Technical Note No. 1

Project: Tower Hill Road, Knypersley

Title: **Transport Planning Paper**

Date: 13 November 2017

1.0 Introduction

1.1 The technical note has been prepared by Cameron Rose Associates to provide a review of the proposed residential development site at the former Brook Works on land off the C354 Tower Hill Road in Knypersley as illustrated in the site location plan presented in **Figure 1.1** below.

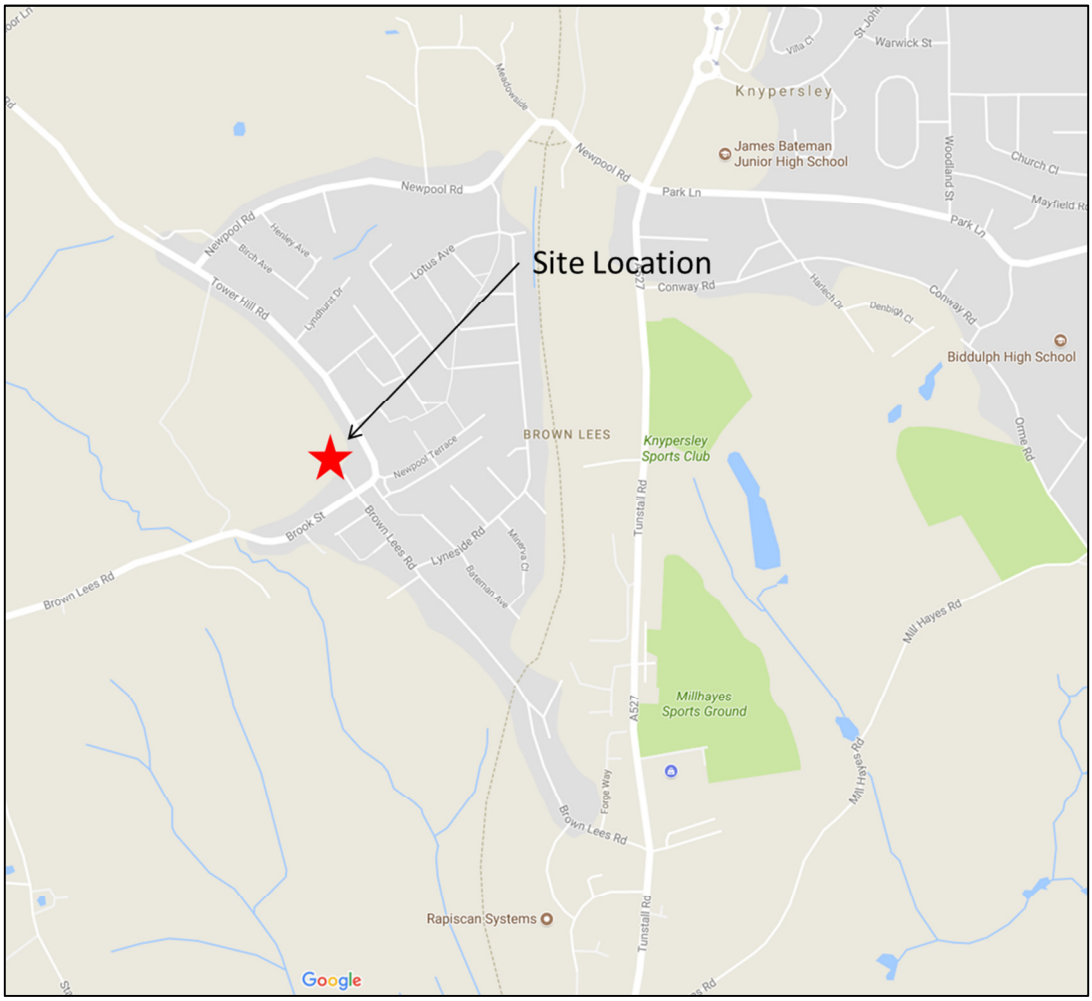


Figure 1.1: Site Location Plan

1.2 The development site was the subject of an outline previous application reference number SMD2016/0649. Staffordshire County Council's response as Local Highway Authority was defined in the Form x response dated 28th April 2017 as presented in **Appendix A** to this Technical Note.

1.3 At this time Staffordshire County Council recommended refusal on the following two grounds:

- *It is impracticable within the site curtilage to construct an access to the C354 Tower Hill Road that would provide adequate visibility for vehicles emerging from the site.*
- *The proposed development would exacerbate the risk of pedestrian/vehicle conflict by reason of no provision for pedestrian access between the proposed access and existing pedestrian routes leading to an increase in the likelihood of danger to highway users.*

1.4 This Technical Note has been prepared following further investigation into the development proposals with due regard to traffic engineering matters.

1.5 This Technical Note on transport planning matter examines the following aspects of the development proposals:

- Section 2 examines the site access proposal with due regard to available visibility splays compared to 85th percentile approach speeds;
- Section 3 presents a review of the site layout with regard to pedestrian route provision; and
- Section 4 concludes this Technical Note with an overview of the findings of the assessment process.

1.6 The report has been prepared solely in connection with the proposed development as stated above. As such, no responsibility is accepted to any third party for all or any part of this report, or in connection with any other development.

2.0 Proposed Site Access Visibility

2.1 Automatic traffic counting units were installed on Tower Hill Road on the southern approach to the proposed site access position to record vehicle speeds from the 21st July 2017 to the 27th July 2017.

2.2 The speed survey raw data received from the independent traffic surveyors is presented in **Appendix B** to this Technical Note and summarised below.

Northbound 85th Percentile Speed = 29.4mph

Southbound 85th Percentile Speed = 31.4mph

2.3 In order to determine appropriate visibility splays based on stopping sight distance (SSD) the following formula has been used:

$$SSD = vt = v^2 / 2d$$

Where: v = speed (m/s)

T = driver perception – reaction time (secs)

D = deceleration rate (m/s^2)

2.4 **Appendix C** to this Technical Note presents the full working of the SSD calculation, which concludes that the proposed development site requires the following visibility splays to accommodate safe stopping sight distances:

Northbound (typical conditions) = 39.3metres

Northbound (snow covered road) = 55.0metres

Southbound (typical conditions) = 43.4metres

Southbound (snow covered road) = 61.3metres

2.5 Cameron Rose Associates drawing 420-01/GA-01 presented in **Appendix D** to this Technical Note provides a general arrangement design of the proposed access position with regard to the required visibility splays.

