

Prepared on behalf of

Keepmoat Homes Ltd

**Proposed Residential Development
School Street
Thurnscoe**

Transport Assessment

Acknowledgements:

Accident data has been provided by Barnsley Metropolitan Borough Council

Traffic count data has been provided by Traffic Data Collection Ltd.

2011 Census data has been used to inform the traffic distribution.

The TRICS database has been used in this report to calculate traffic generations.

The PICADY 5 and ARCADY 6 modelling programmes have been used for junction capacity assessments.

Disclaimer

The methodology adopted and the sources of information used by Sanderson Associates (Consulting Engineers) Ltd in providing its services are outlined within this Report.

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1 Introduction

1.1 Overview

1.1.1 *Sanderson Associates (Consulting Engineers) Ltd* has been appointed by *Keepmoat Homes Ltd* to advise on traffic and transportation issues surrounding a planning application for a proposed residential development at Thurnscoe, Barnsley. The site location is included at **Appendix A, Figure 1**.

1.1.2 The site forms part of an outline consent for residential development granted in 2010. The wider site forming part of the outline consent was separated into three sections as shown on the plan included at **Appendix B**. The area labelled as Site 1 to the south-east of the site has been built out, however the area's identified as Site 2 and Site 3 remain undeveloped and are the subject of this planning application.

1.1.3 *AECOM* have provided a scoping response on behalf of *Barnsley Metropolitan Borough Council* (BMBC) for the application identifying the traffic study area for this Transport Assessment, which is included at **Appendix C**. This comprises the following junctions:

- B6411 / Station Rd / Shepherd Ln / John St;
- B6411 Houghton Rd / School St;
- B6411 Houghton Rd / Lorne Rd / Merrill Rd;
- Barnsley road / Nicholas Ln / Highgate Ln staggered crossroads, and
- A635 / Barnsley Road roundabout.

- 1.1.4 The site is allocated for residential development in the emerging Barnsley Local Plan as site reference H1. The policy for the site is detailed as follows:

**Site H1 Former Reema Estate and adjoining land, off School Street, Thurnscoe
Indicative number of dwellings 525**

The development will be expected to:

- provide a bridge for people and vehicles to use across the railway line connecting the site with Thurnscoe East Estate.
- retain, enhance and manage a wildlife corridor on the eastern boundary alongside the rail line.
- archaeological remains may be present on this site therefore proposals must be accompanied by an appropriate archaeological assessment (including a field evaluation if necessary) that must include the following:
 - o Information identifying the likely location and extent of the remains, and the nature of the remains
 - o An assessment of the significance of the remains
 - o Consideration of how the remains would be affected by the proposed development.

- 1.1.5 A site visit was undertaken on the 17th July 2017 to record highway measurements, audit sustainable transport infrastructure and observe the prevailing highway conditions.

1.2 Planning Policy

- 1.2.1 In accordance with the Planning Practice Guidance 'Transport evidence bases in plan making and decision taking' this Transport Statement addresses key issues including:

1. assess the existing situation and likely generation of trips over time by all modes and the impact on the locality in economic, social and environmental terms

2. assess the opportunities to support a pattern of development that, where reasonable to do so, facilitates the use of sustainable modes of transport
3. highlight and promote opportunities to reduce the need for travel where appropriate
4. identify opportunities to prioritise the use of alternative modes in both existing and new development locations if appropriate
5. consider the cumulative impacts of existing and proposed development on transport networks
6. assess the quality and capacity of transport infrastructure and its ability to meet forecast demands
7. identify the short, medium and long-term transport proposals across all modes

1.2.2 On 27 March 2012 the National Planning Policy Framework (NPPF) was published, which sets out the Government's planning policies for England and how these are expected to be applied. The NPPF supersedes a number of documents, including Planning Policy Guidance 13: Transport.

1.2.3 At paragraph 14 it is stated that:

'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.'

1.2.4 Section 4 of NPPF outlines the Government's planning policies for promoting sustainable transport. The section begins at paragraph 29, which states:

‘Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. Smarter use of technologies can reduce the need to travel. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.’

1.2.5 Paragraph 32 states 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 development are severe.

2 Existing Situation

2.1 The Site and Surrounding Area

2.1.1 The site comprises part of the former Reema Estate (Phase 2) and undeveloped land to the north of this (Phase 3). The site's boundaries can be loosely summarised as follows;

North: Fields

East: Railway Line

South: Housing accessed from Blossom Way (part of the Phase 1 development) and Ashberry Close / Stotfold Drive

West: Housing accessed from Merrill Road, Winn Gardens and Thornwood Court

2.1.2 Housing on the former Reema Estate has been demolished, however the road infrastructure provided by Lingamore Leys. School Street and Willow Road remains.

2.1.3 The area surrounding the site is predominantly residential

2.2 Local Highway Network

2.2.1 School Street runs approximately north-south centrally through the southern part of the site. It acts as a residential collector road for the adjacent streets including the accesses provided to the constructed Phase 1 development via Blossom Way and Oak Road. Similarly Merrill Road acts as a residential collector to the west of the site, running broadly parallel to School Street, whilst Lingamore Leys links these routes running approximately east-west at the north of the Phase 2 site, forming the boundary with the Phase 3 land.

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- 2.2.2 Both School Street and Merrill Road form minor arms of major/ minor priority junctions with the B6411 Houghton Road some 550m apart. Ghost island right turn lanes are provided on Houghton Road at both junctions. The School Street junction is a 'T' junction, whilst Merrill Road forms a crossroads junction with Lorne Road opposite, some 1km south of the mini roundabout junction..
- 2.2.3 Approximately 130m east of School Street the B6411 Houghton Road forms a four-arm mini roundabout junction with John Street, Station Road and Shepherd Lane. Shepherd Lane runs south from the mini roundabout, becoming first Thurnscoe Bridge Lane and then Nicholas Lane, beyond where it passes underneath the A635.
- 2.2.4 Nicholas Lane forms the northern arm of a signalised staggered junction with Barnsley Road and Highgate Lane some 1.5km south of the B6411 in Goldthorpe. Both Nicholas Lane and Highgate Lane are single lane approaches with left turn slip roads, whilst there are two lanes on both Barnsley Road approaches with one a dedicated right turn lane in each case. Signalised pedestrian crossings are provided on each arm of the junction.
- 2.2.5 Approximately 1.2km to the west of the signalised junction, Barnsley Road forms the eastern arm of a four-arm roundabout junction with the A635. The speed limit changes from 30mph on Barnsley Road to 60mph at the roundabout junction.
- 2.3 Highway Accident Data**
- 2.3.1 Accident data for the most recent five year period available (2012-2016) has been obtained from Barnsley MBC for Houghton Road, Merrill Road, School Street and the residential streets within this area. . A copy of the data is included at **Appendix D**.
- 2.3.2 A total of twenty accidents were recorded; sixteen of slight severity and four serious, each of which are summarised in the following paragraphs.

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- 2.3.3 Two serious accidents were recorded on Merrill Lane, both involving child pedestrians running out from behind parked vehicles at different locations.
- 2.3.4 Seven slight accidents were recorded on the section of Houghton Road, between Merrill Road and School Street. These are summarised as follows:
- One involved right turning vehicle into side road.
 - One involved PCSO's chasing a quad bike
 - Two pedestrian accidents, one involving a reversing vehicle and one involving a vehicle mounting the kerb.
 - Two involved vehicles pulling out of parking spaces.
 - One involved a child on a scooter crossing without looking.
 - One was a rear shunt.
- 2.3.5 Three accidents were recorded on School Street, including one at the junction with Houghton Road, which was serious and involved a child pedestrian. The other accidents involved an overtaking vehicle and a vehicle losing control.
- 2.3.6 Five accidents occurred at or near the mini roundabout junction between John Street, Station Road, Shepherd Lane and Houghton Road; four were slight and one serious. The serious accident involved a pedestrian on Shepherd Lane, whilst the slight accidents, two were rear shunts, one was a collision with a mobility scooter and one was a collision on the mini roundabout.
- 2.3.7 One slight accident was recorded on Lingamore Leys and involved an overtaking vehicle.

2.3.8 The accidents occurred due to a variety of different causes and although a number of accidents involved pedestrians, they each occurred at different locations therefore there does not appear to be an inherent accident pattern at a particular location on the local highway network.

2.4 Existing Traffic Flows

2.4.1 Full classified peak period traffic counts have been undertaken by Traffic Data Collection Ltd at the following junctions:

- B6411 / Station Rd / Shepherd Ln / John St;
- B6411 Houghton Rd / School St;
- B6411 Houghton Rd / Lorne Rd / Merrill Rd;
- Barnsley road / Nicholas Ln / Highgate Ln staggered crossroads, and
- A635 / Barnsley Road roundabout.

2.4.2 The counts were undertaken between 0730-0930hrs and 1500-1800hrs on Tuesday 27th June 2017. A copy of the traffic data is included at **Appendix E**.

3 Sustainable Transport Modes

3.1 Introduction

3.1.1 The National Planning Policy Framework (NPPF) was published by the Government in March 2012 and replaced PPG13: Transport. The NPPF however retains the objectives of PPG13, and in particular the need to rebalance the transport system in favour of sustainable transport modes, but does not include the same level of detail as the previous guidance. Some of the policies included in PPG13 Transport have therefore been used in this section to assess travel to the site by sustainable transport modes.

3.1.2 This section of the report considers the accessibility of the site by the following modes of transport.

- 8. Accessibility on foot.
- 9. Accessibility by cycle.
- 10. Accessibility by bus.
- 11. Accessibility by rail.

3.2 Accessibility on Foot

3.2.1 Walking is the most important mode of transport in the local level and can replace short car trips in journeys under 2km, which contribute to congestion and pollution, and the need for car parking.

3.2.2 In relation to acceptable walking distances, Manual for Streets offers the following guidance in Section 4.4 "The walkable neighbourhood".

"Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPG13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km. MfS encourages a reduction in the need to travel by car through the creation of mixed-use neighbourhoods with interconnected street patterns, where daily needs are within walking distance of most residents."

- 3.2.3 The IHT publication "Providing for Journeys on Foot" identifies suggested walking distances for commuting, school and sight-seeing as follows with times based on a walking speed of (1.4m/s).

12. Desirable 500m	6 minutes
13. Acceptable 1000m	12 minutes
14. Preferred maximum 2000m	24 minutes

- 3.2.4 **Appendix A (Figure 2)** indicates destinations which lie within an 800m and 2km radius of the centre of the application site. It is noted that walking routes will not follow the simple radius of this plan and the plan is provided as an indication of where destinations lie and the general extent to which the local area can be accessed on foot. The following amenities and facilities are all located within walking distance of the site.

- Bus stops along School Street, Lingamore Leys, Merrill Road and Houghton Road.
- Thurnscoe Village and associated shops and amenities
- Thurnscoe Train Station
- Gooseacre Primary Academy, The Robert Ogden Special, The Hill Primary Academy, Highgate Primary Academy, Sacred Heart Roman Catholic Primary and Dearne Goldthorpe Primary Schools
- ASDA Supermarket

- Lidget Lane Industrial Estate
- The Thurnscoe Centre doctors surgery
- Weldricks Pharmacy
- Post Office
- Thurnscoe Lifelong Learning Centre and Library
- Thurnscoe Sports Ground
- Hickleton Golf Club
- Pheonix Park

3.2.5 In terms of pedestrian infrastructure; the site is located in a predominately residential area therefore extensive pedestrian provision is present in the vicinity of the site, streets have footways on both sides and are lit. Houghton Road provides the main link between the site and the amenities available in Thurnscoe Village, dropped crossings and central refuge islands are provided regularly along Houghton Road, notably in the vicinity of the junctions with School Street and Merrill Road, with a Zebra crossing provided in the village centre.

3.2.6 Additionally there is a pedestrian bridge over the railway line on the sites eastern boundary which connects the site to the residential estate to the east of the site.

3.2.7 Furthermore the development proposals include the provision of new footways to be constructed within the site which link to the existing network.

3.2.8 It is considered that the site is therefore well located to allow pedestrian access to local services/ facilities and various places of education and employment.

3.3 *Cycling*

3.3.1 Cycling also has the potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport. The plan at **Appendix A (Figure 3)** shows a 5km radius from the centre of the site, which indicates the extent to which the local area can be accessed on cycle.

- 3.3.2 Like walking, cycling has an important part to play in reducing congestion, improving accessibility and reducing pollution. Destinations within a 5km radius from the centre of the site are indicated below together with the cycle time based on a 12kph cycle speed.

Destination	Distance	Time
Thurnscoe Train Station	0.80km	4 minutes
Thurnscoe	0.85km	4¼ minutes
Goldthorpe	2.8km	14 minutes
Great Houghton	3.1km	15 ½ minutes
Hickleton	3.2km	16 minutes
Clayton	3.7km	18 ½ minutes
Bolton-upon-Dearne	3.8km	19 minutes
Little Houghton	4.2km	21 minutes
Millhouses	4.8km	24 minutes

- 3.3.3 Within a 5km cycling distance of the centre of the site there are therefore a number of shopping destinations which provide a range of services, facilities, school provision and employment opportunities.

3.4 **Bus Facilities**

- 3.4.1 There are bus stops located on Lingamore Leys and School Street approximately 150m from the centre of the site and Houghton Road approximately 570m from the centre of the site.

- 3.4.2 The location of accessible bus stops are shown on **Figure 4, Appendix A** and the details of the facilities provided along with the available services are provided as follows:-

Lingamore Leys

Location: Willow Road
Reference: 37051091
Distance to stop: Approximately 150m from the centre of the site
Direction of Travel: Buses travelling westbound
Facilities: Lighting pole with flag and timetable information
Bus services: 219, 407

Location: Willow Road
Reference: 37055288
Distance to stop: Approximately 150m from the centre of the site
Direction of Travel: Buses travelling eastbound
Facilities: Pole with flag and timetable information
Bus services: 219, 226, 407

School Street

Location: Oak Road
Reference: 37056121
Distance to stop: Approximately 150m from the centre of the site
Direction of Travel: Buses travelling northbound
Facilities: Unmarked
Bus services: 219, 226

Houghton Road

Location: Shepherd Lane
Reference: 37050355
Distance to stop: Approximately 570m from the centre of the site
Direction of Travel: Buses travelling eastbound
Facilities: Pole with flag and timetable information

Bus services: 216, 219, 219a, 226, 407, 449, 668
Location: Garden Street
Reference: 37055038
Distance to stop: Approximately 570m from the centre of the site
Direction of Travel: Buses travelling westbound
Facilities: Shelter with seating and timetable information
Bus services: 216, 219, 219a, 226, 407, 449, 665

3.4.3 The services available from these stops are detailed in the following table:

		Approximate Peak Frequencies (Buses per hour)			
Nº	Route	Mon-Fri Day	Mon-Fri Evening	Saturday	Sunday
216	Goldthorpe to Grimethorpe	1433	No Service	1425	0628
	Grimethorpe to Goldthorpe	1525		No Service	0725
219	Barnsley to Doncaster	60 mins	60 mins	60 mins	60 mins
219a	Barnsley to Doncaster	60 mins	No Service	60 mins	No Service
226	Barnsley to Thurnscoe	30 mins	60 mins	30 mins	60 mins
407 (School Service)	Thurnscoe – Goldthorpe	0751	No Service	No Service	No Service
	Goldthorpe to Thurnscoe	1456			
449 (School Service)	Thurnscoe to Wombwell	0730	No Service	No Service	No Service
	Wombwell to Thurnscoe	1505			
665 (School Service)	Wath-upon-Deane to Thurnscoe	1601	No Service	No Service	No Service
668	Thurnscoe to Wath-upon-Deane	0830	No Service	No Service	No Service

3.4.4 There are approximately 4 regular services available per hour during weekday peak periods, the majority of which connect to either Barnsley or Doncaster city centres where an array of facilities and employment opportunities are available.

3.5 Rail Facilities

3.5.1 The nearest station to the site is Thurnscoe Train Station, which is located approximately 525m south east of the site and is described below.

3.5.2 The station is managed by Northern and is accessible by foot and cycle.

3.5.3 Facilities at the station include CCTV monitored cycle stands with parking provision for 8 cycles, a 60 space car park and ramps for train access.

3.5.4 A summary of the available services and their frequencies are shown in the following table:

Route	Monday to Friday Frequency		Saturday Frequency	Sunday Frequency
	Daytime	Evening		
Sheffield to Leeds	60 mins	60 mins	60 mins	120 mins

3.6 *Summary*

3.6.1 The site is therefore accessible by a range of sustainable transport modes and a Travel Plan has also been prepared to encourage residents to utilise these options.

4 Development Proposals

4.1 Overview

4.1.1 The application proposals include 487 dwellings separated into the Phase 2 and Phase 3 sections of the site. A copy of the illustrative masterplan is attached at **Appendix F**.

4.1.2 These phases comprise the following separated into private sales units and affordable housing

	Private	Affordable	TOTAL
Phase 2	206	50	256
Phase 3	185	46	231
Total	391	96	487

Table 4.1.2 – Development Schedule

4.2 Access

4.2.1 The Phase 2 site will be accessed via the existing infrastructure retained from the previous housing comprising Lingamore Leys, Willow Road and School Street. Phase 3 is to be accessed by an extension of School Street to the north.

4.2.2 The internal layout has been designed to provide loop roads and servicing will be undertaken directly from these estate roads. Where cul-de-sacs are provided they will be designed to accommodate the swept path of a refuse vehicle, or provide a collection point within an appropriate carry distance.

4.3 Parking

4.3.1 Barnsley Council's Supplementary Planning Document on car parking (Adopted March 2012) includes maximum standards for residential developments, which are summarised as follows in relation to the proposals;

- Dwellings with 1-2 bedrooms – 1 space per dwelling
- Dwellings with 3 or more bedrooms - 2 spaces per dwelling.

4.3.2 The proposed development comprises the following mix of number of bedrooms:

No of Bedrooms	2 Bed	3 Bed	TOTAL
Phase 2	148	108	256
Phase 3	133	98	231
Total	281	206	487

4.3.3 Therefore in accordance with local standards the maximum number of spaces for Phase 2 is 364 and the maximum number of spaces for Phase 3 is 329, a total of 693 spaces. Car parking provision will be provided in line with these standards.

5 Multimodal Trip Generation

5.1 The trip generations for the proposed residential development have been estimated using the TRICS v7.4.1 database. The TRICS search parameters have been refined to closely match the location and characteristics of the development site. The selection criteria is summarised below:

Land Use: 03 – Residential

Category: A – Houses Privately Owned

Selected Regions and Areas: Greater London and Ireland excluded

Parameter: Number of dwellings

Selected Survey Days: Weekends excluded

Selected Locations: Suburban Area and Edge of Town

Travel Plans: 1 of the 28 surveys was undertaken with a Travel Plan in place

5.2 A full copy of the TRICS output is included at **Appendix G** and the resulting trip rates and generations are shown in table 5.2.

	Trip Rate			Trip Generation			Modal Split %		
	AM Peak	PM Peak	Daily	AM Peak	PM Peak	Daily	AM Peak	PM Peak	Daily
Pedestrians	0.194	0.098	1.304	94	48	635	19.0%	10.3%	15.4%
Cyclists	0.021	0.024	0.159	10	12	77	2.1%	2.5%	1.9%
Public Transport Users	0.017	0.018	0.13	8	9	63	1.7%	1.9%	1.5%
Vehicle Occupants	0.788	0.811	6.847	384	395	3334	77.2%	85.2%	81.1%
Total People Trips	1.021	0.952	8.447	497	464	4114	100.0%	100.0%	100.0%

Table 5.2 – Multi-modal trip generation

6 Traffic Flows

6.1 Surveyed Traffic Flows

6.1.1 The peak hour traffic flows have been identified from traffic count data detailed at section 2.4 as being during 08:00 – 09:00hrs and 17:00 – 18:00hrs. The surveyed traffic flows during these periods are shown on **Figure 5** at **Appendix A**.

6.2 Traffic Growth

6.2.1 An assessment year of 2022 has been applied, 5 years from the year of application. This is consistent with the Transport Assessment for the outline proposals.

6.2.2 To establish the likely growth of traffic from the 2017 traffic surveys to 2022, TEMPRO 7.2 growth factors have been calculated and applied as follows:

2017-2022 AM 1.0937 PM 1.0921

6.2.3 The resulting 2022 base traffic flows are shown on **Figure 6**.

6.3 Vehicle Trip Generations

6.3.1 Vehicle trip rates have been extracted from the multimodal TRICS search described within the previous chapter of this report. The predicted vehicle trip generation potential of a residential development containing 487 dwellings is summarised by the following table;

Time Period	Rates		Generations		
	Arr	Dep	Arr	Dep	Two-way
AM (0800-0900)	0.147	0.411	72	200	272
PM (1700-1800)	0.382	0.229	186	112	298

Table 6.3.1 – Vehicle trip generations – 487 dwellings

6.3.2 Table 6.3.1 identifies that the proposed development would generate in the order of 272 vehicle trips two-way in the AM peak period and 298 vehicle trips two-way in the PM peak period.

6.3.3 These traffic generations are considered highly robust as they are based wholly on private housing and do not making any allowance for the affordable housing provision, which would typically generate less traffic, whilst they also make no allowance for the traffic generated by the previous housing accommodated on the site.

6.3.4 Furthermore, outline consent was granted for the wider development including the now built Phase 1 proposals, which included 160 units. The Transport Assessment for the Outline consent was based on 900 units, whilst the total number of units now proposed in all three phases is 647. The impact is therefore significantly reduced from the consented position.

6.4 Traffic Distribution

6.4.1 In order to determine the impact of the development at junctions on the local highway network a traffic distribution assessment has been undertaken using 2011 Census: Origin / Destination statistics (Dataset: WU03EW) which identifies 'Location of usual residence and place of work by method of travel to work' at Middle Super Output Area (MSOA) level. This data identifies the existing travel to work patterns of people who work within the sites representative MSOA, which for reference is Barnsley 014'.

6.4.2 As the MSOA data includes all nationwide destinations, the results of the search have been refined to exclude all MSOA's which generate less than 10 trips which equates to less than 0.8% of the overall sample. It is considered that this excluded information is not relevant in terms of establishing a 'likely' distribution of traffic.

6.4.3 The likely route assignments between the site and the qualifying MSOA's have been determined using online route mapping and Population Centroid Data which identifies the centre of each MSOA based upon its residential population.

6.4.4 The table included at **Appendix H** details the route assignment percentage draw of each qualifying MSOA, and can be summarised as follows;

Suggested Route	Total Traffic Assignment %
Houghton Road (W)	41.0%
Station Road	22.4%
Highgate Lane	19.6%
A635 (SW)	2.9%
Local Centre	14.0%

Table 6.4.4 – Traffic distribution

6.4.5 With regard to the distribution between Merrill Road and School Street it has been assumed that half of westbound traffic would use both routes, whilst all eastbound traffic would use School Street.

6.4.6 Of the traffic remaining within the same MSOA of the site, it has been assumed that all traffic would travel eastbound through the mini roundabout junction as this would be the route to the Lidget Lane Industrial Estate and provides a robust assessment of the mini roundabout junction between Houghton Road/ John Street and Shepherd Lane.

6.4.7 The resulting traffic distribution upon the local highway network is shown at **Figure 7** and the resulting proposed development traffic flows from the 487 dwellings is shown at **Figure 8**.

6.5 Assessment Flows

6.5.1 The 2022 total proposed assessment flows (including base and proposed development traffic flows) are shown in **Figure 9**.

7 Traffic Impact Assessment

7.1 Study Area

7.1.1 The study area has been agreed with the local highway authority during scoping discussions and comprises the following junctions:

- B6411 / Station Rd / Shepherd Ln / John St;
- B6411 Houghton Rd / School St;
- B6411 Houghton Rd / Lorne Rd / Merrill Rd;
- Barnsley road / Nicholas Ln / Highgate Ln staggered crossroads, and
- A635 / Barnsley Road roundabout.

7.1.2 The proportionate impact of the traffic flows generated by the development, relative to the assessment year base flows has been calculated for each junction approach within the study area with the results detailed in table 7.1.2 below.

	AM	PM
Merrill Road	60.20%	30.65%
Houghton Road (E)	15.03%	5.69%
Lorne Road	0.00%	0.00%
Houghton Road (W)	9.42%	18.78%
Houghton Road (W)	5.72%	13.69%
School Street	124.67%	121.02%
Houghton Road (E)	10.33%	14.96%
Houghton Road	23.83%	15.53%
John Street	0.00%	0.00%
Station Road	5.22%	6.44%
Shepherd Lane	4.94%	13.12%
Nicholas Lane	6.64%	2.78%
Barnsley Road (E)	0.00%	0.00%
Highgate Lane	2.99%	7.74%
Barnsley Road (W)	0.54%	1.34%
TOTAL	3.24%	2.96%
A635 (NE)	1.79%	0.63%
Dudley Drive	0.00%	0.00%
A635 (SW)	0.22%	0.47%

7.1.3 The traffic generated by the development would have a material impact at the Merrill Road, School Street and Houghton Road/ John Street/Station Road/ Shepherd Lane junctions but not at the signalised junction between Nicholas Lane / Barnsley Road / Highgate Lane or the roundabout junction between the A635 / Dudley Drive. With regard to the signalised junction it should be noted that it is appropriate to consider the impact on the junction as a whole rather than single approaches as the timings can be altered to reflect the traffic flows on each approach.

7.1.4 Therefore traffic capacity assessments have been undertaken at the junctions where a material impact has been identified and the resulting study area is consistent with the Transport Assessment for the outline consented application, which also assessed the impact of the now-built Phase 1 development.

7.2 *Houghton Road / Merrill Road / Lorne Road*

7.2.1 PICADY has been used to assess the capacity of the junction; the results outputs are included at **Appendix I** and are summarised in the table below.

Arm A = Houghton Road (E)

Arm B = Lorne Road

Arm C = Houghton Road (W)

Arm D = Merrill Road

	AM Peak Hour 0800-0900hrs				PM Peak Hour 1700-1800hrs			
	2022 Base		2022 Proposed		2022 Base		2022 Proposed	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
B – CD	0.027	0.03	0.027	0.03	0.017	0.02	0.017	0.02
B – AD	0.076	0.08	0.078	0.08	0.090	1.5	0.094	0.10
A – D	0.146	0.17	0.153	0.18	0.136	2.4	0.155	0.18
D – AB	0.100	0.11	0.122	0.14	0.112	1.9	0.128	0.15
D – BC	0.065	0.07	0.170	0.20	0.067	0.07	0.136	0.16
C – B	0.006	0.01	0.006	0.01	0.034	0.03	0.034	0.04

Table 7.2.1 – PICADY Results – Houghton Road / Merrill Road / Lorne Road Junction

7.2.2 The assessment shows that the junction would operate comfortably within its practical capacity, generally accepted as being represented by a ratio of flow to capacity of 0.850 with no material queuing.

7.3 **Houghton Road/ School Street**

7.3.1 PICADY has been used to assess the capacity of the junction; the results outputs are included at **Appendix J** and are summarised in the table below.

Arm A = Houghton Road (E)

Arm B = School Street

Arm C = Houghton Road (W)

2022	AM Peak Hour 0800-0900hrs				PM Peak Hour 1700-180hrs			
	Base		Proposed		Base		Proposed	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
B – C	0.179	0.29	0.463	0.84	0.103	0.11	0.223	0.30
B - A	0.075	0.08	0.295	0.41	0.096	0.10	0.241	0.31
C – AB	0.113	0.13	0.171	0.21	0.099	0.11	0.257	0.35

Table 7.3.1 – PICADY Results – Houghton Road / School Street

7.3.2 The assessment shows that the junction would operate within its practical capacity, with no material queuing.

7.4 **Houghton Road / John Street / Station Road / Shepherd Lane**

7.4.1 ARCADY has been used to assess the capacity of the mini-roundabout junction; the results outputs are included at **Appendix K** and are summarised in the table below.

Arm A = John Street

Arm B = Station Road

Arm C = Shepherd Lane

Arm D = Houghton Road

2022	AM Peak Hour 0800-0900hrs				PM Peak Hour 1700-1800hrs			
	Base		Proposed		Base		Proposed	
	RFC	Queue	RFC	Queue	RFC	Queue	RFC	Queue
A	0.085	0.1	0.121	0.1	0.021	0.0	0.023	0.0
B	0.412	0.7	0.453	0.8	0.760	3.1	0.830	4.5
C	0.519	1.1	0.551	1.2	0.610	1.5	0.726	2.5
D	0.705	2.3	0.837	4.8	0.465	0.9	0.537	1.1

Table 7.4.1 – ARCADY Results John Street/Station Road/Shepherd Lane/Houghton Road

7.4.2 The assessment shows that the junction would operate within its practical capacity, generally accepted as being represented by a ratio of flow to capacity of 0.850 without significant queuing.

