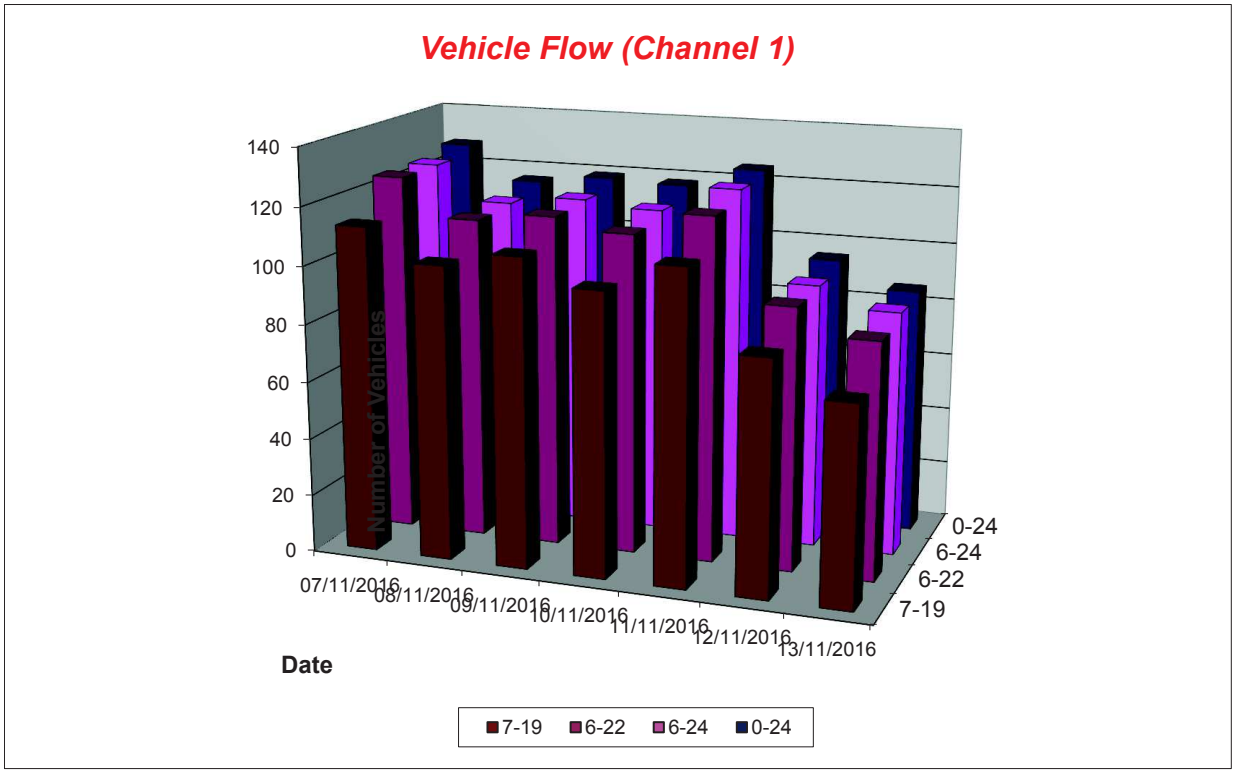
ATC Report

Forton ATC, School Lane

Channel 1 - Southbound | **Vehicle Flow** | **Week 1**

Hr Ending	07/11/2016 Monday	08/11/2016 Tuesday	09/11/2016 Wednesday	10/11/2016 Thursday	11/11/2016 Friday	12/11/2016 Saturday	13/11/2016 Sunday	5 Day Ave	7 Day Ave
1	0	0	0	0	0	0	1	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	1	0	0	0
6	3	3	3	4	2	2	0	3	2
7	1	3	2	2	2	1	2	2	2
8	9	5	9	6	5	5	2	7	6
9	12	19	18	10	12	7	4	14	12
10	10	2	8	3	8	7	6	6	6
11	11	8	5	4	13	8	9	8	8
12	7	9	12	13	7	7	6	10	9
13	4	7	4	5	10	7	7	6	6
14	11	4	10	6	9	6	5	8	7
15	8	6	11	7	5	9	3	7	7
16	13	11	7	14	6	7	7	10	9
17	17	12	8	12	17	10	7	13	12
18	8	12	11	13	9	7	9	11	10
19	3	7	4	5	7	1	4	5	4
20	7	2	4	5	3	3	5	4	4
21	4	4	2	6	5	3	1	4	4
22	0	1	0	0	1	3	5	0	1
23	0	1	0	3	1	0	3	1	1
24	0	0	1	0	3	1	0	1	1

7-19	113	102	107	98	108	81	69	106	97
6-22	125	112	115	111	119	91	82	116	108
6-24	125	113	116	114	123	92	85	118	110
0-24	128	116	119	118	125	95	86	121	112



Forton ATC, School Lane

Channel 1 - Southbound **Average Speed** **Week 1**

Hr Ending	07/11/2016 Monday	08/11/2016 Tuesday	09/11/2016 Wednesday	10/11/2016 Thursday	11/11/2016 Friday	12/11/2016 Saturday	13/11/2016 Sunday
1	-	-	-	-	-	-	16.0
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	20.0	-
6	21.7	18.3	17.0	21.5	18.5	23.5	-
7	19.0	17.3	19.0	17.0	16.0	20.0	22.0
8	19.8	19.8	21.1	20.5	21.4	16.4	21.5
9	17.8	17.0	19.2	18.3	21.7	15.0	16.5
10	17.4	14.0	19.9	19.7	20.0	20.3	20.5
11	20.6	15.9	16.8	23.8	17.8	17.6	19.3
12	21.7	15.8	18.2	19.1	17.6	21.7	20.5
13	20.8	20.4	15.8	18.4	22.6	18.1	15.9
14	18.3	20.3	18.8	19.7	16.9	20.8	19.8
15	21.8	21.2	19.5	20.4	19.4	20.3	24.7
16	19.5	16.8	19.0	20.1	15.3	17.6	23.6
17	18.6	22.0	19.0	19.3	20.4	18.4	19.9
18	23.1	19.7	22.8	19.5	20.4	24.3	19.0
19	24.3	24.0	19.3	21.4	21.9	22.0	22.5
20	20.7	19.5	22.5	23.0	25.7	26.3	17.8
21	26.5	18.0	20.0	21.7	18.0	31.7	16.0
22	-	22.0	-	-	11.0	18.3	20.6
23	-	18.0	-	23.3	21.0	-	23.0
24	-	-	21.0	-	18.3	26.0	-