2.6 Cameron Rose Associates drawing 420-01/GA-01 demonstrates a leading direction visibility splay of 2.4m x 42m and a non-leading direction visibility splay of 2.4m x 46m.

2.7 It is therefore concluded that an operationally sound site access can be provided with regard to vehicle approach on Tower Hill Road toward the proposed site from both northbound and southbound directions.

3.0 Pedestrian Connectivity

3.1 The existing western kerbline footway on Tower Hill Road terminates at the boundary of property number 12 as illustrated below in **Figure 3.1**.



Figure 3.1: Existing Footway Terminal Point

3.2 **Appendix D** of this Technical Note presents the Cameron Rose Associates drawing 420-01/GA-01, which illustrates the provision of a footway connection from the existing terminal point into the development site.

3.3 In addition it is proposed that the development provides footways at the site access junction and the around the junction radii. Informal crossings are then proposed across Tower Hill Road with associated tactile paving; located to both the south and the north side of the proposed junction.

3.4 The internal arrangement of the development's residential street takes on best practice design guidance and provides a shared surface arrangement.

3.5 This shared surface arrangement will be defined by a change in surface material following on from the standard junction geometry and footway provision within 15metres of the site access.

4.0 Summary and Conclusion

4.1 This Technical Note provides a Transport Planning assessment of the proposed residential unit development on land off Tower Hill Road, Knypersley.

4.2 The assessment includes derivation of vehicle approach speeds and calculation of associated stopping sight distances to achieve a safe and efficient access with appropriate visibility splays.

4.3 The results of the SSD assessment with regard to recorded 85th percentile speeds has determined that appropriate visibility splays can be provided from the proposed access position.

4.4 It has also been demonstrated that pedestrians can access and egress the development site in a safe and efficient manner.

4.5 Based on the findings of this Technical Note it is concluded that there are no Transport Planning reasons as to why the Local Planning Authority cannot permit the proposed residential development.

CAMERON ROSE
ASSOCIATES

APPENDICES

CAMERON ROSE
ASSOCIATES

APPENDIX A

PLANNING APPLICATION SMD2016/0649

FORM X

Form X (i)

Staffordshire County Council
Town and Country Planning Act, 1990
Development Management Procedure Order 2015

To: Staffordshire Moorlands, DCM
Staffordshire Moorlands District Council
Moorlands House
Stockwell Street
Leek
ST13 6HQ

Applicant: MR CHRISTOPHER HOWLE

Address: BROUGH WORKS
BROOK STREET
BROWN LEES
STAFFORDSHIRE MOORLANDS
ST8 6PF

Application Type: OUTLINE

Application Number: SMD2016/0649

Date Received: 13-APR-2017

Road Number: C0354

Officer: David Plant

Date: 28-APR-2017

Particulars of Development:
OUTLINE PLANNING APPLICATION WITH SOME MATTERS RESERVED (EXCEPT ACCESS AND LAYOUT) FOR PROPOSED RESIDENTIAL DEVELOPMENT AND CREATION OF NEW VEHICULAR ACCESS.

Location of Development:
BROOK WORKS, BROOK STREET, BIDDULPH, ST8 6PF.

REFUSAL:

Recommendations: This application should be refused for the following reasons:-

1 It is impracticable within the site curtilage to construct an access to the C354 Tower Hill Road that would provide adequate visibility for vehicles emerging from the site.

2 The proposed development would exacerbate the risk of pedestrian/vehicle conflict by reason of no provision for pedestrian access between the proposed access and existing pedestrian routes leading to an increase in the likelihood of danger to highway users.

REASONS

ALL In conflict with NPPF Paragraph 32; in conflict with SMDC Core Strategy Policy DC1; contrary to the interests of highway safety.

2 In conflict with SMDC Core Strategy policies T1 and T2

Commissioner for the Built County
on behalf of the County Council
as Highway Authority