7.5 Summary

7.5.1 Therefore each of these junctions can accommodate the traffic that would be generated by the proposed development.

7.5.2 In considering the results the following factors should be considered:

- The results are based on robust traffic generations, based wholly on private housing and not making any allowance for the affordable housing provision, which would typically generate less traffic.
- The traffic generations also make no allowance for the traffic generated by the previous housing accommodated on the site.
- Outline consent was granted for the wider development including the now built Phase 1 proposals, which included 160 units. The Transport Assessment for the Outline consent was based on 900 units, whilst the total number of units now proposed in all three phases is 647. The impact is therefore significantly reduced from the consented position.

-
- Given that the development proposals were already the subject of an Outline consent and are included in the emerging Local Plan, the traffic generated will already be accounted for on the wider network by the TEMPRO factors used to calculate traffic growth. Therefore the application of these growth factors in addition to the specific distribution of the traffic generated by the proposed development represents an element of 'double counting' in these capacity assessments.
 - The potential provision of a road bridge over the railway lines would allow some traffic to bypass the junctions within the study area and therefore the impact of the proposals would reduce should this be delivered.
 - It has been assumed that all trips remaining within Thurnscoe would travel through the mini roundabout junction between Houghton Road, John Street, Station Road and Shepherd Lane, when in practice this is unlikely to be the case.

8 Summary and Conclusions

- 8.1 Sanderson Associates (Consulting Engineers) Limited have been appointed by Keepmoat Homes Ltd to advise on traffic and transportation issues in support of a proposed residential development off School Street, Thurnscoe..
- 8.2 The proposed development comprises 487 houses to be served by the existing infrastructure and an extension of School Street.
- 8.3 The site formed part of a wider outline application, consented in 2010. The proposals form Phases 2 and 3 of the development with Phase 1 already constructed.
- 8.4 Even based on highly robust assumptions, the junctions within study area would continue to operate within capacity, whilst accommodating the traffic generated by the proposed development.
- 8.5 Car parking spaces will be provided in accordance with the local authority's standards.
- 8.6 There does not appear to be an inherent accident pattern at a particular location on the local highway network.
- 8.7 The site is accessible by walking, cycling, and public transport and a Travel Plan has also been prepared to promote travel by these modes.
- 8.8 In accordance with the National Planning Policy Framework paragraph 32, this Transport Statement has demonstrated that:
- Sustainable transport modes are available for residents and visitors that reduce the need for major transport infrastructure.
 - Safe and suitable access to the site can be achieved for all people; and

- The impacts are not severe and improvements are not required within the transport network to limit the impacts of the development.

8.9 It is therefore considered that the application is acceptable in transport terms.

APPENDIX A

Figure 1 – Site Location Plan

Figure 2 – 800m and 2,000m indicative Walking Distance

Figure 3 – 5km Indicative Cycling Distance

Figure 4 – Public Transport Information

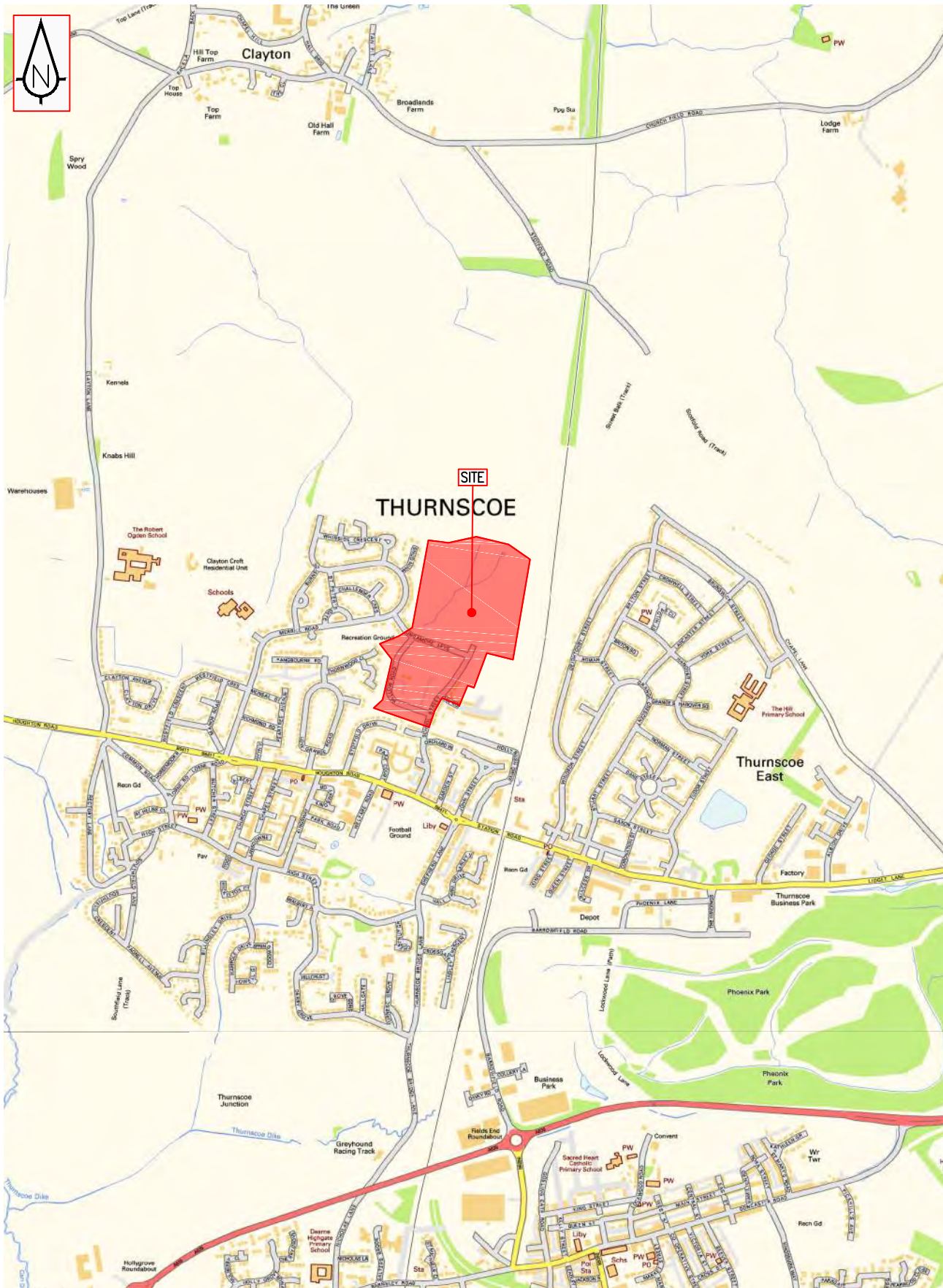
Figure 5 – 2017 Surveyed Flows

Figure 6 – 2022 Base Flows

Figure 7 – Proposed Development Traffic Distribution

Figure 8 – Proposed Development

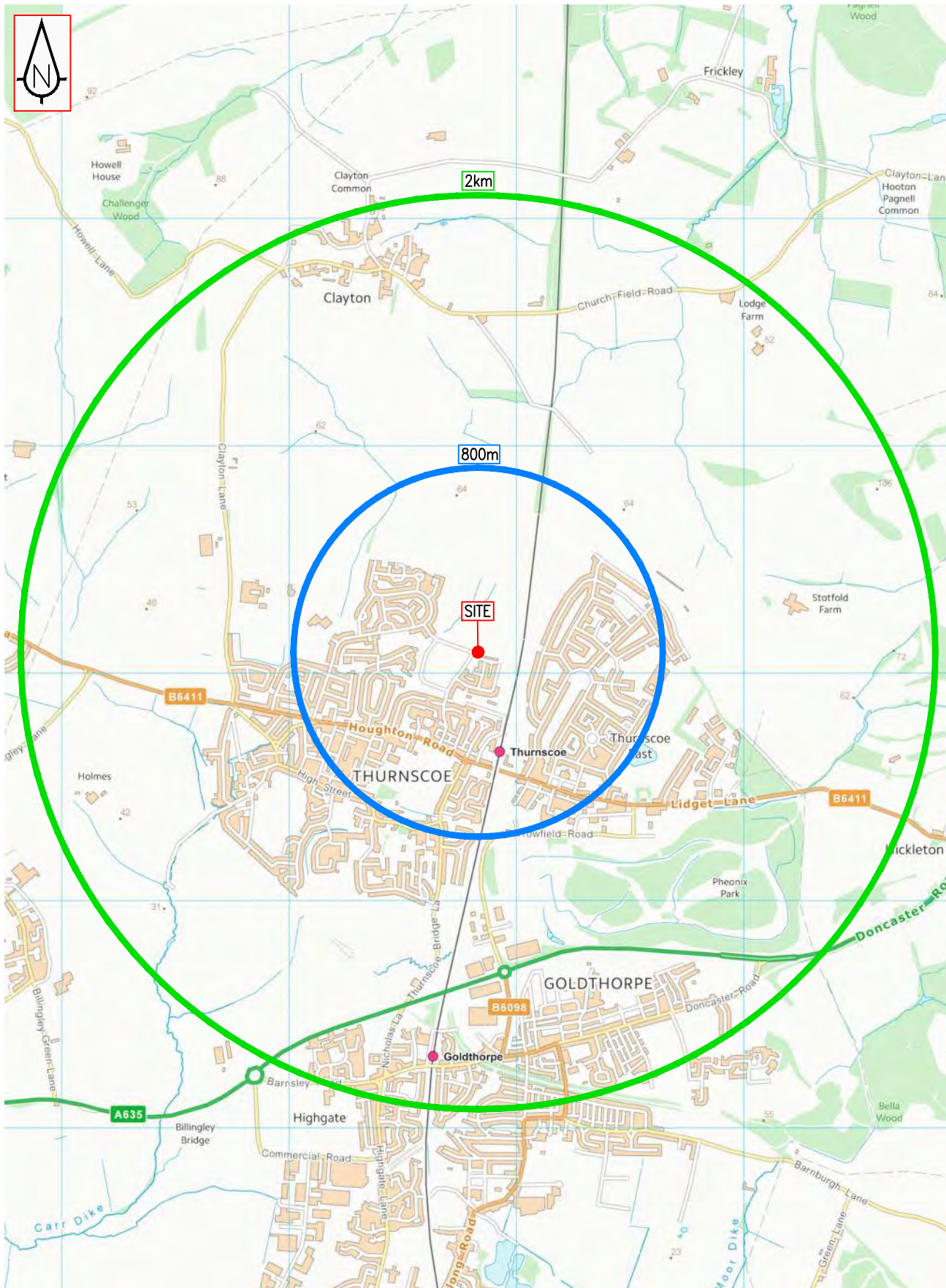
Figure 9 – 2022 Total Proposed

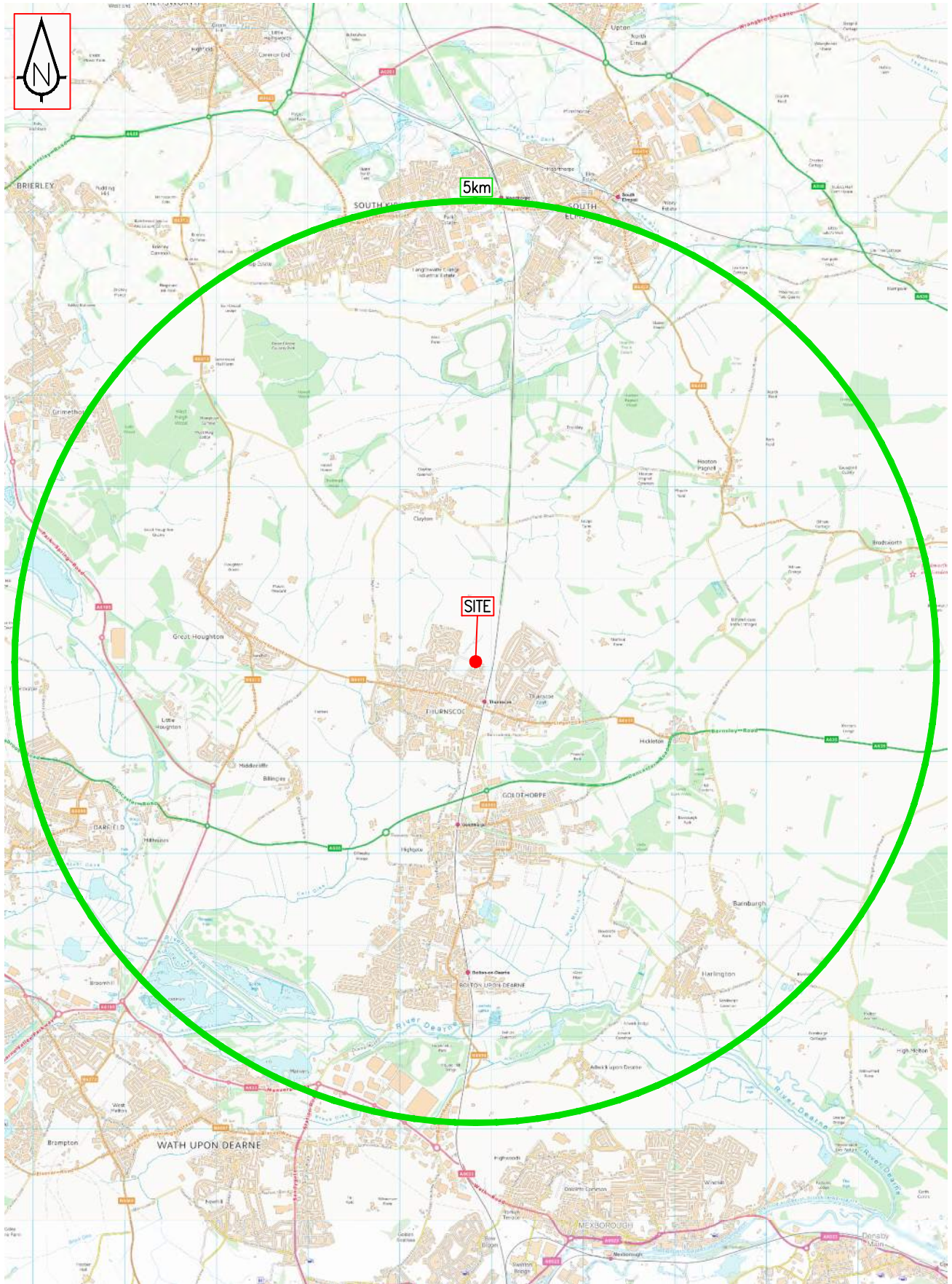


Site Location Plan

Proposed Residential Development
School Street, Thurnscoe

Drawn CC	Scale NTS	 ISO 9001 REGISTERED FIRM
Checked MD	Date July 2017	
Approved MD	Drawing Number Figure 1	Size A4







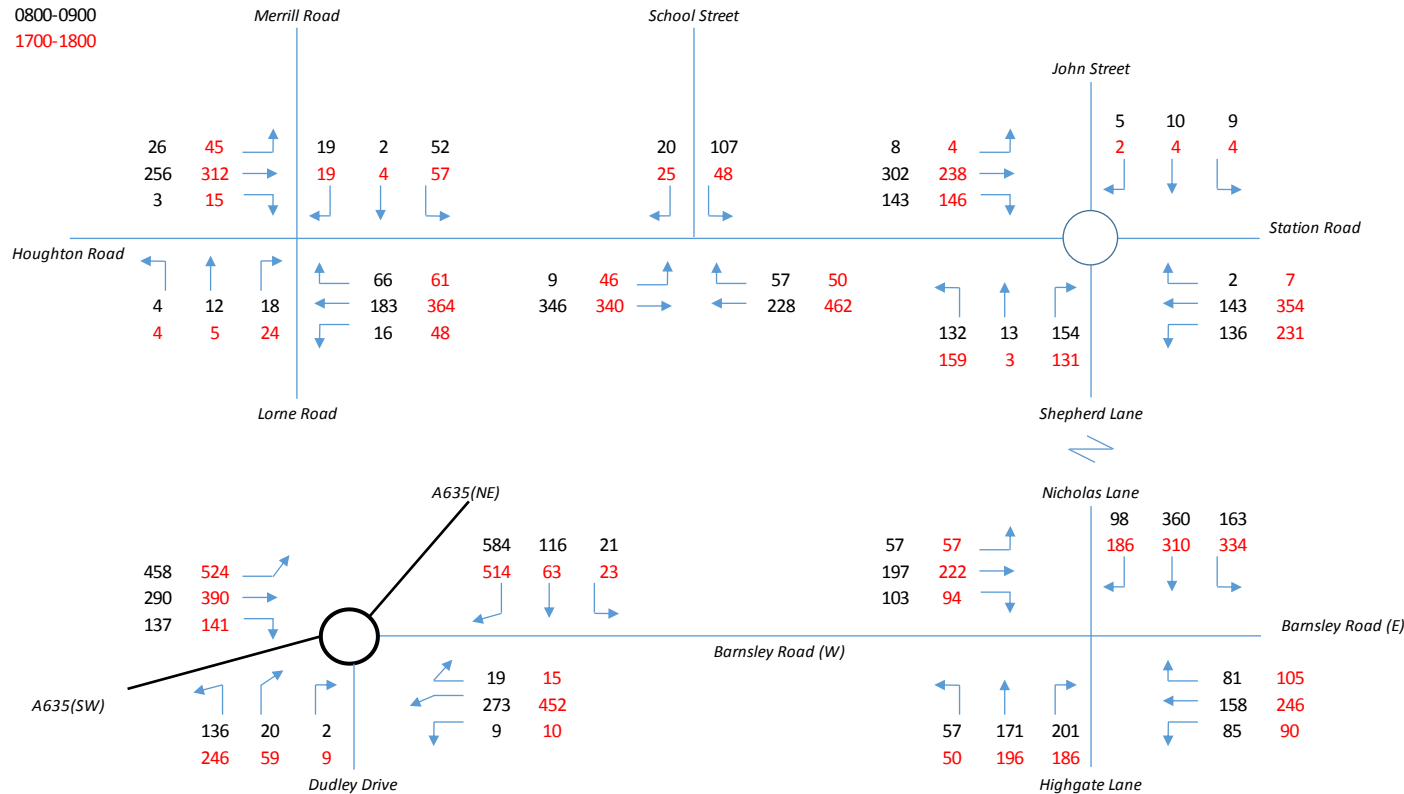
THURNSCOE



2017 Surveyed Traffic Flows

AM 0800-0900

PM 1700-1800



Rev	Amendment	Drawn	Date	Checked
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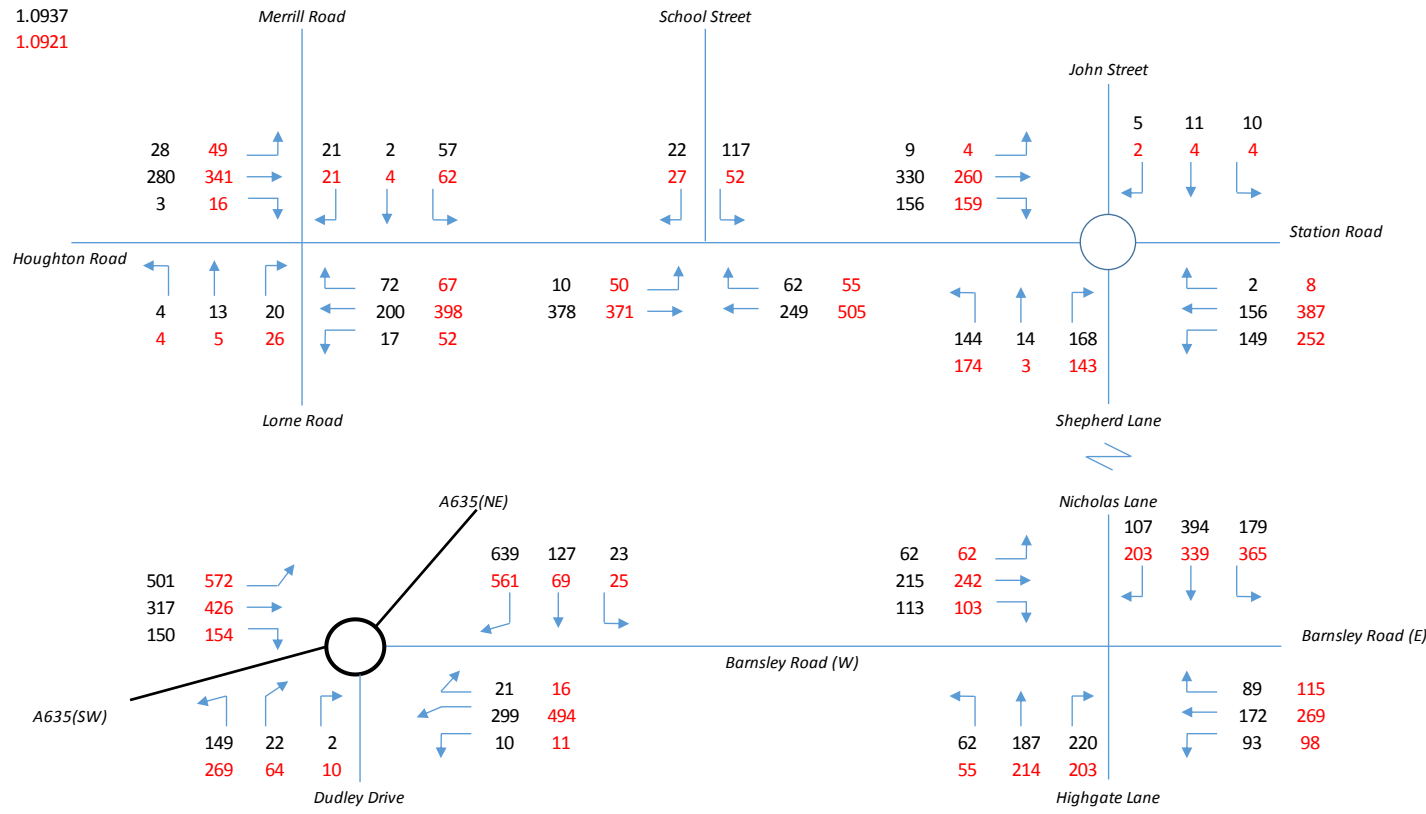
Proposed Residential Development School Street, Thurnscoe

2017 Surveyed Traffic Flows

Scale	NTS	Draw by	BL
Drawing Size	A3	Checked by	MD
Date	July 2017	Approved by	MD
	Drawing Number	Rev.	
	Figure 5		

2022 Base Flows

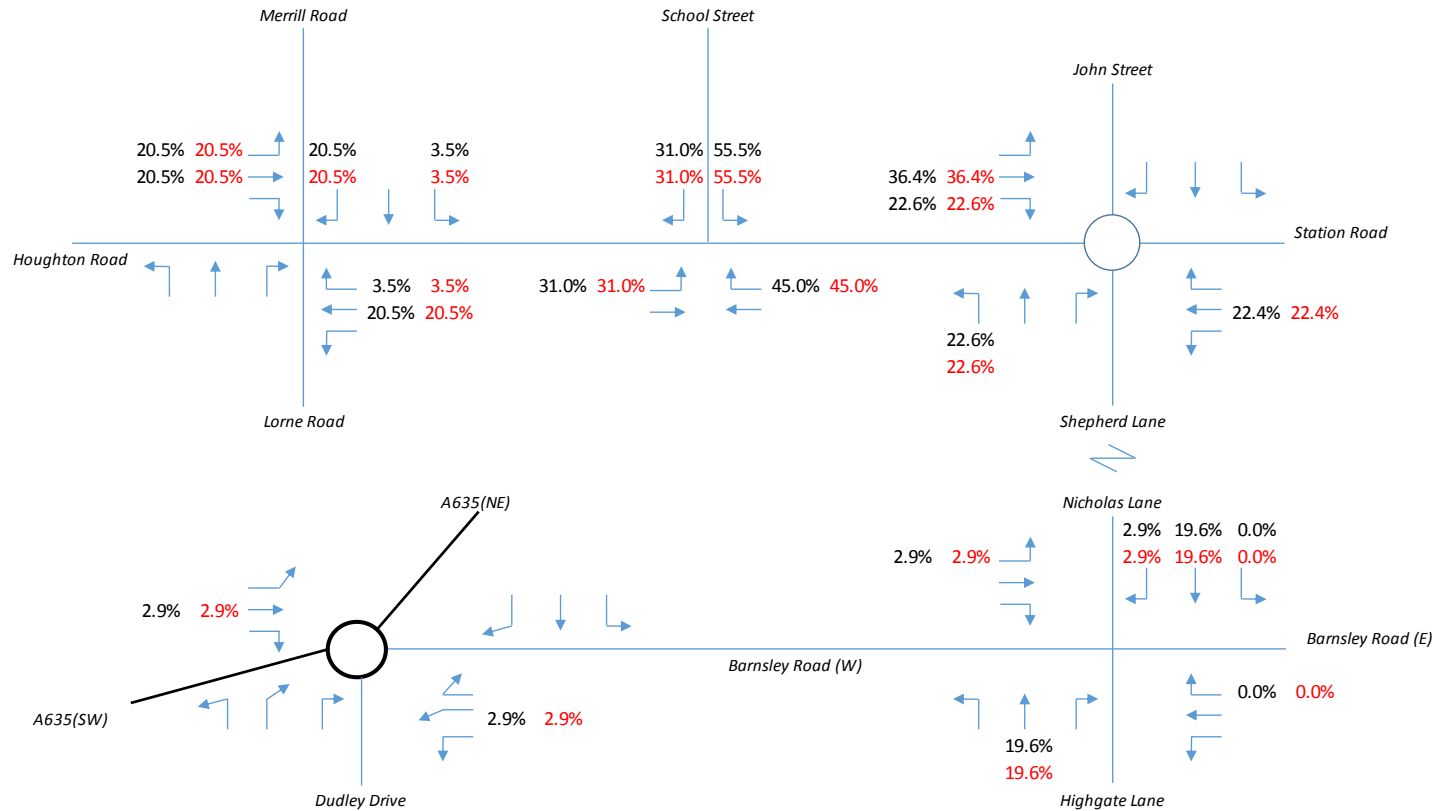
AM 1.0937
 PM 1.0921



Rev	Amendment	Drawn	Date	Checked
Proposed Residential Development School Street, Thurnscoe				
2022 Base Traffic Flows				
Scale	NTS		Draw by	BL
Drawing Size	A3		Checked by	MD
Date	July 2017		Approved by	MD
Drawing Number		Rev.		
Figure 6				