10-12	21.1	15.8	17.8	20.2	17.7	19.5	19.8
14-16	20.3	18.4	19.3	20.2	17.2	19.1	23.9
0-24	20.0	18.8	19.5	20.1	19.6	20.0	19.9

Average	19.7

Channel 1 - Southbound **85th Percentile**

Hr Ending	07/11/2016 Monday	08/11/2016 Tuesday	09/11/2016 Wednesday	10/11/2016 Thursday	11/11/2016 Friday	12/11/2016 Saturday	13/11/2016 Sunday
1	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	22.0	20.5	19.8	26.7	21.7	23.9	-
7	-	22.4	20.4	19.1	19.5	-	22.7
8	28.4	23.8	26.6	26.3	22.2	20.8	24.0
9	22.4	22.0	23.0	23.7	24.4	18.1	21.7
10	22.0	14.7	22.0	21.5	23.0	21.3	25.5
11	25.0	20.0	21.8	27.4	23.0	22.0	24.6
12	27.2	22.0	22.7	24.2	22.1	25.9	29.3
13	25.0	26.0	20.8	22.8	29.7	24.0	18.3
14	24.5	24.1	21.7	23.5	24.2	22.8	24.4
15	26.9	26.5	23.0	25.0	24.0	23.8	27.9
16	24.0	23.5	26.3	22.0	21.0	22.1	25.3
17	27.6	24.0	22.9	23.0	25.6	25.0	22.0
18	26.9	24.0	28.0	24.2	25.4	27.5	24.4
19	25.4	28.1	23.8	24.0	28.0	-	25.8
20	25.1	21.3	26.9	27.0	28.4	29.1	21.4
21	31.8	22.1	20.7	25.0	24.6	34.8	-
22	-	-	-	-	-	20.4	25.4
23	-	-	-	26.8	-	-	24.8
24	-	-	-	-	22.2	-	-

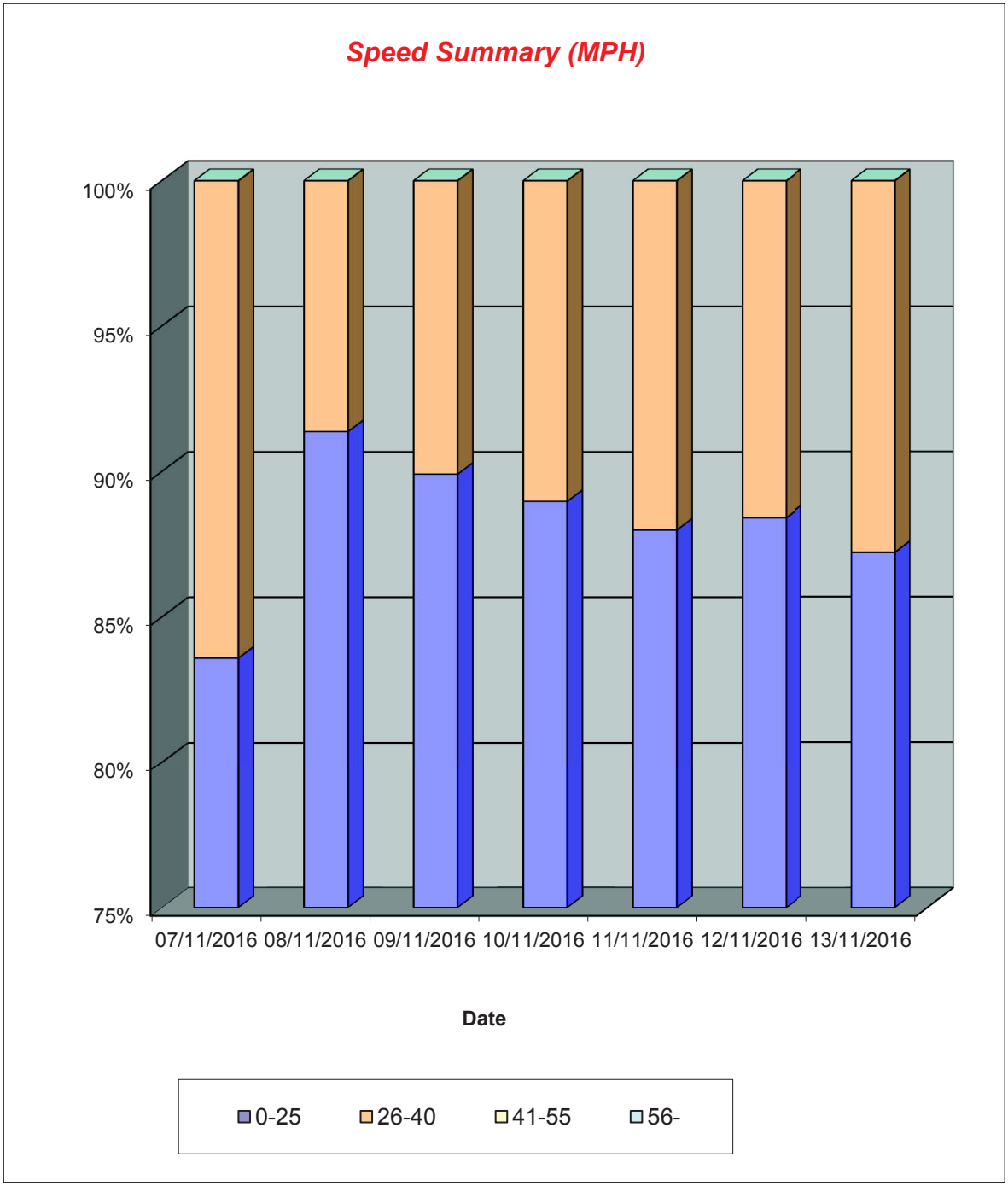
10-12	25.0	20.0	21.8	27.4	23.0	22.0	24.6
14-16	24.0	24.0	25.0	24.0	23.5	23.0	27.0
0-24	26.0	24.0	24.3	25.0	25.0	24.0	25.0

85th %ile	25.0

Forton ATC, School Lane

Channel 1 - Southbound | **Speed Summary** | **Week 1**

Speed (MPH)	07/11/2016 Monday	08/11/2016 Tuesday	09/11/2016 Wednesday	10/11/2016 Thursday	11/11/2016 Friday	12/11/2016 Saturday	13/11/2016 Sunday
0-25	107	106	107	105	110	84	75
26-40	21	10	12	13	15	11	11
41-55	0	0	0	0	0	0	0
56-	0	0	0	0	0	0	0
TOTAL	**128**	**116**	**119**	**118**	**125**	**95**	**86**