CAMERON ROSE
ASSOCIATES

APPENDIX B

TRAFFIC SURVEY DATA

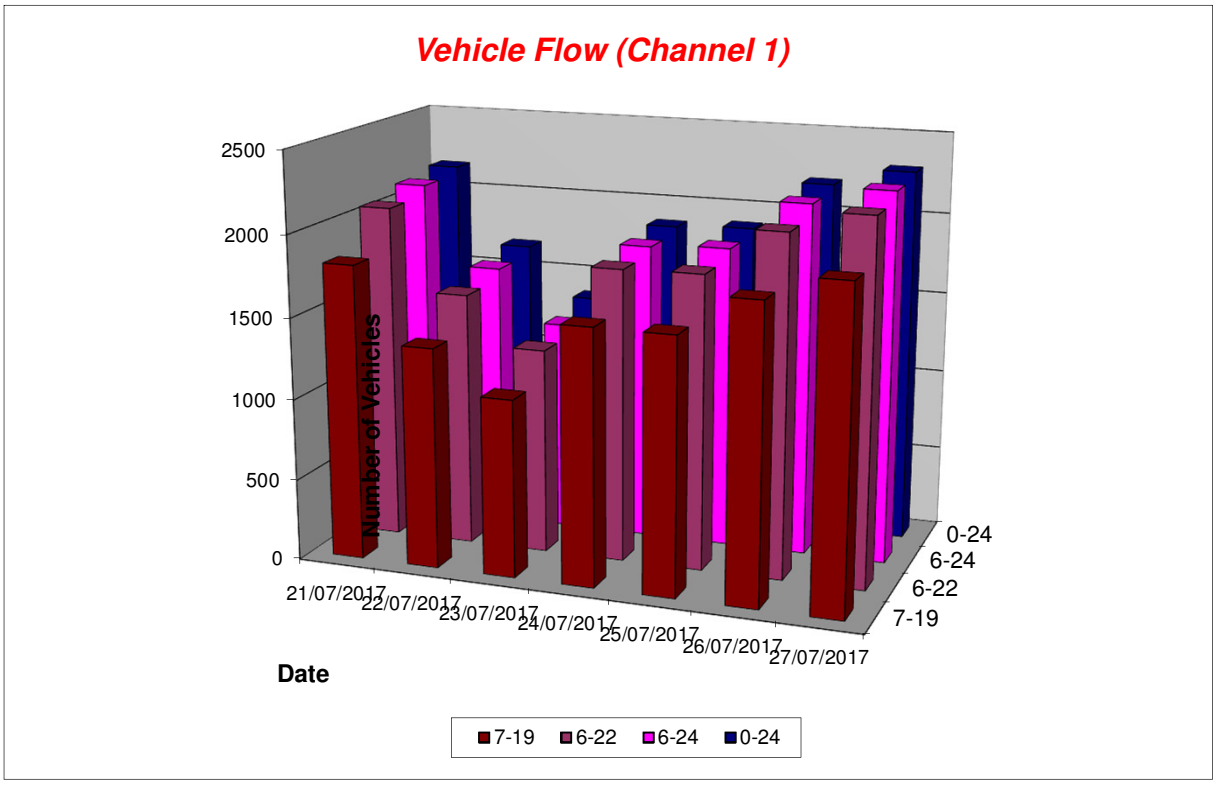
Knypersley ATC, Tower Hill Road

Produced by PCC Traffic Information Consultancy Ltd.

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

Hr Ending	7/21/2017 Friday	7/22/2017 Saturday	7/23/2017 Sunday	7/24/2017 Monday	7/25/2017 Tuesday	7/26/2017 Wednesday	7/27/2017 Thursday	5 Day Ave	7 Day Ave
1	9	16	23	4	8	4	7	6	10
2	3	7	21	4	3	6	1	3	6
3	6	8	4	1	0	1	2	2	3
4	2	2	3	2	1	0	1	1	2
5	4	3	4	2	3	1	5	3	3
6	15	9	6	18	14	19	13	16	13
7	34	13	9	34	35	41	35	36	29
8	99	41	19	80	83	85	96	89	72
9	153	61	36	106	113	107	100	116	97
10	97	96	60	101	82	91	110	96	91
11	117	123	87	106	88	98	92	100	102
12	129	132	115	122	112	107	118	118	119
13	136	131	135	127	110	108	110	118	122
14	120	141	128	105	121	111	127	117	122
15	163	138	110	123	124	122	139	134	131
16	201	109	112	138	134	132	171	155	142
17	225	145	129	187	196	274	273	231	204
18	210	132	100	217	223	350	379	276	230
19	164	105	60	155	179	219	235	190	160
20	108	80	74	90	89	100	102	98	92
21	66	58	53	67	62	87	73	71	67
22	42	59	37	40	56	56	56	50	49
23	31	29	25	27	36	45	38	35	33
24	27	33	13	12	17	30	16	20	21

7-19	1814	1354	1091	1567	1565	1804	1950	1740	1592
6-22	2064	1564	1264	1798	1807	2088	2216	1995	1829
6-24	2122	1626	1302	1837	1860	2163	2270	2050	1883
0-24	2161	1671	1363	1868	1889	2194	2299	2082	1921



Knypersley ATC, Tower Hill Road

Produced by PCC Traffic Information Consultancy Ltd.

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

Hr Ending	7/21/2017 Friday	7/22/2017 Saturday	7/23/2017 Sunday	7/24/2017 Monday	7/25/2017 Tuesday	7/26/2017 Wednesday	7/27/2017 Thursday
1	27.2	27.4	27.1	20.4	28.9	20.5	25.5
2	25.5	26.6	26.2	27.4	18.7	28.8	33.0
3	28.0	23.0	24.9	38.0	-	25.5	25.5
4	20.5	25.5	22.2	25.5	38.0	-	25.5
5	27.4	21.2	27.4	29.2	28.0	33.0	26.5
6	26.5	25.5	23.8	26.9	28.0	27.7	28.8
7	25.6	25.9	24.1	27.2	26.1	26.2	25.4
8	26.3	26.6	24.8	26.3	26.5	26.8	26.6
9	26.3	26.1	26.8	25.2	25.9	25.5	26.6
10	25.0	26.2	25.6	25.3	25.6	25.7	25.9
11	25.3	25.8	25.3	25.9	25.1	25.7	26.0
12	25.6	26.1	25.9	25.3	26.4	25.8	25.8
13	26.2	26.6	25.8	25.8	25.1	25.9	26.2
14	26.9	25.9	26.0	25.7	25.4	26.6	26.1
15	26.3	26.3	26.0	25.9	26.1	25.7	26.1
16	26.0	25.2	26.2	25.7	26.2	25.6	25.5
17	26.5	25.9	26.8	26.0	25.9	26.6	26.6
18	26.9	26.1	26.0	26.7	26.6	27.1	26.8
19	26.4	26.7	26.0	26.6	25.9	26.4	26.5
20	26.4	26.2	25.9	26.7	27.0	27.0	26.4
21	25.2	26.9	26.5	25.8	26.6	27.4	26.7
22	26.5	25.5	26.9	25.8	26.6	25.8	27.6
23	27.0	25.7	25.4	29.0	25.9	26.0	26.7
24	24.9	25.7	24.7	27.2	28.0	28.2	25.8
10-12	25.4	26.0	25.6	25.6	25.8	25.7	25.8
14-16	26.1	25.9	26.1	25.8	26.1	25.7	25.8
0-24	26.2	26.1	26.0	26.1	26.1	26.4	26.4