Census based traffic distribution %

AM
PM



Rev	Amendment	Drawn	Date	Checked
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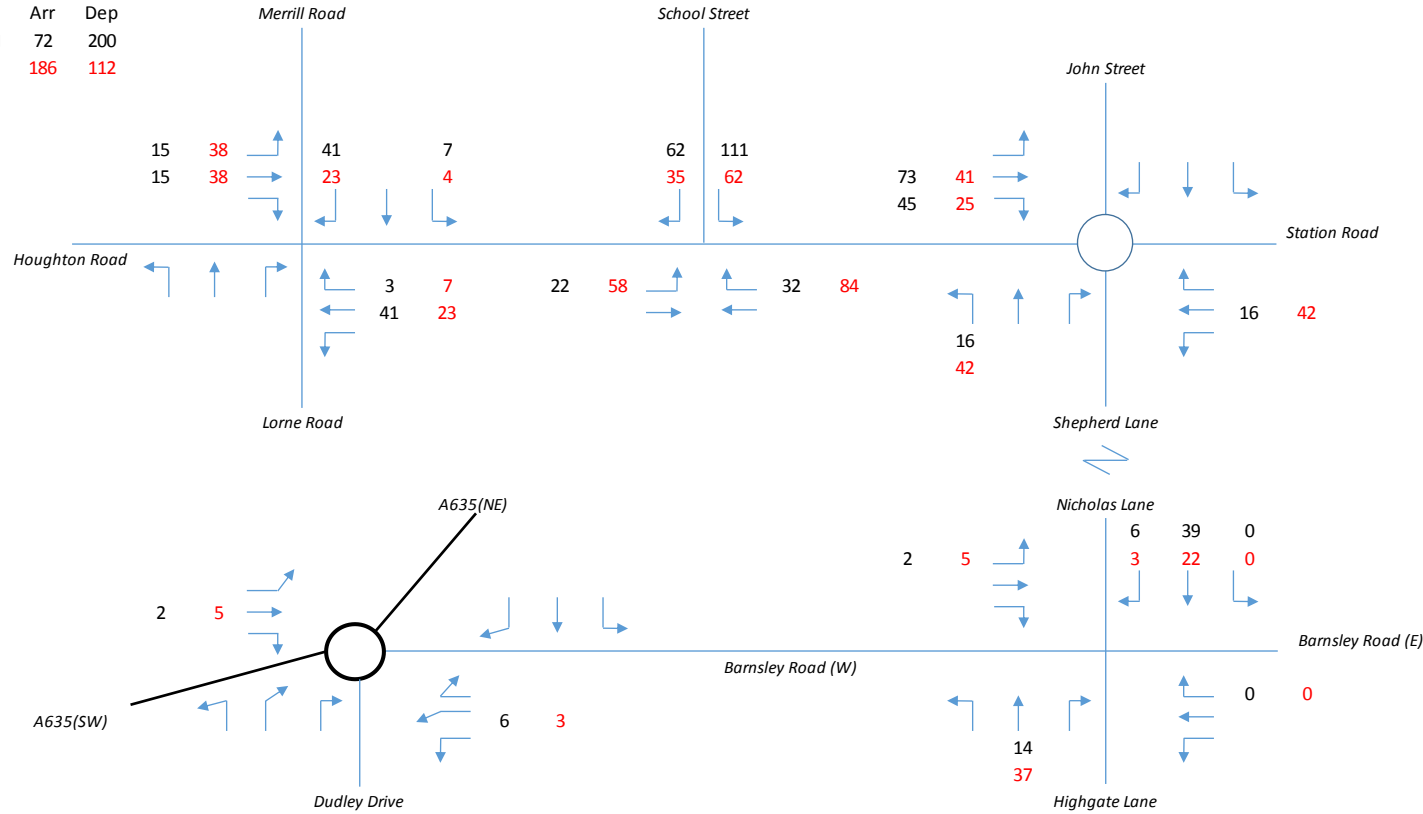
Proposed Residential Development School Street, Thurnscoe

Development Traffic Distribution %

Scale	NTS	Draw by	BL
Drawing Size	A3	Checked by	MD
Date	July 2017	Approved by	MD
	Drawing Number	Rev.	
	Figure 7		

Development Traffic

	Arr	Dep
AM	72	200
PM	186	112



Rev	Amendment	Drawn	Date	Checked
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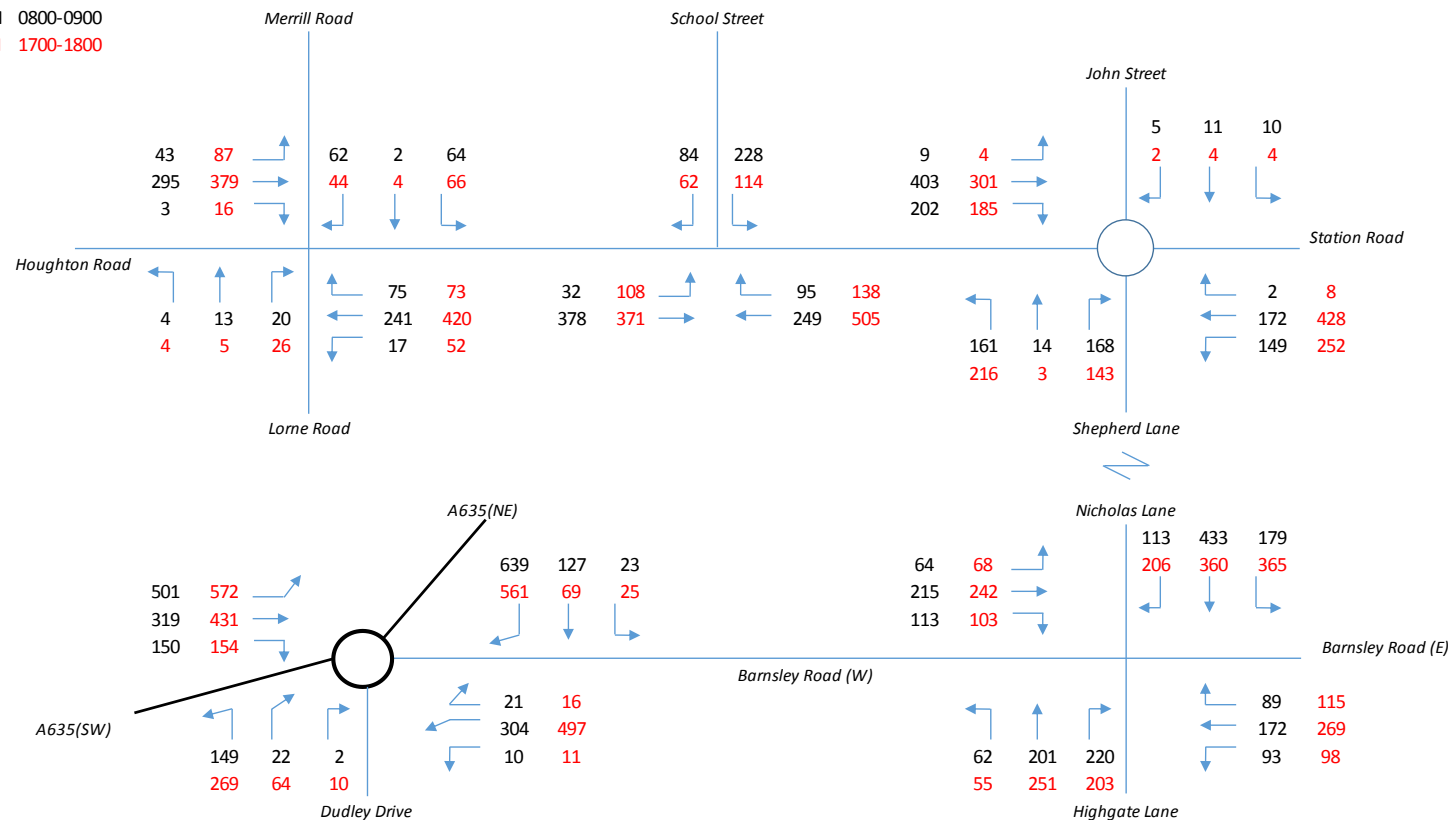
**Proposed Residential Development
School Street, Thurnscoe**

Peak Hour Development Traffic Flows

Scale	NTS	Draw by	BL
Drawing Size	A3	Checked by	MD
Date	July 2017	Approved by	MD
	Drawing Number	Rev.	
	Figure 8		

2022 Base + Development Traffic Flows

AM 0800-0900
 PM 1700-1800



Rev	Amendment	Drawn	Date	Checked
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Proposed Residential Development School Street, Thurnscoe

2022 Base + Development Traffic

Scale	NTS	Draw by	BL
Drawing Size	A3	Checked by	MD
Date	July 2017	Approved by	MD
	Drawing Number	Rev.	
	Figure 9		

APPENDIX B
Outline Consent Site Plan



KEY	
	Green Space
	LEAP Play Area
	Equipped Play Area
	Application Boundary
	Site Boundaries
	Proposed New Development
	Mews court
	Parking courts
	Pavement
	Road
	Visitor Parking
	Soft Landscape
	Trees



Scale: 1:1250 @ A1

APPENDIX C
Scoping Correspondence

Mark Devenish

From: Moss, Stephen R <stephen.moss@aeacom.com>
Sent: 23 June 2017 15:30
To: Mark Devenish
Cc: Wilson , Barbara; Andrew Bradley
Subject: RE: Thurnscoe Phase 2 - Highways inspection meeting request

Mark

Good afternoon and following a review of the above development on behalf of Barnsley MBC can you please obtain traffic count data at the following junctions to then allow these to be assessed in any future report:

- B6411 / Station Rd / Shepherd Ln / John St;
- B6411 Houghton Rd / School St;
- B6411 Houghton Rd / Lorne Rd / Merrill Rd;
- Barnsley road / Nicholas Ln / Highgate Ln staggered crossroads, and
- A635 / Barnsley Road roundabout.

Furthermore, given the operation of the local highway it would also be useful to understand the number of trips you would propose to send through the Cathill roundabout, so that we can take a view on the level of impact from this and other proposals.

Hope that the above is clear but please do not hesitate to contact me if you would like to discuss anything

Regards

Stephen Moss, BEng (Hons) CEng MICE MCIHT
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From: Andrew Bradley [mailto:Andrew.Bradley@keepmoat.com]
Sent: 20 June 2017 16:50
To: Moss, Stephen R
Cc: Wilson , Barbara; Mark Devenish
Subject: RE: Thurnscoe Phase 2 - Highways inspection meeting request

Stephen

As discussed we will be proposing a total of 485 plots over the next phases as per the sketch layout. This is subject to change as we progress through planning.

If you could liaise directly with Mark Devenish at Sanderson's associates to agree your scoping I would most appreciate it.

APPENDIX D
Accident Records

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Manual Selection

Notes:

Mark Devenish - Sandersons

Police Ref.	Day	Location Description	Vehicles				Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age / Sev
Road No.	Time								
2nd Road No.	D/L								
Grid Ref.	R.S.C								
	Weather								
	Speed								
	Account of Accident								
Causation Factor:									

B-00883-12	Friday	HOUGHTON ROAD THURNSCOE,	Veh 1	Car	Wait to turn right	W to E	F	59	Slight
	28/09/2012	BARNSELEY 10 M NTH CHAPPEL ST	Veh 1	Car	Wait to turn right	W to E	F	53	Slight
R1: B 6411	2141hrs		Veh 1	Car	Wait to turn right	W to E	F	80	Slight
R2: U	Darkness: street lights present		Veh 1	Car	Wait to turn right	W to E	F	38	Slight
E 445,194	Dry		Veh 1	Car	Wait to turn right	W to E	F	38	Slight
N 405,780	Fine without high winds		Veh 2	Car	Going ahead	E to W			
	30 mph								

Causation Factor:

1st: Impaired by alcohol
2nd: Careless/Reckless/In a hurry
3rd: Aggressive driving
4th: Inexperienced or learner driver/rider
5th: Stolen vehicle
6th: Vehicle in course of crime

Participant:

Vehicle 2
Vehicle 2
Vehicle 2
Vehicle 2
Vehicle 2
Vehicle 2

Confidence:

Very Likely
Very Likely
Possible
Possible
Possible
Possible

VEH 1 MCAR TV ON HOUGHTON RD 10 M NORTH CHAPPEL STREET. HEADING TWO THURNSCOE TURNING RT. VEH 2 MCAR TV IN OPP DIRC. VEH 1 TURNS RT INTO PATH VEH 1. VEH 2 COLL VEH 1.

B-00974-12	Sunday	STATION RD, THURNSCOE	Veh 1	M/C > 125 cc	Starting	W to E			
	28/10/2012	BARNSELEY J/W JOHN STREET	Veh 2	M/C < 50 cc	Going ahead	W to E	Dri	M	17 Slight
R1: B 6411	1109hrs								
R2: U									
E 445,775	Wet/Damp								
N 405,623	Fine without high winds								
	30 mph								

Causation Factor:

1st: Failed to look properly
2nd: Buildings, road signs, street furniture

Participant:

Vehicle 1
Vehicle 1

Confidence:

Very Likely
Possible

V1 HAS PULLED UP AT THE JUNCTION WHEN A BIKE (V2) HAS COLLIDED WITH ITS REAR, THE RIDER OF V2 IS INJURED

133752	Wednesday	B 6411 HOUGHTON ROAD SOUTH	Veh 1	Goods < 3.5t	Wait go ahead held up	E to W	Ped	F	29 Slight
	06/02/2013	YORKSHIRE							
R1: B 6411	0925hrs								
	Daylight:street lights present								
E 445,326	Dry								
N 405,752	Fine without high winds								
	30 mph								

Causation Factor:

1st: Vehicle travelling along pavement

Participant:

Vehicle 1

Confidence:

Possible

PEDESTRIAN STOOD ON PAAVEMENT AS V1 DRIVES ONTO PAVEMENT, MOUNTING KERB & CLIPPING PEDESTRIAN'S SHOULDER.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Manual Selection

Notes:

Mark Devenish - Sandersons

Police Ref.	Day Date	Location Description	Vehicles						Casualties			
			Veh No / Type / Manv / Dir / Class						Sex / Age / Sev			
Road No.	Time											
2nd Road No.												
Grid Ref.	D/L											
	R.S.C											
	Weather											
	Speed											
	Account of Accident											
Causation Factor:												

B-00158-13 Tuesday STOTFOLD DRIVE THURNSCOE O/S Veh 1 Car Going ahead N to S Ped M 65 Slight
16/04/2013 NO 23
R1: U 2050hrs
Darkness: street lights present
E 445,486 Dry
N 405,861 Unknown
30 mph

Causation Factor:

1st: Careless/Reckless/In a hurry
2nd: Nervous/Uncertain/Panic
3rd: Aggressive driving
4th: Failed to look properly

Participant:

Vehicle 1
Vehicle 1
Vehicle 1
Vehicle 1

Confidence:

Possible
Possible
Possible
Possible

CAS1 [PEDN] STANDING IN CARRIAGEWAY IN FRONT OF VEH1 TO PREVENT VEH1 LEAVING SCENE. VEH1 DRIVES OFF, FRONT OFFSIDE OF VEH STRIKING CAS1 CAUSING MINOR INJURIES.

B-00151-13 Monday HOUGHTON RD THURNSCOE Veh 1 Car Stopping W to E
22/04/2013 Veh 2 Car Wait go ahead held up W to E Dri F 29 Slight
R1: B 6411 1855hrs
Daylight:street lights present
E 445,373 Dry
N 405,754 Fine without high winds
30 mph

Causation Factor:

1st: Failed to judge other persons path or speed
2nd: Inexperienced or learner driver/rider

Participant:

Vehicle 1
Vehicle 1

Confidence:

Very Likely
Very Likely

VEH'S TR IN SAME DIRECTION, V2 BRAKED BUT V1 FAILED TO REACT IN TIME AND COLL WITH REAR OF V2.

C-00631-13 Saturday HOUGHTON ROAD ROTHERHAM 10 Veh 1 Car Going ahead W to E Ped M 5 Slight
10/08/2013 METRES KINGSWAY, THURNSCOE
R1: B 6411 1818hrs
R2: U Daylight:street lights present
E 445,366 Dry
N 405,755 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly
2nd: Careless/Reckless/In a hurry

Participant:

Casualty 1
Casualty 1

Confidence:

Very Likely
Very Likely

A YOUNG LAD (C1) WITH A SCOOTER HAS GONE ACROSS THE ZEBRA CROSSING WITHOUT LOOKING, V1 TRAVELLING THROUGH LIGHTS HAS BRAKED SHARPLY BUT THE CHILD WENT OVER THE BONNET

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Manual Selection

Notes:

Mark Devenish - Sandersons

Police Ref.	Day	Location Description	Vehicles				Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-00505-13 Sunday HOUGHTON RD THURNSCOPE J/W 25/08/2013 SCHOOL ST Veh 1 Car Going ahead NW to SE Ped F 10 Serious
R1: B 6411 1100hrs
R2: U Daylight:street lights present
E 445,660 Dry
N 405,681 Fine without high winds 30 mph

Causation Factor:

1st: Failed to look properly
2nd: Careless/Reckless/In a hurry
3rd: Failed to judge vehicles path or speed

Participant:

Casualty 1
Casualty 1
Casualty 1

Confidence:

Very Likely
Possible

C001 RUNS INTO PATH OF V1 AND COLL WITH WINDSCREEN CAUSING HEAD INJURY

B-00437-14 Tuesday LINGAMORE LEYS THURNSCOPE 13 29/04/2014 MTS WILLOW ROAD Veh 1 Car Going ahead NW to SE
Veh 2 M/C < 125 cc Going ahead NW to SE Dri M 23 Slight
R1: U 1740hrs
R2: U Daylight:street lights present
E 445,634 Dry
N 406,158 Fine without high winds 30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 2

Confidence:

Very Likely

VEH1 TV FROM MERRILL RD TURNED LT INTO LINGAMORE LEYS. DRIVER INDICATED AND BEGAN TO OVTK M/CYCLE2. RIDER SWAYED INTO PATH OF VEH1 AND COLL OCCURRED.

B-00874-14 Thursday HOUGHTON ROAD THURNSCOPE 04/09/2014 5MTRS KINGSWAY Veh 1 Car Reversing SW to NE Ped M 8 Slight
R1: B 6411 1530hrs
R2: U Daylight:street lights present
E 445,358 Dry
N 405,755 Fine without high winds 30 mph

Causation Factor:

1st: Failed to look properly
2nd: Failed to look properly
3rd: Failed to judge vehicles path or speed

Participant:

Vehicle 1
Casualty 1
Casualty 1

Confidence:

Very Likely
Very Likely

VEH1 PULLING OUT OF PARKING SPACE INTO HOUGHTON RD DRIVES OVER PED FOOT.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Manual Selection

Notes:

Mark Devenish - Sandersons

Police Ref.	Day	Location Description	Vehicles					Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

B-00876-14 Wednesday 17/09/2014 KINGSWAY THURNSCOE J/W HOUGHTON ROAD
R1: U 1750hrs
R2: B 6411 Daylight:street lights present
E 445,375 Dry
N 405,747 Fine without high winds 30 mph

Veh 1 Car Going ahead S to N
Veh 2 Pedal cycle Going ahead W to E Dri F 7 Slight

Causation Factor:

1st: Failed to look properly
2nd: Careless/Reckless/In a hurry

Participant:

Casualty 1
Casualty 1

Confidence:

Very Likely
Possible

VH1 M/CAR TRV NB ON KINGSWAY WHEN CHILD ON VH2 PED CYC RODE INTO PATH OF VEH1 TRV EB AND COLL OCC.

B-01276-14 Tuesday 23/12/2014 JOHN STREET THURNSCOE J/W HOUGHTON ROAD
R1: U 1525hrs
R2: U Daylight:street lights present
E 445,778 Dry
N 405,627 Fine without high winds 30 mph

Veh 1 Car Going ahead S to N
Veh 2 Going ahead E to W Dri F 82 Slight

Causation Factor:

1st: Failed to look properly
2nd: Failed to look properly

Participant:

Vehicle 1
Vehicle 2

Confidence:

Possible
Possible

VH1 M/CAR TRV FRM SHEPHERD LN ONTO MINI RNDABT & EXITS ONTO JOHN ST THEN COLL MOBILITY SCOOTER CROSSING JOHN ST WB

B-00053-15 Sunday 18/01/2015 HOUGHTON ROAD THURNSCOE 12 MTS CHAPEL STREET
R1: B 6411 1330hrs
R2: U Daylight:street lights present
E 445,245 Dry
N 405,771 Unknown 30 mph

Veh 1 Car Reversing E to W Ped F 21 Slight

PEDESTRIAN WAS CROSSING HOUGHTON RD NEAR TO SHOPS. V1 WAS REVERSING BUT THEN BRAKED. PEDESTRIAN SAW THIS SC CARRIED ON WALKING. V1 THEN STARTED TO REVERSE AT SPEED & COLLIDED WITH THE PEDESTRIAN. V1 FAILED TO STOP AT SCENE.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Manual Selection

Notes:

Mark Devenish - Sandersons

Police Ref.	Day	Location Description	Vehicles					Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev	
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R.S.C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

B-00088-15 Tuesday MERRILL ROAD THURNSCOE J/W Beechlea Veh 1 M/C < 125 cc Stopping E to W Ped M 7 Serious
27/01/2015
R1: U 1900hrs
R2: U Darkness: street lights present
E 445,354 Dry
N 406,171 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly

2nd: Crossed road masked by stationary veh

PEDN RUNS AROUND FRONT OF PARKED VEH INTO RD AND COLL OCCURS WITH VEH1.

Participant:

Casualty 1

Casualty 1

Confidence:

Very Likely

Possible

C-00141-15 Friday LOW GRANGE ROAD THURNSCOE 25 Veh 1 Car Going ahead RH bend N to W Ped M 67 Slight
30/01/2015 MTS LOW GRANGE ROAD
R1: U 2315hrs
Darkness: street lights present
E 445,392 Wet/Damp
N 405,814 Raining without high winds
30 mph

Causation Factor:

1st: Failed to look properly

2nd: Impaired by alcohol

3rd: Careless/Reckless/In a hurry

4th: Pedestrian wearing dark clothing at night

5th: Disability or illness, mental or physical

6th: Road layout (eg bend, hill crest)

A PEDESTRIAN (C1) IN DRINK HAS FALLEN INTO THE PATH OF ONCOMING V1

Participant:

Casualty 1

Casualty 1

Casualty 1

Casualty 1

Casualty 1

Vehicle 1

Confidence:

Very Likely

Very Likely

Possible

Possible

Possible

Possible

B-00244-15 Thursday HOUGHTON ROAD THURNSCOE 14 Veh 1 Starting S to N Ped M 42 Slight
05/03/2015 MTS CHAPEL STREET Veh 1 Starting S to N Ped F 20 Slight
R1: B 6411 1610hrs Veh 2 Car Parked 0 to 0
R2: U Daylight:street lights present
E 445,245 Dry
N 405,769 Fine without high winds
30 mph

Causation Factor:

1st: Aggressive driving

2nd: Vehicle in course of crime

2 PCSO'S CAS 1 & 2 SEE UNREGISTERED QUAD BIKE VEH1 ON PAVEMENT WITH ENGINE RUNNING. RIDER EXITS FROM SHOP AND STARTS TO RIDE OFF. PCSO'S ATTEMPT TO PREVENT SAME AND ARE PULLED TO THE GROUND. VEH1 THEN COLLIDES WITH PARKED VEH2 BEFORE LEAVING SCENE

Participant:

Vehicle 1

Vehicle 1

Confidence:

Very Likely

Very Likely

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Manual Selection

Notes:

Mark Devenish - Sandersons

Police Ref.	Day	Location Description	Vehicles					Casualties			
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev	
Road No.	Time										
2nd Road No.	D/L										
Grid Ref.	R.S.C										
	Weather										
	Speed										
	Account of Accident										
Causation Factor:											

B-01000-15 Friday HOUGHTON ROAD THURNSCOE Veh 1 Car Going ahead W to E RSP M 4 Slight
 30/10/2015 Veh 2 Car Going ahead E to W
R1: B 6411 1400hrs
 Daylight:street lights present
E 445,411 Dry
N 405,753 Fine without high winds
 30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 2

Possible

VEH1 TV HOUGHTON RD. VEH2 TV IN OPP DIRC WHEN COLL OCCURRED.

1679704 Sunday STATION ROAD (B6411) BARNSLEY Veh 1 M/C > 500 cc Turning right W to S Dri M 59 Slight
 05/06/2016 AT OR WITHIN 20 MTS OF SHEPHERD Lane Veh 2 Car Going ahead E to W Dri F 41 Slight
R1: B 6411 1735hrs
R2: U Daylight:street lights present
E 445,780 Dry
N 405,611 Fine without high winds
 30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 2

Possible

V1 HAS BEEN TRAVELLING ON HOUGHTON ROAD AND HAS COME TO A MINI ROUNDABOUT. V1 HAS ENTERED THE ROUNDABOUT INTENDING TO TURN RIGHT ONTO SHEPHERD LANE, V2 HAS ENTERED THE ROUND ABOUT FROM STATION ROAD AND COLLIDED WITH V1 CAUSING THE RIDER TO COME OFF.

1682899 Saturday STATION ROAD (B6411) BARNSLEY Veh 1 Car Wait to turn right W to S Dri M 77 Slight
 02/07/2016 AT OR WITHIN 20 MTS OF SHEPHERD Lane Veh 2 Goods < 3.5t Going ahead W to E
R1: B 6411 2015hrs
R2: U Daylight:street lights present
E 445,781 Dry
N 405,615 Fine without high winds
 30 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly

Vehicle 2

Possible

V1 STAT AT ROUNDABOUT INTENDING TO TURN RIGHT FROM HOUGHTON ROAD ONTO NICHOLAS LANE. V2 COLL INTO REAR OF V1 AND FTS.

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Manual Selection

Notes:

Mark Devenish - Sandersons

Police Ref.	Day	Location Description	Vehicles					Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

16118125 Friday SCHOOL STREET BARNSELY AT OR Veh 1 Car Turning right SW to SE Dri F 52 Slight
14/10/2016 WITHIN 20 MTS OF OAK ROAD Veh 2 Car O/take m/veh o/side SW to NE
R1: U 1220hrs
R2: U Daylight:street lights present
E 445,728 Dry
N 405,974 Fine without high winds
30 mph

Causation Factor:

1st: Failed to signal/Misleading signal
2nd: Poor turn or manoeuvre
3rd: Following too close

Participant:

Vehicle 1
Vehicle 1
Vehicle 2

Confidence:

Possible
Possible

V1 TURNING RIGHT. V2 OVERTAKES V1 COLL OCCURS

16126198 Saturday SCHOOL STREET BARNSELY Veh 1 Goods < 3.5t Parked 0 to 0
22/10/2016 Veh 2 Car Going ahead N to S Dri M 51 Slight
R1: U 1428hrs Veh 3 Car Going ahead S to N
Daylight:street lights present
E 445,677 Dry
N 405,726 Fine without high winds
30 mph

Causation Factor:

1st: Other

Participant:

Vehicle 3

Confidence:

Possible

V3 TURNS RIGHT FROM HOUGHTON ROAD ONTO SCHOOL STREET LOSES CONTROL AND COLL WITH V1 WHICH WAS PARKED FACING HOUGHTON ROAD. V3 FTS AND TURNS INTO A GENNEL THAT LINKS WITH GARDEN STREET AND COLL WITH V2 WHICH WAS TRAVELLING DOWN GARDEN STREET.

16128395 Monday MERRILL ROAD BARNSELY Veh 1 Car O/take s/veh o/side E to W Ped M 12 Serious
07/11/2016
R1: U 1510hrs
Daylight:street lights present
E 445,438 Dry
N 406,184 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly
2nd: Crossed road masked by stationary veh

Participant:

Casualty 1
Casualty 1

Confidence:

Very Likely
Very Likely

V1 HAS BEEN TRAVELLING ALONG MERRILL RD THURNSCOE, WHEN A BUS IN FRONT HAS PULLED UP AT THE BUS STOP ON THE LEFT. HE HAS BEGUN TO OVERTAKE THE BUS, WHEN HE HAS BECAME PARALLEL WITH THE FRONT AND THE CHILD HAS RAN OU IN FRONT OF THE BUS AND INTO THE SID E OF V1

Details of Personal Injury Accidents for Period - 01/01/2012 to 31/12/2016 (60) months

Selection:

Selected using Manual Selection

Notes:

Mark Devenish - Sandersons

Police Ref.	Day	Location Description	Vehicles					Casualties		
	Date		Veh No	Type	Manv	Dir	Class	Sex	Age	Sev
Road No.	Time									
2nd Road No.	D/L									
Grid Ref.	R.S.C									
	Weather									
	Speed									
	Account of Accident									
Causation Factor:										

16129676 Tuesday SHEPHERD LANE BARNSELEY Veh 1 M/C < 125 cc Going ahead NE to SW Dri M 26 Serious
08/11/2016 Veh 1 M/C < 125 cc Going ahead NE to SW Ped M 55 Serious
R1: U 1410hrs
Daylight:street lights present
E 445,755 Dry
N 405,570 Fine without high winds
30 mph

Causation Factor:

1st: Failed to judge other persons path or speed
2nd: Stationary or parked vehicle
3rd: Failed to look properly

CAS001 STEPS INTO ROAD INTO PATH OF V1

Participant:

Vehicle 1
Vehicle 1
Casualty 2

Confidence:

Possible
Very Likely

16144729 Tuesday HOUGHTON ROAD (B6411) Veh 1 Car Going ahead NW to SE Ped F 14 Serious
20/12/2016 BARNSELEY AT OR WITHIN 20 MTS
R1: B 6411 1106hrs OF SCHOOL STREET
R2: U Daylight:street lights present
E 445,659 Dry
N 405,683 Fine without high winds
30 mph

Causation Factor:

1st: Failed to look properly
2nd: Careless/Reckless/In a hurry
3rd: Failed to judge vehicles path or speed

VEH TRAVELLING HOUGHTON ROAD TOWARDS SHEPHERD LANE WHEN PEDN RUNS FROM NEAR SIDE AND A COLL OCCURRED.