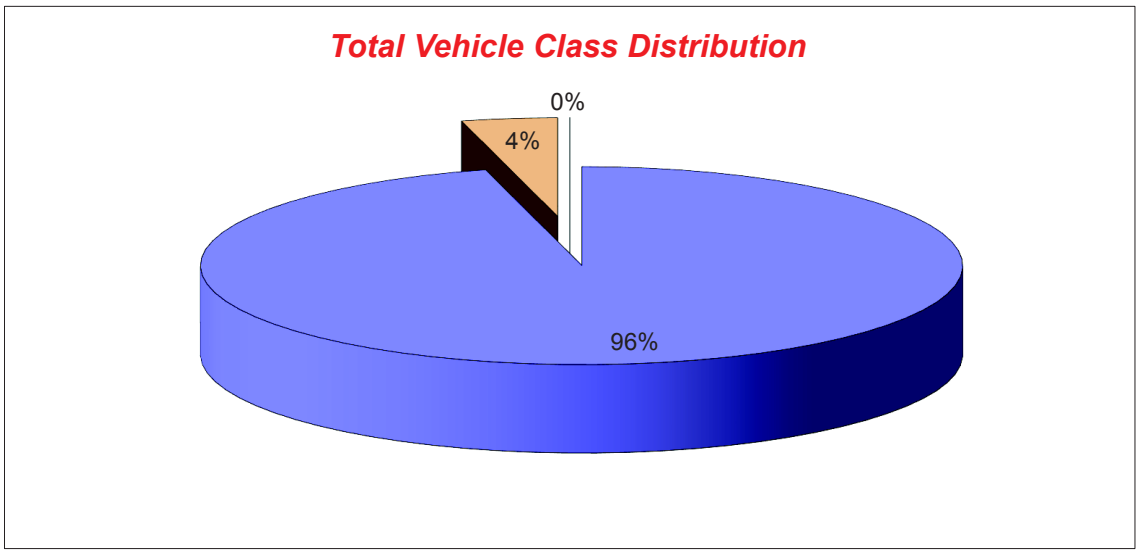


Forton ATC, School Lane

Channel 1 - Southbound | **Vehicle Class** | **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
07/11/2016				
7-19	108	5	0	113
6-22	119	6	0	125
6-24	119	6	0	125
0-24	122	6	0	128
08/11/2016				
7-19	98	4	0	102
6-22	108	4	0	112
6-24	109	4	0	113
0-24	112	4	0	116
09/11/2016				
7-19	98	9	0	107
6-22	106	9	0	115
6-24	107	9	0	116
0-24	110	9	0	119
10/11/2016				
7-19	94	4	0	98
6-22	106	5	0	111
6-24	109	5	0	114
0-24	113	5	0	118
11/11/2016				
7-19	104	4	0	108
6-22	115	4	0	119
6-24	118	5	0	123
0-24	120	5	0	125
12/11/2016				
7-19	80	1	0	81
6-22	89	2	0	91
6-24	90	2	0	92
0-24	93	2	0	95
13/11/2016				
7-19	69	0	0	69
6-22	81	1	0	82
6-24	84	1	0	85
0-24	85	1	0	86

