Access hdpc Ltd

Access Highway Design Planning Consultancy.

TRANSPORT ASSESSMENT IN SUPPORT

OF AN OUTLINE PLANNING APPLICATION

(PLANNING APPLICATION P/2014/0264)

PROPOSED DEVELOPMENT OF UP TO 70 DWELLINGS

AT LAND SOUTH OF ELLESMERE LANE PENLEY

Client: LLOYD STODDARD DEVELOPMENT
November 2013

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1 INTRODUCTION

1.1 Access hdpc have been commissioned by Bower Edleston Architects to produce a Transport Assessment to assist the Local Planning Authority's determination of an outline planning application for a residential development off Ellesmere Lane, Penley, Wrexham.

1.2 The application site is located on an undeveloped green field site adjacent to the west of Ellesmere Lane.

1.3 It is proposed to develop the site with up to 70 residential units. A single vehicular access is proposed via a new access off Ellesmere Lane. Details of the access design will be provided in Section 3 of the report.

1.3 Section 2 of the report will consider the existing site conditions and Sections 3 provides details of the proposed development.

1.4 The relevant planning polices for Highways are considered in Section 4 and the traffic impact of the site is described in Section 5 of the report.

1.5 The accessibility of the site is examined in Section 6 and details of the accident data is provided in Section 7.

2 EXISTING HIGHWAY CONDITIONS

2.1.1 The application site is located approximately half a kilometer south of Penley

2.1.2 The site is bound to the north by a farm access track and to south by Tudor Drive, further south is an existing residential development. To the west of the site is undeveloped land and the eastern boundary is Ellesmere Lane.

2.1.3 The site is an undeveloped site that does not have a current access to Ellesmere Lane, the farm access provides the current access to the land.

2.2 Existing Highway Network

2.2.1 To the east of the proposed development site, Ellesmere Road runs in an approximate north-south alignment that connects to the village centre and then to the existing residential development to the south of Tudor Drive.

2.2.2 Ellesmere Lane is generally around 7.3 metres wide with a single footway along the western side of the road. There is existing system lighting and Ellesmere Road is subject to a 30mph speed limit on the approaches to the proposed site access.

2.3 Baseline Transport Data

2.3.1 The site is undeveloped land and in this assessment it will be assumed that it does not generate any existing traffic.

3 PROPOSED DEVELOPMENT

3.1 Development Proposals

3.1.1 It is proposed to develop the site to provide up to 70 residential units. The residential development will comprise a mix of house types, 38 3 bed units, 27 2 bed units and 5 4/5 bed units. The final layout design will be provided in the reserved matters application.

3.1.2 An indicative site layout is provided

3.2 Vehicular Access

3.2.1 The site will be served by one point of access which will be taken from Ellesmere Lane.

3.2.2 The proposed site access junction is 5.5 metres wide with a footpath on both sides 2.0 metres wide. The junction radii on both sides of the access are 6m and include tactile crossing points. Visibility in both directions from the proposed access points are Manual for Streets compliant, providing splays of 2.4m x 43m. (See plan provided)

3.2.3 The proposed site access is shown on a Plan provided and the design of the access is suitable to serve a development consisting of 70 units.

3.3 Pedestrian and Cycle Access

3.3.1 Pedestrian and cycle access to the site is from the new proposed vehicular access to Ellesmere Lane, pedestrian access can also be gained from the existing public right of way that crosses the site and connects to Ellesmere Lane at its junction with Tudor Drive.

4 TRANSPORT PLANNING POLICY

4.1 National Policy

4.1.1 The relevant national policy documents are the National Planning Policy Framework (NPPF) published in March 2012 and the National Planning Practice Guidance (NPPG) published in April 2014. This guidance sets out the Government's planning policies to achieve sustainable development.

4.1.2 Paragraph 32 of the NPPF is relevant in which it states that all developments that generate significant amounts of movements should be supported by a Transport Statement of 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 limits 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.

5 TRAFFIC IMPACT ANALYSIS

5.1 Introduction

5.1.1 The proposed development consists of up to 70 units in total; the guidance thresholds in the DfT Guidance on Transport Assessments indicate that as the proposal is less than 80 units that either a Transport Statement or Transport Assessment would be applicable. In order to provide a robust assessment of the development impact a Transport Assessment has been undertaken. The following section of the report considers the traffic impact of the development proposals on the local highway network.

5.2 Traffic surveys

5.2.1 In order to assess the impact of the proposed development on the local highway network peak hour traffic surveys were undertaken at the junction on Ellesmere Lane and the A539. This is the only junction that has been modeled in this Transport Assessment as being necessary, the

scope of impact of the development was discussed with Wrexham County Borough Council the local highway authority.

5.2.2 The traffic survey data can be found at Appendix 1. The AM and PM peak hours were indentified as 0800 to 0900 hours and 1700 to 1800 hours.

5.3 Growthed Traffic Flows

5.3.1 In order to assess the traffic flows at the assumed year of opening 2017 and the future year assessment at 2022, a NTEM adjusted National Road Traffic Model growth factor was applied for Penley.

5.3.2 The resultant growth factors are;

- 2014 to 2017 AM Peak – 1.015
- 2014 to 2017 PM peak - 1.018
- 2014 to 2022 AM peak - 1.085
- 2014 to 2022 PM peak - 1.095

5.3.3 The resultant growthed traffic flows are shown in Figure for the 2017 weekday AM and PM peak periods and the 2022 growthed flows are shown in Figures 3 - 6

5.4 Committed Development

5.4.1 Following discussions with the local highway authority it was agreed that there are no local committed development sites that need to be taken account of in the Transport Assessment.

5.5 Base Flows

5.5.1 To calculate the 2017 Base Flows, the only addition is the growth rates as there are no committed development flows to be added in. Therefore, the resultant 2017 Base Flows for the weekday AM and PM peak periods are shown in Figures 3 and 4. The Base Flows for the future year 2022 AM and PM peaks are shown in Figures 5 and 6.

5.6 Trip Distribution

5.6.1 The directional trip distribution for the proposed development has been made to the current pattern of traffic flows on the local highway network.

5.6.2 The proposed distribution for the AM peak period is shown in Figure 7 whilst the proposed distribution for the PM Peak is shown in Figure 8

5.7 Trip Generation

5.7.1 In order to forecast the likely number of trips that a development of 70 units would generate the TRICS Version 7.1.1 database was analysed. Trip rates from all developments in the field' Residential – Houses privately owned within the range of 50 – 200 units were used. The full TRICS output can be seen at Appendix…

5.7.2 Given the rural location of the site, it is assumed that the majority of trips to and from the site will be car based. Therefore, in order to provide a robust assessment of the traffic impact 85%ile trips rates have been used.

5.7.3 The peak hour trip rates and forecast generation are shown in Table 1

Peak Hour	Trip Rates		Trip Generation	
	In	Out	In	Out
AM	0.174	0.548	12	38
PM	0.463	0.296	32	20

Table 1 - Forecast trip Generation 85%ile rates

5.7.4 The residential development of consisting of 70 units is forecast to generate a two-way flow of 50 trips in the AM peak and 52 trips in the PM peak hour.

5.7.5 In order to assign these development flows to the road network the trip distribution has been used and the resultant traffic flows are shown in Figure 9 and 10.

5.8 **With Development Flows**

5.8.1 To calculate the 2017 'With development' flows the Base Flows and Development Flows have been added together and similarly this has been done for the 2022 'With Development' flows. The resultant flows for both the opening year and future year can be seen in Figures 11, 12 13 and 14.

5.9 Capacity Assessments

5.9.1 In order to assess the operation of the junction, a capacity assessment has been undertaken at the following location;

- Ellesmere Lane/A539 – Priority Controlled Junction

5.9.2 Capacity Assessments were undertaken using the PICADY 5 program using the'With Development' flows for both the opening year 2017 and at 2022.

Arm	2017 Assessment Flows			
	AM		PM	
	RFC	MMQ	RFC	MMQ
Ellesmere Lane	0.094	0.1	0.148	0.2
A539 West	0.040	0.1	0.060	0.1
A539 East	0.0	0.0	0.0	0.0

Table 2 Summary of PICADY output for Ellesmere Lane/A539 2017

Arm	2022 Assessment Flows			
	AM		PM	
	RFC	MMQ	RFC	MMQ
Ellesmere Lane	0.148	0.2	0.116	0.2
A539 West	0.060	0.2	0.040	0.1
A539 East	0.0	0.0	0.0	0.0

Table 3 Summary of PICADY output for Ellesmere Lane/A539 2022

5.9.3 The capacity results shown in Tables 2 and 3 that the junction of Ellesmere Lane/A539 is forecast to operate well within it capacity limits in both AM and PM periods. The existing flows are very low indeed and the additional development flows can easily be accommodated at the junction and there are certainly no capacity problems that arise at the junction.

6.0 NON-CAR ACCESSIBILITY

6.1 Introduction

6.1.2 The NPPF places great emphasis on promoting sustainable development and make the most of the existing infrastructure and also the use of public transport and also walking and cycling.

6.1.3 Clearly, the location of the site is a rural location and there are very limited opportunities to use public transport for employment based trips and it is recognised that the accessibility of the site in this regard is not particularly good.

6.2 Access on Foot

6.2.1 It is likely that the primary pedestrian desire line will be to the north of the site towards various different amenities in Penley including the nearby school. A 1.8m footway is available of the development side of Ellesmere Lane and provides a direct route to Penley.

6.2.2 The Highways and Transportation (IHT) document 'Guildlines for Providing Journeys on Foot' identifies that a distance of 800 metres as the preferred maximum walking distance for town centres, with 2 kilometres as a maximum for commuting. Clearly, the village of Penley is well within walking distance of the site and the nearby Maelor School.

6.2.3 In summary, the site is linked to the existing footway network and is not situated in a remote location and is within easy walking distance of the comprehensive school and also the village of Penley. It is acknowledged that there are very few local amenities in the village.