Participant:

Casualty 1
Casualty 1
Casualty 1

Confidence:

Very Likely
Possible

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00883-12 28/09/2012 Friday Time: 2141 Vehicles 2 Casualties 5 Slight

Easting: 445,194 Northing: 405,780

Fine without high winds Road Surface: Dry Darkness: street lights present and lit

Road Type: Single carriageway Speed Limit: 30

Location: HOUGHTON ROAD THURNSCOE, BARNSLEY 10 M NTH CHAPPEL ST

Description: VEH 1 MCAR TV ON HOUGHTON RD 10 M NORTH CHAPPEL STREET. HEADING TWO THURNSCOE TURNING RT. VEH 2 MCAR TV IN OPP DIRC. VEH 1 TURNS RT INTO PATH VEH 1. VEH 2 COLL VEH 1.

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

Vehicle Reference: 1 Car Waiting to turn right

First point of impact: Front

Vehicle direction: W to E

Journey: Not known

Age of Driver : 38

Breath test: Negative

Contributory Factors : 501 602 601 605 901 902

Casualty Reference: 1 Age: 38 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Casualty Reference: 2 Age: 59 Female Passenger Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Casualty Reference: 3 Age: 53 Female Passenger Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Casualty Reference: 4 Age: 80 Female Passenger Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Casualty Reference: 5 Age: 38 Female Passenger Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Vehicle Reference: 2 Car Going ahead

First point of impact: Offside

Vehicle direction: E to W

Journey: Not known

Age of Driver :

Breath test: Driver not contacted

Contributory Factors : 501 602 601 605 901 902

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00974-12 28/10/2012 Sunday Time: 1109 Vehicles 2 Casualties 1 Slight
Easting: 445,775 Northing: 405,623
Fine without high winds Road Surface: Wet/Damp Daylight: street lights present
Road Type: Roundabout Speed Limit: 30

Location: STATION RD, THURNSCOE BARNSELY J/W JOHN STREET

Description: V1 HAS PULLED UP AT THE JUNCTION WHEN A BIKE (V2) HAS COLLIDED WITH ITS REAR, THE RIDER OF V2 IS INJURED

Vehicle Reference: 1 Motorcycle over 125cc and up Moving off

First point of impact: Offside

Vehicle direction: W to E

Journey: Not known

Age of Driver : 53

Breath test: Not requested

Contributory Factors : 405 704

Vehicle Reference: 2 Motorcycle 50cc and under Going ahead

First point of impact: Front

Vehicle direction: W to E

Journey: Not known

Age of Driver : 17

Breath test: Not requested

Contributory Factors : 405 704

Casualty Reference: 1 Age: 17 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

133752 06/02/2013 Wednesda Time: 0925 Vehicles 1 Casualties 1 Slight
Easting: 445,326 Northing: 405,752
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: B 6411 HOUGHTON ROAD SOUTH YORKSHIRE

Description: PEDESTRIAN STOOD ON PAAVEMENT AS V1 DRIVES ONTO PAVEMENT,
MOUNTING KERB & CLIPPING PEDESTRIAN'S SHOULDER.

Vehicle Reference: 1 Van or Goods <= 3.5 tonnes Waiting to go ahead but held up

First point of impact: Front

Vehicle direction: E to W

Journey: Journey as part of work

Age of Driver :

Breath test:

Contributory Factors : 309

Casualty Reference: 1 Age: 29 Female Pedestrian Severity: Slight

Ped Dir: Ped Movement : Movement U/K

Ped Location: On footpath / verge

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00158-13 16/04/2013 Tuesday Time: 2050 Vehicles 1 Casualties 1 Slight
Easting: 445,486 Northing: 405,861
Unknown Road Surface: Dry Darkness: street lights present and lit
Road Type: Single carriageway Speed Limit: 30

Location: STOTFOLD DRIVE THURNSCOE O/S NO 23

Description: CAS1 [PEDN] STANDING IN CARRIAGEWAY IN FRONT OF VEH1 TO PREVENT
VEH1 LEAVING SCENE. VEH1 DRIVES OFF, FRONT OFFSIDE OF VEH STRIKING
CAS1 CAUSING MINOR INJURIES.

Vehicle Reference: 1 Car

Going ahead

First point of impact: Front

Vehicle direction: N to S

Journey: Not known

Age of Driver : 29

Breath test: Driver not contacted

Contributory Factors : 602 603 601 405

Casualty Reference: 1 Age: 65 Male Pedestrian Severity: Slight

Ped Dir: Ped Movement : In carr not crossing

Ped Location: In carr not crossing

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00151-13 22/04/2013 Monday Time: 1855 Vehicles 2 Casualties 1 Slight
Easting: 445,373 Northing: 405,754
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HOUGHTON RD THURNSCOE

Description: VEH'S TR IN SAME DIRECTION, V2 BRAKED BUT V1 FAILED TO REACT IN TIME
AND COLL WITH REAR OF V2.

Vehicle Reference: 1 Car

Slowing or Stopping

First point of impact: Front

Vehicle direction: W to E

Journey: Pupil riding to/from school

Age of Driver : 21

Breath test: Not requested

Contributory Factors : 406 605

Vehicle Reference: 2 Car

Waiting to go ahead but held up

First point of impact: Back

Vehicle direction: W to E

Journey: Not known

Age of Driver : 29

Breath test: Not requested

Contributory Factors : 406 605

Casualty Reference: 1 Age: 29 Female Driver/rider Severity: Slight

Ped Dir:

Ped Movement :

Ped Location:

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

C-00631-13 10/08/2013 Saturday Time: 1818 Vehicles 1 Casualties 1 Slight
Easting: 445,366 Northing: 405,755
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HOUGHTON ROAD ROTHERHAM 10 METRES KINGSWAY, THURNSCOE
Description: A YOUNG LAD (C1) WITH A SCOOTER HAS GONE ACROSS THE ZEBRA
CROSSING WITHOUT LOOKING, V1 TRAVELLING THROUGH LIGHTS HAS BRAKED
SHARPLY BUT THE CHILD WENT OVER THE BONNET

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: W to E Journey: Not known
Age of Driver : 24 Breath test: Not requested

Contributory Factors : 802 808

Casualty Reference: 1 Age: 5 Male Pedestrian Severity: Slight

Ped Dir: Pedestrian Ped Movement : Driver's nearside

Ped Location: On Ped Crossing

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00505-13 25/08/2013 Sunday Time: 1100 Vehicles 1 Casualties 1 Serious
Easting: 445,660 Northing: 405,681
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HOUGHTON RD THURNSCOE J/W SCHOOL ST

Description: C001 RUNS INTO PATH OF V1 AND COLL WITH WINDSCREEN CAUSING HEAD INJURY

Vehicle Reference: 1 Car

Going ahead

First point of impact: Front

Vehicle direction: NW to SE

Journey: Not known

Age of Driver : 71

Breath test: Negative

Contributory Factors : 802 808 803

Casualty Reference: 1 Age: 10 Female Pedestrian

Severity: Serious

Ped Dir: Pedestrian Ped Movement : Driver's nearside

Ped Location: In car elsewhere

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00437-14 29/04/2014 Tuesday Time: 1740 Vehicles 2 Casualties 1 Slight
Easting: 445,634 Northing: 406,158
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: LINGAMORE LEYS THURNSCOPE 13 MTS WILLOW ROAD

Description: VEH1 TV FROM MERRILL RD TURNED LT INTO LINGAMORE LEYS. DRIVER
INDICATED AND BEGAN TO OVERTAKE M/CYCLE2. RIDER SWAYED INTO PATH OF
VEH1 AND COLL OCCURRED.

Vehicle Reference: 1 Car Going ahead
First point of impact: Nearside
Vehicle direction: NW to SE Journey: Other
Age of Driver : 31 Breath test: Not requested

Contributory Factors : 405

Vehicle Reference: 2 Motorcycle over 50cc and up Going ahead
First point of impact: Offside
Vehicle direction: NW to SE Journey: Other
Age of Driver : 23 Breath test: Not requested

Contributory Factors : 405

Casualty Reference: 1 Age: 23 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00874-14 04/09/2014 Thursday Time: 1530 Vehicles 1 Casualties 1 Slight
Easting: 445,358 Northing: 405,755
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HOUGHTON ROAD THURNSCOE 5MTRS KINGSWAY

Description: VEH1 PULLING OUT OF PARKING SPACE INTO HOUGHTON RD DRIVES OVER PED FOOT.

Vehicle Reference: 1 Car

Reversing

First point of impact: Back

Vehicle direction: SW to NE

Journey: Other

Age of Driver :

Breath test: Driver not contacted

Contributory Factors : 405 802 803

Casualty Reference: 1 Age: 8 Male Pedestrian Severity: Slight

Ped Dir: Pedestrian Ped Movement : In carr not crossing

Ped Location: On footpath / verge

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00876-14 17/09/2014 Wednesda Time: 1750 Vehicles 2 Casualties 1 Slight
Easting: 445,375 Northing: 405,747
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: KINGSWAY THURNSCOE J/W HOUGHTON ROAD

Description: VH1 M/CAR TRV NB ON KINGSWAY WHEN CHILD ON VH2 PED CYC RODE INTO
PATH OF VEH1 TRV EB AND COLL OCC.

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Other
Age of Driver : 28 Breath test: Driver not contacted
Contributory Factors : 802 808

Vehicle Reference: 2 Pedal cycle Going ahead
First point of impact: Nearside
Vehicle direction: W to E Journey: Other
Age of Driver : 7 Breath test: Driver not contacted
Contributory Factors : 802 808

Casualty Reference: 1 Age: 7 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-01276-14 23/12/2014 Tuesday Time: 1525 Vehicles 2 Casualties 1 Slight
Easting: 445,778 Northing: 405,627
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: JOHN STREET THURNSCOE J/W HOUGHTON ROAD

Description: VH1 M/CAR TRV FRM SHEPHERD LN ONTO MINI RNDABT & EXITS ONTO JOHN ST
THEN COLL MOBILITY SCOOTER CROSSING JOHN ST WB

Vehicle Reference: 1 Car

Going ahead

First point of impact: Front

Vehicle direction: S to N

Journey: Other

Age of Driver : 25

Breath test: Not requested

Contributory Factors : 405 405

Vehicle Reference: 2 Mobility Scooter

Going ahead

First point of impact: Nearside

Vehicle direction: E to W

Journey: Other

Age of Driver : 82

Breath test: Not requested

Contributory Factors : 405 405

Casualty Reference: 1 Age: 82 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00053-15 18/01/2015 Sunday Time: 1330 Vehicles 1 Casualties 1 Slight
Easting: 445,245 Northing: 405,771
Unknown Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HOUGHTON ROAD THURNSCOE 12 MTS CHAPEL STREET

Description: PEDESTRIAN WAS CROSSING HOUGHTON RD NEAR TO SHOPS. V1 WAS
REVERSING BUT THEN BRAKED. PEDESTRIAN SAW THIS SO CARRIED ON
WALKING. V1 THEN STARTED TO REVERSE AT SPEED & COLLIDED WITH THE
PEDESTRIAN. V1 FAILED TO STOP AT SCENE.

Vehicle Reference: 1 Car

Reversing

First point of impact: Back

Vehicle direction: E to W

Journey: Other

Age of Driver :

Breath test: Driver not contacted

Contributory Factors :

Casualty Reference: 1 Age: 21 Female Pedestrian Severity: Slight

Ped Dir: Pedestrian Ped Movement : Driver's nearside masked

Ped Location: In carr elsewhere

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00088-15 27/01/2015 Tuesday Time: 1900 Vehicles 1 Casualties 1 Serious

Easting: 445,354 Northing: 406,171

Fine without high winds Road Surface: Dry Darkness: street lights present and lit

Road Type: Single carriageway Speed Limit: 30

Location: MERRILL ROAD THURNSCOE J/W BEECHLEA

Description: PEDN RUNS AROUND FRONT OF PARKED VEH INTO RD AND COLL OCCURS WITH VEH1.

Vehicle Reference: 1 Motorcycle over 50cc and up Slowing or Stopping

First point of impact: Front

Vehicle direction: E to W

Journey: Other

Age of Driver : 18

Breath test: Negative

Contributory Factors : 802 801

Casualty Reference: 1 Age: 7 Male Pedestrian Severity: Serious

Ped Dir: Pedestrian Ped Movement : Driver's nearside masked

Ped Location: In carr elsewhere

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

C-00141-15 30/01/2015 Friday Time: 2315 Vehicles 1 Casualties 1 Slight

Easting: 445,392 Northing: 405,814

Raining without high winds Road Surface: Wet/Damp Darkness: street lights present and lit

Road Type: Single carriageway Speed Limit: 30

Location: LOW GRANGE ROAD THURNSCOE 25 MTS LOW GRANGE ROAD

Description: A PEDESTRIAN (C1) IN DRINK HAS FALLEN INTO THE PATH OF ONCOMING V1

Vehicle Reference: 1 Car Going ahead right hand bend

First point of impact: Offside

Vehicle direction: N to W

Journey: Other

Age of Driver : 61

Breath test: Not requested

Contributory Factors : 802 806 808 809 810 703

Casualty Reference: 1 Age: 67 Male Pedestrian Severity: Slight

Ped Dir: Pedestrian Ped Movement : Movement U/K

Ped Location: On footpath / verge

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-00244-15 05/03/2015 Thursday Time: 1610 Vehicles 2 Casualties 2 Slight
Easting: 445,245 Northing: 405,769
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HOUGHTON ROAD THURNSCOE 14 MTS CHAPEL STREET

Description: 2 PCSO'S CAS 1 & 2 SEE UNREGISTERED QUAD BIKE VEH1 ON PAVEMENT WITH
ENGINE RUNNING. RIDER EXITS FROM SHOP AND STARTS TO RIDE OFF. PCSO'S
ATTEMPT TO PREVENT SAME AND ARE PULLED TO THE GROUND. VEH1 THEN
COLLIDES WITH PARKED VEH2 BEFORE LEAVING SCENE

Vehicle Reference: 1 Other Vehicle

Moving off

First point of impact: Front

Vehicle direction: S to N

Journey: Other

Age of Driver :

Breath test: Driver not contacted

Contributory Factors : 601 902

Casualty Reference: 1 Age: 20 Female Pedestrian

Severity: Slight

Ped Dir: Pedestrian Ped Movement : Movement U/K

Ped Location: On footpath / verge

Casualty Reference: 2 Age: 42 Male Pedestrian

Severity: Slight

Ped Dir: Pedestrian Ped Movement : Movement U/K

Ped Location: On footpath / verge

Vehicle Reference: 2 Car

Parked

First point of impact: Back

Vehicle direction: Parked to Parked

Journey: Other

Age of Driver : 70

Breath test: Not requested

Contributory Factors : 601 902

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

B-01000-15 30/10/2015 Friday Time: 1400 Vehicles 2 Casualties 1 Slight
Easting: 445,411 Northing: 405,753
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: HOUGHTON ROAD THURNSCOE

Description: VEH1 TV HOUGHTON RD. VEH2 TV IN OPP DIRC WHEN COLL OCCURRED.

Vehicle Reference: 1 Car Going ahead
First point of impact: Offside
Vehicle direction: W to E Journey: Other
Age of Driver : 27 Breath test: Not requested

Contributory Factors : 405

Casualty Reference: 1 Age: 4 Male Passenger Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Offside
Vehicle direction: E to W Journey: Other
Age of Driver : 78 Breath test: Not requested

Contributory Factors : 405

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

1679704 05/06/2016 Sunday Time: 1735 Vehicles 2 Casualties 2 Slight
Easting: 445,780 Northing: 405,611
Fine without high winds Road Surface: Dry Daylight
Road Type: Roundabout Speed Limit: 30

Location: STATION ROAD (B6411) BARNSELY AT OR WITHIN 20 MTS OF SHEPHERD LANE
Description: V1 HAS BEEN TRAVELLING ON HOUGHTON ROAD AND HAS COME TO A MINI
ROUNDAABOUT. V1 HAS ENTERED THE ROUNDAABOUT INTENDING TO TURN
RIGHT ONTO SHEPHERD LANE, V2 HAS ENTERED THE ROUND ABOUT FROM
STATION ROAD AND COLLIDED WITH V1 CAUSING THE RIDER TO COME OFF.

Vehicle Reference: 1 Motorcycle over 500cc Turning right
First point of impact: Nearside
Vehicle direction: W to S Journey: Not known
Age of Driver : 59 Breath test: Not provided (medical)

Contributory Factors : 405

Casualty Reference: 1 Age: 59 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: E to W Journey: Not known
Age of Driver : 41 Breath test: Not provided (medical)

Contributory Factors : 405

Casualty Reference: 2 Age: 41 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

1682899 02/07/2016 Saturday Time: 2015 Vehicles 2 Casualties 1 Slight
Easting: 445,781 Northing: 405,615
Fine without high winds Road Surface: Dry Daylight
Road Type: Roundabout Speed Limit: 30

Location: STATION ROAD (B6411) BARNSELY AT OR WITHIN 20 MTS OF SHEPHERD LANE
Description: V1 STAT AT ROUNDABOUT INTENDING TO TURN RIGHT FROM HOUGHTON ROAD
ONTO NICHOLAS LANE. V2 COLL INTO REAR OF V1 AND FTS.

Vehicle Reference: 1 Car Waiting to turn right
First point of impact: Back
Vehicle direction: W to S Journey: Not known
Age of Driver : 77 Breath test: Driver not contacted
Contributory Factors : 405

Casualty Reference: 1 Age: 77 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Vehicle Reference: 2 Van or Goods <= 3.5 tonnes Going ahead
First point of impact: Front
Vehicle direction: W to E Journey: Not known
Age of Driver : Breath test: Driver not contacted
Contributory Factors : 405

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

16118125 14/10/2016 Friday Time: 1220 Vehicles 2 Casualties 1 Slight
Easting: 445,728 Northing: 405,974
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: SCHOOL STREET BARNSELY AT OR WITHIN 20 MTS OF OAK ROAD

Description: V1 TURNING RIGHT. V2 OVERTAKES V1 COLL OCCURS

Vehicle Reference: 1 Car Turning right
First point of impact: Front
Vehicle direction: SW to SE Journey: Other
Age of Driver : 52 Breath test: Driver not contacted

Contributory Factors : 404 403 308

Casualty Reference: 1 Age: 52 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Vehicle Reference: 2 Car Overtaking moving vehicle on its offside
First point of impact: Front
Vehicle direction: SW to NE Journey: Other
Age of Driver : 23 Breath test: Negative

Contributory Factors : 404 403 308

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

16126198 22/10/2016 Saturday Time: 1428 Vehicles 3 Casualties 1 Slight
Easting: 445,677 Northing: 405,726
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: SCHOOL STREET BARNSELY

Description: V3 TURNS RIGHT FROM HOUGHTON ROAD ONTO SCHOOL STREET LOSES
CONTROL AND COLL WITH V1 WHICH WAS PARKED FACING HOUGHTON ROAD.
V3 FTS AND TURNS INTO A GENNEL THAT LINKS WITH GARDEN STREET AND
COLL WITH V2 WHICH WAS TRAVELLING DOWN GARDEN STREET.

Vehicle Reference: 1 Van or Goods <= 3.5 tonnes Parked

First point of impact: Front

Vehicle direction: Parked to Parked

Journey: Other

Age of Driver : 43

Breath test: Not requested

Contributory Factors : 999

Vehicle Reference: 2 Car

Going ahead

First point of impact: Front

Vehicle direction: N to S

Journey: Other

Age of Driver : 51

Breath test: Not requested

Contributory Factors : 999

Casualty Reference: 1 Age: 51 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Vehicle Reference: 3 Car

Going ahead

First point of impact: Offside

Vehicle direction: S to N

Journey: Not known

Age of Driver :

Breath test: Driver not contacted

Contributory Factors : 999

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

16128395 07/11/2016 Monday Time: 1510 Vehicles 1 Casualties 1 Serious
Easting: 445,438 Northing: 406,184
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: MERRILL ROAD BARNSELY

Description: V1 HAS BEEN TRAVELLING ALONG MERRILL RD THURNSCOE, WHEN A BUS IN
FRONT HAS PULLED UP AT THE BUS STOP ON THE LEFT. HE HAS BEGUN TO
OVERTAKE THE BUS, WHEN HE HAS BECOME PARALLEL WITH THE FRONT AND
THE CHILD HAS RAN OUT IN FRONT OF THE BUS AND INTO THE SID
E OF V1

Vehicle Reference: 1 Car Overtaking stationary vehicle on its offside
First point of impact: Nearside
Vehicle direction: E to W Journey: Other
Age of Driver : 30 Breath test: Driver not contacted

Contributory Factors : 802 801

Casualty Reference: 1 Age: 12 Male Pedestrian Severity: Serious

Ped Dir: Pedestrian Ped Movement : Driver's nearside masked

Ped Location: In carr elsewhere

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

16129676 08/11/2016 Tuesday Time: 1410 Vehicles 1 Casualties 2 Serious
Easting: 445,755 Northing: 405,570
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 30

Location: SHEPHERD LANE BARNSELY

Description: CAS001 STEPS INTO ROAD INTO PATH OF V1

Vehicle Reference: 1 Motorcycle over 50cc and up Going ahead

First point of impact: Front

Vehicle direction: NE to SW

Journey: Other

Age of Driver : 26

Breath test: Driver not contacted

Contributory Factors : 406 701 802

Casualty Reference: 1 Age: 26 Male Driver/rider Severity: Serious

Ped Dir: Ped Movement :

Ped Location:

Casualty Reference: 2 Age: 55 Male Pedestrian Severity: Serious

Ped Dir: Pedestrian Ped Movement : Driver's nearside

Ped Location: In carr elsewhere

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Notes:

Selected using Manual Selection

Mark Devenish - Sandersons

16144729 20/12/2016 Tuesday Time: 1106 Vehicles 1 Casualties 1 Serious
 Easting: 445,659 Northing: 405,683
 Fine without high winds Road Surface: Dry Daylight
 Road Type: Single carriageway Speed Limit: 30

Location: HOUGHTON ROAD (B6411) BARNSELY AT OR WITHIN 20 MTS OF SCHOOL STREET

Description: VEH TRAVELLING HOUGHTON ROAD TOWARDS SHEPHERD LANE WHEN PEDN RUNS FROM NEAR SIDE AND A COLL OCCURRED.

Vehicle Reference: 1 Car

Going ahead

First point of impact: Front

Vehicle direction: NW to SE

Journey: Other

Age of Driver : 72

Breath test: Negative

Contributory Factors : 802 808 803

Casualty Reference: 1 Age: 14 Female Pedestrian

Severity: Serious

Ped Dir: Pedestrian Ped Movement : Driver's nearside

Ped Location: In car elsewhere

Accidents involving:

	Fatal	Serious	Slight	Total
Motor vehicles only excluding 2-wheels	0	3	13	16
2-wheeled motor vehicles	0	2	3	5
Pedal cycles	0	0	1	1
Horses & other	0	0	1	1
Total	0	5	18	23

Casualties:

	Fatal	Serious	Slight	Total
Vehicle driver	0	0	7	7
Passenger	0	0	5	5
Motorcycle rider	0	1	3	4
Cyclist	0	0	1	1
Pedestrian	0	5	8	13
Other	0	0	0	0
Total	0	6	24	30

Selected Range of Accidents between dates 8/1/12 and 31/12/16
 Selected using Manual Selection

Map showing a residential area with streets including Clayton Avenue, Westfield Crescent, Common Road, and others. A red line highlights a specific route through the area. Various accident locations are marked with blue dots and labeled with codes such as B-00088-15, C-00141-15, and B-01000-15. Other features include a playing field, a football ground, and a station.

Selected map area

MAKING SOUTH YORKSHIRE ROADS SAFER

1 : 5500

27/07/2017

DRN BY

Accidents between dates **01/01/2012 and 31/12/2016** (60) months

Selection: **Notes:**
Selected using Manual Selection Mark Devenish - Sandersons

Police Ref.	Date	Cas.	Sev.	P2W	Cycs	Peds	Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
B-00883-12	28/09/2012	5	Slight	0	0	0	0	1	Dark	Right	Dry	2141	HOUGHTON ROAD THURNSCOPE, BARNSLEY 10 M NTH CHAPPEL ST
B-00974-12	28/10/2012	1	Slight	2	0	0	0	0	Light	No turn	Wet/Damp	1109	STATION RD, THURNSCOPE BARNSLEY J/W JOHN STREET
133752	06/02/2013	1	Slight	0	0	1	0	0	Light	No turn	Dry	0925	B 6411 HOUGHTON ROAD SOUTH YORKSHIRE
B-00158-13	16/04/2013	1	Slight	0	0	1	0	1	Dark	No turn	Dry	2050	STOTFOLD DRIVE THURNSCOPE O/S NO 23
B-00151-13	22/04/2013	1	Slight	0	0	0	0	0	Light	No turn	Dry	1855	HOUGHTON RD THURNSCOPE
C-00631-13	10/08/2013	1	Slight	0	0	1	1	0	Light	No turn	Dry	1818	HOUGHTON ROAD ROTHERHAM 10 METRES KINGSWAY, THURNSCOPE
B-00505-13	25/08/2013	1	Serious	0	0	1	1	0	Light	No turn	Dry	1100	HOUGHTON RD THURNSCOPE J/W SCHOOL ST
B-00437-14	29/04/2014	1	Slight	1	0	0	0	0	Light	No turn	Dry	1740	LINGAMORE LEYS THURNSCOPE 13 MTS WILLOW ROAD
B-00874-14	04/09/2014	1	Slight	0	0	1	1	0	Light	No turn	Dry	1530	HOUGHTON ROAD THURNSCOPE 5MTRS KINGSWAY
B-00876-14	17/09/2014	1	Slight	0	1	0	1	0	Light	No turn	Dry	1750	KINGSWAY THURNSCOPE J/W HOUGHTON ROAD
B-01276-14	23/12/2014	1	Slight	0	0	0	0	1	Light	No turn	Dry	1525	JOHN STREET THURNSCOPE J/W HOUGHTON ROAD
B-00053-15	18/01/2015	1	Slight	0	0	1	0	0	Light	No turn	Dry	1330	HOUGHTON ROAD THURNSCOPE 12 MTS CHAPEL STREET
B-00088-15	27/01/2015	1	Serious	1	0	1	1	0	Dark	No turn	Dry	1900	MERRILL ROAD THURNSCOPE J/W BEECHLEA
C-00141-15	30/01/2015	1	Slight	0	0	1	0	1	Dark	No turn	Wet/Damp	2315	LOW GRANGE ROAD THURNSCOPE 25 MTS LOW GRANGE ROAD
B-00244-15	05/03/2015	2	Slight	0	0	2	0	0	Light	No turn	Dry	1610	HOUGHTON ROAD THURNSCOPE 14 MTS CHAPEL STREET
B-01000-15	30/10/2015	1	Slight	0	0	0	1	0	Light	No turn	Dry	1400	HOUGHTON ROAD THURNSCOPE
1679704	05/06/2016	2	Slight	1	0	0	0	0	Light	Right	Dry	1735	STATION ROAD (B6411) BARNSLEY AT OR WITHIN 20 MTS OF SHEPH
1682899	02/07/2016	1	Slight	0	0	0	0	1	Light	Right	Dry	2015	STATION ROAD (B6411) BARNSLEY AT OR WITHIN 20 MTS OF SHEPH
16118125	14/10/2016	1	Slight	0	0	0	0	0	Light	Right	Dry	1220	SCHOOL STREET BARNSLEY AT OR WITHIN 20 MTS OF OAK ROAD
16126198	22/10/2016	1	Slight	0	0	0	0	0	Light	No turn	Dry	1428	SCHOOL STREET BARNSLEY
16128395	07/11/2016	1	Serious	0	0	1	1	0	Light	No turn	Dry	1510	MERRILL ROAD BARNSLEY
16129676	08/11/2016	2	Serious	1	0	1	0	0	Light	No turn	Dry	1410	SHEPHERD LANE BARNSLEY
16144729	20/12/2016	1	Serious	0	0	1	1	0	Light	No turn	Dry	1106	HOUGHTON ROAD (B6411) BARNSLEY AT OR WITHIN 20 MTS OF SC
Column Totals		30		6	1	13	8	5					
No. of Accidents				5	1	12	8	5					

Total number of accidents listed: 23

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection:

Selected using Manual Selection

Notes:

Mark Devenish - Sandersons

Police Ref.	Acc Class	Date	Time	Grid References	Casualties			Causation Factors/ Prob	Ped			Light	Weather	Road Surface	Vehicle Types
					Ftl	Ser	Slt		L	M	D				
B-00883-12	Slight	28/09/2012	2141	445194 405780	0	0	5	501V2A 602V2A 601V2B 605V2B 901V2B 902V2B	0	0	0	Dark	Fine without high winds	Dry	9 9
B-00974-12	Slight	28/10/2012	1109	445775 405623	0	0	1	405V1A 704V1B	0	0	0	Light	Fine without high winds	Wet/Damp	4 2
133752	Slight	06/02/2013	0925	445326 405752	0	0	1	309V1B	6	9		Light	Fine without high winds	Dry	19
B-00158-13	Slight	16/04/2013	2050	445486 405861	0	0	1	602V1B 603V1B 601V1B 405V1B	9	5		Dark	Unknown	Dry	9
B-00151-13	Slight	22/04/2013	1855	445373 405754	0	0	1	406V1A 605V1A	0	0	0	Light	Fine without high winds	Dry	9 9
C-00631-13	Slight	10/08/2013	1818	445366 405755	0	0	1	802C1A 808C1A	1	1	5	Light	Fine without high winds	Dry	9
B-00505-13	Serious	25/08/2013	1100	445660 405681	0	1	0	802C1A 808C1B 803C1B	5	1	7	Light	Fine without high winds	Dry	9
B-00437-14	Slight	29/04/2014	1740	445634 406158	0	0	1	405V2A	0	0	0	Light	Fine without high winds	Dry	9 3
B-00874-14	Slight	04/09/2014	1530	445358 405755	0	0	1	405V1A 802C1A 803C1B	6	5	1	Light	Fine without high winds	Dry	9
B-00876-14	Slight	17/09/2014	1750	445375 405747	0	0	1	802C1A 808C1B	0	0	0	Light	Fine without high winds	Dry	9 1
B-01276-14	Slight	23/12/2014	1525	445778 405627	0	0	1	405V1B 405V2B	0	0	0	Light	Fine without high winds	Dry	9 22
B-00053-15	Slight	18/01/2015	1330	445245 405771	0	0	1		5	2	5	Light	Unknown	Dry	9
B-00088-15	Serious	27/01/2015	1900	445354 406171	0	1	0	802C1A 801C1B	5	2	1	Dark	Fine without high winds	Dry	3
C-00141-15	Slight	30/01/2015	2315	445392 405814	0	0	1	802C1A 806C1A 808C1A 809C1B 810C1B 703V1B	6	9	1	Dark	Raining without high winds	Wet/Damp	9
B-00244-15	Slight	05/03/2015	1610	445245 405769	0	0	2	601V1A 902V1A	6	9	0	Light	Fine without high winds	Dry	90 9
B-01000-15	Slight	30/10/2015	1400	445411 405753	0	0	1	405V2B	0	0	0	Light	Fine without high winds	Dry	9 9
1679704	Slight	05/06/2016	1735	445780 405611	0	0	2	405V2B	0	0	0	Light	Fine without high winds	Dry	5 9
1682899	Slight	02/07/2016	2015	445781 405615	0	0	1	405V2B	0	0	0	Light	Fine without high winds	Dry	9 19
16118125	Slight	14/10/2016	1220	445728 405974	0	0	1	404V1B 403V1B 308V2B	0	0	0	Light	Fine without high winds	Dry	9 9
16126198	Slight	22/10/2016	1428	445677 405726	0	0	1	999V3B	0	0	0	Light	Fine without high winds	Dry	19 9 9
16128395	Serious	07/11/2016	1510	445438 406184	0	1	0	802C1A 801C1A	5	2	1	Light	Fine without high winds	Dry	9
16129676	Serious	08/11/2016	1410	445755 405570	0	2	0	406V1B 701V1A 802C2A	5	1	8	Light	Fine without high winds	Dry	3

Accidents between dates 01/01/2012 and 31/12/2016 (60) months

Selection: Notes:
Selected using Manual Selection Mark Devenish - Sandersons

Police Ref.	Acc Class	Date	Time	Grid References	Casualties			Causation Factors/ Prob	Ped			Light	Weather	Road Surface	Vehicle Types
					Ftl	Ser	Slr		L	M	D				
16144729	Serious	20/12/2016	1106	445659 405683	0	1	0	802C1A 808C1B 803C1B	5	1	5	Light	Fine without high winds	Dry	9
Column Totals					0	6	1					Light : 19 Dark : 4		Dry : 21 Wet : 2	

Total number of accidents listed: 23

APPENDIX E
Traffic Count Data

REF: Thurnscoe

A = School Road
B = Houghton Road (East)
C = Houghton Road (West)

SITE: J2

DAY: Tue 27th June 2017

TIME	A => B						TOT	PCU	A => C						TOT	PCU	B => A						TOT	PCU	B => C						TOT	PCU	C => A						TOT	PCU	C => B						TOT	PCU
	PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS			PCL	MCL	CAR	LGV	HGV	BUS		
07:30	0	0	19	2	0	2	23	25	0	0	1	0	0	0	1	1	0	0	3	0	0	0	3	3	0	0	23	4	1	3	31	35.3	0	0	2	0	0	0	2	2	0	0	65	12	0	1	78	79
07:45	0	0	17	3	0	2	22	24	0	0	4	1	0	0	5	5	0	0	6	1	0	0	7	7	0	0	25	5	1	3	34	38.3	0	0	2	0	0	0	2	2	0	0	67	12	0	1	80	81
H/TOT	0	0	36	5	0	4	45	49	0	0	5	1	0	0	6	6	0	0	9	1	0	0	10	10	0	0	48	9	2	6	65	73.6	0	0	4	0	0	0	4	4	0	0	132	24	0	2	158	160
08:00	0	0	20	0	0	1	21	22	0	0	3	0	0	0	3	3	0	0	9	0	0	0	9	9	0	0	45	5	1	1	52	54.3	0	0	3	0	0	0	3	3	0	0	72	12	1	1	86	88.3
08:15	0	0	27	1	0	0	28	28	0	0	5	0	0	0	5	5	0	0	9	0	0	0	9	9	0	0	35	11	2	1	49	52.6	0	0	4	0	0	0	4	4	0	0	65	11	1	1	78	80.3
08:30	0	0	31	4	0	2	37	39	0	0	7	1	0	0	8	8	0	0	20	3	0	1	24	25	0	0	42	7	2	1	52	55.6	0	0	1	0	0	0	1	1	0	0	81	12	2	1	96	99.6
08:45	0	0	21	0	0	0	21	21	0	0	4	0	0	0	4	4	0	0	15	0	0	0	15	15	0	0	65	7	1	2	75	78.3	0	0	1	0	0	0	1	1	0	0	72	12	1	1	86	88.3
H/TOT	0	0	99	5	0	3	107	110	0	0	19	1	0	0	20	20	0	0	53	3	0	1	57	58	0	0	187	30	6	5	228	241	0	0	9	0	0	0	9	9	0	0	290	47	5	4	346	357
09:00	0	0	15	2	0	1	18	19	0	0	4	0	0	0	4	4	0	0	12	2	0	0	14	14	0	0	55	5	1	2	63	66.3	0	0	3	0	0	0	3	3	0	0	85	12	0	1	98	99
09:15	0	0	16	1	0	1	18	19	0	0	5	0	0	0	5	5	0	0	11	1	0	0	12	12	0	0	52	11	1	2	66	69.3	0	0	2	0	0	0	2	2	0	0	84	9	0	1	94	95
H/TOT	0	0	31	3	0	2	36	38	0	0	9	0	0	0	9	9	0	0	23	3	0	0	26	26	0	0	107	16	2	4	129	136	0	0	5	0	0	0	5	5	0	0	169	21	0	2	192	194
AM TOT	0	0	166	13	0	9	188	197	0	0	33	2	0	0	35	35	0	0	85	7	0	1	93	94	0	0	342	55	10	15	422	450	0	0	18	0	0	0	18	18	0	0	591	92	5	8	696	711
15:00	0	0	11	1	0	1	13	14	0	0	2	0	0	0	2	2	0	0	11	2	0	1	14	15	0	0	55	7	1	1	64	66.3	0	0	3	0	0	0	3	3	0	0	55	3	0	0	58	58
15:15	0	0	12	1	0	1	14	15	0	0	2	0	0	0	2	2	0	0	12	2	0	0	14	14	0	0	65	5	0	1	71	72	0	0	3	0	0	0	3	3	0	0	47	4	0	2	53	55
15:30	0	0	15	1	0	1	17	18	0	0	2	0	0	0	2	2	0	0	17	1	0	1	19	20	0	0	75	10	0	2	87	89	0	0	4	0	0	0	4	4	0	0	57	4	0	1	62	63
15:45	0	0	11	1	0	1	13	14	0	0	3	0	0	0	3	3	0	0	12	2	0	0	14	14	0	0	79	11	0	0	90	90	0	0	3	0	0	0	3	3	0	0	72	9	0	0	81	81
H/TOT	0	0	49	4	0	4	57	61	0	0	9	0	0	0	9	9	0	0	52	7	0	2	61	63	0	0	274	33	1	4	312	317	0	0	13	0	0	0	13	13	0	0	231	20	0	3	254	257
16:00	0	0	16	2	0	1	19	20	0	0	3	0	0	0	3	3	0	0	21	2	0	0	23	23	0	0	95	15	1	2	113	116	0	0	5	0	0	0	5	5	0	0	74	19	0	1	94	95
16:15	0	0	17	1	0	0	18	18	0	0	3	0	0	0	3	3	0	0	16	0	0	0	16	16	0	0	85	15	0	1	101	102	0	0	4	0	0	0	4	4	0	0	69	16	1	0	86	87.3
16:30	0	0	9	0	0	1	10	11	0	0	2	0	0	0	2	2	0	0	19	2	0	1	22	23	0	0	86	18	0	0	104	104	0	0	6	0	0	0	6	6	0	0	112	17	1	0	130	131
16:45	0	0	13	0	0	1	14	15	0	0	10	0	0	0	10	10	0	0	16	0	0	0	16	16	0	0	72	15	0	0	87	87	0	0	10	0	0	0	10	10	0	0	89	9	0	0	98	98
H/TOT	0	0	55	3	0	3	61	64	0	0	18	0	0	0	18	18	0	0	72	4	0	1	77	78	0	0	338	63	1	3	405	409	0	0	25	0	0	0	25	25	0	0	344	61	2	1	408	412
17:00	0	0	11	1	0	1	13	14	0	0	7	1	0	0	8	8	0	0	14	2	0	0	16	16	0	0	95	10	1	2	108	111	0	0	8	1	0	0	9	9	0	0	71	11	0	1	83	84
17:15	0	0	10	1	0	0	11	11	0	0	6	1	0	0	7	7	0	0	12	0	0	0	12	12	0	0	102	12	1	1	116	118	0	0	12	2	0	0	14	14	0	0	84	9	0	0	93	93
17:30	0	0	11	0	0	0	11	11	0	0	5	0	0	0	5	5	0	0	11	0	0	0	11	11	0	0	118	13	0	1	132	133	0	0	11	1	0	0	12	12	0	0	83	4	0	1	88	89
17:45	0	0	12	0	0	1	13	14	0	0	5	0	0	0	5	5	0	0	10	1	0	0	11	11	0	0	92	11	1	2	106	109	0	0	10	1	0	0	11	11	0	0	72	4	0	0	76	76
H/TOT	0	0	44	2	0	2	48	50	0	0	23	2	0	0	25	25	0	0	47	3	0	0	50	50	0	0	407	46	3	6	462	472	0	0	41	5	0	0	46	46	0	0	310	28	0	2	340	342
PM TOT	0	0	148	9	0	9	166	175	0	0	50	2	0	0	52	52	0	0	171	14	0	3	188	191	0	0	1019	142	5	13	1179	1199	0	0	79	5	0	0	84	84	0	0	885	109	2	6	1002	1011
TOTAL	0	0	314	22	0	18	354	372	0	0	83	4	0	0	87	87	0	0	256	21	0	4	281	285	0	0	1361	197	15	28	1601	1649	0	0	97	5	0	0	102	102	0	0	1476	201	7	14	1698	1721

REF: Thurnscoe
SITE: J5
DAY: Tue 27th June 2017

A = A635 (North East)
B = Barnsley Road (East)
C = Dudley Drive
D = A635 (West)

		A ==> B										A ==> C										A ==> D										B ==> A										B ==> C										B ==> D										C ==> A										C ==> B										C ==> D										D ==> A										D ==> B										D ==> C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
TIME	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS	TOT	PCU	PCL	MCL	CAR	LGV	HGV	BUS

APPENDIX F
Proposed Site Layout

PHASE 3 - APPRAISAL ACCOMMODATION SCHEDULE									
PRIVATE SALES UNITS				GIA		total GIA of type		No.	%
House type				sq.ft.	sq.m.	sq.ft.	sq.m.		
A 580	Detached	2 bed. 4 person	580	53.9	1740	161.7	3	2	
	Detached	2 bed. 3 person	621	57.7	2484	230.8	4	2	
B 621	Semi-detached	2 bed. 3 person	621	57.7	2484	230.8	4	2	
	Semi-detached and terrace	2 bed. 4 person	651	60.5	5890	543.2	90	49	
D 857	Detached	3 bed. 5 person	857	79.6	10284	955.4	12	6	
	Detached	3 bed. 5 person	867	80.5	2601	241.6	3	2	
E 867	Semi-detached	3 bed. 5 person	867	80.5	6069	563.8	7	4	
	Detached	3 bed. 6 person	955	88.7	11460	1064.7	12	6	
F 955	Semi-detached	3 bed. 6 person	955	88.7	47750	4436.1	50	27	
SUB-TOTAL					143462	13328.1	185	100	
AFFORDABLE UNITS				GIA		total GIA of type		No.	%
House type				sq.ft.	sq.m.	sq.ft.	sq.m.		
G 821	Semi-detached	2 bed. 4 person	821	76.3	26272	2440.7	32	70	
	Semi-detached	3 bed. 5 person	953	88.5	13342	1239.5	14	30	
SUB-TOTAL					39614	3680.3	46	100	
TOTAL					183076	17008.32	231		

PHASE 2 - APPRAISAL ACCOMMODATION SCHEDULE									
PRIVATE SALES UNITS				GIA		total GIA of type		No.	%
House type				sq.ft.	sq.m.	sq.ft.	sq.m.		
A 580	Detached	2 bed. 4 person	580	53.9	1740	161.7	3	1	
	Detached	2 bed. 3 person	621	57.7	11178	1038.5	18	9	
B 621	Semi-detached	2 bed. 3 person	621	57.7	6210	576.9	10	5	
	Semi-detached and terrace	2 bed. 4 person	651	60.5	52731	4898.9	81	39	
D 857	Detached	3 bed. 5 person	857	79.6	12855	1194.3	15	7	
	Detached	3 bed. 5 person	867	80.5	8670	803.5	10	5	
E 867	Semi-detached	3 bed. 5 person	867	80.5	4335	402.7	5	2	
	Detached	3 bed. 6 person	955	88.7	11460	1064.7	12	6	
F 955	Semi-detached	3 bed. 6 person	955	88.7	49660	4613.6	52	25	
SUB-TOTAL					158839	14756.6	204	100	
AFFORDABLE UNITS				GIA		total GIA of type		No.	%
House type				sq.ft.	sq.m.	sq.ft.	sq.m.		
G 821	Semi-detached	2 bed. 4 person	821	76.3	29556	2745.8	36	72	
	Semi-detached	3 bed. 5 person	953	88.5	13342	1239.5	14	28	
SUB-TOTAL					42898	3985.4	50	100	
TOTAL					201737	18741.98	256		



DRAWING TITLE:
**SKETCH APPRAISAL 3
PHASE 2 & 3**

PROJECT:
Residential Development

PROJECT ADDRESS:
School Street,
Thurnscoe

CLIENT:
KEEPMOAT HOMES

DRAWN
MB

SCALE
1:1000 @ A1

DATE
26th JULY 2016

JOB NO.
2238

DWG. NO.
SK03

REVISION
-

**Chris
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Company No. 9118738

Keepmoat
Keepmoat, The Waterfront, Lakeside Boulevard,
Doncaster, DN4 5PL.
Tel: 01302 347605 www.keepmoat.com

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ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCING ANY WORK

APPENDIX G

TRICS Data

Calculation Reference: AUDIT-109307-170725-0738

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	2 days
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	1 days
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
09	NORTH	
	CB CUMBRIA	1 days
10	WALES	
	CF CARDIFF	1 days
11	SCOTLAND	
	FA FALKIRK	1 days
	FI FIFE	1 days
	HI HIGHLAND	1 days
	SR STIRLING	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: 82 to 432 (units:)
 Range Selected by User: 80 to 491 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/06 to 25/09/15

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	9 days
Tuesday	3 days
Wednesday	2 days
Thursday	3 days
Friday	5 days

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

Selected survey types:

Manual count	22 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 undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	9
Edge of Town	13

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

Selected Location Sub Categories:

Residential Zone	17
Out of Town	1
No Sub Category	4

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	22 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®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	3 days
10,001 to 15,000	5 days
15,001 to 20,000	8 days
20,001 to 25,000	4 days
25,001 to 50,000	1 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	2 days
25,001 to 50,000	2 days
50,001 to 75,000	3 days
75,001 to 100,000	4 days
100,001 to 125,000	5 days
125,001 to 250,000	5 days
250,001 to 500,000	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	8 days
1.1 to 1.5	14 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	1 days
No	21 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	22 days
-----------------	---------

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

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	CF-03-A-02	MIXED HOUSES		CARDIFF
	DROPE ROAD			
	CARDIFF			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	196		
	Survey date: FRIDAY	05/10/07	Survey Type: MANUAL	
3	CH-03-A-06	SEMI-DET./BUNGALOWS		CHESHIRE
	CREWE ROAD			
	CREWE			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:	129		
	Survey date: TUESDAY	14/10/08	Survey Type: MANUAL	
4	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	
5	EX-03-A-01	SEMI-DET.		ESSEX
	MILTON ROAD			
	CORRINGHAM			
	STANFORD-LE-HOPE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	237		
	Survey date: TUESDAY	13/05/08	Survey Type: MANUAL	
6	FA-03-A-02	MIXED HOUSES		FALKIRK
	ROSEBANK AVENUE & SPRINGFIELD DRIVE			
	FALKIRK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	161		
	Survey date: WEDNESDAY	29/05/13	Survey Type: MANUAL	
7	FI-03-A-03	MIXED HOUSES		FIFE
	WOODMILL ROAD			
	DUNFERMLINE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	155		
	Survey date: MONDAY	30/04/07	Survey Type: MANUAL	

LIST OF SITES relevant to selection parameters (Cont.)

8	HI-03-A-11	BUNGALOWS		HIGHLAND
	STEVENSON ROAD			
	INSHES			
	INVERNESS			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	85		
	Survey date: MONDAY	05/06/06		Survey Type: MANUAL
9	LN-03-A-01	MIXED HOUSES		LINCOLNSHIRE
	BRANT ROAD			
	BRACEBRIDGE			
	LINCOLN			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	150		
	Survey date: TUESDAY	15/05/07		Survey Type: MANUAL
10	LN-03-A-02	MIXED HOUSES		LINCOLNSHIRE
	HYKEHAM ROAD			
	LINCOLN			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	186		
	Survey date: MONDAY	14/05/07		Survey Type: MANUAL
11	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
12	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
13	NT-03-A-03	SEMI DETACHED		NOTTINGHAMSHIRE
	B6018 SUTTON ROAD			
	KIRKBY-IN-ASHFIELD			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	166		
	Survey date: WEDNESDAY	28/06/06		Survey Type: MANUAL
14	NY-03-A-06	BUNGALOWS & SEMI DET.		NORTH YORKSHIRE
	HORSEFAIR			
	BOROUGHBRIDGE			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	115		
	Survey date: FRIDAY	14/10/11		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	SF-03-A-02	SEMI DET./TERRACED		SUFFOLK
	STOKE PARK DRIVE			
	MAIDENHALL			
	IPSWICH			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	230		
	Survey date: THURSDAY	24/05/07		Survey Type: MANUAL
16	SF-03-A-03	MIXED HOUSES		SUFFOLK
	BARTON HILL			
	FORNHAM ST MARTIN			
	BURY ST EDMUNDS			
	Edge of Town			
	Out of Town			
	Total Number of dwellings:	101		
	Survey date: MONDAY	15/05/06		Survey Type: MANUAL
17	SH-03-A-04	TERRACED		SHROPSHIRE
	ST MICHAEL'S STREET			
	SHREWSBURY			
	Suburban Area (PPS6 Out of Centre)			
	No Sub Category			
	Total Number of dwellings:	108		
	Survey date: THURSDAY	11/06/09		Survey Type: MANUAL
18	SR-03-A-01	DETACHED		STIRLING
	BENVIEW			
	STIRLING			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	115		
	Survey date: MONDAY	23/04/07		Survey Type: MANUAL
19	WL-03-A-01	SEMI D./TERRACED W. BASSETT		WILTSHIRE
	MAPLE DRIVE			
	WOOTTON BASSETT			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	99		
	Survey date: MONDAY	02/10/06		Survey Type: MANUAL
20	WM-03-A-03	MIXED HOUSING		WEST MIDLANDS
	BASELEY WAY			
	ROWLEYS GREEN			
	COVENTRY			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	84		
	Survey date: MONDAY	24/09/07		Survey Type: MANUAL
21	WO-03-A-03	DETACHED		WORCESTERSHIRE
	BLAKEBROOK			
	BLAKEBROOK			
	KIDDERMINSTER			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	138		
	Survey date: FRIDAY	05/05/06		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

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

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	22	152	0.075	22	152	0.280	22	152	0.355
08:00 - 09:00	22	152	0.147	22	152	0.411	22	152	0.558
09:00 - 10:00	22	152	0.163	22	152	0.211	22	152	0.374
10:00 - 11:00	22	152	0.146	22	152	0.184	22	152	0.330
11:00 - 12:00	22	152	0.170	22	152	0.165	22	152	0.335
12:00 - 13:00	22	152	0.193	22	152	0.177	22	152	0.370
13:00 - 14:00	22	152	0.184	22	152	0.176	22	152	0.360
14:00 - 15:00	22	152	0.178	22	152	0.189	22	152	0.367
15:00 - 16:00	22	152	0.294	22	152	0.209	22	152	0.503
16:00 - 17:00	22	152	0.323	22	152	0.195	22	152	0.518
17:00 - 18:00	22	152	0.382	22	152	0.229	22	152	0.611
18:00 - 19:00	22	152	0.262	22	152	0.218	22	152	0.480
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.517			2.644			5.161

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:	82 - 432 (units:)
Survey date range:	01/01/06 - 25/09/15
Number of weekdays (Monday-Friday):	22
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 shown. 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	22	152	0.006	22	152	0.009	22	152	0.015
08:00 - 09:00	22	152	0.005	22	152	0.016	22	152	0.021
09:00 - 10:00	22	152	0.004	22	152	0.004	22	152	0.008
10:00 - 11:00	22	152	0.001	22	152	0.005	22	152	0.006
11:00 - 12:00	22	152	0.004	22	152	0.002	22	152	0.006
12:00 - 13:00	22	152	0.004	22	152	0.004	22	152	0.008
13:00 - 14:00	22	152	0.004	22	152	0.004	22	152	0.008
14:00 - 15:00	22	152	0.004	22	152	0.004	22	152	0.008
15:00 - 16:00	22	152	0.015	22	152	0.009	22	152	0.024
16:00 - 17:00	22	152	0.009	22	152	0.007	22	152	0.016
17:00 - 18:00	22	152	0.013	22	152	0.011	22	152	0.024
18:00 - 19:00	22	152	0.009	22	152	0.006	22	152	0.015
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.078			0.081			0.159

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: 82 - 432 (units:)
 Survey date range: 01/01/06 - 25/09/15
 Number of weekdays (Monday-Friday): 22
 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 shown. 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	22	152	0.086	22	152	0.333	22	152	0.419
08:00 - 09:00	22	152	0.182	22	152	0.606	22	152	0.788
09:00 - 10:00	22	152	0.191	22	152	0.271	22	152	0.462
10:00 - 11:00	22	152	0.184	22	152	0.240	22	152	0.424
11:00 - 12:00	22	152	0.213	22	152	0.213	22	152	0.426
12:00 - 13:00	22	152	0.244	22	152	0.223	22	152	0.467
13:00 - 14:00	22	152	0.234	22	152	0.225	22	152	0.459
14:00 - 15:00	22	152	0.226	22	152	0.245	22	152	0.471
15:00 - 16:00	22	152	0.458	22	152	0.282	22	152	0.740
16:00 - 17:00	22	152	0.448	22	152	0.273	22	152	0.721
17:00 - 18:00	22	152	0.504	22	152	0.307	22	152	0.811
18:00 - 19:00	22	152	0.348	22	152	0.311	22	152	0.659
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.318			3.529			6.847

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:	82 - 432 (units:)
Survey date range:	01/01/06 - 25/09/15
Number of weekdays (Monday-Friday):	22
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 shown. 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	22	152	0.031	22	152	0.050	22	152	0.081
08:00 - 09:00	22	152	0.041	22	152	0.153	22	152	0.194
09:00 - 10:00	22	152	0.043	22	152	0.052	22	152	0.095
10:00 - 11:00	22	152	0.042	22	152	0.042	22	152	0.084
11:00 - 12:00	22	152	0.033	22	152	0.037	22	152	0.070
12:00 - 13:00	22	152	0.034	22	152	0.027	22	152	0.061
13:00 - 14:00	22	152	0.027	22	152	0.037	22	152	0.064
14:00 - 15:00	22	152	0.046	22	152	0.048	22	152	0.094
15:00 - 16:00	22	152	0.154	22	152	0.069	22	152	0.223
16:00 - 17:00	22	152	0.076	22	152	0.049	22	152	0.125
17:00 - 18:00	22	152	0.055	22	152	0.043	22	152	0.098
18:00 - 19:00	22	152	0.057	22	152	0.058	22	152	0.115
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.639			0.665			1.304

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:	82 - 432 (units:)
Survey date range:	01/01/06 - 25/09/15
Number of weekdays (Monday-Friday):	22
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 shown. 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	22	152	0.000	22	152	0.009	22	152	0.009
08:00 - 09:00	22	152	0.003	22	152	0.014	22	152	0.017
09:00 - 10:00	22	152	0.002	22	152	0.007	22	152	0.009
10:00 - 11:00	22	152	0.003	22	152	0.004	22	152	0.007
11:00 - 12:00	22	152	0.004	22	152	0.005	22	152	0.009
12:00 - 13:00	22	152	0.005	22	152	0.007	22	152	0.012
13:00 - 14:00	22	152	0.006	22	152	0.003	22	152	0.009
14:00 - 15:00	22	152	0.004	22	152	0.002	22	152	0.006
15:00 - 16:00	22	152	0.008	22	152	0.006	22	152	0.014
16:00 - 17:00	22	152	0.009	22	152	0.003	22	152	0.012
17:00 - 18:00	22	152	0.014	22	152	0.004	22	152	0.018
18:00 - 19:00	22	152	0.007	22	152	0.001	22	152	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.065			0.065			0.130

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: 82 - 432 (units:)
 Survey date range: 01/01/06 - 25/09/15
 Number of weekdays (Monday-Friday): 22
 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 shown. 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	22	152	0.124	22	152	0.401	22	152	0.525
08:00 - 09:00	22	152	0.232	22	152	0.789	22	152	1.021
09:00 - 10:00	22	152	0.240	22	152	0.333	22	152	0.573
10:00 - 11:00	22	152	0.230	22	152	0.291	22	152	0.521
11:00 - 12:00	22	152	0.255	22	152	0.258	22	152	0.513
12:00 - 13:00	22	152	0.287	22	152	0.261	22	152	0.548
13:00 - 14:00	22	152	0.271	22	152	0.269	22	152	0.540
14:00 - 15:00	22	152	0.280	22	152	0.299	22	152	0.579
15:00 - 16:00	22	152	0.636	22	152	0.366	22	152	1.002
16:00 - 17:00	22	152	0.543	22	152	0.333	22	152	0.876
17:00 - 18:00	22	152	0.586	22	152	0.366	22	152	0.952
18:00 - 19:00	22	152	0.421	22	152	0.376	22	152	0.797
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		4.105			4.342			8.447	

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:	82 - 432 (units:)
Survey date range:	01/01/06 - 25/09/15
Number of weekdays (Monday-Friday):	22
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