Average				
7-19	93	4	0	97
6-22	103	4	0	108
6-24	105	5	0	110
0-24	108	5	0	112

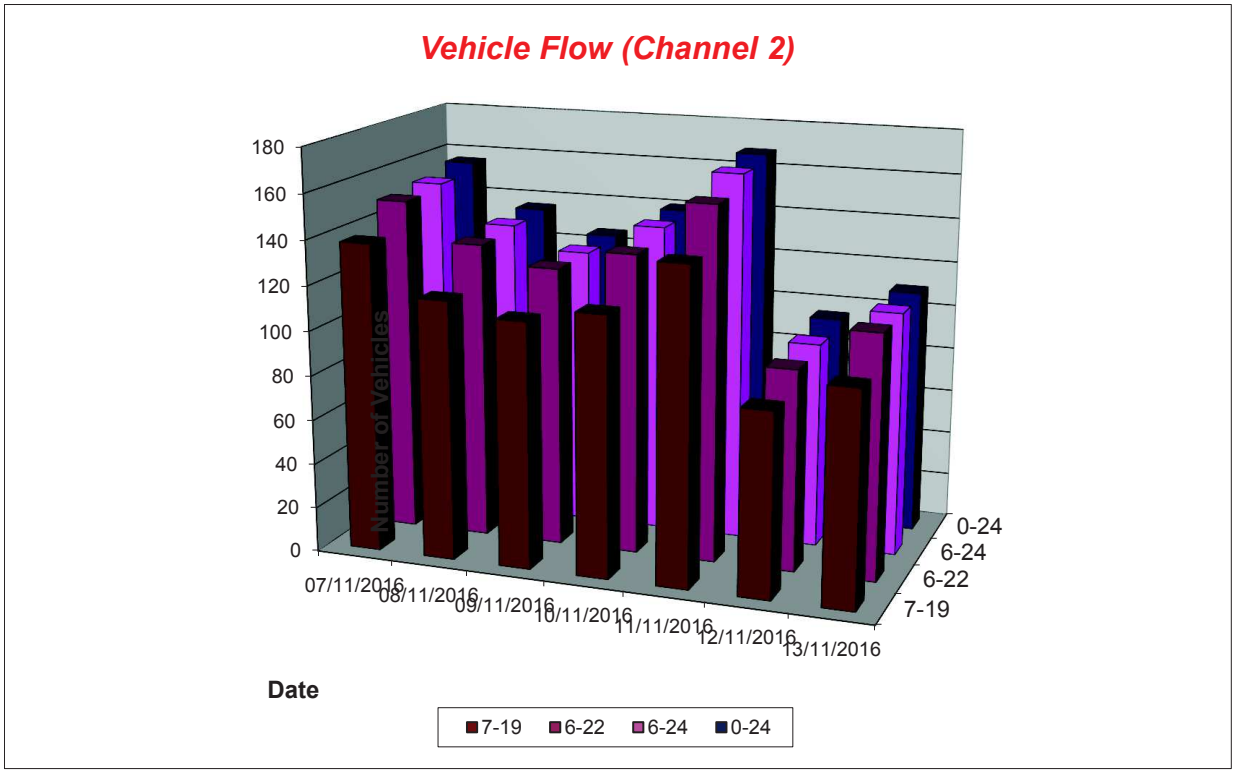


Forton ATC, School Lane

Channel 2 - Northbound | **Vehicle Flow** | **Week 1**

Hr Ending	07/11/2016 Monday	08/11/2016 Tuesday	09/11/2016 Wednesday	10/11/2016 Thursday	11/11/2016 Friday	12/11/2016 Saturday	13/11/2016 Sunday	5 Day Ave	7 Day Ave
1	0	0	0	0	0	1	0	0	0
2	0	0	0	0	0	0	1	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	1	0	0	1	2	2	0	1	1
6	3	1	1	0	1	0	0	1	1
7	2	2	3	2	2	1	3	2	2
8	12	13	12	12	15	5	5	13	11
9	16	15	10	11	17	9	1	14	11
10	8	11	9	9	11	6	9	10	9
11	11	9	6	10	10	14	7	9	10
12	10	5	3	7	9	8	14	7	8
13	12	9	1	8	9	7	13	8	8
14	6	10	16	7	12	6	13	10	10
15	7	6	12	9	9	6	5	9	8
16	21	15	14	11	13	9	13	15	14
17	10	14	12	17	14	7	9	13	12
18	17	5	11	12	16	3	3	12	10
19	8	4	4	3	5	2	3	5	4
20	6	6	8	9	5	3	3	7	6
21	0	5	4	4	8	4	4	4	4
22	4	4	0	3	3	0	4	3	3
23	1	1	0	5	2	1	0	2	1
24	1	1	0	0	5	1	0	1	1

7-19	138	116	110	116	140	82	95	124	114
6-22	150	133	125	134	158	90	109	140	128
6-24	152	135	125	139	165	92	109	143	131
0-24	156	136	126	140	168	95	110	145	133



Forton ATC, School Lane

Channel 2 - Northbound **Average Speed** **Week 1**

Hr Ending	07/11/2016 Monday	08/11/2016 Tuesday	09/11/2016 Wednesday	10/11/2016 Thursday	11/11/2016 Friday	12/11/2016 Saturday	13/11/2016 Sunday
1	-	-	-	-	-	18.0	-
2	-	-	-	-	-	-	21.0
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	25.0	-	-	25.0	22.0	17.5	-
6	25.0	23.0	23.0	-	25.0	-	-
7	20.0	18.0	20.0	19.5	14.5	23.0	17.3
8	19.0	21.8	18.8	21.3	20.7	19.8	19.6
9	19.4	18.1	19.5	20.0	19.4	18.1	15.0
10	17.9	21.5	19.7	16.9	18.7	20.7	17.0
11	17.6	18.2	19.2	19.6	18.5	20.4	23.0
12	20.3	17.4	16.7	18.6	19.0	21.8	17.6
13	19.3	21.2	25.0	16.5	19.7	20.7	17.2
14	20.8	23.9	18.3	17.1	19.3	18.8	18.8
15	21.0	17.3	20.6	17.1	18.1	17.8	20.4
16	19.1	18.5	19.7	18.5	20.3	21.8	22.2
17	20.7	22.7	19.7	19.4	20.2	19.4	20.0
18	20.5	16.6	21.4	18.8	20.9	22.7	19.7
19	20.6	21.8	21.3	21.7	22.8	17.0	17.7
20	21.0	21.5	24.0	22.1	22.0	20.0	20.3
21	-	22.6	20.0	25.5	22.6	23.3	24.5
22	28.5	22.5	-	21.0	27.7	-	20.0
23	21.0	19.0	-	24.2	17.0	26.0	-
24	32.0	14.0	-	-	25.8	22.0	-
10-12	18.9	17.9	18.3	19.2	18.7	20.9	19.4
14-16	19.6	18.1	20.1	17.9	19.4	20.2	21.7
0-24	20.1	20.3	20.0	19.5	20.3	20.2	19.4
						Average	20.0

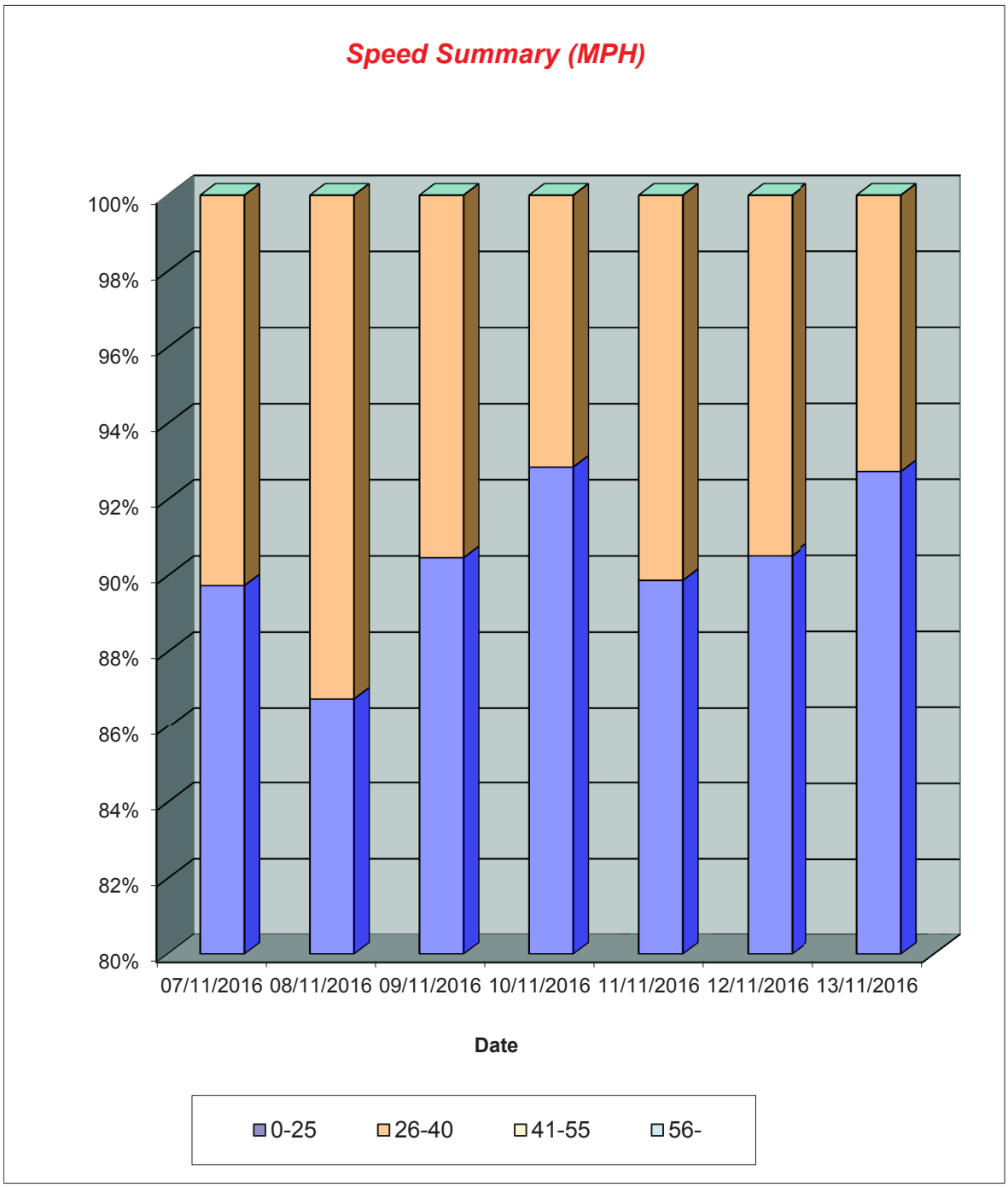
Channel 2 - Northbound **85th Percentile**