6.3 Access by Cycle

6.3.1 An alternative mode of travel to the site can be achieved by cycle, over short distances cycling can replace car journeys and it is generally accepted that 5 km is an acceptable cycling distance.

6.3.2 The area surrounding the site lends itself to cycling as it's broadly flat and suitable for cycling, there are no identified cycle routes/paths in the vicinity of the site but traffic levels are low and on-carriageway cycling is possible. The internal layout of the site will ensure that vehicular speeds are low and as such would assist cycle accessibility.

6.3.3 In summary, the site can be considered accessible by cycle.

6.4 Access by Bus

6.4.1 The nearest bus stop to the site is located on the A539 near to the mini roundabout, there is a bus stop in both directions on the A539. There is safe pedestrian access to these bus stops via the existing pedestrian network.

6.4.2 The desirable walking distance to bus stops is generally accepted as 400 metres, both of these stops are within 400 metres walking distance of the site

Service	Route	Mon – Sat Frequency per hour				Sun
		AM Peak	Mid Day	PM Peak	Eve	
146	Wrexham- Marchweil – Penley - Whitchurch	1	1	1	0	0
146	Whitchurch – Penley – Marchweil - Wrexham	1	1	1	0	0

Existing Bus Services in Operation on the A539

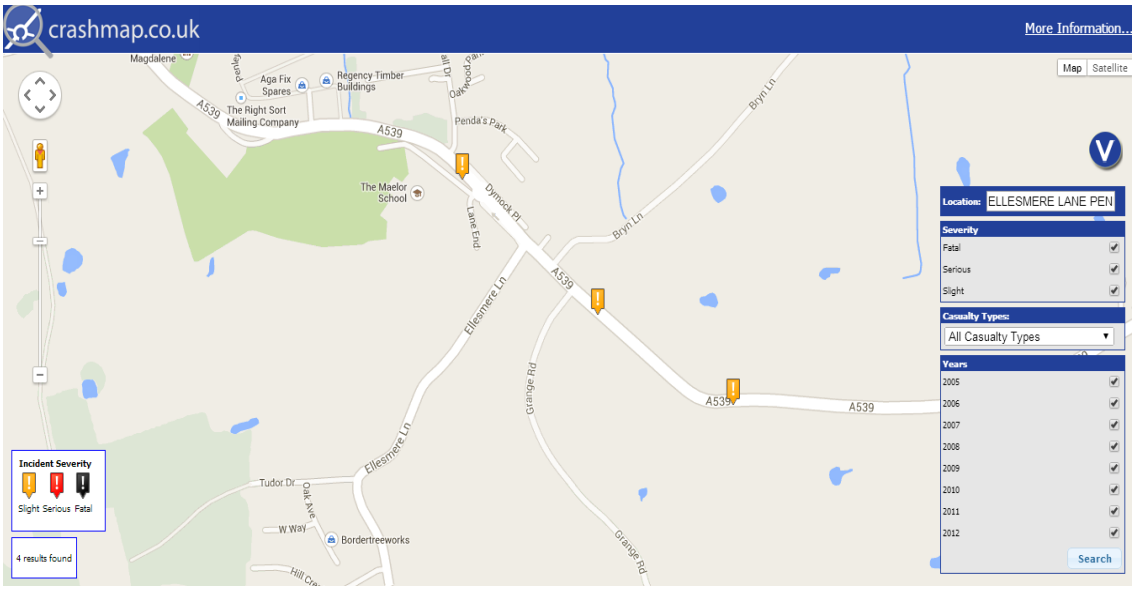
6.4.3 The above table indicates that there is a service to Wrexham from Penley that takes approximately 40 minutes and is only an hourly service in each direction. The bus services do operate within the peak hours in each direction and are capable of providing an alternative to car use but is limited in terms of frequency. However, the site can be considered accessible to public transport.

7.0 ACCIDENT ANALYSIS

7.1 Introduction

7.1.1 An accident data analysis has been carried out in the vicinity of the site which the proposed development will have an impact on. The number of accidents that have occurred in the general area of the site between 2007 and 2012 are listed below;

- A539 near to Lane End junction – Slight
- A539 near to Grange Road – Slight
- Ellesmere Lane near to Crossfield Wood – Slight



7.2 There have been three slight accidents recorded in the general area of the site and there are no accidents recorded at the site access and also at the junction of Ellesmere Lane and the A539.

7.2.1 It can be concluded that the local highway network in the vicinity of the site does not have an unduly poor safety record and is very unlikely that this situation would be materially worsened by the development proposals.

8.0 CONCLUSIONS

8.1.1 This report has assessed the transport impact of the proposed residential development off Ellesmere Lane. The following conclusions can be drawn regarding the development.

8.1.2 The proposed development will be accessed by a safe access design that complies with technical standards.

8.1.3 It has been demonstrated that the traffic associated with the development can be accommodated on the local highway network. The traffic flows are generally very low and well below their theoretical capacity and this applies to the junctions on the A539. The proposals will have a negligible impact on the local highway network and does not constitute a severe impact to warrant refusal as stated in the NPPF.

8.1.4 The site can be accessed easily by both walking and cycling and is connected to the existing infrastructure and provides an alternative mode of transport to the car to access the local school and the village centre. There are public transport services that operate on the A539 but it is accepted that this is a limited service but nevertheless it can provide an alternative to car trips. Overall it can be concluded that the site is sustainable.

8.1.5 Given the limited size of development it is not proposed that a Residential Travel Plan is required as this accords with the DfT guidance on Transport Assessments. However, if required a framework Travel Plan can be provided for the site and this can be a condition placed upon any subsequent planning approval.

8.1.6 The National Planning Policy Framework (NPPF) was published on 27 March 2012 which sets out government's planning policies for England and how these are expected to be applied. The Government's National Planning Policy Framework is clear that there is now a 'presumption in favor of sustainable development' at the heart of the planning system. For decision-takers this means: Where the development plan is absent, silent or relevant policies are out of date, granting permission unless:

8.1.7 Any adverse impacts of doing so would significantly and demonstrable outweigh the benefits, when assessed against the policies in the Framework taken as a whole; or The NPPF clearly seeks to boost the supply of high quality homes which address the issues of a rising population, which is living longer.

8.1.8 The National Planning Policy Framework states that, “Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe”, which this is clearly not.

8.1.9 Overall, the proposed development does not produce a residual cumulative impact on the road network and is considered acceptable in transport terms.

8.1.10 In light of information contained within this report, I am satisfied that the proposed access, to serve the application site off Chapel Street, can safely accommodate all vehicular and pedestrian movements and ask that the planning and highways authority support this application with a recommendation of approval.

Simon Boone

Highway Planning Engineer
Access highway design planning consultancy
simon.boone@accesshdpc.co.uk May 2014

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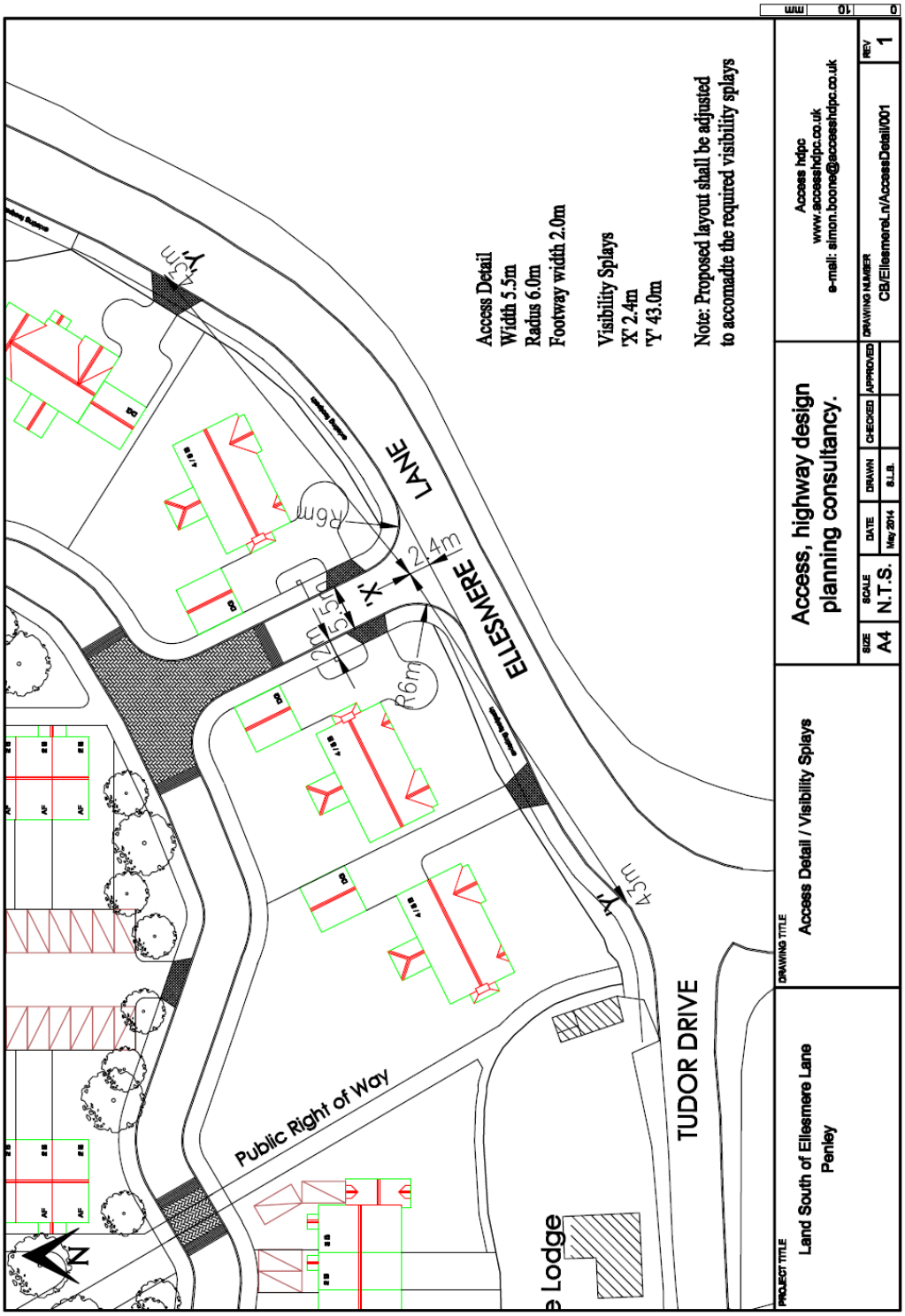
PLANS