APPENDIX H

Census Based Traffic Assignment

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

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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

place of work : 2011 super output area - middle layer	usual residence E02001522 : Barnsley 014	%	Co-ordinates		Houghton Road (W)	Station Road	Barnsley Road (E)	Highgate Lane	A635 (SW)	Local Centre
E02001579 : Rotherham 002	208	17.5%	53.49745242	-1.34205705	8.7%			8.7%		
E02001522 : Barnsley 014	167	14.0%	53.54650379	-1.31370821						14.0%
E02001530 : Barnsley 022	146	12.3%	53.53170944	-1.30774141		6.1%		6.1%		
E02001578 : Rotherham 001	70	5.9%	53.50678169	-1.36995058	2.9%				2.9%	
E02001521 : Barnsley 013	63	5.3%	53.55028028	-1.48868045	5.3%					
E02001560 : Doncaster 022	51	4.3%	53.51831483	-1.13003816		4.3%				
E02001523 : Barnsley 015	38	3.2%	53.54683154	-1.44273593	3.2%					
E02001566 : Doncaster 028	34	2.9%	53.50134495	-1.14599696		2.9%				
E02001520 : Barnsley 012	31	2.6%	53.55970955	-1.51054398	2.6%					
E02001558 : Doncaster 020	26	2.2%	53.52041056	-1.26387801		2.2%				
E02002481 : Wakefield 044	26	2.2%	53.59249788	-1.28789752		2.2%				
E02001594 : Rotherham 017	25	2.1%	53.42979154	-1.34949431	2.1%					
E02001533 : Barnsley 025	22	1.8%	53.51931549	-1.32028306				1.8%		
E02001534 : Barnsley 026	21	1.8%	53.51900135	-1.39822545	1.8%					
E02001569 : Doncaster 031	21	1.8%	53.49746585	-1.29244249		0.9%		0.9%		
E02001528 : Barnsley 020	20	1.7%	53.53752800	-1.37496651	1.7%					
E02001580 : Rotherham 003	17	1.4%	53.48804280	-1.31552092				1.4%		
E02001531 : Barnsley 023	16	1.3%	53.52646923	-1.40865004	1.3%					
E02001632 : Sheffield 022	15	1.3%	53.39790185	-1.45582932	1.3%					
E02001510 : Barnsley 002	14	1.2%	53.59575351	-1.44659135	1.2%					
E02001536 : Barnsley 028	14	1.2%	53.50295042	-1.47533056	1.2%					
E02001542 : Doncaster 004	14	1.2%	53.59814401	-1.02554965		1.2%				
E02001602 : Rotherham 025	14	1.2%	53.40487425	-1.37004525	0.6%			0.6%		
E02001515 : Barnsley 007	13	1.1%	53.58093183	-1.47498841	1.1%					
E02001518 : Barnsley 010	13	1.1%	53.56329007	-1.48573098	1.1%					
E02006843 : Sheffield 073	13	1.1%	53.38594108	-1.47564761	1.1%					
E02001519 : Barnsley 011	12	1.0%	53.56226223	-1.43664222	1.0%					
E02001553 : Doncaster 015	12	1.0%	53.53807668	-1.10328197		1.0%				
E02001593 : Rotherham 016	12	1.0%	53.43153334	-1.37936987	1.0%					
E02001628 : Sheffield 018	12	1.0%	53.41220748	-1.39668964	1.0%					
E02001514 : Barnsley 006	10	0.8%	53.58091579	-1.37905769	0.8%					
E02001545 : Doncaster 007	10	0.8%	53.56611563	-1.06717894		0.8%				
E02001595 : Rotherham 018	10	0.8%	53.42741467	-1.21991169		0.8%				
	1,190	100.0%			41.0%	22.4%	0.0%	19.6%	2.9%	14.0%

APPENDIX I

PICADY – Houghton Road / Merrill Road / Lorne Road

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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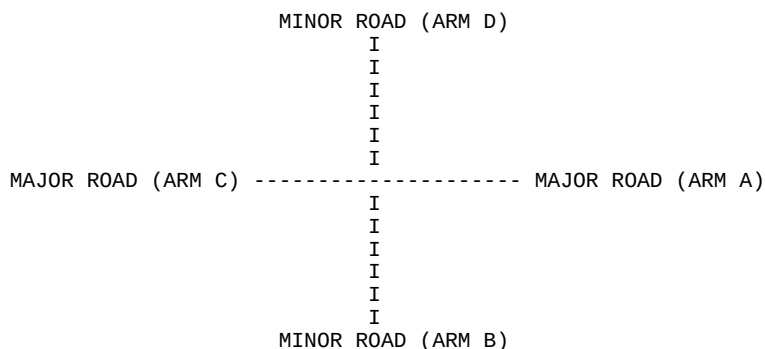
Run with file:-
"J:\10000\10000\10082_SchoolStreetThurnscoe\engineering\Traffic_Programs\Picady\Merrill Road\Merrill Road.vpi"
(drive-on-the-left) at 12:41:39 on Thursday, 27 July 2017

RUN INFORMATION

RUN TITLE : Merrill Road - Houghton Road
LOCATION : Thurnscoe
DATE : 27/07/17
CLIENT : Keepmoat Homes Ltd
ENUMERATOR :
JOB NUMBER : 10082
STATUS : Preliminary
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Houghton Road (E)
ARM B IS Lorne Road
ARM C IS Houghton Road (W)
ARM D IS Merrill Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 12.00 M.	I	(W) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I	(WA-D) 2.20 M.	I
I	- VISIBILITY	I	(VC-B)100.00 M.	I	(VA-D)100.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I	NO (0)	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 20.0 M.	I	(VD-A) 30.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I	(VD-C) 50.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 2.30 M.	I	(WD-A) -	I
I	- LANE 2 WIDTH	I	(WB-A) 2.30 M.	I	(WD-C) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	-	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	-	I	4.90 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	-	I	3.65 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	-	I	3.55 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	-	I	3.70 M.	I
I	- LENGTH OF FLARED SECTION	I	-	I	1 VEHS	I

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	638.75	0.18	0.07	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	495.65	0.17	0.17	0.17	0.17	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I	0.07	0.11	0.24	0.08	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-B	STREAM A-C	STREAM A-D	I
I	631.87	0.18	0.18	0.26	I

I Intercept For I STREAM A-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	I
I 631.87	0.18	0.26	0.18	I

B-D Stream From Left Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 495.65	0.17	0.17	0.07	0.24	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.11	0.11			I

B-D Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 495.65	0.17	0.17	0.07	0.24	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.11	0.11			I

D-B Stream From Left Hand Lane

I Intercept For I STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

TRAFFIC DEMAND DATA

I ARM	I FLOW	I SCALE(%)	I
I A	I 100	I	
I B	I 100	I	
I C	I 100	I	
I D	I 100	I	

Demand set: 2022 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	MINUTES FROM START WHEN TOP OF PEAK IS REACHED	MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	3.61	5.42	3.61
ARM B	15.00	45.00	75.00	0.46	0.69	0.46
ARM C	15.00	45.00	75.00	3.89	5.83	3.89
ARM D	15.00	45.00	75.00	1.00	1.50	1.00

Demand set: 2022 Base AM

		TURNING PROPORTIONS				TURNING COUNTS				(PERCENTAGE OF H.V.S)			
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	ARM	D			
07.45 - 09.15	ARM A	A	I	0.000	I	0.059	I	0.692	I	0.249	I		
				0.0		17.0		200.0		72.0			
				(0.0)		(6.3)		(3.8)		(4.5)			
				I		I		I		I			
	ARM B	B	I	0.541	I	0.000	I	0.108	I	0.351	I		
				20.0		0.0		4.0		13.0			
				(5.6)		(0.0)		(0.0)		(0.0)			
				I		I		I		I			
	ARM C	C	I	0.900	I	0.010	I	0.000	I	0.090	I		
				280.0		3.0		0.0		28.0			
				(2.0)		(0.0)		(0.0)		(3.8)			
				I		I		I		I			
	ARM D	D	I	0.712	I	0.025	I	0.262	I	0.000	I		
				57.0		2.0		21.0		0.0			
				(1.9)		(0.0)		(10.5)		(0.0)			
				I		I		I		I			

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD

1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-CD	0.13	7.99	0.017		0.00	0.02	0.2		0.13
B-AD	0.33	6.84	0.048		0.00	0.05	0.7		0.15
A-B	0.21								
A-C	2.51								
A-D	0.90	9.38	0.096		0.00	0.11	1.5		0.12
D-AB	0.73	11.10	0.066		0.00	0.07	1.0		0.10
D-BC	0.28	6.77	0.041		0.00	0.04	0.6		0.15
C-D	0.35								
C-A	3.51								
C-B	0.04	9.77	0.004		0.00	0.00	0.1		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-CD	0.16	7.78	0.021		0.02	0.02	0.3		0.13
B-AD	0.39	6.63	0.059		0.05	0.06	0.9		0.16
A-B	0.25								
A-C	3.00								
A-D	1.08	9.25	0.117		0.11	0.13	1.9		0.12
D-AB	0.87	10.91	0.080		0.07	0.09	1.3		0.10
D-BC	0.33	6.54	0.050		0.04	0.05	0.8		0.16
C-D	0.42								
C-A	4.20								
C-B	0.04	9.63	0.005		0.00	0.00	0.1		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-CD	0.20	7.49	0.027		0.02	0.03	0.4		0.14
B-AD	0.48	6.33	0.076		0.06	0.08	1.2		0.17
A-B	0.31								
A-C	3.67								
A-D	1.32	9.06	0.146		0.13	0.17	2.5		0.13
D-AB	1.07	10.66	0.100		0.09	0.11	1.6		0.10
D-BC	0.40	6.23	0.065		0.05	0.07	1.0		0.17
C-D	0.51								
C-A	5.14								
C-B	0.06	9.42	0.006		0.00	0.01	0.1		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-CD	0.20	7.49	0.027		0.03	0.03	0.4		0.14
B-AD	0.48	6.33	0.076		0.08	0.08	1.2		0.17
A-B	0.31								
A-C	3.67								
A-D	1.32	9.06	0.146		0.17	0.17	2.5		0.13
D-AB	1.07	10.66	0.100		0.11	0.11	1.7		0.10
D-BC	0.40	6.23	0.065		0.07	0.07	1.0		0.17
C-D	0.51								
C-A	5.14								
C-B	0.06	9.42	0.006		0.01	0.01	0.1		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-CD	0.16	7.78	0.021		0.03	0.02	0.3		0.13
B-AD	0.39	6.63	0.059		0.08	0.06	1.0		0.16
A-B	0.25								
A-C	3.00								
A-D	1.08	9.25	0.117		0.17	0.13	2.0		0.12
D-AB	0.87	10.91	0.080		0.11	0.09	1.3		0.10
D-BC	0.33	6.54	0.050		0.07	0.05	0.8		0.16
C-D	0.42								
C-A	4.20								
C-B	0.04	9.63	0.005		0.01	0.00	0.1		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-CD	0.13	7.99	0.017		0.02	0.02	0.3		0.13
B-AD	0.33	6.84	0.048		0.06	0.05	0.8		0.15
A-B	0.21								
A-C	2.51								
A-D	0.90	9.38	0.096		0.13	0.11	1.6		0.12
D-AB	0.73	11.09	0.066		0.09	0.07	1.1		0.10
D-BC	0.28	6.76	0.041		0.05	0.04	0.7		0.15
C-D	0.35								
C-A	3.51								
C-B	0.04	9.77	0.004		0.00	0.00	0.1		0.10

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-AD	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM A-D	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

QUEUE FOR STREAM D-AB	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM D-BC	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE FOR STREAM C-B	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING	*	I	* INCLUSIVE	QUEUEING	*	I
I		I			I	* DELAY	*	I	* DELAY	*		I
I		I	(VEH)	(VEH/H)	I	(MIN)		I	(MIN)		(MIN/VEH)	I
I	B-CD	I	14.9	I 9.9	I	2.0	I 0.13	I	2.0	I	0.13	I
I	B-AD	I	36.0	I 24.0	I	5.8	I 0.16	I	5.8	I	0.16	I
I	A-B	I	23.4	I 15.6	I		I	I		I		I
I	A-C	I	275.3	I 183.5	I		I	I		I		I
I	A-D	I	99.1	I 66.1	I	12.2	I 0.12	I	12.2	I	0.12	I
I	D-AB	I	79.9	I 53.3	I	8.0	I 0.10	I	8.0	I	0.10	I
I	D-BC	I	30.2	I 20.1	I	4.9	I 0.16	I	4.9	I	0.16	I
I	C-D	I	38.5	I 25.7	I		I	I		I		I
I	C-A	I	385.4	I 256.9	I		I	I		I		I
I	C-B	I	4.1	I 2.8	I	0.4	I 0.10	I	0.4	I	0.10	I
I	ALL	I	986.9	I 657.9	I	33.2	I 0.03	I	33.2	I	0.03	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-C		STREAM		A-C	STREAM		A-B	I
I	638.75				0.18			0.07	I

STREAM D-A

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM D-A		STREAM		C-A	STREAM		C-D	I
I	0.00				0.00			0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-A		STREAM		A-C	STREAM		A-D	STREAM		D-A	STREAM		D-B	I
I	495.65				0.17			0.17			0.17			0.17	I

I		Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I		STREAM		A-B	STREAM		C-A	STREAM		C-B	STREAM		D-C	I
I				0.07			0.11			0.24			0.08	I

STREAM D-C

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM D-C		STREAM		C-A	STREAM		C-B	STREAM		B-C	STREAM		B-D	I
I	0.00				0.00			0.00			0.00			0.00	I

I		Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I		STREAM		C-D	STREAM		A-C	STREAM		A-D	STREAM		B-A	I
I				0.00			0.00			0.00			0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
---	-----------	-----	-------	-----	----------	-------	-----	----------	-------	-----	----------	---

I	631.87	0.18	0.18	0.26	I
---	--------	------	------	------	---

STREAM A-D

I	Intercept For I STREAM A-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	I
I	631.87	0.18	0.26	0.18	I

B-D Stream From Left Hand Lane

I	Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I	495.65	0.17	0.17	0.07	0.24	I

I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.11	0.11			I

B-D Stream From Right Hand Lane

I	Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I	495.65	0.17	0.17	0.07	0.24	I

I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.11	0.11			I

D-B Stream From Left Hand Lane

I	Intercept For I STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I	Intercept For I STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
	16.45-17.00									
	B-CD	0.08	8.08	0.010		0.00	0.01	0.1		0.12
	B-AD	0.36	6.56	0.054		0.00	0.06	0.8		0.16
	A-B	0.65								
	A-C	4.99								
	A-D	0.84	9.44	0.089		0.00	0.10	1.4		0.12
	D-AB	0.80	11.04	0.073		0.00	0.08	1.1		0.10
	D-BC	0.29	7.02	0.041		0.00	0.04	0.6		0.15
	C-D	0.61								
	C-A	4.28								
	C-B	0.20	9.27	0.022		0.00	0.02	0.3		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-CD	0.10	7.77	0.013		0.01	0.01	0.2		0.13
B-AD	0.42	6.22	0.068		0.06	0.07	1.1		0.17
A-B	0.78								
A-C	5.96								
A-D	1.00	9.26	0.108		0.10	0.12	1.8		0.12
D-AB	0.96	10.81	0.089		0.08	0.10	1.4		0.10
D-BC	0.34	6.69	0.051		0.04	0.05	0.8		0.16
C-D	0.73								
C-A	5.11								
C-B	0.24	9.03	0.027		0.02	0.03	0.4		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-CD	0.12	7.34	0.017		0.01	0.02	0.2		0.14
B-AD	0.52	5.77	0.090		0.07	0.10	1.4		0.19
A-B	0.95								
A-C	7.30								
A-D	1.23	9.01	0.136		0.12	0.16	2.3		0.13
D-AB	1.18	10.49	0.112		0.10	0.13	1.8		0.11
D-BC	0.42	6.24	0.067		0.05	0.07	1.0		0.17
C-D	0.90								
C-A	6.26								
C-B	0.29	8.69	0.034		0.03	0.03	0.5		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-CD	0.12	7.34	0.017		0.02	0.02	0.3		0.14
B-AD	0.52	5.77	0.090		0.10	0.10	1.5		0.19
A-B	0.95								
A-C	7.30								
A-D	1.23	9.01	0.136		0.16	0.16	2.4		0.13
D-AB	1.18	10.49	0.112		0.13	0.13	1.9		0.11
D-BC	0.42	6.24	0.067		0.07	0.07	1.1		0.17
C-D	0.90								
C-A	6.26								
C-B	0.29	8.69	0.034		0.03	0.03	0.5		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-CD	0.10	7.77	0.013		0.02	0.01	0.2		0.13
B-AD	0.42	6.22	0.068		0.10	0.07	1.1		0.17
A-B	0.78								
A-C	5.96								
A-D	1.00	9.26	0.108		0.16	0.12	1.9		0.12
D-AB	0.96	10.81	0.089		0.13	0.10	1.5		0.10
D-BC	0.34	6.69	0.051		0.07	0.05	0.8		0.16
C-D	0.73								
C-A	5.11								
C-B	0.24	9.02	0.027		0.03	0.03	0.4		0.11

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-CD	0.08	8.08	0.010		0.01	0.01	0.2		0.13	I
I	B-AD	0.36	6.55	0.054		0.07	0.06	0.9		0.16	I
I	A-B	0.65									I
I	A-C	4.99									I
I	A-D	0.84	9.44	0.089		0.12	0.10	1.5		0.12	I
I	D-AB	0.80	11.04	0.073		0.10	0.08	1.2		0.10	I
I	D-BC	0.29	7.02	0.041		0.05	0.04	0.7		0.15	I
I	C-D	0.61									I
I	C-A	4.28									I
I	C-B	0.20	9.27	0.022		0.03	0.02	0.3		0.11	I

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM A-D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.1
18.15	0.1

QUEUE FOR STREAM D-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM D-BC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I	I	I	I	I	* DELAY *	I	* DELAY *	I
I	I	I	I	I	I	I	I	I
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	B-CD	I	9.2	I 6.1	I 1.2	I 0.13	I 1.2	I 0.13
I	B-AD	I	39.0	I 26.0	I 6.8	I 0.17	I 6.8	I 0.17
I	A-B	I	71.6	I 47.7	I	I	I	I
I	A-C	I	547.8	I 365.2	I	I	I	I
I	A-D	I	92.2	I 61.5	I 11.2	I 0.12	I 11.2	I 0.12
I	D-AB	I	88.2	I 58.8	I 9.0	I 0.10	I 9.0	I 0.10
I	D-BC	I	31.5	I 21.0	I 5.0	I 0.16	I 5.0	I 0.16
I	C-D	I	67.4	I 45.0	I	I	I	I
I	C-A	I	469.4	I 312.9	I	I	I	I
I	C-B	I	22.0	I 14.7	I 2.5	I 0.11	I 2.5	I 0.11
I	ALL	I	1438.4	I 958.9	I 35.8	I 0.02	I 35.8	I 0.02

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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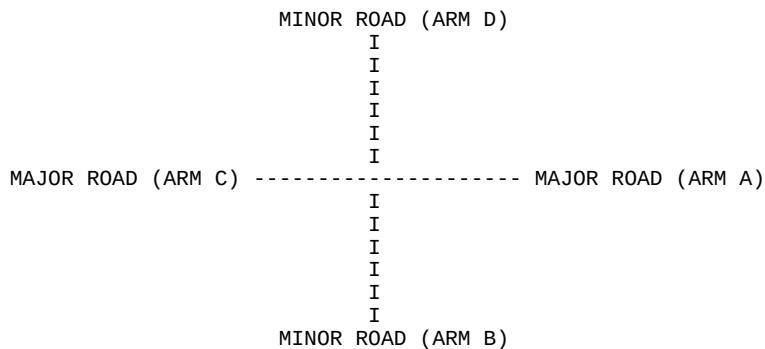
Run with file:-
"J:\10000\10000\10082_SchoolStreetThurnscoe\engineering\Traffic_Programs\Picady\Merrill Road\Merrill Road.vpi"
(drive-on-the-left) at 12:42:54 on Thursday, 27 July 2017

RUN INFORMATION

RUN TITLE : Merrill Road - Houghton Road
LOCATION : Thurnscoe
DATE : 27/07/17
CLIENT : Keepmoat Homes Ltd
ENUMERATOR :
JOB NUMBER : 10082
STATUS : Preliminary
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Houghton Road (E)
ARM B IS Lorne Road
ARM C IS Houghton Road (W)
ARM D IS Merrill Road

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I	MINOR ROAD D	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 12.00 M.	I	(W) 12.00 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I	(WCR) 0.00 M.	I
I		I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.20 M.	I	(WA-D) 2.20 M.	I
I	- VISIBILITY	I	(VC-B)100.00 M.	I	(VA-D)100.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	NO (0)	I	NO (0)	I
I		I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 20.0 M.	I	(VD-A) 30.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 100.0 M.	I	(VD-C) 50.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) 2.30 M.	I	(WD-A) -	I
I	- LANE 2 WIDTH	I	(WB-A) 2.30 M.	I	(WD-C) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	-	I	10.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	-	I	4.90 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	-	I	3.65 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	-	I	3.55 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	-	I	3.70 M.	I
I	- LENGTH OF FLARED SECTION	I	-	I	1 VEHS	I

SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM B-C	STREAM A-C	STREAM A-B	I
I	638.75	0.18	0.07	I

STREAM D-A

I	Intercept For	Slope For Opposing	Slope For Opposing	I
I	STREAM D-A	STREAM C-A	STREAM C-D	I
I	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM B-A	STREAM A-C	STREAM A-D	STREAM D-A	STREAM D-B	I
I	495.65	0.17	0.17	0.17	0.17	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM A-B	STREAM C-A	STREAM C-B	STREAM D-C	I
I	0.07	0.11	0.24	0.08	I

STREAM D-C

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM D-C	STREAM C-A	STREAM C-B	STREAM B-C	STREAM B-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-D	STREAM A-C	STREAM A-D	STREAM B-A	I
I	0.00	0.00	0.00	0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept For	Slope For Opposing	Slope For Opposing	Slope For Opposing	I
I	STREAM C-B	STREAM A-B	STREAM A-C	STREAM A-D	I
I	631.87	0.18	0.18	0.26	I

I Intercept For I STREAM A-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	I
I 631.87	0.18	0.26	0.18	I

B-D Stream From Left Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 495.65	0.17	0.17	0.07	0.24	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.11	0.11			I

B-D Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I 495.65	0.17	0.17	0.07	0.24	I
I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.11	0.11			I

D-B Stream From Left Hand Lane

I Intercept For I STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I Intercept For I STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I 0.00	0.00	0.00	0.00	0.00	I
I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

TRAFFIC DEMAND DATA

I ARM	I FLOW	I SCALE(%)	I
I A	I 100	I	
I B	I 100	I	
I C	I 100	I	
I D	I 100	I	

Demand set: 2022 Base AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN				RATE OF FLOW (VEH/MIN)								
I	ARM	I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	BEFORE	I	AT TOP	I	AFTER	
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	
I		I		I		I		I		I		I		
I	ARM	A	I	15.00	I	45.00	I	75.00	I	3.61	I	5.42	I	3.61
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.46	I	0.69	I	0.46
I	ARM	C	I	15.00	I	45.00	I	75.00	I	3.89	I	5.83	I	3.89
I	ARM	D	I	15.00	I	45.00	I	75.00	I	1.00	I	1.50	I	1.00

Demand set: Development AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	I	15.00	45.00	75.00	0.55	0.83	0.55
ARM B	I	15.00	45.00	75.00	0.00	0.00	0.00
ARM C	I	15.00	45.00	75.00	0.38	0.56	0.38
ARM D	I	15.00	45.00	75.00	0.60	0.90	0.60

Demand set: 2022 Base AM

		TURNING PROPORTIONS												
		TURNING COUNTS												
		(PERCENTAGE OF H.V.S)												
TIME		FROM/TO	ARM	A	ARM	B	ARM	C	ARM	D				
07.45 - 09.15		ARM	A	0.000	0.059	0.692	0.249							
				0.0	17.0	200.0	72.0							
				(0.0)	(6.3)	(3.8)	(4.5)							
		ARM	B	0.541	0.000	0.108	0.351							
				20.0	0.0	4.0	13.0							
				(5.6)	(0.0)	(0.0)	(0.0)							
		ARM	C	0.900	0.010	0.000	0.090							
				280.0	3.0	0.0	28.0							
				(2.0)	(0.0)	(0.0)	(3.8)							
		ARM	D	0.712	0.025	0.262	0.000							
				57.0	2.0	21.0	0.0							
				(1.9)	(0.0)	(10.5)	(0.0)							

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: Development AM

TIME	TURNING PROPORTIONS									
	TURNING COUNTS									
	(PERCENTAGE OF H.V.S)									
	FROM/TO	ARM	A	ARM	B	ARM	C	ARM	D	
07.45 - 09.15	ARM A		0.000	0.000	0.932	0.068				
			0.0	0.0	41.0	3.0				
		(0.0)	(0.0)	(0.0)	(0.0)					
	ARM B		0.000	0.000	0.000	0.000				
			0.0	0.0	0.0	0.0				
		(0.0)	(0.0)	(0.0)	(0.0)					
	ARM C		0.500	0.000	0.000	0.500				
			15.0	0.0	0.0	15.0				
		(0.0)	(0.0)	(0.0)	(0.0)					
	ARM D		0.146	0.000	0.854	0.000				
			7.0	0.0	41.0	0.0				
		(0.0)	(0.0)	(0.0)	(0.0)					

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-CD	0.13	7.86	0.017		0.00	0.02	0.3		0.13
B-AD	0.33	6.68	0.049		0.00	0.05	0.7		0.16
A-B	0.21								
A-C	3.02								
A-D	0.94	9.34	0.101		0.00	0.11	1.6		0.12
D-AB	0.82	10.37	0.079		0.00	0.08	1.2		0.10
D-BC	0.79	7.44	0.106		0.00	0.12	1.7		0.15
C-D	0.54								
C-A	3.70								
C-B	0.04	9.67	0.004		0.00	0.00	0.1		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-CD	0.16	7.63	0.021		0.02	0.02	0.3		0.13
B-AD	0.39	6.44	0.061		0.05	0.06	0.9		0.17
A-B	0.25								
A-C	3.61								
A-D	1.12	9.19	0.122		0.11	0.14	2.0		0.12
D-AB	0.98	10.14	0.096		0.08	0.11	1.6		0.11
D-BC	0.94	7.16	0.132		0.12	0.15	2.2		0.16
C-D	0.64								
C-A	4.42								
C-B	0.04	9.50	0.005		0.00	0.00	0.1		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-CD	0.20	7.30	0.027		0.02	0.03	0.4		0.14
B-AD	0.48	6.10	0.078		0.06	0.08	1.2		0.18
A-B	0.31								
A-C	4.42								
A-D	1.38	8.98	0.153		0.14	0.18	2.6		0.13
D-AB	1.20	9.81	0.122		0.11	0.14	2.0		0.12
D-BC	1.15	6.78	0.170		0.15	0.20	2.9		0.18
C-D	0.79								
C-A	5.41								
C-B	0.06	9.27	0.006		0.00	0.01	0.1		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-CD	0.20	7.30	0.027		0.03	0.03	0.4		0.14
B-AD	0.48	6.10	0.078		0.08	0.08	1.3		0.18
A-B	0.31								
A-C	4.42								
A-D	1.38	8.98	0.153		0.18	0.18	2.7		0.13
D-AB	1.20	9.81	0.122		0.14	0.14	2.1		0.12
D-BC	1.15	6.78	0.170		0.20	0.20	3.0		0.18
C-D	0.79								
C-A	5.41								
C-B	0.06	9.27	0.006		0.01	0.01	0.1		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-CD	0.16	7.63	0.021		0.03	0.02	0.3		0.13
B-AD	0.39	6.44	0.061		0.08	0.07	1.0		0.17
A-B	0.25								
A-C	3.61								
A-D	1.12	9.19	0.122		0.18	0.14	2.2		0.12
D-AB	0.98	10.14	0.096		0.14	0.11	1.6		0.11
D-BC	0.94	7.16	0.132		0.20	0.15	2.4		0.16
C-D	0.64								
C-A	4.42								
C-B	0.04	9.50	0.005		0.01	0.00	0.1		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-CD	0.13	7.86	0.017		0.02	0.02	0.3		0.13
B-AD	0.33	6.68	0.049		0.07	0.05	0.8		0.16
A-B	0.21								
A-C	3.02								
A-D	0.94	9.34	0.101		0.14	0.11	1.7		0.12
D-AB	0.82	10.37	0.079		0.11	0.09	1.3		0.10
D-BC	0.79	7.44	0.106		0.15	0.12	1.8		0.15
C-D	0.54								
C-A	3.70								
C-B	0.04	9.67	0.004		0.00	0.00	0.1		0.10

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM A-D	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.1
09.15	0.1

QUEUE FOR STREAM D-AB	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUE FOR STREAM D-BC	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

QUEUE FOR STREAM C-B	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING	*	I	* INCLUSIVE	QUEUEING	*	I
I		I			I	* DELAY	*	I	* DELAY	*		I
I		I	(VEH)	(VEH/H)	I	(MIN)		I	(MIN)		(MIN/VEH)	I
I		I			I			I				I
I	B-CD	I	14.9	I 9.9	I	2.0	I 0.13	I	2.0	I	0.13	I
I	B-AD	I	36.0	I 24.0	I	6.0	I 0.17	I	6.0	I	0.17	I
I	A-B	I	23.4	I 15.6	I		I	I		I		I
I	A-C	I	331.7	I 221.1	I		I	I		I		I
I	A-D	I	103.2	I 68.8	I	12.8	I 0.12	I	12.9	I	0.12	I
I	D-AB	I	89.7	I 59.8	I	9.8	I 0.11	I	9.8	I	0.11	I
I	D-BC	I	86.5	I 57.7	I	14.1	I 0.16	I	14.1	I	0.16	I
I	C-D	I	59.2	I 39.5	I		I	I		I		I
I	C-A	I	406.0	I 270.7	I		I	I		I		I
I	C-B	I	4.1	I 2.8	I	0.4	I 0.11	I	0.4	I	0.11	I
I	ALL	I	1154.8	I 769.9	I	45.2	I 0.04	I	45.2	I	0.04	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

STREAM B-C

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-C		STREAM		A-C	STREAM		A-B	I
I	638.75				0.18			0.07	I

STREAM D-A

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM D-A		STREAM		C-A	STREAM		C-D	I
I	0.00				0.00			0.00	I

* Due to the presence of a flare, data is not available

STREAM B-A

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM B-A		STREAM		A-C	STREAM		A-D	STREAM		D-A	STREAM		D-B	I
I	495.65				0.17			0.17			0.17			0.17	I

I		Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I		STREAM		A-B	STREAM		C-A	STREAM		C-B	STREAM		D-C	I
I				0.07			0.11			0.24			0.08	I

STREAM D-C

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I	STREAM D-C		STREAM		C-A	STREAM		C-B	STREAM		B-C	STREAM		B-D	I
I	0.00				0.00			0.00			0.00			0.00	I

I		Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
I		STREAM		C-D	STREAM		A-C	STREAM		A-D	STREAM		B-A	I
I				0.00			0.00			0.00			0.00	I

* Due to the presence of a flare, data is not available

STREAM C-B

I	Intercept	For	Slope	For	Opposing	Slope	For	Opposing	Slope	For	Opposing	I
---	-----------	-----	-------	-----	----------	-------	-----	----------	-------	-----	----------	---

I	631.87	0.18	0.18	0.26	I
---	--------	------	------	------	---

STREAM A-D

I	Intercept For I STREAM A-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	I
I	631.87	0.18	0.26	0.18	I

B-D Stream From Left Hand Lane

I	Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I	495.65	0.17	0.17	0.07	0.24	I

I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.11	0.11			I

B-D Stream From Right Hand Lane

I	Intercept For I STREAM B-D	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-D	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-B	I
I	495.65	0.17	0.17	0.07	0.24	I

I	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-D	Slope For Opposing	Slope For Opposing	I
I	0.11	0.11			I

D-B Stream From Left Hand Lane

I	Intercept For I STREAM D-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

D-B Stream From Right Hand Lane

I	Intercept For I STREAM B-D	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B	Slope For Opposing STREAM C-D	Slope For Opposing STREAM A-D	I
I	0.00	0.00	0.00	0.00	0.00	I

I	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing	Slope For Opposing	I
I	0.00	0.00			I

* Due to the presence of a flare, data is not available

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I
I	D	I	100		I

Demand set: 2022 Base PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I																		
			I	FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS		I	BEFORE	I	AT TOP	I	AFTER												
																I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK
I	ARM	A	I	15.00	I	45.00	I	75.00	I	6.46	I	9.69	I	6.46	I												
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.44	I	0.66	I	0.44	I												
I	ARM	C	I	15.00	I	45.00	I	75.00	I	5.07	I	7.61	I	5.07	I												
I	ARM	D	I	15.00	I	45.00	I	75.00	I	1.09	I	1.63	I	1.09	I												

Demand set: Development PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)			I						
			I	I	I	I	I	I							
										I	I	I			
													I	I	I
I	I	I	FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER	I						
I	I	I	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK	I						
I	I	I	I	I	I	I	I	I	I						
I	ARM	A	I	15.00	I	45.00	I	75.00	I	0.38	I	0.56	I	0.38	I
I	ARM	B	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I
I	ARM	C	I	15.00	I	45.00	I	75.00	I	0.95	I	1.42	I	0.95	I
I	ARM	D	I	15.00	I	45.00	I	75.00	I	0.34	I	0.51	I	0.34	I

Demand set: 2022 Base PM

	TIME	TURNING PROPORTIONS											
		TURNING COUNTS											
		(PERCENTAGE OF H.V.S)											
		FROM/TO	ARM	A	ARM	B	ARM	C	ARM	D			
16.45	-	18.15	ARM	A	0.000	0.101	0.770	0.130					
					0.0	52.0	398.0	67.0					
					(0.0)	(2.1)	(1.6)	(1.6)					
			ARM	B	0.743	0.000	0.114	0.143					
					26.0	0.0	4.0	5.0					
					(0.0)	(0.0)	(0.0)	(0.0)					
			ARM	C	0.840	0.039	0.000	0.121					
					341.0	16.0	0.0	49.0					
					(0.6)	(0.0)	(0.0)	(0.0)					
			ARM	D	0.713	0.046	0.241	0.000					
					62.0	4.0	21.0	0.0					
					(0.0)	(0.0)	(0.0)	(0.0)					

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: Development PM

TIME	TURNING PROPORTIONS									
	TURNING COUNTS									
	(PERCENTAGE OF H.V.S)									
	FROM/TO	ARM	A	ARM	B	ARM	C	ARM	D	
16.45 - 18.15	ARM A		0.000	0.000	0.767	0.233				
			0.0	0.0	23.0	7.0				
			(0.0)	(0.0)	(0.0)	(0.0)				
	ARM B		0.000	0.000	0.000	0.000				
			0.0	0.0	0.0	0.0				
			(0.0)	(0.0)	(0.0)	(0.0)				
	ARM C		0.500	0.000	0.000	0.500				
			38.0	0.0	0.0	38.0				
			(0.0)	(0.0)	(0.0)	(0.0)				
	ARM D		0.148	0.000	0.852	0.000				
			4.0	0.0	23.0	0.0				
			(0.0)	(0.0)	(0.0)	(0.0)				

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD

2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-CD	0.08	7.96	0.010		0.00	0.01	0.2		0.13
B-AD	0.36	6.41	0.056		0.00	0.06	0.8		0.17
A-B	0.65								
A-C	5.28								
A-D	0.93	9.28	0.100		0.00	0.11	1.6		0.12
D-AB	0.86	10.47	0.082		0.00	0.09	1.3		0.10
D-BC	0.58	7.08	0.081		0.00	0.09	1.3		0.15
C-D	1.09								
C-A	4.76								
C-B	0.20	9.20	0.022		0.00	0.02	0.3		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-CD	0.10	7.62	0.013		0.01	0.01	0.2		0.13
B-AD	0.42	6.05	0.070		0.06	0.07	1.1		0.18
A-B	0.78								
A-C	6.31								
A-D	1.11	9.07	0.122		0.11	0.14	2.0		0.13
D-AB	1.02	10.20	0.100		0.09	0.11	1.6		0.11
D-BC	0.69	6.69	0.103		0.09	0.11	1.7		0.17
C-D	1.30								
C-A	5.68								
C-B	0.24	8.94	0.027		0.02	0.03	0.4		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-CD	0.12	7.14	0.017		0.01	0.02	0.3		0.14
B-AD	0.52	5.55	0.094		0.07	0.10	1.5		0.20
A-B	0.95								
A-C	7.73								
A-D	1.36	8.77	0.155		0.14	0.18	2.7		0.13
D-AB	1.25	9.80	0.128		0.11	0.15	2.1		0.12
D-BC	0.84	6.17	0.136		0.11	0.16	2.3		0.19
C-D	1.60								
C-A	6.95								
C-B	0.29	8.58	0.034		0.03	0.04	0.5		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-CD	0.12	7.14	0.017		0.02	0.02	0.3		0.14
B-AD	0.52	5.55	0.094		0.10	0.10	1.5		0.20
A-B	0.95								
A-C	7.73								
A-D	1.36	8.77	0.155		0.18	0.18	2.7		0.13
D-AB	1.25	9.80	0.128		0.15	0.15	2.2		0.12
D-BC	0.84	6.17	0.136		0.16	0.16	2.3		0.19
C-D	1.60								
C-A	6.95								
C-B	0.29	8.58	0.034		0.04	0.04	0.5		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-CD	0.10	7.62	0.013		0.02	0.01	0.2		0.13
B-AD	0.42	6.05	0.070		0.10	0.08	1.2		0.18
A-B	0.78								
A-C	6.31								
A-D	1.11	9.07	0.122		0.18	0.14	2.2		0.13
D-AB	1.02	10.20	0.100		0.15	0.11	1.7		0.11
D-BC	0.69	6.69	0.103		0.16	0.12	1.8		0.17
C-D	1.30								
C-A	5.68								
C-B	0.24	8.93	0.027		0.04	0.03	0.4		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-CD	0.08	7.95	0.010		0.01	0.01	0.2		0.13
B-AD	0.36	6.41	0.056		0.08	0.06	0.9		0.17
A-B	0.65								
A-C	5.28								
A-D	0.93	9.28	0.100		0.14	0.11	1.7		0.12
D-AB	0.86	10.47	0.082		0.11	0.09	1.4		0.10
D-BC	0.58	7.07	0.081		0.12	0.09	1.4		0.15
C-D	1.09								
C-A	4.76								
C-B	0.20	9.19	0.022		0.03	0.02	0.3		0.11

QUEUE FOR STREAM B-CD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUE FOR STREAM B-AD

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM A-D	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.1
18.15	0.1

QUEUE FOR STREAM D-AB	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM D-BC	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.2
17.45	0.2
18.00	0.1
18.15	0.1

QUEUE FOR STREAM C-B	
TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I	(MIN/VEH)	I	(MIN)	I
I	B-CD	I	9.2	I	6.1	I	1.2	I
I	B-AD	I	39.0	I	26.0	I	7.0	I
I	A-B	I	71.6	I	47.7	I		I
I	A-C	I	579.5	I	386.3	I		I
I	A-D	I	101.9	I	67.9	I	12.9	I
I	D-AB	I	93.9	I	62.6	I	10.3	I
I	D-BC	I	63.0	I	42.0	I	10.7	I
I	C-D	I	119.7	I	79.8	I		I
I	C-A	I	521.7	I	347.8	I		I
I	C-B	I	22.0	I	14.7	I	2.5	I
I	ALL	I	1621.4	I	1081.0	I	44.7	I
							0.03	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

APPENDIX J

PICADY – Houghton Road / School Street

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
IN NO WAY RELIEVED OF HIS/HER RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-

"J:\10000\10000\10082_SchoolStreetThurnsco\engineering\Traffic_Programs\Picady\

School Street - Houghton Road.vpi"

(drive-on-the-left) at 10:58:45 on Thursday, 27 July 2017

RUN INFORMATION

```

RUN TITLE      : School Street - Houghton Road
LOCATION        : School Street, Thurnscoe
DATE          : 25/07/17
CLIENT        : Keepmoat Homes Ltd
ENUMERATOR    : brett.littlewood [PC137]
JOB NUMBER    : 10082
STATUS        : Preliminary
DESCRIPTION   :

```

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

THE SET DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)

I
I
I
I
I

MINOR ROAD (ARM B)

ARM A IS Houghton Road (W)

ARM B IS School Street

ARM C IS Houghton Road (E)

STREAM LABELLING CONVENTION

STRENGTH LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B

STREAM	ARM	CONTAINS	TRAFFIC	GOING	FROM	ARM	B	TO	ARM	A	AND	TO	ARM	C
STREAM	B-AC	CONTAINS	TRAFFIC	GOING	FROM	ARM	B	TO	ARM	A	AND	TO	ARM	C

ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 10.10 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.40 M.	I
I	- VISIBILITY	I	(VC-B)220.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	YES (4)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 20.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 15.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	7.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	3.65 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	3.65 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.65 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.65 M.	I
I	- LENGTH OF FLARED SECTION	I	DERIVED: 0 PCU	I

SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	716.63		0.23		0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

Demand set: 2022 AM Base

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I
I	ARM	A	15.00	I	4.85	I
I	ARM	B	15.00	I	1.74	I
I	ARM	C	15.00	I	3.89	I

Demand set: 2022 AM Base

I I I I I	TIME	TURNING PROPORTIONS								
		I	TURNING COUNTS							I
			(PERCENTAGE OF H.V.S)							
			FROM/TO	ARM	A	ARM	B	ARM	C	
I	07.45 - 09.15	I		I		I		I		
I		I	ARM A	I	0.000	I	0.026	I	0.974	I
I		I		I	0.0	I	10.0	I	378.0	I
I		I		I	(0.0)	I	(0.0)	I	(2.6)	I
I		I		I		I		I		I
I		I	ARM B	I	0.158	I	0.000	I	0.842	I
I		I		I	22.0	I	0.0	I	117.0	I
I		I		I	(0.0)	I	(0.0)	I	(2.8)	I
I		I		I		I		I		I
I		I	ARM C	I	0.801	I	0.199	I	0.000	I
I		I		I	249.0	I	62.0	I	0.0	I
I		I		I	(4.8)	I	(1.8)	I	(0.0)	I
I		I		I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-C	1.47	10.05	0.146		0.00	0.17	2.5		0.12
B-A	0.28	6.01	0.046		0.00	0.05	0.7		0.17
C-AB	0.78	10.61	0.073		0.00	0.08	1.2		0.10
A-B	0.13								
A-C	4.74								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	1.75	9.81	0.179		0.17	0.22	3.2		0.12
B-A	0.33	5.75	0.057		0.05	0.06	0.9		0.18
C-AB	0.93	10.40	0.089		0.08	0.10	1.5		0.11
A-B	0.15								
A-C	5.66								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	2.15	9.49	0.226		0.22	0.29	4.2		0.14
B-A	0.40	5.39	0.075		0.06	0.08	1.2		0.20
C-AB	1.14	10.10	0.113		0.10	0.13	1.9		0.11
A-B	0.18								
A-C	6.94								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	2.15	9.49	0.226		0.29	0.29	4.4		0.14
B-A	0.40	5.39	0.075		0.08	0.08	1.2		0.20
C-AB	1.14	10.10	0.113		0.13	0.13	1.9		0.11
A-B	0.18								
A-C	6.94								

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	B-C	1.75	9.81	0.179		0.29	0.22	3.4		0.12	I
I	B-A	0.33	5.75	0.057		0.08	0.06	1.0		0.18	I
I	C-AB	0.93	10.40	0.089		0.13	0.10	1.5		0.11	I
I	A-B	0.15									I
I	A-C	5.66									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	B-C	1.47	10.04	0.146		0.22	0.17	2.6		0.12	I
I	B-A	0.28	6.01	0.046		0.06	0.05	0.7		0.17	I
I	C-AB	0.78	10.61	0.073		0.10	0.08	1.2		0.10	I
I	A-B	0.13									I
I	A-C	4.74									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

TIME	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.2
09.15	0.2

TIME	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

TIME	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I		STREAM	I	TOTAL DEMAND		I	* QUEUEING *		I	* INCLUSIVE QUEUEING *		I		
I			I			I	* DELAY *		I	* DELAY *		I		
I			I			I			I			I		
I			I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I		
I	B-C	I	161.0	I	107.4	I	20.2	I	0.13	I	20.2	I	0.13	I
I	B-A	I	30.3	I	20.2	I	5.6	I	0.19	I	5.6	I	0.19	I
I	C-AB	I	85.3	I	56.9	I	9.1	I	0.11	I	9.1	I	0.11	I
I	A-B	I	13.8	I	9.2	I		I		I		I		I
I	A-C	I	520.3	I	346.9	I		I		I		I		I
I	ALL	I	1153.4	I	769.0	I	35.0	I	0.03	I	35.0	I	0.03	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	716.63		0.23		0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	I	SCALE(%)	I
I	A	I	100	I		I
I	B	I	100	I		I
I	C	I	100	I		I

Demand set: 2022 PM Base

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
 LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

		NUMBER OF MINUTES FROM START WHEN			RATE OF FLOW (VEH/MIN)		
ARM		FLOW STARTS	TOP OF PEAK	FLOW STOPS	BEFORE	AT TOP	AFTER
		TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	B	15.00	45.00	75.00	5.26	7.89	5.26
ARM B	A	15.00	45.00	75.00	0.99	1.48	0.99
ARM C	I	15.00	45.00	75.00	7.00	10.50	7.00

Demand set: 2022 PM Base

I I I I I	TIME	TURNING PROPORTIONS									
		I I I	TURNING COUNTS							I I I	
			(PERCENTAGE OF H.V.S)								
			FROM/TO	ARM	A	ARM	B	ARM	C		
I	16.45 - 18.15	I	I	I	I	I	I	I	I		
I		I	ARM	A	I	0.000	I	0.119	I	0.881	I
I		I			I	0.0	I	50.0	I	371.0	I
I		I			I	(0.0)	I	(0.0)	I	(0.6)	I
I		I			I		I		I		I
I		I	ARM	B	I	0.342	I	0.000	I	0.658	I
I		I			I	27.0	I	0.0	I	52.0	I
I		I			I	(0.0)	I	(0.0)	I	(4.2)	I
I		I			I		I		I		I
I		I	ARM	C	I	0.902	I	0.098	I	0.000	I
I		I			I	505.0	I	55.0	I	0.0	I
I		I			I	(1.9)	I	(0.0)	I	(0.0)	I
I		I			I		I		I		I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD

2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	0.65	9.81	0.067		0.00	0.07	1.0		0.11
B-A	0.34	5.95	0.057		0.00	0.06	0.9		0.18
C-AB	0.69	10.73	0.064		0.00	0.07	1.0		0.10
A-B	0.63								
A-C	4.66								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	0.78	9.57	0.081		0.07	0.09	1.3		0.11
B-A	0.40	5.61	0.072		0.06	0.08	1.1		0.19
C-AB	0.82	10.50	0.079		0.07	0.08	1.3		0.10
A-B	0.75								
A-C	5.56								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	0.95	9.24	0.103		0.09	0.11	1.7		0.12
B-A	0.50	5.14	0.096		0.08	0.10	1.5		0.22
C-AB	1.01	10.17	0.099		0.08	0.11	1.6		0.11
A-B	0.92								
A-C	6.81								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	0.95	9.24	0.103		0.11	0.11	1.7		0.12
B-A	0.50	5.14	0.096		0.10	0.11	1.6		0.22
C-AB	1.01	10.17	0.099		0.11	0.11	1.6		0.11
A-B	0.92								
A-C	6.81								

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-C	0.78	9.57	0.081		0.11	0.09	1.4		0.11	I
I	B-A	0.40	5.61	0.072		0.11	0.08	1.2		0.19	I
I	C-AB	0.82	10.50	0.079		0.11	0.09	1.3		0.10	I
I	A-B	0.75									I
I	A-C	5.56									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-C	0.65	9.81	0.067		0.09	0.07	1.1		0.11	I
I	B-A	0.34	5.95	0.057		0.08	0.06	0.9		0.18	I
I	C-AB	0.69	10.73	0.064		0.09	0.07	1.0		0.10	I
I	A-B	0.63									I
I	A-C	4.66									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM B-A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I			I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I		I			I			I	(MIN/VEH)
I	B-C	I	71.6	I 47.7	I	8.2	I 0.11	I	8.2
I	B-A	I	37.2	I 24.8	I	7.2	I 0.19	I	7.2
I	C-AB	I	75.7	I 50.5	I	7.9	I 0.10	I	7.9
I	A-B	I	68.8	I 45.9	I		I	I	
I	A-C	I	510.7	I 340.4	I		I	I	
I	ALL	I	1459.0	I 972.7	I	23.3	I 0.02	I	23.3

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

TRL LIMITED

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CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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Run with file:-
"J:\10000\10000\10082_SchoolStreetThurnsco\engineering\Traffic_Programs\Picady\
School Street - Houghton Road.vpi"
(drive-on-the-left) at 10:57:10 on Thursday, 27 July 2017

RUN INFORMATION

RUN TITLE : School Street - Houghton Road
LOCATION : School Street, Thurnscoe
DATE : 25/07/17
CLIENT : Keepmoat Homes Ltd
ENUMERATOR : brett.littlewood [PC137]
JOB NUMBER : 10082
STATUS : Preliminary
DESCRIPTION :

MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA

MAJOR ROAD (ARM C) ----- MAJOR ROAD (ARM A)
I
I
I
I
I
I
MINOR ROAD (ARM B)

ARM A IS Houghton Road (W)
ARM B IS School Street
ARM C IS Houghton Road (E)

STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

GEOMETRIC DATA

I	DATA ITEM	I	MINOR ROAD B	I
I	TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	I	(W) 10.10 M.	I
I	CENTRAL RESERVE WIDTH	I	(WCR) 0.00 M.	I
I		I		I
I	MAJOR ROAD RIGHT TURN - WIDTH	I	(WC-B) 2.40 M.	I
I	- VISIBILITY	I	(VC-B)220.00 M.	I
I	- BLOCKS TRAFFIC (SPACES)	I	YES (4)	I
I		I		I
I	MINOR ROAD - VISIBILITY TO LEFT	I	(VB-C) 20.0 M.	I
I	- VISIBILITY TO RIGHT	I	(VB-A) 15.0 M.	I
I	- LANE 1 WIDTH	I	(WB-C) -	I
I	- LANE 2 WIDTH	I	(WB-A) -	I
I	WIDTH AT 0 M FROM JUNCTION	I	7.00 M.	I
I	WIDTH AT 5 M FROM JUNCTION	I	3.65 M.	I
I	WIDTH AT 10 M FROM JUNCTION	I	3.65 M.	I
I	WIDTH AT 15 M FROM JUNCTION	I	3.65 M.	I
I	WIDTH AT 20 M FROM JUNCTION	I	3.65 M.	I
I	- LENGTH OF FLARED SECTION	I	DERIVED: 0 PCU	I

SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	STREAM	C-B	I
I	0.00		0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	716.63		0.23		0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100		I
I	B	I	100		I
I	C	I	100		I

Demand set: 2022 AM Base

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.

LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I
I		I	FLOW STARTS	I	BEFORE	I
I		I	TO RISE	I	AT TOP	I
I		I	IS REACHED	I	OF PEAK	I
I		I	FALLING	I	PEAK	I
I	A	I	15.00	I	4.85	I
I	B	I	15.00	I	1.74	I
I	C	I	15.00	I	3.89	I

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-C	3.42	9.49	0.360		0.41	0.55	8.0		0.16
B-A	1.26	5.61	0.224		0.21	0.28	4.1		0.23
C-AB	1.41	10.39	0.136		0.12	0.16	2.3		0.11
A-B	0.48								
A-C	5.66								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-C	4.18	9.04	0.463		0.55	0.84	12.0		0.20
B-A	1.54	5.22	0.295		0.28	0.41	5.9		0.27
C-AB	1.72	10.07	0.171		0.16	0.20	3.1		0.12
A-B	0.59								
A-C	6.94								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-C	4.18	9.04	0.463		0.84	0.85	12.7		0.21
B-A	1.54	5.22	0.295		0.41	0.41	6.2		0.27
C-AB	1.72	10.07	0.171		0.20	0.21	3.1		0.12
A-B	0.59								
A-C	6.94								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-C	3.42	9.49	0.360		0.85	0.57	8.9		0.17
B-A	1.26	5.61	0.224		0.41	0.29	4.6		0.23
C-AB	1.41	10.39	0.136		0.21	0.16	2.4		0.11
A-B	0.48								
A-C	5.66								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-C	2.86	9.81	0.292		0.57	0.42	6.5		0.14
B-A	1.05	5.90	0.179		0.29	0.22	3.4		0.21
C-AB	1.18	10.62	0.111		0.16	0.13	1.9		0.11
A-B	0.40								
A-C	4.74								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.6 *
08.30	0.8 *
08.45	0.9 *
09.00	0.6 *
09.15	0.4

QUEUE FOR STREAM B-A	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

QUEUE FOR STREAM C-AB	
TIME	NO. OF
SEGMENT	VEHICLES
ENDING	IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I		I	* DELAY *	I	* DELAY *	I
I		I		I		I		I
I		I	(VEH)	I	(VEH/H)	I	(MIN)	I
I		I		I		I	(MIN/VEH)	I
I	B-C	I	313.8	I	209.2	I	54.0	I
I	B-A	I	115.6	I	77.1	I	27.2	I
I	C-AB	I	129.4	I	86.3	I	14.6	I
I	A-B	I	44.0	I	29.4	I		I
I	A-C	I	520.3	I	346.9	I		I
I	ALL	I	1465.9	I	977.3	I	95.9	I
I		I		I		I	0.07	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
 WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
 A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-C	STREAM	A-C	STREAM	A-B	I
I	0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	Slope For	Opposing	I
I	STREAM B-A	STREAM	A-C	STREAM	A-B	STREAM	C-A	I
I	0.00		0.00		0.00		0.00	I

* Due to the presence of a flare, data is not available

I	Intercept For	Slope For	Opposing	Slope For	Opposing	I
I	STREAM C-B	STREAM	A-C	STREAM	A-B	I
I	716.63		0.23		0.23	I

(NB These values do not allow for any site specific corrections)

TRAFFIC DEMAND DATA

I	ARM	I	FLOW	SCALE(%)	I
I	A	I	100	I	I
I	B	I	100	I	I
I	C	I	100	I	I

Demand set: 2022 PM Base

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM	A	15.00	I	45.00	I	75.00	I	5.26	I	7.89	I	5.26	I
I	ARM	B	15.00	I	45.00	I	75.00	I	0.99	I	1.48	I	0.99	I
I	ARM	C	15.00	I	45.00	I	75.00	I	7.00	I	10.50	I	7.00	I

Demand set: PM Development

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS FALLING	I	BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM	A	15.00	I	45.00	I	75.00	I	0.73	I	1.09	I	0.73	I
I	ARM	B	15.00	I	45.00	I	75.00	I	1.21	I	1.82	I	1.21	I
I	ARM	C	15.00	I	45.00	I	75.00	I	1.05	I	1.57	I	1.05	I

Demand set: 2022 PM Base

I	TIME	I	FROM/TO	I	ARM	A	I	ARM	B	I	ARM	C	I
I	16.45 - 18.15	I	ARM	I	A	I	0.000	I	0.119	I	0.881	I	I
I		I		I		I	0.0	I	50.0	I	371.0	I	I
I		I		I		I	(0.0)	I	(0.0)	I	(0.6)	I	I
I		I		I		I		I		I		I	I
I		I	ARM	I	B	I	0.342	I	0.000	I	0.658	I	I
I		I		I		I	27.0	I	0.0	I	52.0	I	I
I		I		I		I	(0.0)	I	(0.0)	I	(4.2)	I	I
I		I		I		I		I		I		I	I
I		I	ARM	I	C	I	0.902	I	0.098	I	0.000	I	I
I		I		I		I	505.0	I	55.0	I	0.0	I	I
I		I		I		I	(1.9)	I	(0.0)	I	(0.0)	I	I
I		I		I		I		I		I		I	I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

Demand set: PM Development

	TIME	TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
		FROM/TO	ARM	A	ARM	B	ARM	C	
16.45 - 18.15	ARM A	0.000	1.000	0.000					
		0.0	58.0	0.0					
		(0.0)	(0.0)	(0.0)					
	ARM B	0.361	0.000	0.639					
		35.0	0.0	62.0					
		(0.0)	(0.0)	(0.0)					
	ARM C	0.000	1.000	0.000					
		0.0	84.0	0.0					
		(0.0)	(0.0)	(0.0)					

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
THE PERCENTAGE OF HEAVY VEHICLES VARIES OVER TURNING MOVEMENTS

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR COMBINED DEMAND SETS
AND FOR TIME PERIOD

2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-C	1.43	9.75	0.147		0.00	0.17	2.5		0.12
B-A	0.78	5.68	0.137		0.00	0.16	2.2		0.20
C-AB	1.74	10.57	0.165		0.00	0.20	2.9		0.11
A-B	1.36								
A-C	4.66								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-C	1.71	9.44	0.181		0.17	0.22	3.2		0.13
B-A	0.93	5.28	0.176		0.16	0.21	3.0		0.23
C-AB	2.08	10.30	0.202		0.20	0.25	3.8		0.12
A-B	1.62								
A-C	5.56								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-C	2.09	9.00	0.233		0.22	0.30	4.4		0.14
B-A	1.14	4.72	0.241		0.21	0.31	4.5		0.28
C-AB	2.55	9.93	0.257		0.25	0.34	5.1		0.14
A-B	1.98								
A-C	6.81								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-C	2.09	8.99	0.233		0.30	0.30	4.5		0.15
B-A	1.14	4.72	0.241		0.31	0.31	4.7		0.28
C-AB	2.55	9.93	0.257		0.34	0.35	5.2		0.14
A-B	1.98								
A-C	6.81								

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	B-C	1.71	9.44	0.181		0.30	0.22	3.4		0.13	I
I	B-A	0.93	5.27	0.176		0.31	0.22	3.4		0.23	I
I	C-AB	2.08	10.30	0.202		0.35	0.26	3.8		0.12	I
I	A-B	1.62									I
I	A-C	5.56									I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	B-C	1.43	9.74	0.147		0.22	0.17	2.7		0.12	I
I	B-A	0.78	5.68	0.137		0.22	0.16	2.5		0.20	I
I	C-AB	1.74	10.57	0.165		0.26	0.20	3.0		0.11	I
I	A-B	1.36									I
I	A-C	4.66									I

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

TIME	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

TIME	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

TIME	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.3
17.45	0.3
18.00	0.3
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	STREAM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I
I		I			I	* DELAY *	I	* DELAY *	I
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)
I		I			I			I	(MIN/VEH)
I	B-C	I	156.9	I 104.6	I	20.7	I 0.13	I	20.7
I	B-A	I	85.3	I 56.9	I	20.3	I 0.24	I	20.3
I	C-AB	I	191.3	I 127.5	I	23.9	I 0.12	I	23.9
I	A-B	I	148.7	I 99.1	I	I	I	I	I
I	A-C	I	510.7	I 340.4	I	I	I	I	I
I	ALL	I	1788.0	I 1192.0	I	64.8	I 0.04	I	64.8

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*****END OF RUN*****

===== end of file =====

APPENDIX K

ARCADY – John Street / Station Road / Shepherd Lane / Houghton Road

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"j:\10000\10000\10082_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2022 AM.vai"
(drive-on-the-left) at 16:06:35 on Thursday, 27 July 2017

FILE PROPERTIES

RUN TITLE: Houghton Road-John Street-Station Road-Shepherd Lane
LOCATION: Thurnscoe
DATE: 27/07/17
CLIENT: Keepmoat Homes Ltd
ENUMERATOR: mark.devenish [PC119]
JOB NUMBER: 10082
STATUS: Preliminary
DESCRIPTION:

INPUT DATA

ARM A - John Street
ARM B - Station Road
ARM C - Shepherd Lane
ARM D - Houghton Road

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	(PCU/MIN)	I
I	ARM A	I	4.15	I	4.45	I	1.00	I	4.15	I	12.00	I	4.00	I	4.00	I	0.770	I	16.750	I
I	ARM B	I	3.50	I	4.50	I	6.00	I	3.50	I	15.00	I	6.00	I	-6.00	I	0.863	I	18.536	I
I	ARM C	I	3.50	I	4.45	I	1.00	I	3.50	I	15.00	I	6.00	I	2.00	I	0.641	I	14.485	I
I	ARM D	I	3.60	I	4.55	I	7.00	I	3.60	I	14.00	I	9.50	I	5.00	I	0.821	I	19.169	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

ARM	FLOW	SCALE(%)
A	100	
B	100	
C	100	
D	100	

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2022 AM Base

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	0.32	0.49	0.32
ARM B	15.00	45.00	75.00	4.04	6.06	4.04
ARM C	15.00	45.00	75.00	4.29	6.43	4.29
ARM D	15.00	45.00	75.00	7.68	11.51	7.68

DEMAND SET TITLE: 2022 AM Base

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.385	0.423	0.192
		0.0	10.0	11.0	5.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.006	0.000	0.461	0.533
		2.0	0.0	149.0	172.0
		(0.0)	(0.0)	(1.5)	(7.7)
	ARM C	0.041	0.490	0.000	0.469
		14.0	168.0	0.0	161.0
		(0.0)	(0.0)	(0.0)	(1.5)
	ARM D	0.015	0.656	0.329	0.000
		9.0	403.0	202.0	0.0
		(0.0)	(3.6)	(0.7)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	0.33	9.19	0.036	-	0.0	0.0	0.5	0.113
ARM B	4.05	15.44	0.263	-	0.0	0.4	5.1	0.088
ARM C	4.30	12.86	0.335	-	0.0	0.5	7.2	0.116
ARM D	7.70	16.85	0.457	-	0.0	0.8	11.9	0.108

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15								
ARM A	0.39	7.68	0.051	-	0.0	0.1	0.8	0.137
ARM B	4.84	14.99	0.323	-	0.4	0.5	6.9	0.098
ARM C	5.14	12.55	0.409	-	0.5	0.7	9.9	0.134
ARM D	9.20	16.48	0.558	-	0.8	1.2	17.8	0.136

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30								
ARM A	0.48	5.67	0.084	-	0.1	0.1	1.3	0.193
ARM B	5.93	14.39	0.412	-	0.5	0.7	10.0	0.118
ARM C	6.29	12.14	0.518	-	0.7	1.1	15.1	0.170
ARM D	11.27	15.99	0.704	-	1.2	2.3	31.8	0.205

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45								
ARM A	0.48	5.61	0.085	-	0.1	0.1	1.4	0.195
ARM B	5.93	14.37	0.412	-	0.7	0.7	10.4	0.118
ARM C	6.29	12.14	0.519	-	1.1	1.1	15.9	0.171
ARM D	11.27	15.98	0.705	-	2.3	2.3	34.7	0.212

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00								
ARM A	0.39	7.59	0.051	-	0.1	0.1	0.8	0.139
ARM B	4.84	14.96	0.323	-	0.7	0.5	7.4	0.099
ARM C	5.14	12.54	0.410	-	1.1	0.7	11.0	0.136
ARM D	9.20	16.47	0.559	-	2.3	1.3	20.4	0.140

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15								
ARM A	0.33	9.10	0.036	-	0.1	0.0	0.6	0.114
ARM B	4.05	15.41	0.263	-	0.5	0.4	5.5	0.088
ARM C	4.30	12.84	0.335	-	0.7	0.5	7.9	0.117
ARM D	7.70	16.83	0.458	-	1.3	0.9	13.3	0.110

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.5	
08.30	0.7	*
08.45	0.7	*
09.00	0.5	
09.15	0.4	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.7	*
08.30	1.1	*
08.45	1.1	*
09.00	0.7	*
09.15	0.5	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.2	*
08.30	2.3	**
08.45	2.3	**
09.00	1.3	*
09.15	0.9	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
ARM	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *				
			DELAY *		DELAY *				
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)			
A	35.8	23.9	5.4	0.15	5.4	0.15			
B	444.6	296.4	45.5	0.10	45.5	0.10			
C	472.1	314.7	66.9	0.14	66.9	0.14			
D	845.1	563.4	129.9	0.15	129.9	0.15			
ALL	1797.6	1198.4	247.7	0.14	247.8	0.14			

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

Printed at 16:06:44 on 27/07/2017]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"j:\10000\10000\10082_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2022 AM.vai"
(drive-on-the-left) at 16:07:12 on Thursday, 27 July 2017

FILE PROPERTIES

RUN TITLE: Houghton Road-John Street-Station Road-Shepherd Lane
LOCATION: Thurnscoe
DATE: 27/07/17
CLIENT: Keepmoat Homes Ltd
ENUMERATOR: mark.devenish [PC119]
JOB NUMBER: 10082
STATUS: Preliminary
DESCRIPTION:

INPUT DATA

ARM A - John Street
ARM B - Station Road
ARM C - Shepherd Lane
ARM D - Houghton Road

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																			T5	
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I		I		I		I		I		I		I		I		I		I	(PCU/MIN)	I
I	ARM A	I	4.15	I	4.45	I	1.00	I	4.15	I	12.00	I	4.00	I	4.00	I	0.770	I	16.750	I
I	ARM B	I	3.50	I	4.50	I	6.00	I	3.50	I	15.00	I	6.00	I	-6.00	I	0.863	I	18.536	I
I	ARM C	I	3.50	I	4.45	I	1.00	I	3.50	I	15.00	I	6.00	I	2.00	I	0.641	I	14.485	I
I	ARM D	I	3.60	I	4.55	I	7.00	I	3.60	I	14.00	I	9.50	I	5.00	I	0.821	I	19.169	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

----- T13

I	ARM	I	FLOW SCALE(%)	I
I	A	I	100	I
I	B	I	100	I
I	C	I	100	I
I	D	I	100	I

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2022 AM Base

----- T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	RATE OF FLOW (VEH/MIN) BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.32	I	0.49	I	0.32	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.04	I	6.06	I	4.04	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.29	I	6.43	I	4.29	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	7.68	I	11.51	I	7.68	I

DEMAND SET TITLE: Development AM

----- T15

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK	I	FLOW STOPS	I	RATE OF FLOW (VEH/MIN) BEFORE	I	AT TOP	I	AFTER	I
I		I	TO RISE	I	IS REACHED	I	FALLING	I	PEAK	I	OF PEAK	I	PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	0.20	I	0.30	I	0.20	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.20	I	0.30	I	0.20	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	1.48	I	2.21	I	1.48	I

DEMAND SET TITLE: 2022 AM Base

----- T33

I	TIME	I	FROM/T	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
I	07.45 - 09.15	I	ARM A	I	0.000	I	0.385	I	0.423	I	0.192	I
I		I		I	0.0	I	10.0	I	11.0	I	5.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I		I	ARM B	I	0.006	I	0.000	I	0.461	I	0.533	I
I		I		I	2.0	I	0.0	I	149.0	I	172.0	I
I		I		I	(0.0)	I	(0.0)	I	(1.5)	I	(7.7)	I
I		I	ARM C	I	0.041	I	0.490	I	0.000	I	0.469	I
I		I		I	14.0	I	168.0	I	0.0	I	161.0	I
I		I		I	(0.0)	I	(0.0)	I	(0.0)	I	(1.5)	I
I		I	ARM D	I	0.015	I	0.656	I	0.329	I	0.000	I
I		I		I	9.0	I	403.0	I	202.0	I	0.0	I
I		I		I	(0.0)	I	(3.6)	I	(0.7)	I	(0.0)	I
I		I		I		I		I		I		I

DEMAND SET TITLE: Development AM

T33

TURNING PROPORTIONS									
TURNING COUNTS									
(PERCENTAGE OF H.V.S)									
TIME	FROM/T	ARM A	ARM B	ARM C	ARM D				
07.45 - 09.15									
	ARM A	0.000	0.000	0.000	0.000				
		0.0	0.0	0.0	0.0				
		(0.0)	(0.0)	(0.0)	(0.0)				
	ARM B	0.000	0.000	0.000	1.000				
		0.0	0.0	0.0	16.0				
		(0.0)	(0.0)	(0.0)	(0.0)				
	ARM C	0.000	0.000	0.000	1.000				
		0.0	0.0	0.0	16.0				
		(0.0)	(0.0)	(0.0)	(0.0)				
	ARM D	0.000	0.619	0.381	0.000				
		0.0	73.0	45.0	0.0				
		(0.0)	(0.0)	(0.0)	(0.0)				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	0.33	8.06	0.040	-	0.0	0.0	0.6	0.129
ARM B	4.25	15.01	0.283	-	0.0	0.4	5.7	0.092
ARM C	4.50	12.73	0.354	-	0.0	0.5	7.8	0.121
ARM D	9.18	16.92	0.543	-	0.0	1.2	16.6	0.127

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15								
ARM A	0.39	6.33	0.062	-	0.0	0.1	0.9	0.168
ARM B	5.08	14.47	0.351	-	0.4	0.5	7.8	0.106
ARM C	5.38	12.40	0.434	-	0.5	0.8	10.9	0.142
ARM D	10.97	16.55	0.663	-	1.2	1.9	26.9	0.176

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30								
ARM A	0.48	4.09	0.117	-	0.1	0.1	1.8	0.277
ARM B	6.22	13.78	0.452	-	0.5	0.8	11.7	0.132
ARM C	6.59	11.96	0.551	-	0.8	1.2	17.0	0.184
ARM D	13.43	16.06	0.836	-	1.9	4.5	58.7	0.337

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45								
ARM A	0.48	3.96	0.121	-	0.1	0.1	2.0	0.287
ARM B	6.22	13.73	0.453	-	0.8	0.8	12.3	0.133
ARM C	6.59	11.95	0.551	-	1.2	1.2	18.1	0.186
ARM D	13.43	16.05	0.837	-	4.5	4.8	70.1	0.373

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	08.45-09.00										I
I	ARM A	0.39	6.14	0.063	- -	0.1	0.1	1.1	-	0.174	I
I	ARM B	5.08	14.40	0.353	- -	0.8	0.6	8.5	-	0.108	I
I	ARM C	5.38	12.39	0.434	- -	1.2	0.8	12.2	-	0.144	I
I	ARM D	10.97	16.53	0.663	- -	4.8	2.0	33.5	-	0.192	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)		AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	09.00-09.15										I
I	ARM A	0.33	7.94	0.041	- -	0.1	0.0	0.7	-	0.131	I
I	ARM B	4.25	14.97	0.284	- -	0.6	0.4	6.1	-	0.094	I
I	ARM C	4.50	12.72	0.354	- -	0.8	0.6	8.6	-	0.122	I
I	ARM D	9.18	16.90	0.543	- -	2.0	1.2	19.0	-	0.131	I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.1
08.30	0.1
08.45	0.1
09.00	0.1
09.15	0.0

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.4
08.15	0.5 *
08.30	0.8 *
08.45	0.8 *
09.00	0.6 *
09.15	0.4

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.8 *
08.30	1.2 *
08.45	1.2 *
09.00	0.8 *
09.15	0.6 *

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.2 *
08.15	1.9 **
08.30	4.5 *****
08.45	4.8 *****
09.00	2.0 **
09.15	1.2 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

											T75
I	ARM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I		I			I	* DELAY *	I	* DELAY *	I		
I		I			I		I		I		
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	I
I	A	I	35.8	I 23.9	I	7.1	I 0.20	I	7.1	I 0.20	I
I	B	I	466.6	I 311.1	I	52.2	I 0.11	I	52.2	I 0.11	I
I	C	I	494.1	I 329.4	I	74.6	I 0.15	I	74.6	I 0.15	I
I	D	I	1007.5	I 671.7	I	224.7	I 0.22	I	224.8	I 0.22	I
I	ALL	I	2004.1	I 1336.1	I	358.6	I 0.18	I	358.7	I 0.18	I

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

Printed at 16:07:29 on 27/07/2017]

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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IN NO WAY RELIEVED OF THEIR RESPONSIBILITY FOR THE CORRECTNESS OF THE SOLUTION

Run with file:-
"j:\10000\10000\10082_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2022 PM.vai"
(drive-on-the-left) at 16:03:54 on Thursday, 27 July 2017

FILE PROPERTIES

RUN TITLE: Houghton Road-John Street-Station Road-Shepherd Lane
LOCATION: Thurnscoe
DATE: 27/07/17
CLIENT: Keepmoat Homes Ltd
ENUMERATOR: mark.devenish [PC119]
JOB NUMBER: 10082
STATUS: Preliminary
DESCRIPTION:

INPUT DATA

ARM A - John Street
ARM B - Station Road
ARM C - Shepherd Lane
ARM D - Houghton Road

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

																			T5	
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	(PCU/MIN)	I
I	ARM A	I	4.15	I	4.45	I	1.00	I	4.15	I	12.00	I	4.00	I	4.00	I	0.770	I	16.750	I
I	ARM B	I	3.50	I	4.50	I	6.00	I	3.50	I	15.00	I	6.00	I	-6.00	I	0.863	I	18.536	I
I	ARM C	I	3.50	I	4.45	I	1.00	I	3.50	I	15.00	I	6.00	I	2.00	I	0.641	I	14.485	I
I	ARM D	I	3.60	I	4.55	I	7.00	I	3.60	I	14.00	I	9.50	I	5.00	I	0.821	I	19.169	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

----- T13

ARM	FLOW	SCALE(%)
A	100	
B	100	
C	100	
D	100	

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2022 PM Base

----- T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
ARM A	15.00	45.00	75.00	0.13	0.19	0.13
ARM B	15.00	45.00	75.00	8.09	12.13	8.09
ARM C	15.00	45.00	75.00	4.00	6.00	4.00
ARM D	15.00	45.00	75.00	5.29	7.93	5.29

DEMAND SET TITLE: 2022 PM Base

----- T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.400	0.400	0.200
		0.0	4.0	4.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.012	0.000	0.389	0.598
		8.0	0.0	252.0	387.0
		(0.0)	(0.0)	(1.3)	(2.5)
	ARM C	0.009	0.447	0.000	0.544
		3.0	143.0	0.0	174.0
		(0.0)	(0.0)	(0.0)	(1.5)
	ARM D	0.009	0.615	0.376	0.000
		4.0	260.0	159.0	0.0
		(0.0)	(1.7)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

----- T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	0.13	11.31	0.011	-	0.0	0.0	0.2	0.089
ARM B	8.12	16.43	0.494	-	0.0	1.0	13.7	0.118
ARM C	4.02	11.15	0.360	-	0.0	0.6	7.9	0.139
ARM D	5.31	17.42	0.305	-	0.0	0.4	6.3	0.082

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15								
ARM A	0.15	10.23	0.015	-	0.0	0.0	0.2	0.099
ARM B	9.69	16.08	0.603	-	1.0	1.5	21.2	0.155
ARM C	4.79	10.50	0.456	-	0.6	0.8	11.8	0.174
ARM D	6.34	17.10	0.371	-	0.4	0.6	8.5	0.093

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30								
ARM A	0.18	8.78	0.021	-	0.0	0.0	0.3	0.116
ARM B	11.87	15.62	0.760	-	1.5	3.0	40.4	0.254
ARM C	5.87	9.66	0.608	-	0.8	1.5	20.8	0.258
ARM D	7.76	16.69	0.465	-	0.6	0.9	12.5	0.112

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45								
ARM A	0.18	8.75	0.021	-	0.0	0.0	0.3	0.117
ARM B	11.87	15.61	0.760	-	3.0	3.1	45.4	0.266
ARM C	5.87	9.62	0.610	-	1.5	1.5	22.7	0.266
ARM D	7.76	16.68	0.465	-	0.9	0.9	12.9	0.112

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00								
ARM A	0.15	10.19	0.015	-	0.0	0.0	0.2	0.100
ARM B	9.69	16.08	0.603	-	3.1	1.6	24.8	0.162
ARM C	4.79	10.45	0.459	-	1.5	0.9	13.7	0.180
ARM D	6.34	17.08	0.371	-	0.9	0.6	9.2	0.093

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15								
ARM A	0.13	11.27	0.011	-	0.0	0.0	0.2	0.090
ARM B	8.12	16.42	0.494	-	1.6	1.0	15.5	0.122
ARM C	4.02	11.11	0.362	-	0.9	0.6	8.9	0.142
ARM D	5.31	17.39	0.305	-	0.6	0.4	6.8	0.083

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.0	*
08.15	1.5	*
08.30	3.0	***
08.45	3.1	***
09.00	1.6	**
09.15	1.0	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.8	*
08.30	1.5	*
08.45	1.5	**
09.00	0.9	*
09.15	0.6	*

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	0.9	*
08.45	0.9	*
09.00	0.6	*
09.15	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75									
ARM	TOTAL DEMAND	* QUEUEING *	* INCLUSIVE QUEUEING *						
		DELAY *	DELAY *						
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)			
A	13.8	9.2	1.4	0.10	1.4	0.10			
B	890.5	593.7	161.1	0.18	161.1	0.18			
C	440.5	293.6	85.9	0.19	85.9	0.20			
D	582.2	388.2	56.2	0.10	56.2	0.10			
ALL	1927.0	1284.7	304.6	0.16	304.6	0.16			

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

===== end of file =====

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-
"j:\10000\10000\10082_SchoolStreetThurnsco\engineering\Traffic_Programs\Arcady\2022 PM.vai"
(drive-on-the-left) at 16:02:34 on Thursday, 27 July 2017

FILE PROPERTIES

RUN TITLE: Houghton Road-John Street-Station Road-Shepherd Lane
LOCATION: Thurnscoe
DATE: 27/07/17
CLIENT: Keepmoat Homes Ltd
ENUMERATOR: mark.devenish [PC119]
JOB NUMBER: 10082
STATUS: Preliminary
DESCRIPTION:

INPUT DATA

ARM A - John Street
ARM B - Station Road
ARM C - Shepherd Lane
ARM D - Houghton Road

MINI-ROUNDABOUT GEOMETRIC DATA

JUNCTION IN LONDON
LIGHTING CONDITIONS : NORMAL
ROAD SURFACE CONDITION: NORMAL

T5																				
I	ARM	I	V (M)	I	E (M)	I	Lm(M)	I	Vm(M)	I	A (M)	I	K (M)	I	G (%)	I	SLOPE	I	INTERCEPT	I
I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	(PCU/MIN)	I
I	ARM A	I	4.15	I	4.45	I	1.00	I	4.15	I	12.00	I	4.00	I	4.00	I	0.770	I	16.750	I
I	ARM B	I	3.50	I	4.50	I	6.00	I	3.50	I	15.00	I	6.00	I	-6.00	I	0.863	I	18.536	I
I	ARM C	I	3.50	I	4.45	I	1.00	I	3.50	I	15.00	I	6.00	I	2.00	I	0.641	I	14.485	I
I	ARM D	I	3.60	I	4.55	I	7.00	I	3.60	I	14.00	I	9.50	I	5.00	I	0.821	I	19.169	I

V = approach half-width Lm = effective flare length A = distance between arms
E = entry width Vm = minimum approach half-width K= entry corner kerb line G=gradient over 50 m

TRAFFIC DEMAND DATA

Only sets included in the current run are shown

SCALING FACTORS

T13

ARM	FLOW	SCALE(%)
A	100	
B	100	
C	100	
D	100	

TIME PERIOD BEGINS(07.45)AND ENDS(09.15)

LENGTH OF TIME PERIOD -(90) MINUTES

LENGTH OF TIME SEGMENT - (15) MINUTES

DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE TURNING COUNT DATA

DEMAND SET TITLE: 2022 PM Base

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
A	15.00	45.00	75.00	0.13	0.19	0.13
B	15.00	45.00	75.00	8.09	12.13	8.09
C	15.00	45.00	75.00	4.00	6.00	4.00
D	15.00	45.00	75.00	5.29	7.93	5.29

DEMAND SET TITLE: Development PM

T15

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	TOP OF PEAK	FLOW STOPS	RATE OF FLOW (VEH/MIN) BEFORE	AT TOP	AFTER
	TO RISE	IS REACHED	FALLING	PEAK	OF PEAK	PEAK
A	15.00	45.00	75.00	0.00	0.00	0.00
B	15.00	45.00	75.00	0.52	0.79	0.52
C	15.00	45.00	75.00	0.52	0.79	0.52
D	15.00	45.00	75.00	0.82	1.24	0.82

DEMAND SET TITLE: 2022 PM Base

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.400	0.400	0.200
		0.0	4.0	4.0	2.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM B	0.012	0.000	0.389	0.598
		8.0	0.0	252.0	387.0
		(0.0)	(0.0)	(1.3)	(2.5)
	ARM C	0.009	0.447	0.000	0.544
		3.0	143.0	0.0	174.0
		(0.0)	(0.0)	(0.0)	(1.5)
	ARM D	0.009	0.615	0.376	0.000
		4.0	260.0	159.0	0.0
		(0.0)	(1.7)	(0.0)	(0.0)

DEMAND SET TITLE: Development PM

T33

		TURNING PROPORTIONS							
		TURNING COUNTS							
		(PERCENTAGE OF H.V.S)							
TIME	FROM/T	ARM A	ARM B	ARM C	ARM D				
07.45 - 09.15	ARM A	0.000	0.000	0.000	0.000				
		0.0	0.0	0.0	0.0				
		(0.0)	(0.0)	(0.0)	(0.0)				
	ARM B	0.000	0.000	0.000	1.000				
		0.0	0.0	0.0	42.0				
		(0.0)	(0.0)	(0.0)	(0.0)				
	ARM C	0.000	0.000	0.000	1.000				
		0.0	0.0	0.0	42.0				
		(0.0)	(0.0)	(0.0)	(0.0)				
	ARM D	0.000	0.621	0.379	0.000				
		0.0	41.0	25.0	0.0				
		(0.0)	(0.0)	(0.0)	(0.0)				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00								
ARM A	0.13	10.68	0.012	-	0.0	0.0	0.2	0.095
ARM B	8.65	16.19	0.534	-	0.0	1.1	16.0	0.130
ARM C	4.54	10.83	0.420	-	0.0	0.7	10.1	0.157
ARM D	6.14	17.44	0.352	-	0.0	0.5	7.8	0.088

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15								
ARM A	0.15	9.48	0.016	-	0.0	0.0	0.2	0.107
ARM B	10.32	15.79	0.654	-	1.1	1.8	25.9	0.180
ARM C	5.42	10.12	0.536	-	0.7	1.1	16.0	0.210
ARM D	7.33	17.13	0.428	-	0.5	0.7	10.8	0.102

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30								
ARM A	0.18	7.87	0.023	-	0.0	0.0	0.3	0.130
ARM B	12.64	15.25	0.829	-	1.8	4.3	56.0	0.341
ARM C	6.64	9.21	0.722	-	1.1	2.4	32.1	0.366
ARM D	8.97	16.73	0.536	-	0.7	1.1	16.4	0.128

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45								
ARM A	0.18	7.82	0.023	-	0.0	0.0	0.4	0.131
ARM B	12.64	15.24	0.830	-	4.3	4.5	66.6	0.377
ARM C	6.64	9.14	0.726	-	2.4	2.5	37.1	0.395
ARM D	8.97	16.70	0.537	-	1.1	1.1	17.2	0.129

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00								
ARM A	0.15	9.41	0.016	-	0.0	0.0	0.3	0.108
ARM B	10.32	15.77	0.654	-	4.5	2.0	32.1	0.195
ARM C	5.42	10.03	0.541	-	2.5	1.2	19.6	0.225
ARM D	7.33	17.09	0.429	-	1.1	0.8	11.8	0.103

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15								
ARM A	0.13	10.62	0.012	-	0.0	0.0	0.2	0.095
ARM B	8.65	16.17	0.535	-	2.0	1.2	18.4	0.135
ARM C	4.54	10.77	0.422	-	1.2	0.7	11.6	0.162
ARM D	6.14	17.41	0.352	-	0.8	0.5	8.4	0.089

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	1.1 *
08.15	1.8 **
08.30	4.3 ****
08.45	4.5 *****
09.00	2.0 **
09.15	1.2 *

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.7 *
08.15	1.1 *
08.30	2.4 **
08.45	2.5 ***
09.00	1.2 *
09.15	0.7 *

QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.5 *
08.15	0.7 *
08.30	1.1 *
08.45	1.1 *
09.00	0.8 *
09.15	0.5 *

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

											T75
I	ARM	I	TOTAL	DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I		I			I	* DELAY *	I	* DELAY *	I		
I		I			I			I			
I		I	(VEH)	(VEH/H)	I	(MIN)	(MIN/VEH)	I	(MIN)	(MIN/VEH)	
I	A	I	13.8	I 9.2	I	1.5	I 0.11	I	1.5	I 0.11	
I	B	I	948.4	I 632.2	I	215.0	I 0.23	I	215.1	I 0.23	
I	C	I	498.3	I 332.2	I	126.5	I 0.25	I	126.5	I 0.25	
I	D	I	673.1	I 448.7	I	72.4	I 0.11	I	72.4	I 0.11	
I	ALL	I	2133.5	I 1422.3	I	415.4	I 0.19	I	415.5	I 0.19	

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

END OF JOB

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