Average	26.2

Channel 1 - Northbound — **85th Percentile**

Hr Ending	7/21/2017 Friday	7/22/2017 Saturday	7/23/2017 Sunday	7/24/2017 Monday	7/25/2017 Tuesday	7/26/2017 Wednesday	7/27/2017 Thursday
1	33.7	33.6	34.0	26.2	33.9	25.6	26.3
2	26.0	26.7	33.4	33.9	26.2	38.7	-
3	33.6	25.8	33.3	-	-	-	25.7
4	25.8	26.3	25.7	25.5	-	-	-
5	33.3	33.8	33.2	33.5	33.4	-	33.3
6	26.6	26.1	26.1	33.9	33.1	33.1	33.3
7	33.0	34.0	25.9	33.4	33.8	26.3	33.0
8	33.8	33.9	25.9	26.4	33.5	33.4	33.5
9	26.4	33.2	33.7	26.0	26.3	26.0	33.2
10	26.2	26.3	25.8	26.0	26.1	26.0	26.4
11	25.5	26.5	26.1	26.0	26.3	25.7	26.1
12	25.9	26.1	26.0	25.9	26.5	25.9	26.3
13	26.4	33.5	25.9	25.9	25.7	26.0	26.4
14	33.8	26.0	26.1	25.8	25.6	33.6	33.3
15	26.4	34.0	26.1	26.0	26.1	25.8	26.1
16	26.5	26.2	33.5	25.7	26.2	26.4	25.6
17	26.6	26.0	33.9	26.5	26.0	33.1	33.6
18	33.1	26.2	33.3	33.1	33.0	33.4	33.4
19	33.9	33.1	26.3	33.4	33.5	33.3	34.0
20	26.5	33.1	26.0	33.4	33.7	33.9	33.1
21	26.0	33.8	33.3	33.5	33.5	33.8	33.9
22	33.8	25.8	33.9	25.9	33.8	25.9	33.6
23	33.1	25.7	26.1	38.5	33.1	33.7	33.3
24	26.1	33.3	26.1	33.3	33.2	33.3	25.9
10-12	26.0	26.1	25.9	26.1	26.2	25.8	26.0
14-16	26.2	33.3	26.2	26.0	26.2	25.7	25.8
0-24	26.2	33.9	26.1	26.2	26.2	33.3	34.0

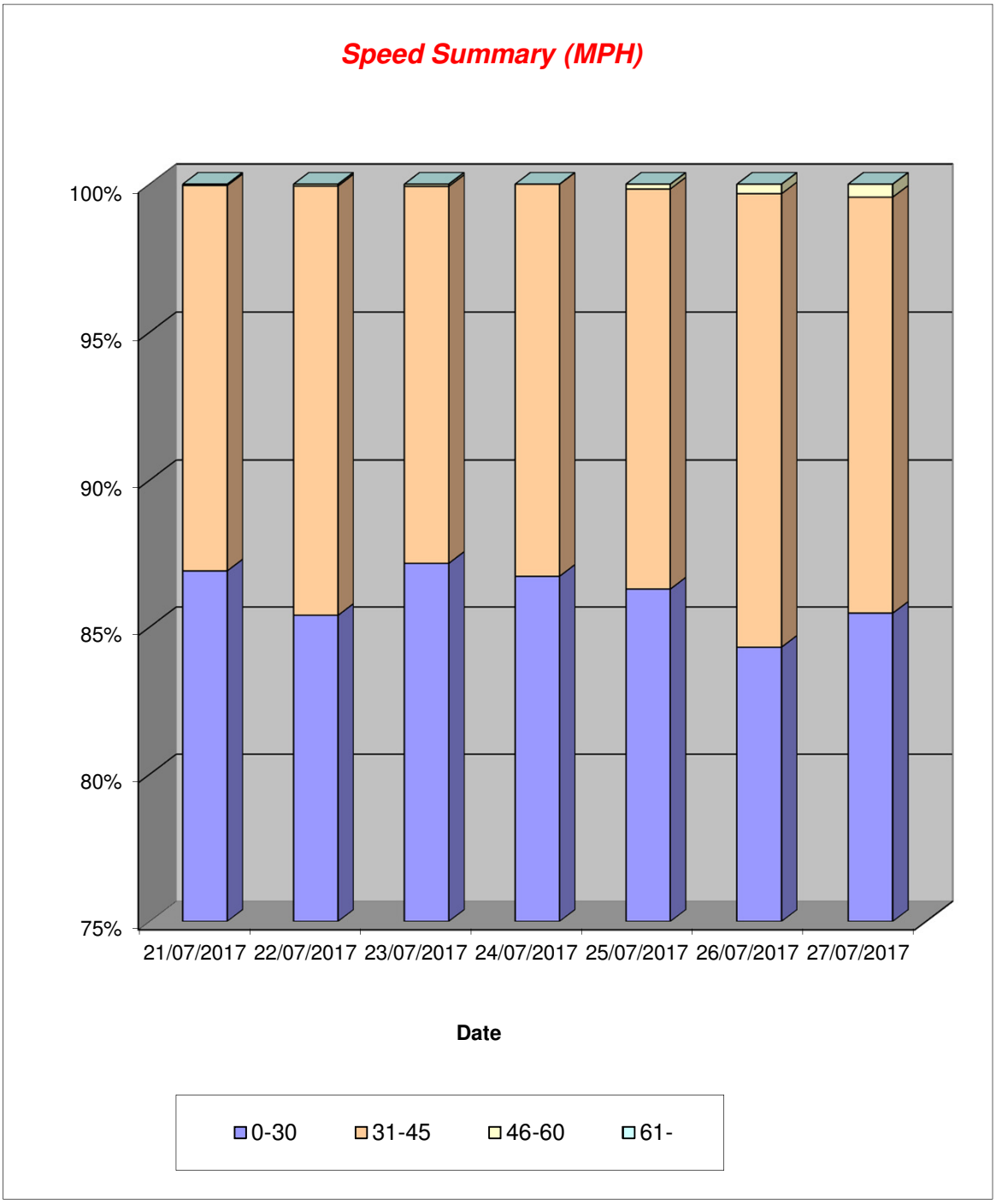
85th %ile	29.4

Knypersley ATC, Tower Hill Road

Produced by PCC Traffic Information Consultancy Ltd.