Site Location Ellesmere Lane Penley

Site Location on Ellesmere Lane Penley

Access Detail Ellesmere Lane Penley



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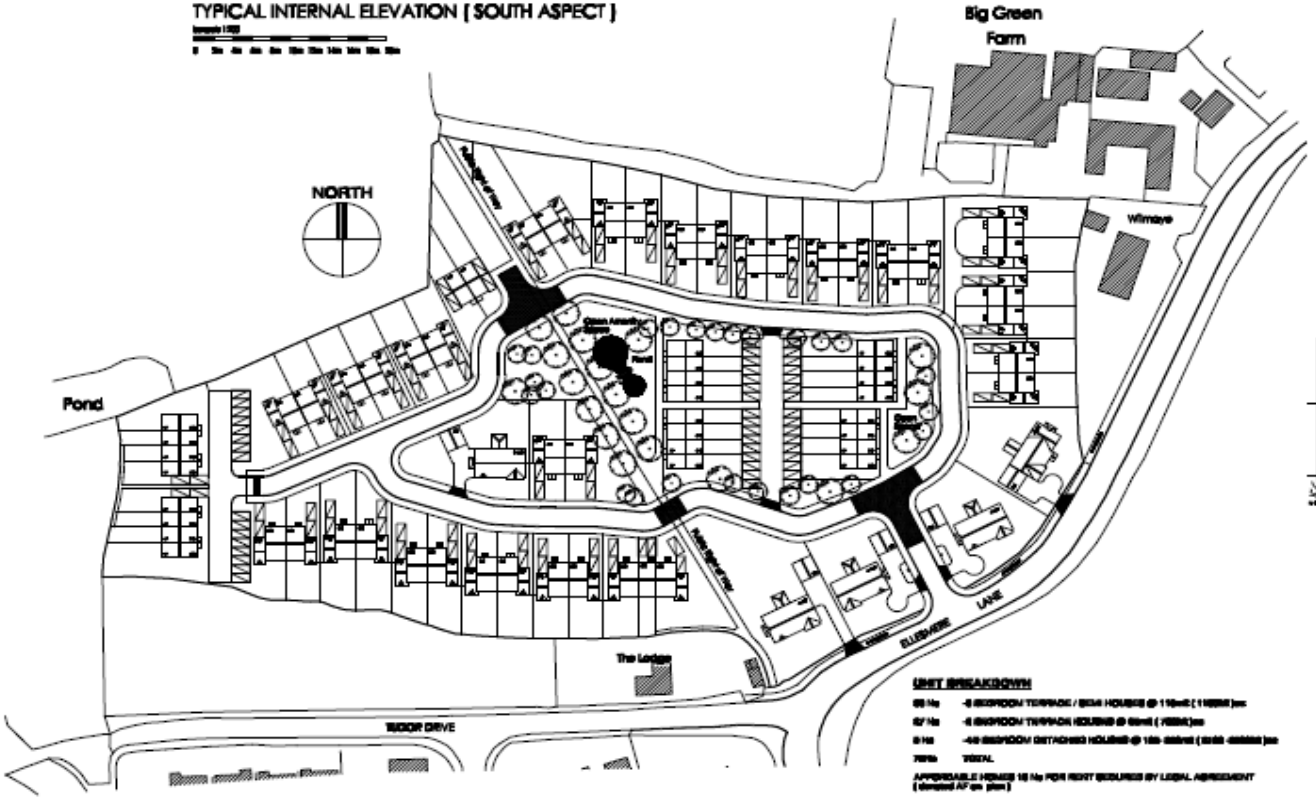
TYPICAL INTERNAL ELEVATION [SOUTH ASPECT]



BLOCK PLAN 1:500

PRELIMINARY

UNIT BREAKDOWN

LOCATION PLAN 1:2500

BOWER EDLESTON
ARCHITECTS
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LAND OFF ELLESMERE LANE, PENLEY

PROPOSED SITE LAYOUT

JAN 2014

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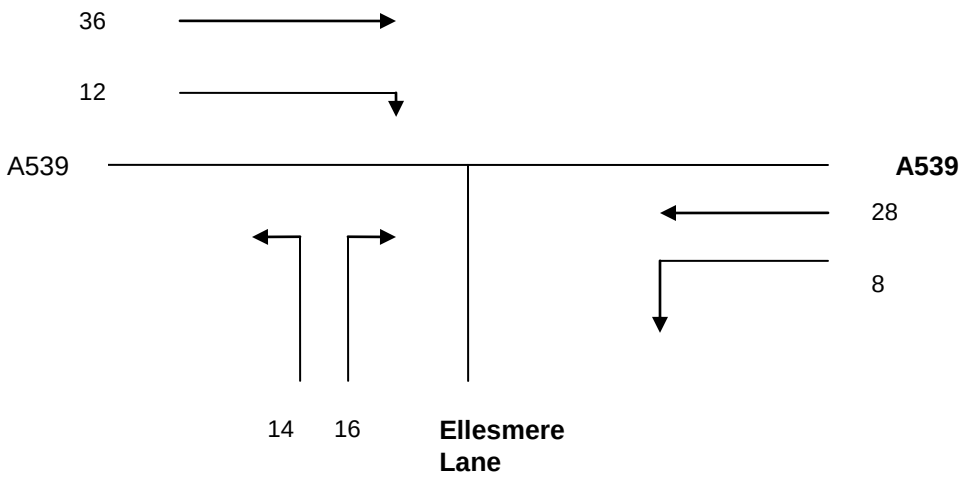

Project	Base Flows 2014	Drawing No.
Ellesmere Lane	AM Peak 0800 - 0900	Figure 1

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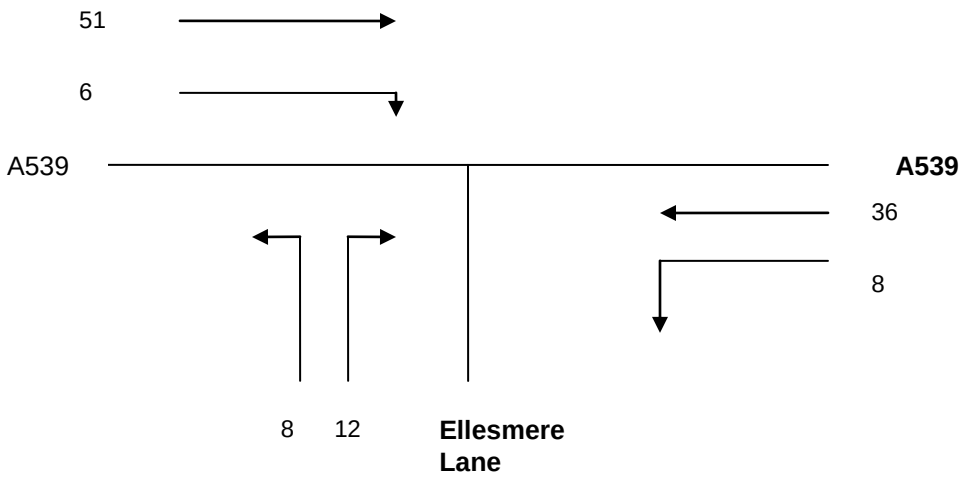

Project	Base Flows 2014	Drawing No.
Ellesmere Lane	PM Peak 1700 - 1800	Figure 2

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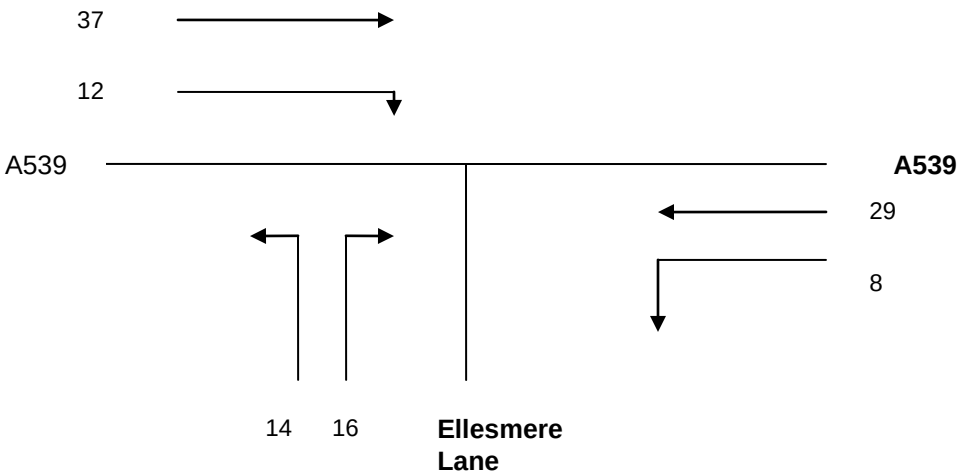

Project	Base Flows 2017	Drawing No.
Ellesmere Lane	**Growthed Flows AM Peak 0800 - 0900**	Figure 3

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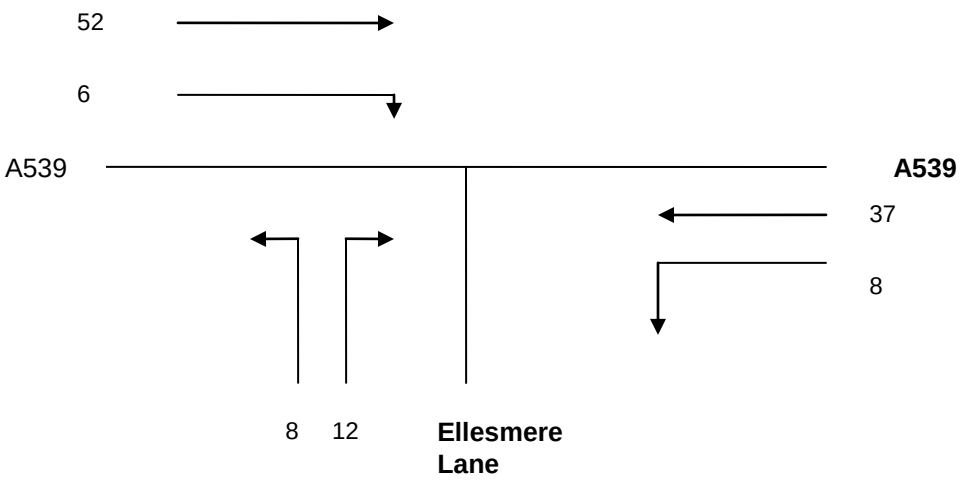

Project	Base Flows 2017	Drawing No.
Ellesmere Lane	Growthed Flows PM Peak 1700 - 1800	Figure 4

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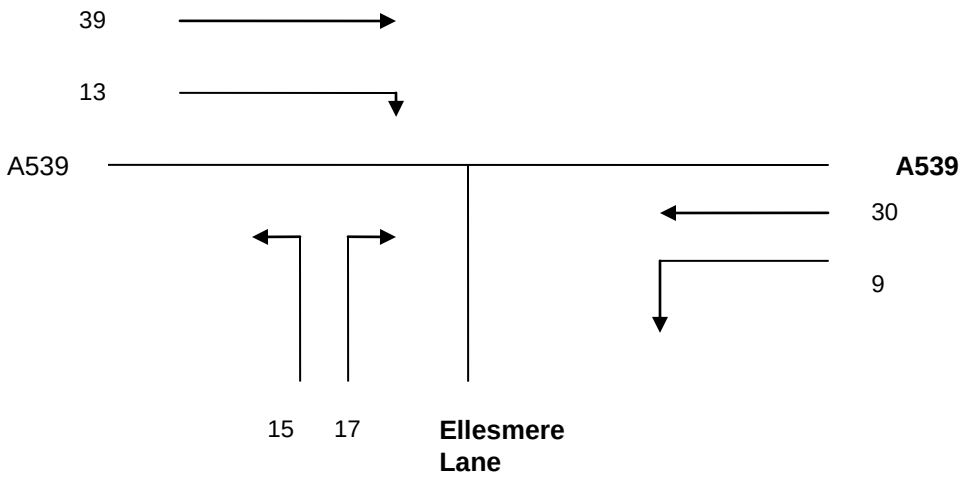

Project	Base Flows 2022	Drawing No.
Ellesmere Lane	**Growthed Flows AM Peak 0800 - 0900**	Figure 5

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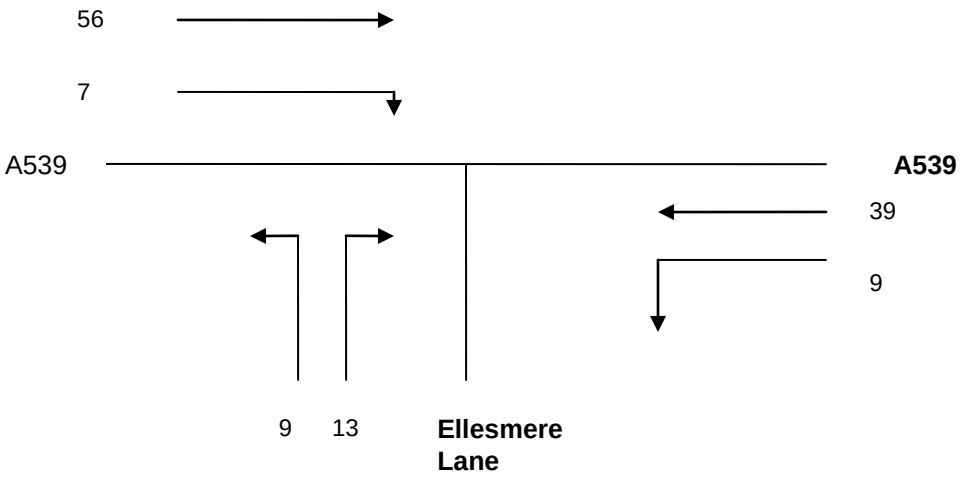
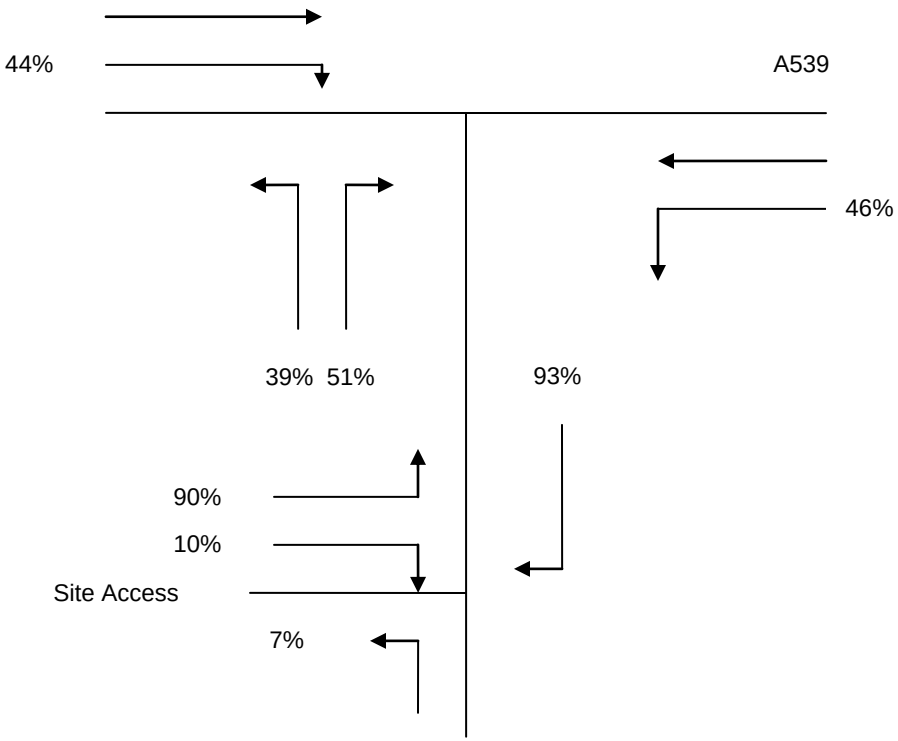
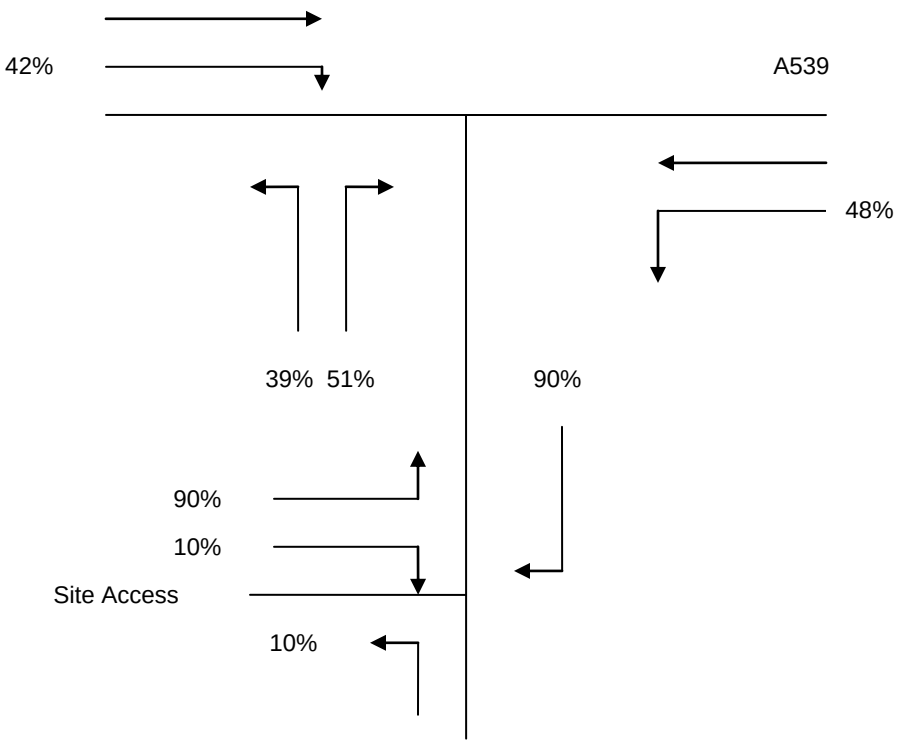


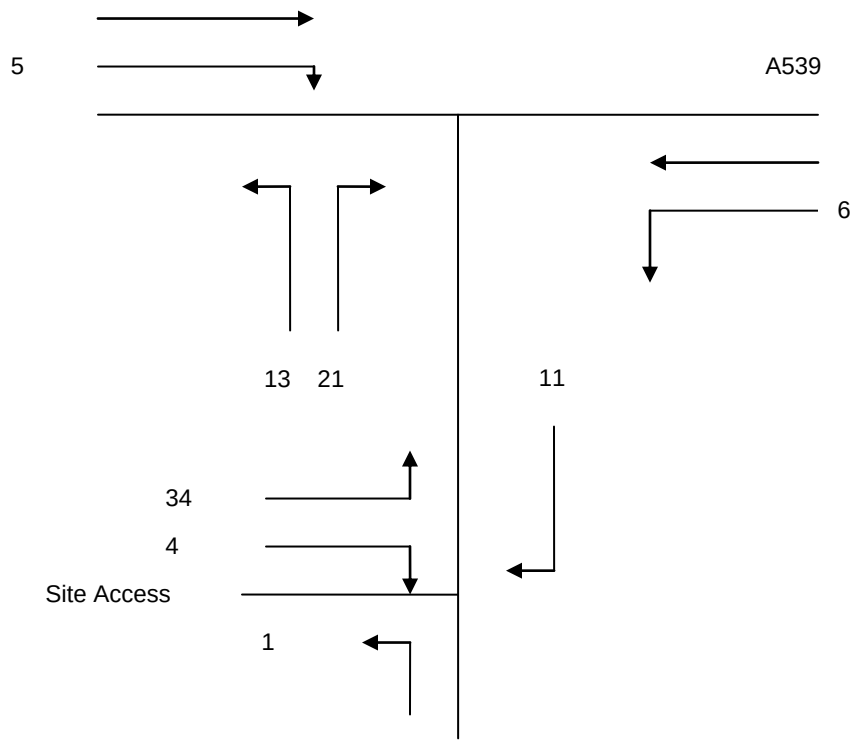
Project	Base Flows 2022	Drawing No.
Ellesmere Lane	Growthed Flows PM Peak 1700 - 1800	Figure 6



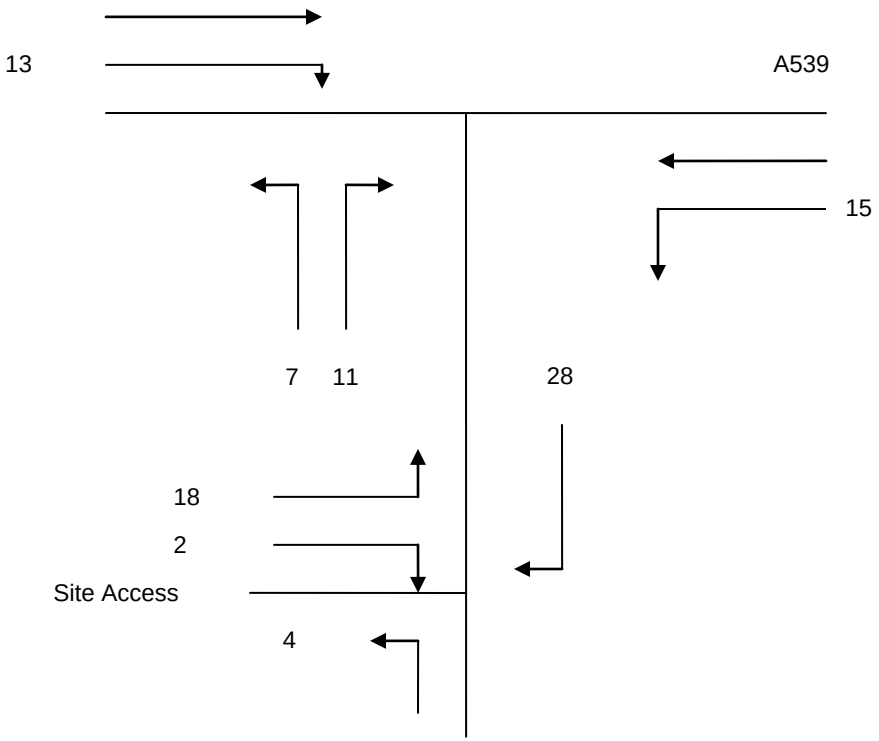
Project	Proposed Trip Distribution	Drawing No.
Ellesmere Lane	**AM Peak 0800 - 0900**	Figure 7



Project	Proposed Trip Distribution	Drawing No.
Ellesmere Lane	**PM Peak 1700 - 1800**	Figure 8



Project	Proposed Development Flows	Drawing No.
Ellesmere Lane	**AM Peak 0800 - 0900**	Figure 9



Project	Proposed Development Flows	Drawing No.
Ellesmere Lane	**PM Peak 1700 - 1800**	Figure 10

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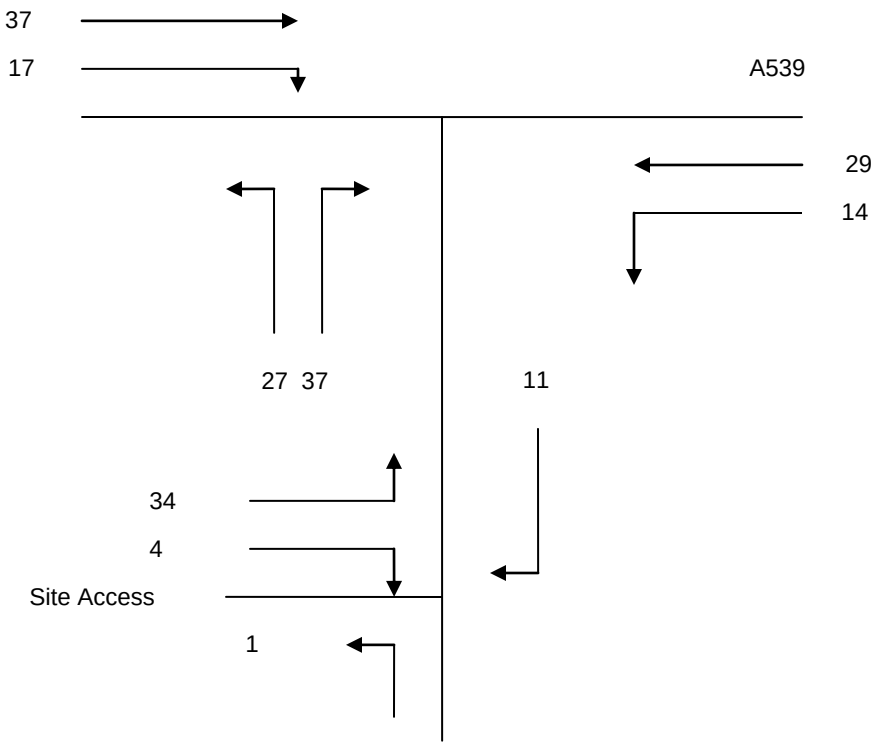

Project	With Development Flows 2017	Drawing No.
Ellesmere Lane	**AM Peak 0800 - 0900**	Figure 11

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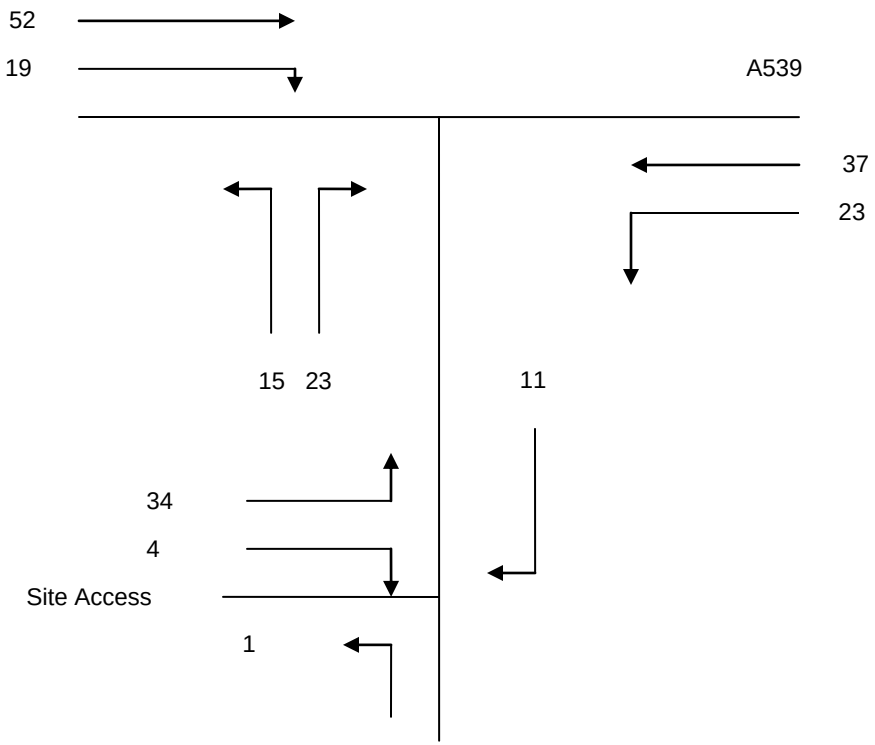

Project	With Development Flows 2017	Drawing No.
Ellesmere Lane	**PM Peak 1700 - 1800**	Figure 12

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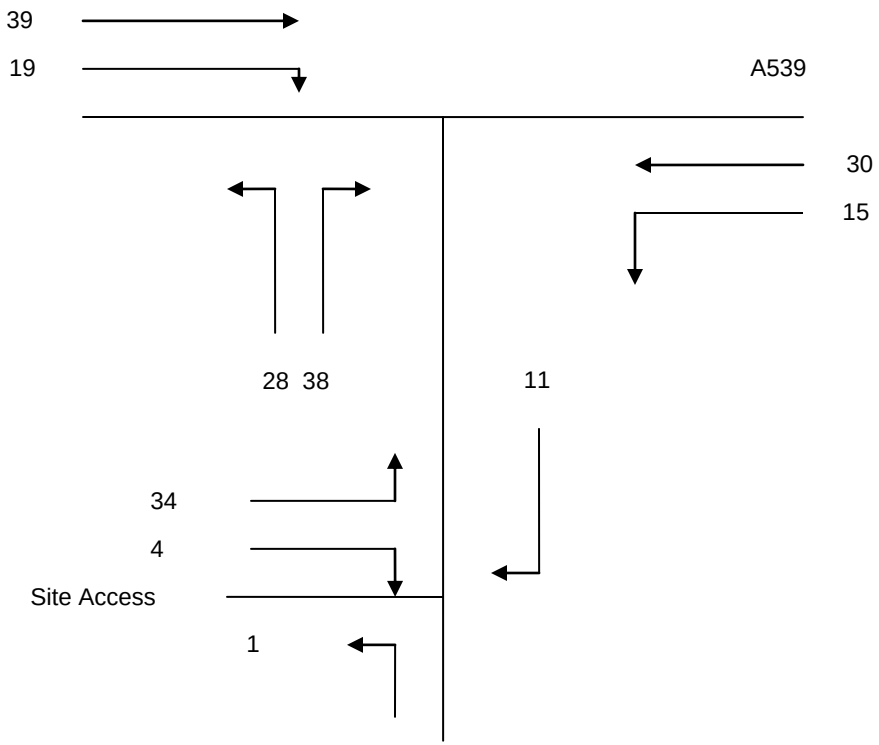

Project	With Development Flows 2022	Drawing No.
Ellesmere Lane	**AM Peak 0800 - 0900**	Figure 13

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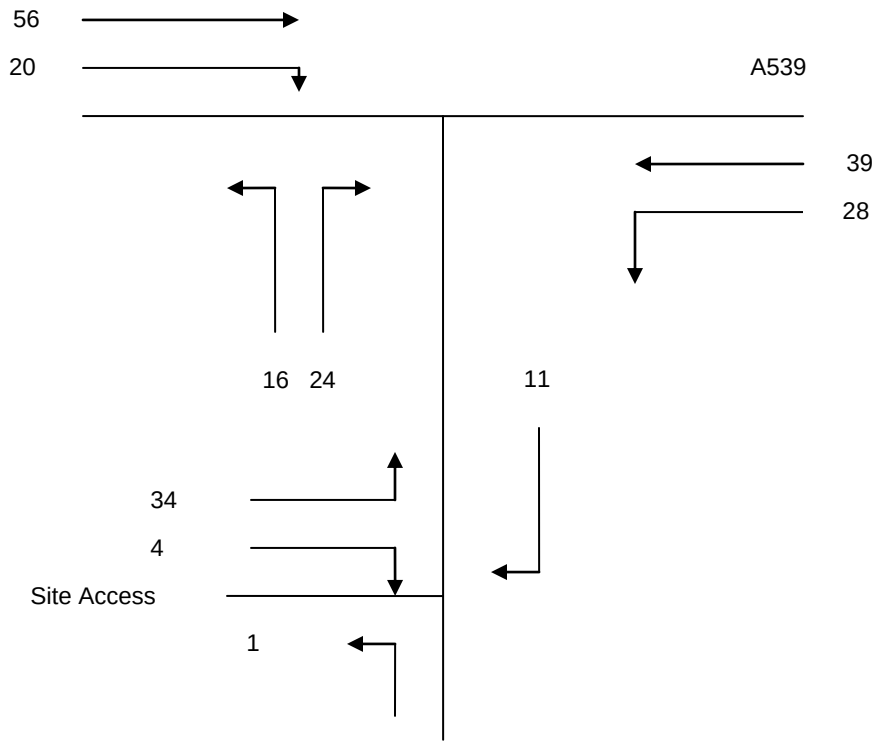

Project	With Development Flows 2022	Drawing No.
Ellesmere Lane	**PM Peak 1700 - 1800**	Figure 14

APPENDICIES

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  JOB NUMBER:
      STATUS:
 DESCRIPTION:

 .MAJOR/MINOR JUNCTION CAPACITY AND DELAY
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                                            MINOR ROAD (ARM B)

 ARM A IS A539 E
 ARM B IS Ellesmere Lane
 ARM C IS A539 W


 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
```

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TRL              TRL VIEWER    3.1 AD C:\Users\SellorA\Desktop\NJ Ellesmere Lane\Ellesemere Lane Priority Jn.vpo - Page 2
--------------------------------------------------------------------------------
 GEOMETRIC DATA
 --------------


 ----------------------------------------------------------------
 I                DATA ITEM                I   MINOR ROAD B    I
 ----------------------------------------------------------------
 I  TOTAL MAJOR ROAD CARRIAGEWAY WIDTH     I ( W  )  7.30 M.   I
 I  CENTRAL RESERVE WIDTH                  I (WCR )  0.00 M.   I
 I                                         I                   I
 I  MAJOR ROAD RIGHT TURN - WIDTH          I (WC-B)  2.20 M.   I
 I                        - VISIBILITY     I (VC-B)  60.0 M.   I
 I                        - BLOCKS TRAFFIC I         YES       I
 I                                         I                   I
 I  MINOR ROAD - VISIBILITY TO LEFT        I (VB-C)   0.0 M.   I
 I             - VISIBILITY TO RIGHT       I (VB-A)   0.0 M.   I
 I             - LANE 1 WIDTH              I (WB-C)  2.20 M.   I
 I             - LANE 2 WIDTH              I (WB-A)  0.00 M.   I
 ----------------------------------------------------------------


 .SLOPES AND INTERCEPT
 --------------------

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

 will be adjusted )
```

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--------------------------------------------------------------------------------
TRL              TRL VIEWER    3.1 AD C:\Users\SellorA\Desktop\NJ Ellesmere Lane\Ellesemere Lane Priority Jn.vpo - Page 3
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 -----------------------
 I ARM I FLOW SCALE(%) I
 -----------------------
 I A   I      100      I
 I B   I      100      I
 I C   I      100      I
 -----------------------

 Demand set: Ellesmere Lane/A539 Demand Set


 TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

 DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA


 ---------------------------------------------------------------------------
 I       I   NUMBER OF MINUTES FROM START WHEN    I   RATE OF FLOW (VEH/MIN) I
 I  ARM  I FLOW STARTS I TOP OF PEAK I FLOW STOPS I 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  0.93  I   1.39  I  0.93 I
 I ARM B I     15.00   I     45.00   I    75.00   I  0.71  I   1.07  I  0.71 I
 I ARM C I     15.00   I     45.00   I    75.00   I  1.04  I   1.56  I  1.04 I
 ---------------------------------------------------------------------------


 ---------------------------------------------------------------
 I                    I         TURNING PROPORTIONS        I
 I                    I         TURNING COUNTS (VEH/HR)    I
 I                    I        (PERCENTAGE OF H.V.S)       I
 I                    ---------------------------------------
 I        TIME        I FROM/TO I  ARM A I  ARM B I  ARM C I
 ---------------------------------------------------------------
 I   16.45 - 18.15    I         I        I        I        I
 I                    I  ARM A  I  0.000 I  0.473 I  0.527 I
```

TIME	FROM/TO	ARM A	ARM B	ARM C
		TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S)		
16.45 - 18.15	ARM A	0.000 0.0 (0.0)	0.473 35.0 (10.0)	0.527 39.0 (10.0)
	ARM B	0.544 31.0 (10.0)	0.000 0.0 (0.0)	0.456 26.0 (10.0)
	ARM C	0.663 55.0 (10.0)	0.337 28.0 (10.0)	0.000 0.0 (0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Ellesmere Lane/A539 Demand Set
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-AC	0.72	7.20	0.099		0.00	0.11	1.6		0.15
C-AB	0.38	9.48	0.040		0.00	0.05	0.7		0.11
C-A	0.66								
A-B	0.44								
A-C	0.49								

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-AC	0.85	7.15	0.119		0.11	0.13	2.0		0.16
C-AB	0.46	9.53	0.048		0.05	0.06	0.9		0.11
C-A	0.78								
A-B	0.52								
A-C	0.58								

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-AC	1.05	7.08	0.148		0.13	0.17	2.5		0.17
C-AB	0.57	9.60	0.060		0.06	0.07	1.1		0.11
C-A	0.95								
A-B	0.64								
A-C	0.72								

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-AC	1.05	7.08	0.148		0.17	0.17	2.6		0.17
C-AB	0.57	9.60	0.060		0.07	0.07	1.1		0.11
C-A	0.95								
A-B	0.64								
A-C	0.72								

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-AC	0.85	7.15	0.119		0.17	0.14	2.1		0.16
C-AB	0.46	9.53	0.048		0.07	0.06	0.9		0.11
C-A	0.78								
A-B	0.52								
A-C	0.58								

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-AC	0.72	7.20	0.099		0.14	0.11	1.7		0.15
C-AB	0.38	9.48	0.040		0.06	0.05	0.7		0.11
C-A	0.66								
A-B	0.44								
A-C	0.49								

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

QUEUE FOR STREAM B-AC

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-AB

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

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TRL              TRL VIEWER    3.1 AD C:\Users\SellorA\Desktop\NJ Ellesmere Lane\Ellesemere Lane Priority Jn.vp
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                 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  (VEH)   (VEH/H) I  (MIN)     (MIN/VEH) I    (MIN)      (MIN/VEH) I
-------------------------------------------------------------------------------
I  B-AC  I   78.5 I   52.3 I    12.4 I    0.16   I      12.4  I    0.16   I
I  C-AB  I   42.4 I   28.2 I     5.4 I    0.13   I       5.4  I    0.13   I
I  C-A   I   71.9 I   47.9 I         I           I            I           I
I  A-B   I   48.2 I   32.1 I         I           I            I           I
I  A-C   I   53.7 I   35.8 I         I           I            I           I
-------------------------------------------------------------------------------
I  ALL   I  294.6 I  196.4 I    17.8 I    0.06   I      17.8  I    0.06   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 PERIO
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD


END OF JOB

.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     573.96            0.21                0.08        I
-------------------------------------------------------


-------------------------------------------------------------------------------------------------------
I Intercept For Slope For Opposing   Slope For Opposing   Slope For Opposing   Slope For OpposingI
I Stream B-A     Stream  A-C          Stream A-B           Stream  C-A          Stream C-B       I
-------------------------------------------------------------------------------------------------------
I     439.58            0.19                0.08                  0.12                 0.27       I
-------------------------------------------------------------------------------------------------------


-------------------------------------------------------
I Intercept For Slope For Opposing   Slope For Opposing I
I Stream C-B     Stream  A-C          Stream A-B        I
-------------------------------------------------------
I     608.71            0.22                0.22        I
-------------------------------------------------------

NB These values do not allow for any site specific corrections


TRAFFIC DEMAND DATA
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RL              TRL VIEWER    3.1 AD C:\Users\SellorA\Desktop\NJ Ellesmere Lane\Ellesemere Lane Priority Jn.vpo - Page 1
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                                TRL LIMITED

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

                        PICADY 5.0  ANALYSIS PROGRAM
                           RELEASE 3.0        (JUNE 2006)

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Run with file:-
"C:\Users\SellorA\Desktop\NJ Ellesmere Lane\Ellesemere Lane Priority Jn.vpi"
drive-on-the-left ) at 12:50:17 on Monday, 2 June 2014


RUN INFORMATION
***************

  RUN TITLE: Ellesmere Lane / A539 20222
   LOCATION:
       DATE: 02/06/14
     CLIENT:
 ENUMERATOR:
 JOB NUMBER:
     STATUS:
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 A539 E
ARM B IS Ellesmere Lane
ARM C IS A539 W


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.
```

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TRL              TRL VIEWER    3.1 AD C:\Users\SellorA\Desktop\NJ Ellesmere Lane\Ellesemere Lane Priority Jn.vpo -
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```

GEOMETRIC DATA

DATA ITEM	MINOR ROAD B	
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	7.30 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.20 M.
- VISIBILITY	(VC-B)	60.0 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	0.0 M.
- VISIBILITY TO RIGHT	(VB-A)	0.0 M.
- LANE 1 WIDTH	(WB-C)	2.20 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

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

will be adjusted)

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
573.96	0.21	0.08

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
439.58	0.19	0.08	0.12	0.27

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
608.71	0.22	0.22

NB These values do not allow for any site specific corrections

TRAFFIC DEMAND DATA

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-------------------------------------------------------------------------------
RL              TRL VIEWER    3.1 AD C:\Users\SellorA\Desktop\NJ Ellesmere Lane\Ellesemere Lane Priority Jn.vpo - Page
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```

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

Demand set: Ellesmere Lane/A539 Demand Set

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

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

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	0.93	1.39	0.93
ARM B	15.00	45.00	75.00	0.71	1.07	0.71
ARM C	15.00	45.00	75.00	1.04	1.56	1.04

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.473	0.527
		0.0	35.0	39.0
		(0.0)	(10.0)	(10.0)
	ARM B	0.544	0.000	0.456
		31.0	0.0	26.0
		(10.0)	(0.0)	(10.0)
	ARM C	0.663	0.337	0.000
		55.0	28.0	0.0
		(10.0)	(10.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET Ellesmere Lane/A539 Demand Set
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-AC	0.72	7.20	0.099		0.00	0.11	1.6		0.15
C-AB	0.38	9.48	0.040		0.00	0.05	0.7		0.11
C-A	0.66								
A-B	0.44								
A-C	0.49								

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-AC	0.85	7.15	0.119		0.11	0.13	2.0		0.16
C-AB	0.46	9.53	0.048		0.05	0.06	0.9		0.11
C-A	0.78								
A-B	0.52								
A-C	0.58								

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TRL              TRL VIEWER    3.1 AD C:\Users\SellorA\Desktop\NJ Ellesmere Lane\Ellesemere Lane Priority Jn.vpo -
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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-AC	1.05	7.08	0.148		0.13	0.17	2.5		0.17
C-AB	0.57	9.60	0.060		0.06	0.07	1.1		0.11
C-A	0.95								
A-B	0.64								
A-C	0.72								

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-AC	1.05	7.08	0.148		0.17	0.17	2.6		0.17
C-AB	0.57	9.60	0.060		0.07	0.07	1.1		0.11
C-A	0.95								
A-B	0.64								
A-C	0.72								

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-AC	0.85	7.15	0.119		0.17	0.14	2.1		0.16
C-AB	0.46	9.53	0.048		0.07	0.06	0.9		0.11
C-A	0.78								
A-B	0.52								
A-C	0.58								

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-AC	0.72	7.20	0.099		0.14	0.11	1.7		0.15
C-AB	0.38	9.48	0.040		0.06	0.05	0.7		0.11
C-A	0.66								
A-B	0.44								
A-C	0.49								

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

QUEUE FOR STREAM B-AC

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-AB

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

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RL              TRL VIEWER    3.1 AD C:\Users\SellorA\Desktop\NJ Ellesmere Lane\Ellesemere Lane Priority Jn.vpo - Page
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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	78.5	52.3	12.4	0.16	12.4	0.16
C-AB	42.4	28.2	5.4	0.13	5.4	0.13
C-A	71.9	47.9				
A-B	48.2	32.1				
A-C	53.7	35.8				
ALL	294.6	196.4	17.8	0.06	17.8	0.06

```
* 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

.SLOPES AND INTERCEPT
---------------------

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

will be adjusted )
```

Intercept For Stream B-C	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
573.96	0.21	0.08

Intercept For Stream B-A	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B	Slope For Opposing Stream C-A	Slope For Opposing Stream C-B
439.58	0.19	0.08	0.12	0.27

Intercept For Stream C-B	Slope For Opposing Stream A-C	Slope For Opposing Stream A-B
608.71	0.22	0.22

```
NB These values do not allow for any site specific corrections


TRAFFIC DEMAND DATA
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```

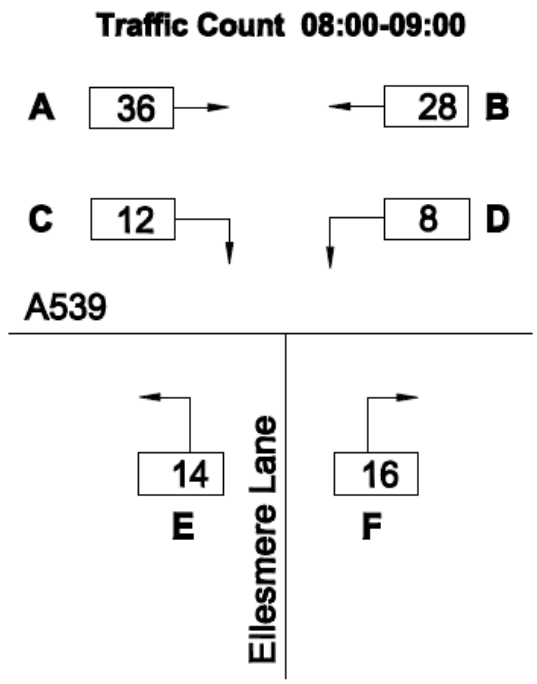

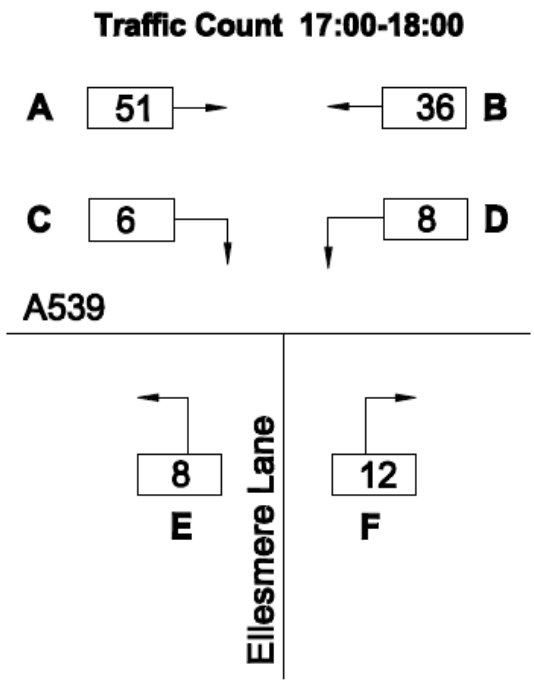

Access HDPC	PROJECT TITLE: Picardy Traffic Counts A539 jct Ellesmere Lane Penley	DRAWING TITLE: Traffic Count Data AM and PM PEAK
	SIZE: A4 · SCALE · DATE · DRAWN: S.S. · CHECKED · APPROVED	DRAWING NUMBER: C:\S.A539\EllesmereLnTrafficFlowDataAmPmN001 · REV

0 10 mm

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	**SOUTH EAST**		
	HF	HERTFORDSHIRE	1 days
03	**SOUTH WEST**		
	CW	CORNWALL	1 days
	DC	DORSET	1 days
	WL	WILTSHIRE	1 days
04	**EAST ANGLIA**		
	NF	NORFOLK	1 days
	SF	SUFFOLK	2 days
05	**EAST MIDLANDS**		
	LN	LINCOLNSHIRE	2 days
	NR	NORTHAMPTONSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	2 days
	WM	WEST MIDLANDS	2 days
	WO	WORCESTERSHIRE	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	3 days
08	**NORTH WEST**		
	CH	CHESHIRE	3 days
	LC	LANCASHIRE	1 days
09	**NORTH**		
	CB	CUMBRIA	1 days
10	**WALES**		
	CF	CARDIFF	1 days
11	**SCOTLAND**		
	AD	ABERDEEN CITY	1 days
	EA	EAST AYRSHIRE	1 days
	FA	FALKIRK	1 days
	FI	FIFE	2 days
	HI	HIGHLAND	2 days
	SR	STIRLING	1 days

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

Filtering Stage 2 selection:

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

Parameter:	Number of dwellings
Actual Range:	51 to 196 (units:)
Range Selected by User:	50 to 200 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/05 to 29/05/13

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

Selected survey days:

Monday	10 days
Tuesday	6 days
Wednesday	4 days
Thursday	1 days
Friday	7 days
Saturday	1 days
Sunday	4 days

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

Selected survey types:

Manual count	33 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	19
Edge of Town	14

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	28
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.

Filtering Stage 3 selection:

Use Class:

C3	33 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®.

Filtering Stage 3 selection (Cont.):

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	7 days
10,001 to 15,000	5 days
15,001 to 20,000	10 days
20,001 to 25,000	5 days
25,001 to 50,000	4 days

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

Population within 5 miles:

5,001 to 25,000	2 days
25,001 to 50,000	6 days
50,001 to 75,000	3 days
75,001 to 100,000	3 days
100,001 to 125,000	8 days
125,001 to 250,000	8 days
250,001 to 500,000	3 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	10 days
1.1 to 1.5	21 days
1.6 to 2.0	1 days

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

Travel Plan:

No	33 days

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

LIST OF SITES relevant to selection parameters

1 **AD-03-A-01** **SEMI-DETACHED** **ABERDEEN CITY**
SPRINGFIELD ROAD

ABERDEEN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 59
Survey date: FRIDAY *18/05/12* *Survey Type: MANUAL*

2 **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*

3 **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*

4 **CH-03-A-02** **HOUSES/FLATS** **CHESHIRE**
SYDNEY ROAD

CREWE
Edge of Town
Residential Zone
Total Number of dwellings: 174
Survey date: TUESDAY *14/10/08* *Survey Type: MANUAL*

5 **CH-03-A-03** **SEMI-DETACHED** **CHESHIRE**
SPRING GARDENS

CREWE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 80
Survey date: SUNDAY *19/10/08* *Survey Type: MANUAL*

6 **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*

7 **CW-03-A-02** **SEMI D./DETATCHED** **CORNWALL**
BOSVEAN GARDENS

TRURO
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 73
Survey date: TUESDAY *18/09/07* *Survey Type: MANUAL*

8 **DC-03-A-01** **DETACHED** **DORSET**
ISAACS CLOSE

POOLE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 51
Survey date: WEDNESDAY *16/07/08* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 EA-03-A-02 DETATCHED EAST AYRSHIRE
DALRY ROAD

STEWARTON
Edge of Town
Residential Zone
Total Number of dwellings: 65
Survey date: SUNDAY *22/06/08* *Survey Type: MANUAL*

10 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*

11 FI-03-A-02 SEMI DETACHED FIFE
WAROUT ROAD

GLENROTHES
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 58
Survey date: MONDAY *16/05/05* *Survey Type: MANUAL*

12 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*

13 HF-03-A-02 HOUSES HERTFORDSHIRE
BLACK FAN ROAD
PANSHANGER
WELWYN GARDEN CITY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 195
Survey date: SUNDAY *20/07/08* *Survey Type: MANUAL*

14 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*

15 HI-03-A-14 SEMI-DETACHED HIGHLAND
CALEDONIAN ROAD
DALNEIGH
INVERNESS
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 73
Survey date: FRIDAY *13/05/11* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

16 **LC-03-A-22** **BUNGALOWS** **LANCASHIRE**
CLIFTON DRIVE NORTH

BLACKPOOL
Edge of Town
Residential Zone
Total Number of dwellings: 98
Survey date: TUESDAY *18/10/05* *Survey Type: MANUAL*

17 **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*

18 **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*

19 **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*

20 **NR-03-A-01** **HOUSES** **NORTHAMPTONSHIRE**
BOUGHTON GREEN ROAD
KINGSTHORPE
NORTHAMPTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 102
Survey date: SATURDAY *22/09/12* *Survey Type: MANUAL*

21 **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*

22 **NY-03-A-01** **MIXED HOUSES** **NORTH YORKSHIRE**
GRAMMAR SCHOOL LANE

NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 52
Survey date: TUESDAY *25/09/07* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

23 NY-03-A-05 HOUSES AND FLATS NORTH YORKSHIRE
BOROUGHBRIDGE ROAD

RIPON
Edge of Town
No Sub Category
Total Number of dwellings: 71
Survey date: MONDAY 22/09/08 Survey Type: MANUAL

24 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

25 SF-03-A-01 SEMI DETACHED SUFFOLK
A1156 FELIXSTOWE ROAD
RACECOURSE
IPSWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 77
Survey date: WEDNESDAY 23/05/07 Survey Type: MANUAL

26 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

27 SH-03-A-02 DETATCHED SHROPSHIRE
GATCOMBE WAY
PRIORSLEE
TELFORD
Edge of Town
Residential Zone
Total Number of dwellings: 57
Survey date: SUNDAY 21/06/09 Survey Type: MANUAL

28 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

29 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

LIST OF SITES relevant to selection parameters (Cont.)

30 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

31 WM-03-A-01 TERRACED WEST MIDLANDS
FOLESHILL ROAD
FOLESHILL
COVENTRY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 79
Survey date: FRIDAY 03/02/06 Survey Type: MANUAL

32 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

33 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

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.

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES

Ranking Type: **TOTALS** Time Range: 08:00-09:00
15th Percentile = No. **28**
85th Percentile = No. **6**

Median Values		Mean Values	
Arrivals:	0.096	Arrivals:	0.129
Departures:	0.400	Departures:	0.342
Totals:	0.496	Totals:	0.470

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals) Arrivals	Departures	Totals	Travel Plan
1	FI-03-A-02	SEMI DETACHED	GLENROTHES	FIFE	58	Mon	16/05/05	0.276	0.569	0.845	
2	SR-03-A-01	DETACHED	STIRLING	STIRLING	115	Mon	23/04/07	0.165	0.678	0.843	
3	WO-03-A-03	DETACHED	KIDDERMINSTER	WORCESTERSHIRE	138	Fri	05/05/06	0.203	0.543	0.746	
4	SH-03-A-04	TERRACED	SHREWSBURY	SHROPSHIRE	108	Thu	11/06/09	0.287	0.454	0.741	
5	WM-03-A-03	MIXED HOUSING	COVENTRY	WEST MIDLANDS	84	Mon	24/09/07	0.321	0.405	0.726	
6	**FI-03-A-03**	**MIXED HOUSES**	**DUNFERMLINE**	**FIFE**	**155**	**Mon**	**30/04/07**	**0.174**	**0.548**	**0.722**	
7	SF-03-A-03	MIXED HOUSES	BURY ST EDMUNDS	SUFFOLK	101	Mon	15/05/06	0.109	0.554	0.663	
8	LN-03-A-01	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	150	Tue	15/05/07	0.187	0.440	0.627	
9	LN-03-A-02	MIXED HOUSES	LINCOLN	LINCOLNSHIRE	186	Mon	14/05/07	0.183	0.425	0.608	
10	NY-03-A-05	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.113	0.465	0.578	
11	WM-03-A-01	TERRACED	COVENTRY	WEST MIDLANDS	79	Fri	03/02/06	0.152	0.418	0.570	
12	HI-03-A-11	BUNGALOWS	INVERNESS	HIGHLAND	85	Mon	05/06/06	0.129	0.424	0.553	
13	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.183	0.366	0.549	
14	CF-03-A-02	MIXED HOUSES	CARDIFF	CARDIFF	196	Fri	05/10/07	0.107	0.413	0.520	
15	SF-03-A-01	SEMI DETACHED	IPSWICH	SUFFOLK	77	Wed	23/05/07	0.104	0.416	0.520	
16	LC-03-A-22	BUNGALOWS	BLACKPOOL	LANCASHIRE	98	Tue	18/10/05	0.173	0.337	0.510	
17	NY-03-A-06	BUNGALOWS & SE	BOROUGHBRIDGE	NORTH YORKSHIRE	115	Fri	14/10/11	0.096	0.400	0.496	
18	CH-03-A-02	HOUSES/FLATS	CREWE	CHESHIRE	174	Tue	14/10/08	0.103	0.374	0.477	
19	DC-03-A-01	DETACHED	POOLE	DORSET	51	Wed	16/07/08	0.098	0.373	0.471	
20	NF-03-A-02	HOUSES & FLATS	NORWICH	NORFOLK	98	Mon	22/10/12	0.122	0.347	0.469	
21	CW-03-A-02	SEMI D./DETATC	TRURO	CORNWALL	73	Tue	18/09/07	0.096	0.329	0.425	
22	NT-03-A-03	SEMI DETACHED	KIRKBY-IN-ASHFIELD	NOTTINGHAMSHIRE	166	Wed	28/06/06	0.108	0.313	0.421	
23	WL-03-A-01	SEMI D./TERRAC	WOOTTON BASSETT	WILTSHIRE	99	Mon	02/10/06	0.071	0.333	0.404	
24	CH-03-A-06	SEMI-DET./BUNG	CREWE	CHESHIRE	129	Tue	14/10/08	0.163	0.240	0.403	
25	NY-03-A-01	MIXED HOUSES	NORTHALLERTON	NORTH YORKSHIRE	52	Tue	25/09/07	0.173	0.173	0.346	
26	FA-03-A-02	MIXED HOUSES	FALKIRK	FALKIRK	161	Wed	29/05/13	0.062	0.280	0.342	
27	HI-03-A-14	SEMI-DETACHED	INVERNESS	HIGHLAND	73	Fri	13/05/11	0.096	0.164	0.260	
28	**SH-03-A-02**	**DETATCHED**	**TELFORD**	**SHROPSHIRE**	**57**	**Sun**	**21/06/09**	**0.035**	**0.140**	**0.175**	
29	NR-03-A-01	HOUSES	NORTHAMPTON	NORTHAMPTONSHIRE	102	Sat	22/09/12	0.059	0.108	0.167	
30	AD-03-A-01	SEMI-DETACHED	ABERDEEN	ABERDEEN CITY	59	Fri	18/05/12	0.017	0.085	0.102	
31	CH-03-A-03	SEMI-DETACHED	CREWE	CHESHIRE	80	Sun	19/10/08	0.037	0.063	0.099	
32	HF-03-A-02	HOUSES	WELWYN GARDEN CITY	HERTFORDSHIRE	195	Sun	20/07/08	0.041	0.036	0.077	

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