Hr Ending	07/11/2016 Monday	08/11/2016 Tuesday	09/11/2016 Wednesday	10/11/2016 Thursday	11/11/2016 Friday	12/11/2016 Saturday	13/11/2016 Sunday
1	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	22.0	20.0	-
6	26.4	-	-	-	-	-	-
7	20.0	20.8	25.3	20.6	14.9	-	21.9
8	22.4	25.0	24.4	24.4	24.9	21.4	24.0
9	23.0	22.8	23.7	24.0	25.0	23.0	-
10	23.9	27.0	22.8	21.0	23.5	25.3	19.4
11	22.5	24.4	21.5	25.0	23.0	24.2	28.7
12	24.7	19.4	19.4	23.6	22.0	23.0	22.0
13	24.4	26.0	-	21.0	22.0	25.4	21.0
14	23.5	25.0	22.0	19.6	22.0	22.8	25.0
15	24.0	21.0	24.7	22.2	22.8	21.3	23.4
16	24.0	21.8	25.2	23.5	24.2	25.0	25.4
17	25.3	25.1	23.7	24.0	22.1	23.3	22.0
18	25.6	20.2	24.0	23.4	25.0	24.7	22.8
19	25.0	26.3	24.6	22.0	24.0	19.8	20.9
20	23.5	26.8	27.0	24.8	25.2	23.2	20.7
21	-	26.6	22.7	28.1	29.0	33.3	26.6
22	31.1	26.1	-	22.4	32.9	-	23.6
23	-	-	-	27.2	24.0	-	-
24	-	-	-	-	27.6	-	-
10-12	22.5	24.4	21.5	25.0	23.0	24.2	28.7
14-16	24.0	21.0	25.3	23.2	24.0	25.0	25.0
0-24	25.0	25.0	25.0	24.2	25.0	25.0	24.7
						85th %ile	25.0

Forton ATC, School Lane

Channel 2 - Northbound | **Speed Summary** | **Week 1**

Speed (MPH)	07/11/2016 Monday	08/11/2016 Tuesday	09/11/2016 Wednesday	10/11/2016 Thursday	11/11/2016 Friday	12/11/2016 Saturday	13/11/2016 Sunday
0-25	140	118	114	130	151	86	102
26-40	16	18	12	10	17	9	8
41-55	0	0	0	0	0	0	0
56-	0	0	0	0	0	0	0
TOTAL	**156**	**136**	**126**	**140**	**168**	**95**	**110**

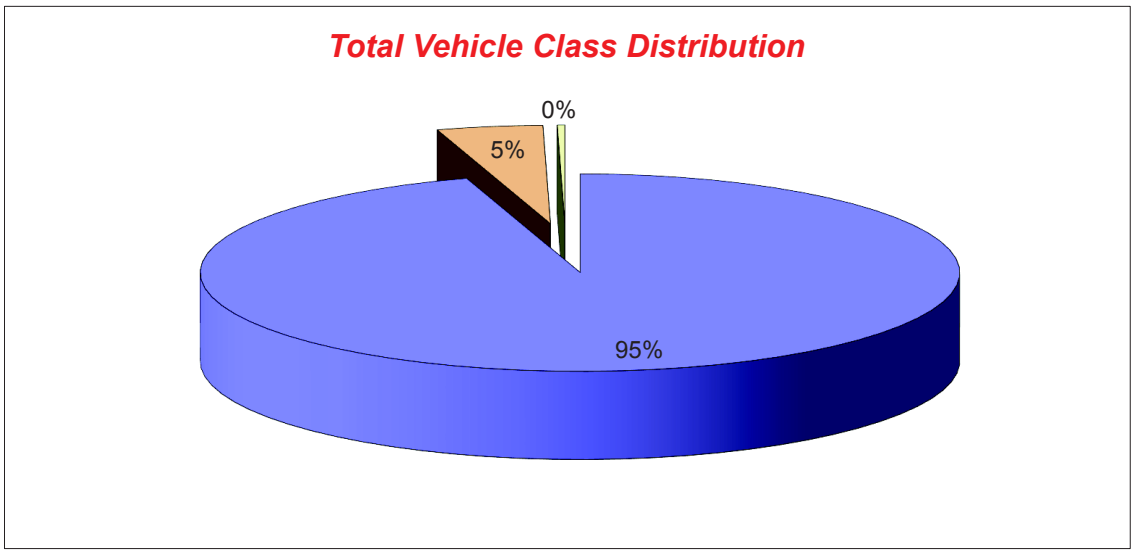


Forton ATC, School Lane

Channel 2 - Northbound | **Vehicle Class** | **Week 1**

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
07/11/2016				
7-19	133	5	0	138
6-22	145	5	0	150
6-24	147	5	0	152
0-24	151	5	0	156
08/11/2016				
7-19	107	8	1	116
6-22	124	8	1	133
6-24	126	8	1	135
0-24	127	8	1	136
09/11/2016				
7-19	102	7	1	110
6-22	117	7	1	125
6-24	117	7	1	125
0-24	118	7	1	126
10/11/2016				
7-19	107	8	1	116
6-22	124	9	1	134
6-24	129	9	1	139
0-24	130	9	1	140
11/11/2016				
7-19	132	8	0	140
6-22	149	9	0	158
6-24	156	9	0	165
0-24	159	9	0	168
12/11/2016				
7-19	80	2	0	82
6-22	88	2	0	90
6-24	90	2	0	92
0-24	93	2	0	95
13/11/2016				
7-19	93	2	0	95
6-22	107	2	0	109
6-24	107	2	0	109
0-24	108	2	0	110

Average				
7-19	108	6	0	114
6-22	122	6	0	128
6-24	125	6	0	131
0-24	127	6	0	133



APPENDIX B

Accident Data Map


Cottage
Steadbank
Newstead
Farm
Nurseries
LUNESDALE DRIVE
TROUTBECK A
SCHOOL LANE
Pav
Cricket
Ground
32m
PW
SPRING
VALE
Forton
Primary School

APPENDIX C

TRICS Output

Calculation Reference: AUDIT-757701-161129-1127

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLES

Selected regions and areas:

02	**SOUTH EAST**		
	HC	HAMPSHIRE	1 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	1 days
	WK	WARWICKSHIRE	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	2 days
09	**NORTH**		
	CB	CUMBRIA	1 days
10	**WALES**		
	PS	POWYS	1 days

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

Filtering Stage 2 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: 17 to 115 (units:)
Range Selected by User: 6 to 491 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/08 to 12/11/15

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	1 days
Wednesday	1 days
Thursday	3 days
Friday	2 days

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

Selected survey types:

Manual count	7 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)	3
Edge of Town	4

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	6
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.

Filtering Stage 3 selection:

Use Class:

C3	7 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	2 days
5,001 to 10,000	5 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	3 days
25,001 to 50,000	4 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	2 days
1.1 to 1.5	5 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:

No	7 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.

LIST OF SITES relevant to selection parameters

1 **CB-03-A-04** **SEMI DETACHED** **CUMBRIA**
MOORCLOSE ROAD
SALTERBACK
WORKINGTON
Edge of Town
No Sub Category
Total Number of dwellings: 82
Survey date: FRIDAY *24/04/09* *Survey Type: MANUAL*

2 **HC-03-A-17** **HOUSES & FLATS** **HAMPSHIRE**
CANADA WAY

LIPHOOK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 36
Survey date: THURSDAY *12/11/15* *Survey Type: MANUAL*

3 **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*

4 **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*

5 **PS-03-A-02** **DETACHED/SEMI-DETACHED** **POWYS**
GUNROG ROAD

WELSHPOOL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 28
Survey date: MONDAY *11/05/15* *Survey Type: MANUAL*

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

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

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.085	7	51	0.220	7	51	0.305
08:00 - 09:00	7	51	0.135	**7**	**51**	**0.380**	**7**	**51**	**0.515**
09:00 - 10:00	7	51	0.152	7	51	0.155	7	51	0.307
10:00 - 11:00	7	51	0.172	7	51	0.163	7	51	0.335
11:00 - 12:00	7	51	0.158	7	51	0.180	7	51	0.338
12:00 - 13:00	7	51	0.177	7	51	0.177	7	51	0.354
13:00 - 14:00	7	51	0.172	7	51	0.163	7	51	0.335
14:00 - 15:00	7	51	0.189	7	51	0.197	7	51	0.386
15:00 - 16:00	7	51	0.256	7	51	0.180	7	51	0.436
16:00 - 17:00	7	51	0.282	7	51	0.132	7	51	0.414
17:00 - 18:00	**7**	**51**	**0.293**	7	51	0.161	7	51	0.454
18:00 - 19:00	7	51	0.220	7	51	0.127	7	51	0.347
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.291			2.235			4.526

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:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	**7**	**51**	**0.011**	**7**	**51**	**0.011**	**7**	**51**	**0.022**
08:00 - 09:00	7	51	0.000	7	51	0.000	7	51	0.000
09:00 - 10:00	7	51	0.003	7	51	0.003	7	51	0.006
10:00 - 11:00	7	51	0.000	7	51	0.000	7	51	0.000
11:00 - 12:00	7	51	0.006	7	51	0.006	7	51	0.012
12:00 - 13:00	7	51	0.003	7	51	0.003	7	51	0.006
13:00 - 14:00	7	51	0.003	7	51	0.003	7	51	0.006
14:00 - 15:00	7	51	0.006	7	51	0.006	7	51	0.012
15:00 - 16:00	7	51	0.003	7	51	0.003	7	51	0.006
16:00 - 17:00	7	51	0.000	7	51	0.000	7	51	0.000
17:00 - 18:00	7	51	0.003	7	51	0.003	7	51	0.006
18:00 - 19:00	7	51	0.003	7	51	0.003	7	51	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.041			0.041			0.082

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:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.000	7	51	0.000	7	51	0.000
08:00 - 09:00	7	51	0.000	7	51	0.000	7	51	0.000
09:00 - 10:00	7	51	0.003	7	51	0.003	7	51	0.006
10:00 - 11:00	**7**	**51**	**0.006**	7	51	0.000	7	51	0.006
11:00 - 12:00	7	51	0.000	7	51	0.003	7	51	0.003
12:00 - 13:00	7	51	0.000	7	51	0.000	7	51	0.000
13:00 - 14:00	7	51	0.000	7	51	0.000	7	51	0.000
14:00 - 15:00	7	51	0.003	**7**	**51**	**0.006**	**7**	**51**	**0.009**
15:00 - 16:00	7	51	0.000	7	51	0.000	7	51	0.000
16:00 - 17:00	7	51	0.000	7	51	0.000	7	51	0.000
17:00 - 18:00	7	51	0.000	7	51	0.000	7	51	0.000
18:00 - 19:00	7	51	0.000	7	51	0.000	7	51	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.012			0.024

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:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.000	7	51	0.000	7	51	0.000
08:00 - 09:00	7	51	0.000	7	51	0.000	7	51	0.000
09:00 - 10:00	7	51	0.000	7	51	0.000	7	51	0.000
10:00 - 11:00	7	51	0.000	7	51	0.000	7	51	0.000
11:00 - 12:00	**7**	**51**	**0.006**	**7**	**51**	**0.006**	**7**	**51**	**0.012**
12:00 - 13:00	7	51	0.000	7	51	0.000	7	51	0.000
13:00 - 14:00	7	51	0.000	7	51	0.000	7	51	0.000
14:00 - 15:00	7	51	0.000	7	51	0.000	7	51	0.000
15:00 - 16:00	7	51	0.000	7	51	0.000	7	51	0.000
16:00 - 17:00	7	51	0.000	7	51	0.000	7	51	0.000
17:00 - 18:00	7	51	0.000	7	51	0.000	7	51	0.000
18:00 - 19:00	7	51	0.000	7	51	0.000	7	51	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.006			0.012

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:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.000	7	51	0.011	7	51	0.011
08:00 - 09:00	7	51	0.006	7	51	0.003	7	51	0.009
09:00 - 10:00	7	51	0.000	7	51	0.003	7	51	0.003
10:00 - 11:00	7	51	0.003	**7**	**51**	**0.020**	**7**	**51**	**0.023**
11:00 - 12:00	7	51	0.003	7	51	0.000	7	51	0.003
12:00 - 13:00	7	51	0.003	7	51	0.006	7	51	0.009
13:00 - 14:00	7	51	0.006	7	51	0.003	7	51	0.009
14:00 - 15:00	7	51	0.000	7	51	0.003	7	51	0.003
15:00 - 16:00	**7**	**51**	**0.014**	7	51	0.000	7	51	0.014
16:00 - 17:00	7	51	0.003	7	51	0.000	7	51	0.003
17:00 - 18:00	7	51	0.011	7	51	0.008	7	51	0.019
18:00 - 19:00	7	51	0.003	7	51	0.000	7	51	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.052			0.057			0.109

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:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.093	7	51	0.282	7	51	0.375
08:00 - 09:00	7	51	0.186	**7**	**51**	**0.561**	**7**	**51**	**0.747**
09:00 - 10:00	7	51	0.180	7	51	0.189	7	51	0.369
10:00 - 11:00	7	51	0.206	7	51	0.214	7	51	0.420
11:00 - 12:00	7	51	0.228	7	51	0.223	7	51	0.451
12:00 - 13:00	7	51	0.225	7	51	0.225	7	51	0.450
13:00 - 14:00	7	51	0.211	7	51	0.214	7	51	0.425
14:00 - 15:00	7	51	0.231	7	51	0.245	7	51	0.476
15:00 - 16:00	7	51	0.380	7	51	0.239	7	51	0.619
16:00 - 17:00	7	51	0.386	7	51	0.177	7	51	0.563
17:00 - 18:00	**7**	**51**	**0.389**	7	51	0.194	7	51	0.583
18:00 - 19:00	7	51	0.273	7	51	0.163	7	51	0.436
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.988			2.926			5.914

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:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.017	7	51	0.037	7	51	0.054
08:00 - 09:00	7	51	0.054	**7**	**51**	**0.158**	7	51	0.212
09:00 - 10:00	7	51	0.023	7	51	0.051	7	51	0.074
10:00 - 11:00	7	51	0.062	7	51	0.051	7	51	0.113
11:00 - 12:00	7	51	0.031	7	51	0.031	7	51	0.062
12:00 - 13:00	7	51	0.031	7	51	0.045	7	51	0.076
13:00 - 14:00	7	51	0.039	7	51	0.023	7	51	0.062
14:00 - 15:00	7	51	0.034	7	51	0.023	7	51	0.057
15:00 - 16:00	**7**	**51**	**0.194**	7	51	0.110	**7**	**51**	**0.304**
16:00 - 17:00	7	51	0.085	7	51	0.054	7	51	0.139
17:00 - 18:00	7	51	0.065	7	51	0.034	7	51	0.099
18:00 - 19:00	7	51	0.039	7	51	0.023	7	51	0.062
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.674			0.640			1.314

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:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.000	7	51	0.000	7	51	0.000
08:00 - 09:00	**7**	**51**	**0.006**	7	51	0.000	7	51	0.006
09:00 - 10:00	7	51	0.000	7	51	0.000	7	51	0.000
10:00 - 11:00	7	51	0.000	7	51	0.000	7	51	0.000
11:00 - 12:00	7	51	0.003	7	51	0.000	7	51	0.003
12:00 - 13:00	7	51	0.003	7	51	0.000	7	51	0.003
13:00 - 14:00	7	51	0.000	7	51	0.000	7	51	0.000
14:00 - 15:00	7	51	0.006	7	51	0.003	**7**	**51**	**0.009**
15:00 - 16:00	7	51	0.000	7	51	0.003	7	51	0.003
16:00 - 17:00	7	51	0.000	**7**	**51**	**0.006**	7	51	0.006
17:00 - 18:00	7	51	0.000	7	51	0.006	7	51	0.006
18:00 - 19:00	7	51	0.000	7	51	0.000	7	51	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.018			0.036

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:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.000	**7**	**51**	**0.011**	**7**	**51**	**0.011**
08:00 - 09:00	7	51	0.000	7	51	0.000	7	51	0.000
09:00 - 10:00	7	51	0.000	7	51	0.000	7	51	0.000
10:00 - 11:00	7	51	0.000	7	51	0.000	7	51	0.000
11:00 - 12:00	7	51	0.000	7	51	0.000	7	51	0.000
12:00 - 13:00	7	51	0.000	7	51	0.000	7	51	0.000
13:00 - 14:00	**7**	**51**	**0.003**	7	51	0.000	7	51	0.003
14:00 - 15:00	7	51	0.000	7	51	0.000	7	51	0.000
15:00 - 16:00	7	51	0.000	7	51	0.000	7	51	0.000
16:00 - 17:00	7	51	0.000	7	51	0.000	7	51	0.000
17:00 - 18:00	7	51	0.003	7	51	0.003	7	51	0.006
18:00 - 19:00	7	51	0.003	7	51	0.000	7	51	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.009			0.014			0.023

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:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL COACH PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.000	7	51	0.000	7	51	0.000
08:00 - 09:00	7	51	0.000	7	51	0.000	7	51	0.000
09:00 - 10:00	7	51	0.000	7	51	0.000	7	51	0.000
10:00 - 11:00	7	51	0.000	7	51	0.000	7	51	0.000
11:00 - 12:00	7	51	0.000	7	51	0.000	7	51	0.000
12:00 - 13:00	7	51	0.000	7	51	0.000	7	51	0.000
13:00 - 14:00	7	51	0.000	7	51	0.000	7	51	0.000
14:00 - 15:00	7	51	0.000	7	51	0.000	7	51	0.000
15:00 - 16:00	7	51	0.000	7	51	0.000	7	51	0.000
16:00 - 17:00	7	51	0.000	7	51	0.000	7	51	0.000
17:00 - 18:00	7	51	0.000	7	51	0.000	7	51	0.000
18:00 - 19:00	7	51	0.000	7	51	0.000	7	51	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

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.

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Parameter summary

Trip rate parameter range selected:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.000	**7**	**51**	**0.011**	**7**	**51**	**0.011**
08:00 - 09:00	**7**	**51**	**0.006**	7	51	0.000	7	51	0.006
09:00 - 10:00	7	51	0.000	7	51	0.000	7	51	0.000
10:00 - 11:00	7	51	0.000	7	51	0.000	7	51	0.000
11:00 - 12:00	7	51	0.003	7	51	0.000	7	51	0.003
12:00 - 13:00	7	51	0.003	7	51	0.000	7	51	0.003
13:00 - 14:00	7	51	0.003	7	51	0.000	7	51	0.003
14:00 - 15:00	7	51	0.006	7	51	0.003	7	51	0.009
15:00 - 16:00	7	51	0.000	7	51	0.003	7	51	0.003
16:00 - 17:00	7	51	0.000	7	51	0.006	7	51	0.006
17:00 - 18:00	7	51	0.003	7	51	0.008	7	51	0.011
18:00 - 19:00	7	51	0.003	7	51	0.000	7	51	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.027			0.031			0.058

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.

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Parameter summary

Trip rate parameter range selected:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	7	51	0.110	7	51	0.341	7	51	0.451
08:00 - 09:00	7	51	0.251	**7**	**51**	**0.721**	**7**	**51**	**0.972**
09:00 - 10:00	7	51	0.203	7	51	0.242	7	51	0.445
10:00 - 11:00	7	51	0.270	7	51	0.285	7	51	0.555
11:00 - 12:00	7	51	0.265	7	51	0.254	7	51	0.519
12:00 - 13:00	7	51	0.262	7	51	0.276	7	51	0.538
13:00 - 14:00	7	51	0.259	7	51	0.239	7	51	0.498
14:00 - 15:00	7	51	0.270	7	51	0.273	7	51	0.543
15:00 - 16:00	**7**	**51**	**0.589**	7	51	0.352	7	51	0.941
16:00 - 17:00	7	51	0.473	7	51	0.237	7	51	0.710
17:00 - 18:00	7	51	0.468	7	51	0.245	7	51	0.713
18:00 - 19:00	7	51	0.318	7	51	0.186	7	51	0.504
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.738			3.651			7.389

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.

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Parameter summary

Trip rate parameter range selected:	17 - 115 (units:)
Survey date date range:	01/01/08 - 12/11/15
Number of weekdays (Monday-Friday):	7
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 D

PICADY Analysis

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Forton PICADY 54 Units.j9
Path: C:\Users\Owner\Desktop\Projects\Forton\CALCS\Revised Calcs for 54 Dwellings
Report generation date: 01/06/2017 12:23:30

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	54 Units - 2022 + Development									
Stream B-AC	0.0	6.84	0.04	A	900 %	0.0	6.68	0.02	A	900 %
Stream C-AB	0.0	5.80	0.01	A	[]	0.0	5.86	0.01	A	[]

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	30/11/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Ed-TOSH\Ed
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	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 + Development	AM	ONE HOUR	07:45	09:15	15	✓
D2	2022 + Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	54 Units	✓	100.000	100.000

54 Units - 2022 + Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	3.00	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

Arms

Arms

Arm	Name	Description	Arm type
A	School Lane South		Major
B	Southern Access		Minor
C	School Lane North		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			81.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.75	41	39

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
1	B-A	497	0.091	0.229	0.144	0.327
1	B-C	632	0.097	0.245	-	-
1	C-B	621	0.241	0.241	-	-

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	2022 + Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	18	100.000
B		ONE HOUR	✓	22	100.000
C		ONE HOUR	✓	18	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	4	14
	B	11	0	11
	C	14	4	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	0	0	0
	C	4	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-AC	0.04	6.84	0.0	A	20	30
C-AB	0.01	5.80	0.0	A	4	6
C-A					13	19
A-B					4	6
A-C					13	19

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)	LOS
B-AC	17	4	552	0.030	16	0.0	0.0	6.715	A
C-AB	3	0.77	625	0.005	3	0.0	0.0	5.795	A
C-A	10	3			10				
A-B	3	0.75			3				
A-C	11	3			11				

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)	LOS
B-AC	20	5	552	0.036	20	0.0	0.0	6.769	A
C-AB	4	0.92	625	0.006	4	0.0	0.0	5.795	A
C-A	13	3			13				
A-B	4	0.90			4				
A-C	13	3			13				

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)	LOS
B-AC	24	6	550	0.044	24	0.0	0.0	6.841	A
C-AB	5	1	626	0.007	5	0.0	0.0	5.794	A
C-A	15	4			15				
A-B	4	1			4				
A-C	15	4			15				

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)	LOS
B-AC	24	6	550	0.044	24	0.0	0.0	6.841	A
C-AB	5	1	626	0.007	5	0.0	0.0	5.795	A
C-A	15	4			15				
A-B	4	1			4				
A-C	15	4			15				

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)	LOS
B-AC	20	5	551	0.036	20	0.0	0.0	6.773	A
C-AB	4	0.92	625	0.006	4	0.0	0.0	5.796	A
C-A	13	3			13				
A-B	4	0.90			4				
A-C	13	3			13				

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)	LOS
B-AC	17	4	552	0.030	17	0.0	0.0	6.718	A
C-AB	3	0.77	625	0.005	3	0.0	0.0	5.796	A
C-A	10	3			10				
A-B	3	0.75			3				
A-C	11	3			11				

54 Units - 2022 + Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	2.34	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	900	

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	2022 + Development	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	20	100.000
B		ONE HOUR	✓	10	100.000
C		ONE HOUR	✓	19	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	8	12
	B	5	0	5
	C	11	8	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	5
	B	0	0	0
	C	4	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-AC	0.02	6.68	0.0	A	9	14
C-AB	0.01	5.86	0.0	A	7	11
C-A					10	15
A-B					7	11
A-C					11	17

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)	LOS
B-AC	8	2	552	0.014	7	0.0	0.0	6.610	A
C-AB	6	2	623	0.010	6	0.0	0.0	5.840	A
C-A	8	2			8				
A-B	6	2			6				
A-C	9	2			9				

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)	LOS
B-AC	9	2	551	0.016	9	0.0	0.0	6.640	A
C-AB	7	2	623	0.012	7	0.0	0.0	5.849	A
C-A	10	2			10				
A-B	7	2			7				
A-C	11	3			11				

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)	LOS
B-AC	11	3	550	0.020	11	0.0	0.0	6.680	A
C-AB	9	2	624	0.014	9	0.0	0.0	5.861	A
C-A	12	3			12				
A-B	9	2			9				
A-C	13	3			13				

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)	LOS
B-AC	11	3	550	0.020	11	0.0	0.0	6.680	A
C-AB	9	2	624	0.014	9	0.0	0.0	5.863	A
C-A	12	3			12				
A-B	9	2			9				
A-C	13	3			13				

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)	LOS
B-AC	9	2	551	0.016	9	0.0	0.0	6.640	A
C-AB	7	2	623	0.012	7	0.0	0.0	5.850	A
C-A	10	2			10				
A-B	7	2			7				
A-C	11	3			11				

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)	LOS
B-AC	8	2	552	0.014	8	0.0	0.0	6.613	A
C-AB	6	2	623	0.010	6	0.0	0.0	5.843	A
C-A	8	2			8				
A-B	6	2			6				
A-C	9	2			9				