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

Speed (MPH)	7/21/2017 Friday	7/22/2017 Saturday	7/23/2017 Sunday	7/24/2017 Monday	7/25/2017 Tuesday	7/26/2017 Wednesday	7/27/2017 Thursday
0-30	1878	1427	1188	1620	1630	1850	1965
31-45	282	243	174	248	256	337	324
46-60	1	1	1	0	3	7	10
61-	0	0	0	0	0	0	0
TOTAL	**2161**	**1671**	**1363**	**1868**	**1889**	**2194**	**2299**



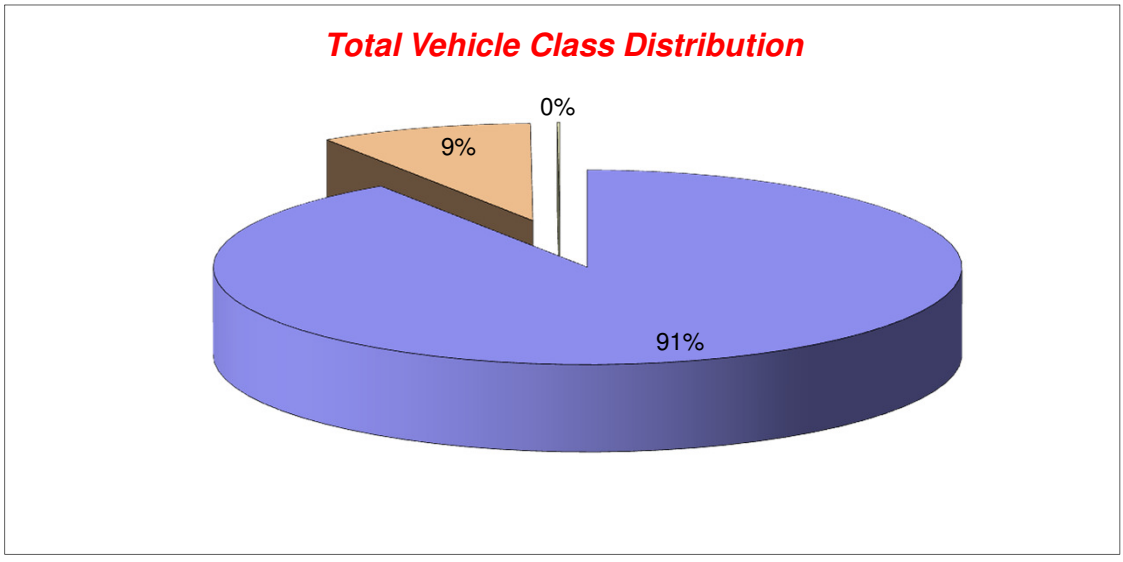
Knypersley ATC, Tower Hill Road

Produced by PCC Traffic Information Consultancy Ltd.

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

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
7/21/2017				
7-19	1650	162	2	1814
6-22	1880	182	2	2064
6-24	1933	187	2	2122
0-24	1969	190	2	2161
7/22/2017				
7-19	1239	113	2	1354
6-22	1435	127	2	1564
6-24	1494	130	2	1626
0-24	1536	133	2	1671
7/23/2017				
7-19	1038	53	0	1091
6-22	1199	65	0	1264
6-24	1235	67	0	1302
0-24	1294	69	0	1363
7/24/2017				
7-19	1393	174	0	1567
6-22	1606	192	0	1798
6-24	1639	198	0	1837
0-24	1668	200	0	1868
7/25/2017				
7-19	1394	169	2	1565
6-22	1611	193	3	1807
6-24	1660	197	3	1860
0-24	1689	197	3	1889
7/26/2017				
7-19	1613	188	3	1804
6-22	1877	208	3	2088
6-24	1946	214	3	2163
0-24	1974	217	3	2194
7/27/2017				
7-19	1740	205	5	1950
6-22	1986	225	5	2216
6-24	2037	228	5	2270
0-24	2063	231	5	2299

Average				
7-19	1438	152	2	1592
6-22	1656	170	2	1829
6-24	1706	174	2	1883
0-24	1742	177	2	1921



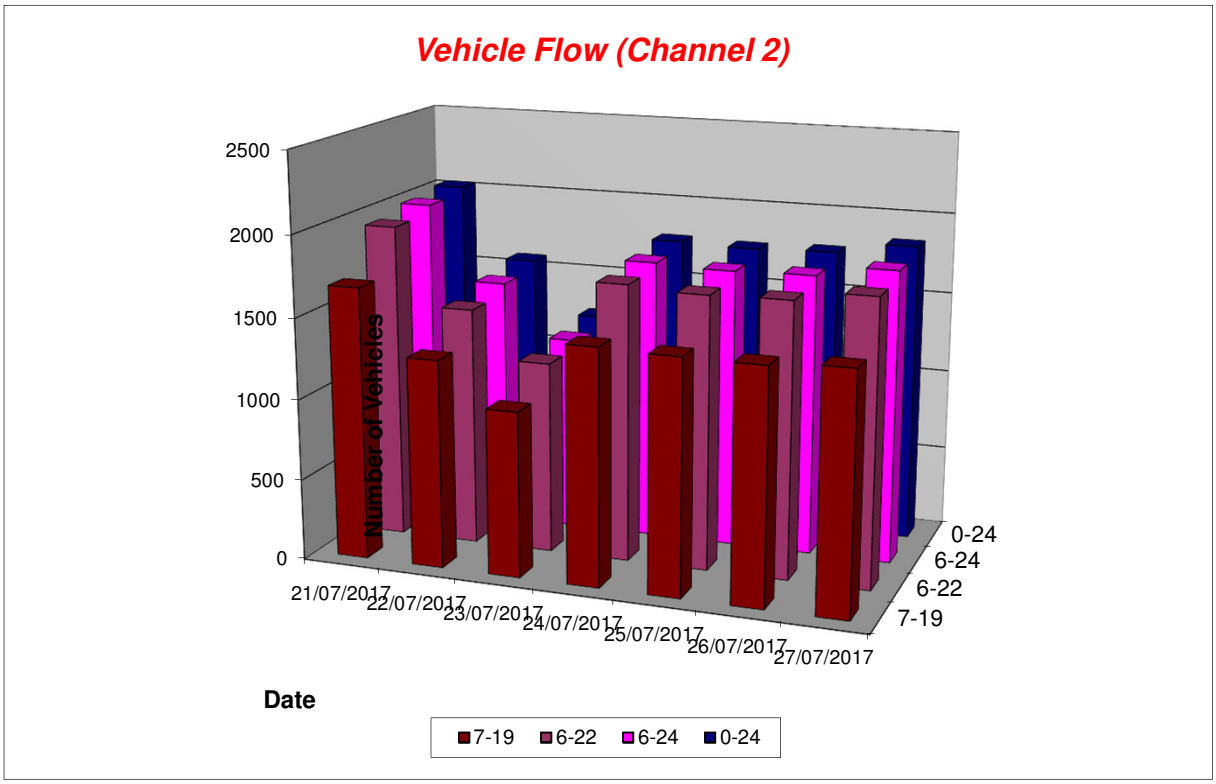
Knypersley ATC, Tower Hill Road

Produced by PCC Traffic Information Consultancy Ltd.

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

Hr Ending	7/21/2017 Friday	7/22/2017 Saturday	7/23/2017 Sunday	7/24/2017 Monday	7/25/2017 Tuesday	7/26/2017 Wednesday	7/27/2017 Thursday	5 Day Ave	7 Day Ave
1	3	17	14	3	3	7	7	5	8
2	3	8	7	2	3	0	2	2	4
3	1	4	3	3	2	2	4	2	3
4	3	2	6	4	3	5	5	4	4
5	2	4	4	2	0	1	5	2	3
6	20	11	3	21	27	26	21	23	18
7	65	25	17	61	53	49	55	57	46
8	188	43	18	125	140	137	135	145	112
9	186	74	34	131	132	132	126	141	116
10	129	111	60	115	97	105	107	111	103
11	113	109	92	117	106	96	93	105	104
12	125	131	90	111	90	102	113	108	109
13	103	132	126	112	109	115	121	112	117
14	125	129	98	121	112	106	115	116	115
15	124	120	106	110	121	111	128	119	117
16	177	116	99	107	130	112	98	125	120
17	147	115	99	135	130	117	151	136	128
18	137	106	108	167	146	161	158	154	140
19	125	97	88	101	127	142	119	123	114
20	94	71	56	78	94	90	98	91	83
21	66	54	57	65	47	68	74	64	62
22	45	41	35	52	50	50	64	52	48
23	34	35	15	23	28	31	32	30	28
24	14	22	9	7	11	9	14	11	12

7-19	1679	1283	1018	1452	1440	1436	1464	1494	1396
6-22	1949	1474	1183	1708	1684	1693	1755	1758	1635
6-24	1997	1531	1207	1738	1723	1733	1801	1798	1676
0-24	2029	1577	1244	1773	1761	1774	1845	1836	1715



Knypersley ATC, Tower Hill Road

Produced by PCC Traffic Information Consultancy Ltd.

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

Hr Ending	7/21/2017 Friday	7/22/2017 Saturday	7/23/2017 Sunday	7/24/2017 Monday	7/25/2017 Tuesday	7/26/2017 Wednesday	7/27/2017 Thursday
1	25.5	25.9	27.5	34.7	29.7	29.8	30.1
2	29.7	27.1	32.6	25.5	28.0	-	35.5
3	25.5	25.5	31.3	28.0	25.5	25.5	27.4
4	21.2	33.0	27.2	27.4	25.5	25.5	30.0
5	29.2	20.4	29.2	29.2	-	25.5	24.4
6	29.2	28.9	38.0	27.9	27.7	29.3	29.2
7	26.7	27.3	26.5	27.8	26.3	28.2	28.6
8	26.4	26.0	28.6	26.5	25.9	26.7	26.9
9	25.4	25.8	25.4	26.3	25.5	25.9	26.5
10	25.6	25.6	24.7	25.6	24.3	24.8	25.7
11	25.7	25.9	26.5	24.9	24.6	23.9	25.6
12	24.5	25.8	25.2	25.3	25.4	25.7	25.4
13	25.1	25.4	25.3	26.5	25.8	25.2	25.9
14	25.6	25.5	24.9	25.7	25.6	25.7	25.2
15	25.1	25.1	25.0	25.6	26.1	25.5	25.7
16	25.3	25.9	25.4	25.5	25.5	25.5	25.4
17	25.7	26.8	25.9	25.5	26.3	26.8	25.4
18	25.8	25.3	25.4	27.1	27.1	26.8	26.3
19	25.8	25.9	26.7	26.8	25.1	25.5	26.2
20	26.1	25.4	24.4	26.8	26.1	26.8	25.5
21	26.2	25.3	26.5	26.3	26.5	26.3	25.9
22	24.9	25.8	26.1	25.7	25.8	26.0	26.7
23	26.5	25.6	26.2	27.2	26.0	26.6	27.5
24	27.8	26.3	27.2	24.1	27.3	25.2	26.4
10-12	25.1	25.9	25.8	25.1	25.0	24.9	25.5
14-16	25.2	25.5	25.2	25.6	25.8	25.5	25.6
0-24	25.7	25.8	25.7	26.1	25.8	26.0	26.1

Average	25.9

Channel 2 - Southbound **85th Percentile**

Hr Ending	7/21/2017 Friday	7/22/2017 Saturday	7/23/2017 Sunday	7/24/2017 Monday	7/25/2017 Tuesday	7/26/2017 Wednesday	7/27/2017 Thursday
1	25.6	33.9	33.2	38.9	38.7	43.4	33.2
2	38.0	33.4	48.0	25.6	33.5	-	38.3
3	-	25.8	53.7	33.6	25.7	25.6	33.0
4	33.5	33.3	38.5	33.3	25.7	25.8	33.7
5	33.9	25.7	33.6	33.1	-	-	33.8
6	33.5	38.5	43.2	33.2	33.3	33.8	33.3
7	33.4	33.2	33.5	33.1	33.8	33.5	33.7
8	33.8	33.6	33.7	33.4	26.0	33.2	33.4
9	26.3	33.4	33.8	34.0	26.0	26.4	33.8
10	26.2	26.4	25.9	26.0	33.8	25.9	33.7
11	26.2	33.5	33.9	26.0	26.3	25.8	33.4
12	26.5	25.9	26.2	26.5	25.8	26.3	25.6
13	25.8	33.7	25.6	33.2	26.5	25.7	26.0
14	26.0	33.7	26.1	25.9	33.8	33.4	25.8
15	25.9	33.6	26.2	25.9	33.7	25.7	33.7
16	26.2	33.8	25.5	25.8	33.9	26.4	33.3
17	25.8	33.2	33.4	26.0	33.9	33.6	33.8
18	25.9	26.3	25.9	33.1	33.4	33.4	33.2
19	33.5	33.2	33.3	33.5	33.1	33.4	33.6
20	26.3	26.5	26.5	34.0	34.0	33.9	34.0
21	33.5	25.6	33.8	33.6	33.8	33.6	33.2
22	25.9	25.9	26.2	33.9	26.2	26.4	33.9
23	33.5	26.3	33.4	33.7	33.4	33.5	33.1
24	33.2	33.4	33.7	25.9	33.0	25.8	34.0
10-12	26.1	33.5	33.3	26.2	25.7	26.4	26.1
14-16	26.0	25.6	25.9	25.7	33.2	25.8	33.6
0-24	26.2	33.1	25.9	33.8	33.5	33.3	33.9

85th %ile	31.4

Knypersley ATC, Tower Hill Road

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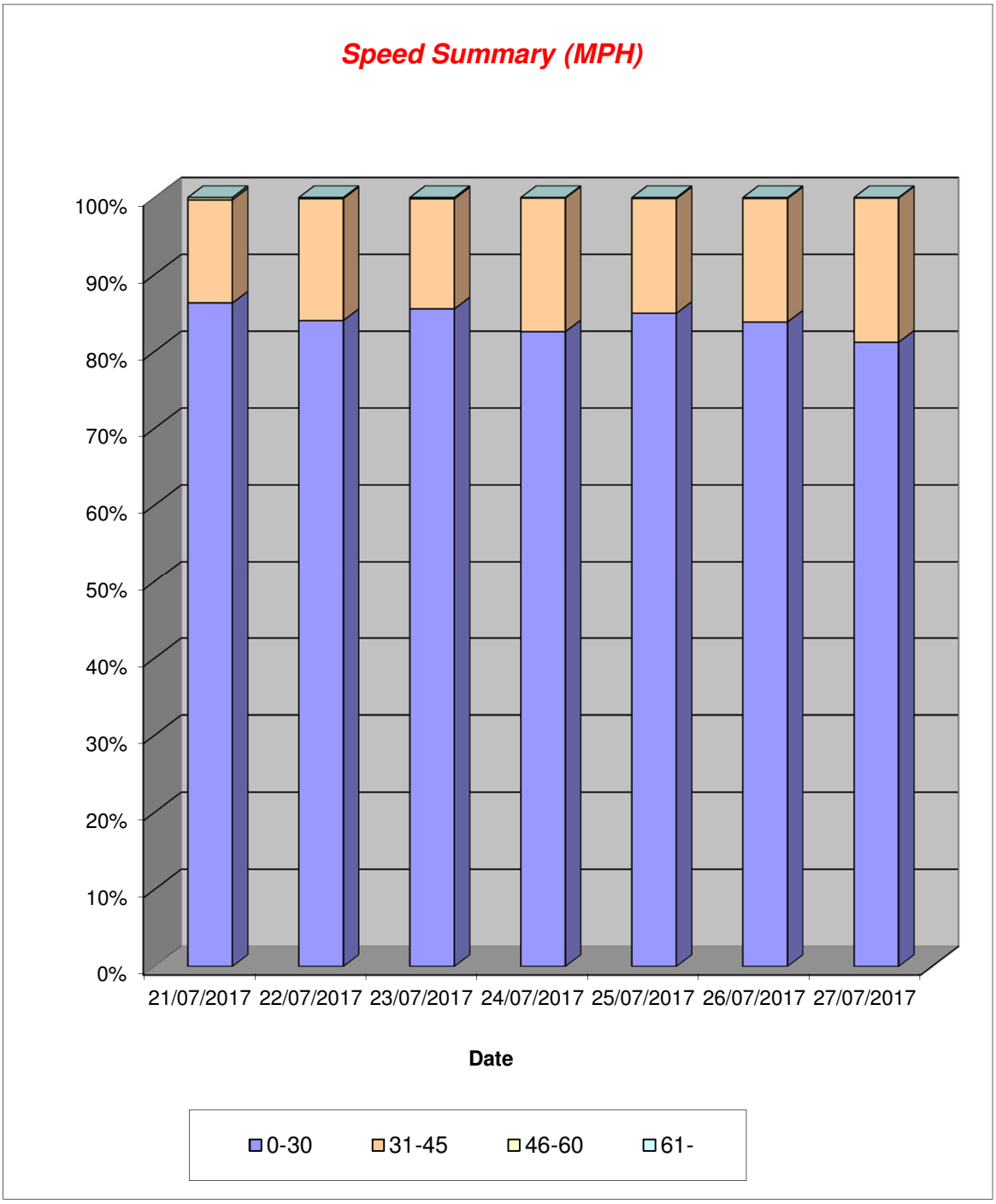
Channel 2 - Southbound | **Speed Summary** | **Week 1**

Speed (MPH)	7/21/2017 Friday	7/22/2017 Saturday	7/23/2017 Sunday	7/24/2017 Monday	7/25/2017 Tuesday	7/26/2017 Wednesday	7/27/2017 Thursday
0-30	1751	1325	1064	1464	1496	1487	1498
31-45	272	250	178	308	263	285	346
46-60	6	2	2	1	2	2	1
61-	0	0	0	0	0	0	0
TOTAL	**2029**	**1577**	**1244**	**1773**	**1761**	**1774**	**1845**



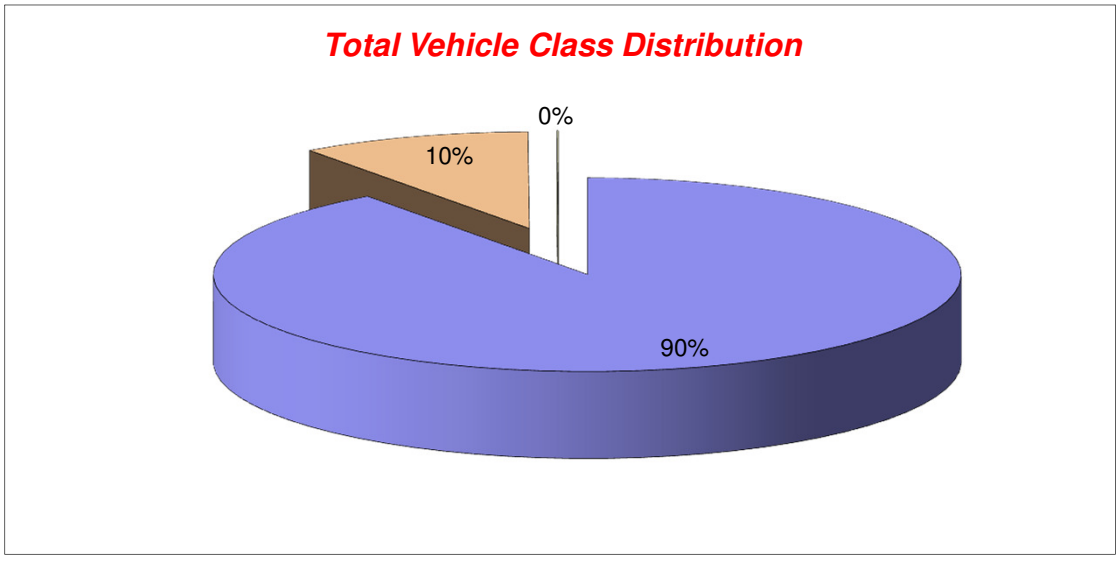
Knypersley ATC, Tower Hill Road

Produced by PCC Traffic Information Consultancy Ltd.

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

Classes / Day / Time	Car / LGV / Caravan - 1	OGV1 / Bus - 2,3,5,6,7,12	OGV2 - 4,8,9,10,11,13	TOTAL - 1-13
7/21/2017				
7-19	1506	171	2	1679
6-22	1748	199	2	1949
6-24	1793	202	2	1997
0-24	1824	203	2	2029
7/22/2017				
7-19	1166	117	0	1283
6-22	1342	132	0	1474
6-24	1396	135	0	1531
0-24	1437	139	1	1577
7/23/2017				
7-19	957	61	0	1018
6-22	1110	72	1	1183
6-24	1133	73	1	1207
0-24	1169	74	1	1244
7/24/2017				
7-19	1286	165	1	1452
6-22	1515	192	1	1708
6-24	1540	197	1	1738
0-24	1572	200	1	1773
7/25/2017				
7-19	1281	158	1	1440
6-22	1502	181	1	1684
6-24	1536	186	1	1723
0-24	1572	188	1	1761
7/26/2017				
7-19	1264	172	0	1436
6-22	1498	195	0	1693
6-24	1535	198	0	1733
0-24	1573	200	1	1774
7/27/2017				
7-19	1309	155	0	1464
6-22	1571	183	1	1755
6-24	1615	185	1	1801
0-24	1654	190	1	1845

Average				
7-19	1253	143	1	1396
6-22	1469	165	1	1635
6-24	1507	168	1	1676
0-24	1543	171	1	1715



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APPENDIX C

STOPPING SIGHT
DISTANCE CALCULATIONS

Appendix C - Northbound

Revised Formula for calculating sight stopping distance (SSD)

Manual for Streets (Page 90, Para 7.5.3)

SSD = $vt + v^2 / 2d$

v = speed (m/s)
t = driver perception - reaction time (secs)
d = deceleration (m/s^2)

Input values:

29.4	mph

Typical Conditions			Snow Covered Road		
v =	13.14262	m/s	v =	13.14262	m/s
t =	1.5	(see para 7.5.7 of MfS)	t =	1.5	(see para 7.5.7 of MfS)
d =	4.41	(see para 7.5.7 of MfS)	d =	2.45	(see para 7.5.6 of MfS)
SSD =	39.29764	m	SSD =	54.96461	m

Appendix D - Southbound

Revised Formula for calculating sight stopping distance (SSD)

Manual for Streets (Page 90, Para 7.5.3)

SSD = $vt + v^2 / 2d$

v = speed (m/s)
t = driver perception - reaction time (secs)
d = deceleration (m/s^2)

Input values:

31.4	mph

Typical Conditions			Snow Covered Road		
v =	14.03667	m/s	v =	14.03667	m/s
t =	1.5	(see para 7.5.7 of MfS)	t =	1.5	(see para 7.5.7 of MfS)
d =	4.41	(see para 7.5.7 of MfS)	d =	2.45	(see para 7.5.6 of MfS)
SSD =	43.3938	m	SSD =	61.26484	m

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APPENDIX D

SITE ACCESS ARRANGEMENT DRAWING

420-01/GA-01



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Follow any figured dimensions - do not scale. IF IN DOUBT ASK.

This drawing has been prepared for feasibility purposes and does not represent a construction plan. All design aspects to be confirmed at the appropriate detailed design stage.

•	Revision History	• Date
A	Revised site arrangement	15/11/17
B	desc	date b
C	desc	date c
D	desc	date d
E	desc	date e
F	desc	date f
G	desc	date g
H	desc	date h
I	desc	date i
J	desc	date j

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project: Tower Hill Road
Knypersley

drawing title: Site Access Arrangement
Preliminary Design Proposal
Available Visibility Splays

scale(s):	date:	drawn by:	checked:
1/500	18/09/17	CAB	IJM

drawing number: 420-01/GA-01

xrefs:

status: Information

rev: A

DATE PRINTED: