

The A14 Girton to Felixstowe
Congestion Study

Report of Study

20 May 2005

Highways Agency



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1. INTRODUCTION & BACKGROUND

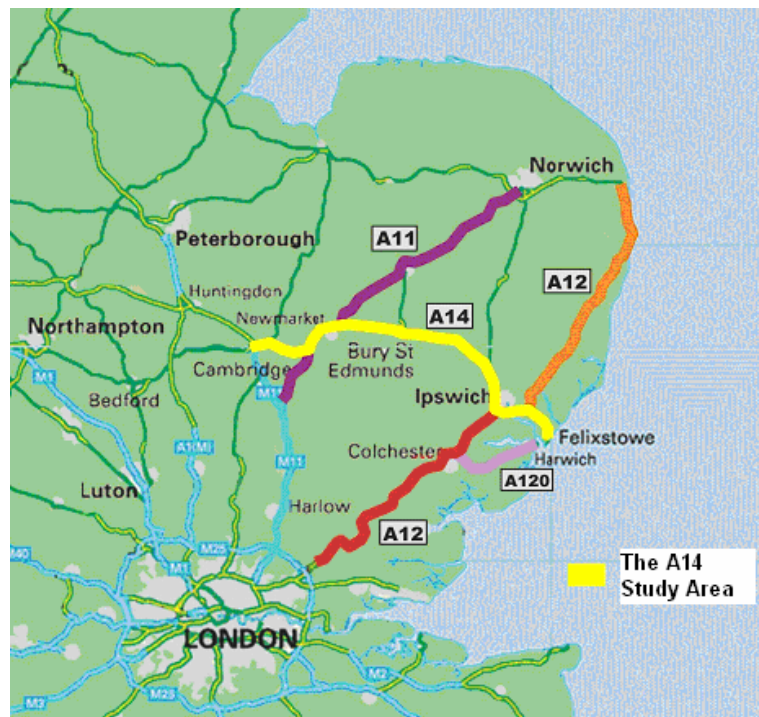
INTRODUCTION

- 1.1 Atkins has been commissioned by the Highways Agency (HA) to carry out a congestion study on the A14 from Girton to Felixstowe to identify potential Local Network Management Schemes (LNMS) which would reduce congestion on the A14 to the east of the M11.
- 1.2 A Route Management Strategy (RMS) was completed on the route in November 2000 identifying 'Making Best Use' improvements. No Multi-Modal Study (MMS) is currently planned on the route from east of the M11 to Felixstowe although MMS's are already in place for parts of the route at Cambridge (Cambridge to Huntingdon Multimodal Study) and Ipswich (London to Ipswich Multimodal Study).

AREA OF INTEREST

- 1.3 The A14 Congestion Study extends along the existing A14 between Girton Interchange (M11 Jn 14) and Felixstowe Docks, linking Cambridge, Newmarket, Bury St. Edmunds, Stowmarket, Ipswich and Felixstowe. Figure 1.1 below shows the section of the A14 under review.

Figure 1.1 – Study Route



SCOPE OF THIS REPORT

- 1.4 In order to achieve the project aims, this study will:
- ◆ Collate all available data
 - ◆ Prepare route performance indicators for discrete sections of the route, based on theoretical capacities (TD46/97) and observed conditions: Current 2004, 2009 and 2014
 - ◆ Review current, planned congestion schemes (Non TPI)
 - ◆ Assess the requirement to undertake traffic surveys
 - ◆ Identify congested locations
 - ◆ Identify and economically justify congestion schemes costing less than £5m; and
 - ◆ Report on the assessment and findings.

STUDY METHODOLOGY

- 1.5 A principal of the study methodology has been to focus on identified congestion problems and issues affecting the A14, as determined from local knowledge and consultation with informed sources. The methodology for the study has been to:
- ◆ Gather existing data sets;
 - ◆ Understand the performance of the A14;
 - ◆ Consult informed sources to identify the locations with problems and issues;
 - ◆ Determine locations where problems could be addressed;
 - ◆ Identify gaps in data, and undertake additional surveys as necessary; and
 - ◆ Propose and justify solutions.

JUNCTION REFERENCING SYSTEM

- 1.6 Table 1.1 shows the junction referencing system adopted for the A14 within the study area.

Table 1.1 – Junction Referencing System

Junc No	Junction Name	Junction With	OSGR	
			Easting	Northing
31	Girton Interchange	M11	541500	261200
32	Histon Interchange	B1049	544400	261800
33	Milton Interchange	A10	546980	262200
34	Fen Ditton Interchange	B1047	548990	261300
35	Stow Cum Quy Interchange	A1303	551500	259700
36	Nine Mile Hill Interchange	A11/A1303	558000	260200
37	Exning Interchange	A142	563400	266000
38	Newmarket Waterhall Interchange	A11/A1304	567100	266600
39	Kentford Interchange	B1506	572300	266700
40	Higham Interchange		575000	266200
41	Risby Interchange		578000	266100
42	Westley Interchange	B1106/A1302	582600	265400
43	Bury St Edmunds St Saviours Interchange	A134	585700	265300
44	Bury St Edmunds Moreton Hall Interchange	A134	586700	263700
46	Beyton Interchange		593200	263800
47	Woolpit Interchange	A1088	597700	263100
47A	Elmswell Junction		598400	262600
48	Quarries Cross Junction		602200	261800
49	Stowmarket North Interchange	A1308	604200	259800
50	Stowmarket Cedars Interchange	A1120	606800	258500
51	Beacon Hill Interchange	A140	610900	254300
52	Claydon Interchange	B1113	612900	249600
53	Ipswich White House Interchange	A1156	613400	247800
54	Sproughton Interchange		613150	245100
55	Copdock Interchange	A12	612600	242050
56	Wherstead Interchange	A137	615400	240850
57	Nacton Interchange	A1189	620200	241200
58	Levington Seven Hills Interchange	A12/A1156	623400	241400
59	Trimley Interchange		627900	237700
60	Felixstowe Dockspur Roundabout	A154	628950	236400
61	Port of Felixstowe	A154	628300	234900
62	Felixstowe Dock Gate	A154	628700	233850

- 1.7 Links between successive junctions are identified within this report using the junction referencing system with the lower number referred to first such that, for example, the link between junction 58 and 59 is simply referred to as link 5859.

BACKGROUND

Function of Route

- 1.8 The A14 forms a strategic east-west link from the M1/M6 Motorway junction in the South Midlands and passes through the central and eastern part of England to Felixstowe in Suffolk. It connects with the A12 London to Ipswich Trunk Road at the Copdock Interchange, and also forms part of the Trans-European Road Network (TEN).
- 1.9 The management of the A14 was considered as part of the A14 Route Management Strategy (RMS) which was published in February 2001. The key objectives of the A14 RMS which relate to congestion are:
- ◆ To improve safety for all travellers, in particular to improve the safe operation of junctions;
 - ◆ To contribute to an efficient economy and to support sustainable economic growth in appropriate locations, in particular to minimise congestion especially that caused by slow moving HGVs and commuter traffic;
 - ◆ To promote accessibility to everyday facilities for all, especially those without a car;
 - ◆ To promote the integration of all forms of transport and land use planning, leading to a better, more efficient transport system; and
 - ◆ To protect and enhance the built and natural environment.
- 1.10 The A14 serves several functions:
- ◆ Strategic Route – linking the ports, towns and cities along the route to the rest of the country;
 - ◆ Holiday Route – acting as an access to holiday destinations within the area;
 - ◆ Regional Function – linking the major settlements along the route; and
 - ◆ Local Function – providing the only means of access to some communities along the route.

Description of the Route

- 1.11 The section of the A14 being studied is 115km in length and connects with other major and local roads along its route, primarily by way of grade separated junctions. It is of dual two lane standard throughout its length except between its junctions with the A11 (Jn 36 to Jn 38) when it is of dual three lane standard.
- 1.12 In total, there are 32 junctions within the study area, with the distance between successive junctions being a maximum of 8.4km.

Previous Major Road Improvements

- 1.13 Table 1.2 below contains a list of opening dates and major improvements to the A14, mainly bypasses, since the 1960's.

Table 1.2 – A14 Major Improvements and Opening Dates

Link	Scheme	Date
3334	Major maintenance between A10 Milton Int and Fen Ditton Int	1999 / 2000
5861	Plane and inlay between Kirton Int and Levington	Mid 90's
4950	Eastbd had major maintenance with metre strips being added	Early 90's
5861	Jn 61 to Levington reconstructed westbd across the C375 Jn	Late 80's / early 90s
5255	Copdock Mill Int (A12 South) to Claydon Int (B1113)	1986
5558	Orwell Bridge to Copdock Mill Interchange (A12 South)	1982
5859	Levington to Levington Seven Hills Interchange	1982
3942	Westley Interchange to B1506 Kentford Interchange	Late 70's
4952	B1113 Claydon Int to Stowmarket (North) Junction	1975
4244	Bury St Edmunds Bypass - Moreton Hall Int to Westley Int	1972-74
5861	Levington to Port of Felixstowe	Early 1970's
3839	B1506 Kentford Int to A11 Water Hall Int	Early 1970's
3538	A11 Water Hall Int to A1305 Stow-Cum-Quy Int	Early 1970's
4950	Stowmarket (North) Junction to Haughley New Street	Late 60's / early 70s
4446	Rougham Nurseries to Moreton Hall Int (Westbound)	Late 60's

CONTENT OF REPORT

- 1.14 The remainder of the report is arranged into six chapters and is supported by a number of appendices:
- ◆ Chapter 2 provides a summary of **existing datasets** that were available to the study, including manual and automatic turning counts;
 - ◆ Chapter 3 analyses the **performance** of the A14 in terms of congestion and accident rates. The chapter also examines forecast traffic growth and its likely affect on link capacity;
 - ◆ Chapter 4 reports on the Consultation and, based on this undertakes a **congestion analysis** along the A14, identifying with existing future issues;
 - ◆ Chapter 5 assess junctions with **existing problems**;
 - ◆ Chapter 6 examines junctions with likely **future problems**; and
 - ◆ Chapter 7 **concludes**.

2. TRAFFIC DATA

INTRODUCTION

- 2.1 Traffic data has been collected from existing sources, and where necessary by additional surveys, to establish patterns of demand for travel on the A14, including for private vehicles and heavy goods vehicles (HGV).

EXISTING DATA SOURCES

- 2.2 It has been the intention of the study to make best use of existing transport related data, where possible. On this basis, a number of sources from which data was available have been identified. This chapter provides a brief summary of these datasets, which comprise:

- ◆ Automatic Traffic Count (ATC) data as held by the HA for 8 sites on the A14
- ◆ Manual Classified Count (MCC) data gathered along the A14 trunk road as part of the Department for Transport's (DfT) national link census programme; and
- ◆ Classified Turning Count Data

Automatic Traffic Count (ATC) Data

- 2.3 The HA maintains a network of ATC sites across the country of which a number have been identified within the study area. The data collected from the ATC sites is processed and maintained on their Traffic Flow Database System (TRADS). ATC data was obtained from the TRADS database for the eight sites along the A14 east of the M11:

- ◆ Girton;
- ◆ Milton;
- ◆ Bottisham;
- ◆ Risby;
- ◆ Tothill, Stowmarket;
- ◆ Baylham;
- ◆ Ipswich West; and
- ◆ Ipswich South.

- 2.4 These ATC sites are shown in Table 2.1 below, together with a summary of basic traffic flow data as recorded during May 2004. The full data can be found in Appendix A. The ATC data has allowed 12 hour AAWT to 24 hour AADT conversion factors to be determined, which have been applied to subsequent manual classified counts.

Table 2.1 – Summary of Highways Agency A14 ATC Data (2004)

Link	TRADS Ref	Location	24hr AADT	12hr AAWT
3132	6-9239 & 6-9240	Girton	61,208	53,994
3334	6-9237 & 6-9238	Milton	58,198	51,872
3536	6-9255 & 6-9256	Bottisham	39,913	33,692
4041	6-9918 & 6-9917	Risby	43,069	38,122
4849	6-9919	Tothill, Stowmarket	39,954	34,126
5152	6-9921 & 6-9922	Baylham	50,150	43,998
5354	6-9923 & 6-9924	Ipswich West	47,788	42,475
5657	6-9925 & 6-9926	Ipswich South	55,920	49,492

AADT – the average of the Monday to Sunday flows

AAWT – the average of the Monday to Thursday flows.

Source: TRADS website

Manual Classified Count (MCC) Data

- 2.5 The DfT collect 12-hour manual classified traffic flow data on a three-year rotational programme for key major links within Great Britain. This link census data has been obtained for those sites along the A14 corridor east of the M11. This data was collected over the 12 hour period between 7.00am and 7.00pm and classified by direction and vehicle category, in hourly intervals.
- 2.6 Tables 2.2 and 2.3 summarise the monitoring data received from the DfT for the years 2002 and 2003 respectively, showing 12 hour flows for all vehicles and the percentage of HGVs. The full data can be found in Appendix B.

Table 2.2 – DfT Monitoring Counts (2002)

Link No	DfT Ref	Location	12hr AAWT	%HGV
3233	16454	Histon Int	53,464	13
3334	77143	Milton Int	45,909	10
3435	46492	Fen Ditton Int	41,090	12
3536	58073	Stow Cum Quy Int	30,098	18
3637	99354	Nine Mile Hill Int	48,329	15
3738	99353	Exning Int	58,277	13
3839	36492	Newmarket Waterhall Int	28,711	17
4041	46494	Higham Int	35,358	13
4243	26486	Westley Int	34,503	15
4446	36493	Bury St Edmunds Moreton Hall Int	33,576	12
47A48	56495	Elmswell Junction	29,834	15
4950	56423	Stowmarket North Int	28,441	16
5051	56429	Stowmarket Cedars Int	32,066	16
5152	6481	Beacon Hill Int	37,835	14
5455	57640	Sproughton Int	37,476	12
5657	38454	Wherstead Int	39,947	13
5758	17942	Nacton Int	37,540	13

Table 2.3 – DfT Monitoring Counts (2003)

Link No	DfT Ref	Location	12hr	
			AAWT	%HGV
3132	46491	Histon Int	49,461	12
3334	77143	Milton Int	51,058	11
3536	58073	Stow Cum Quy Int	30,755	16
3637	99354	Nine Mile Hall Int	50,846	15
3738	99353	Exning Int	60,494	14
3839	36492	Newmarket Waterhall Int	26,789	17
4041	46494	Higham Int	36,895	13
4344	6480	Bury St Edmunds St Saviours Int	38,746	13
4446	36493	Bury St Edmunds Moreton Hall Int	33,601	14
47A48	56495	Elmswell Junction	31,337	15
5051	56429	Stowmarket Cedars Int	30,455	16
5152	6481	Beacon Hill Int	42,106	13
5253	18222	Claydon Int	51,658	12
5455	57640	Sproughton Int	41,282	15
5556	56577	Copdock Int	44,957	13
5657	38454	Wherstead Int	45,724	10

Classified Turning Counts

- 2.7 Classified turning counts were available for a number of junctions including Girton Interchange (J31), Histon Interchange (J32), Milton Interchange (J33) and Fen Ditton Interchange (J34) as part of the Ellington to Fen Ditton TPI schemes. In addition, a classified turning count was also available for Copdock Interchange (J55).

NEW DATA – JUNCTION TRAFFIC COUNTS AND QUEUE LENGTH SURVEYS

- 2.8 Additional traffic surveys were undertaken at three junctions along the A14 in order to supplement the historic data. The data collected can be found in Appendix C. The surveys, which included manual classified traffic counts were undertaken during the AM peak (8am – 9am) and PM peak (5pm – 6pm). The junction traffic counts were periods segmented into 15 minute intervals and the queue length surveys segmented into 5 minute intervals.
- 2.9 The locations of the surveys undertaken are indicated in Table 2.4

Table 2.4 – Location and Dates of New Traffic Data

Junction Number	Junction Name	Survey Date
43	St Saviours Interchange (A14 / A134)	1st February 2005
44	Moreton Hall Interchange	2nd February 2005
53	White House Interchange (A14 / A1156)	3rd February 2005

3. PERFORMANCE OF THE A14

TRAFFIC FLOW

- 3.1 Table 3.1 shows the typical peak hour, 12-hour and 24-hour Annual Average Daily Traffic (AADT) flows along the route. The AADT flow has also been compared with the Congestion Reference Flow (CRF). The Congestion Reference Flow of a link is a standard measure and is an estimate of the Annual Average Daily Traffic (AADT) at which the carriageway is likely to be 'congested' in the peak periods on an average day, where congestion is defined as the situation when the hourly traffic demand exceeds the maximum sustainable hourly throughput of the link. At this point, the effect on traffic is likely to be one or more of the following:
- ◆ Flows break down with speeds varying considerably;
 - ◆ Average speed drops significantly;
 - ◆ Sustainable throughput is reduced and queues are likely to form.
- 3.2 It should be noted that the CRF is a measure of the performance of the road link between junctions, and that the effect of junctions are considered separately. Link stress is defined as the ratio of AADT to CRF and is therefore a measure of the ratio of flow to capacity.
- 3.3 The main feature of the table is the variation in traffic flow along the route from just over 19,000 to over 70,000 vehicles per day (AADT), with a build up of traffic towards Cambridge, Bury St. Edmunds and Ipswich exhibited.

Table 3.1 – Flows on A14

Ref	Section	AM Peak		PM Peak		12-Hour		AADT	CRF	Stress
		East Bound	West Bound	East Bound	West Bound	East Bound	West Bound			
Jn31 to Jn32	Girton to Histon	2,834	2,623	2,657	2,747	25,385	25,757	61,208	68,182	0.90
Jn32 to Jn33	Histon to Milton	2,917	2,970	2,582	3,130	26,354	27,110	67,775	73,682	0.92
Jn33 to Jn34	Milton to Fen Ditton	1,935	3,027	2,827	2,785	23,450	25,801	58,198	66,822	0.87
Jn34 to Jn35	Fen Ditton to Stow Cum Quy	2,503	2,982	2,643	1,971	21,229	19,861	54,490	60,154	0.91
Jn35 to Jn36	Stow Cum Quy to Nine Mile Hill	1,024	2,200	1,523	1,421	13,660	17,307	39,913	87,721	0.46
Jn36 to Jn37	Nine Mile Hill to Exning	2,139	3,620	2,623	2,019	24,265	25,323	59,355	86,461	0.69
Jn37 to Jn38	Exning to Newmarket Waterhall	2,101	3,024	3,439	2,465	31,026	28,360	70,617	119,895	0.59
Jn38 to Jn39	Newmarket Waterhall to Kentford	1,112	1,822	1,845	1,159	13,358	14,392	31,272	58,434	0.54
Jn39 to Jn40	Kentford to Higham					15,833	16,115	37,480	63,156	0.59
Jn40 to Jn41	Higham to Risby	1,849	2,188	2,389	1,644	18,803	17,708	43,069	66,421	0.65
Jn41 to Jn42	Risby to Westley									
Jn42 to Jn43	Westley to Bury St Eds St Saviours	1,614	2,451	2,264	1,590	17,026	17,477	42,028	59,498	0.71
Jn43 to Jn44	Bury St Eds St Saviours to Bury St Eds Moreton Hall	1,597	2,458	2,659	1,512	20,064	18,682	45,230	65,783	0.69
Jn44 to Jn46	Bury St Eds Moreton Hall to Beyton	1,295	2,608	2,516	1,376	16,602	16,987	40,020	50,480	0.79
Jn46 to Jn47	Beyton to Woolpit									
Jn47 to Jn48	Woolpit to Quarries Cross Junction	1,543	1,935	1,992	1,480	15,475	15,111	37,324	66,275	0.56
Jn48 to Jn49	Quarries Cross Junction to Stowmarket North	1,702		1,813		16,490		39,954	79,867	0.50
Jn49 to Jn50	Stowmarket North to Stowmarket Cedars	1,548	1,513	1,691	1,382	14,164	14,277	37,358	72,184	0.52
Jn50 to Jn51	Stowmarket Cedars to Beacon Hill	1,987	1,605	1,792	1,737	15,991	15,270	36,273	66,868	0.54
Jn51 to Jn52	Beacon Hill to Claydon	2,740	2,080	2,307	1,971	21,362	19,799	50,150	70,142	0.71
Jn52 to Jn53	Claydon to Ipswich White House	2,907	2,260	2,773	2,882	26,021	25,637	61,527	76,315	0.81
Jn53 to Jn54	Ipswich White House to Sproughton	2,485	2,007	2,479	2,260	21,725	19,857	47,787	66,528	0.72
Jn54 to Jn55	Sproughton to Copdock	2,735	2,101	2,453	2,396	19,987	19,393	49,169	63,797	0.77
Jn55 to Jn56	Copdock to Wherstead	2,891	2,278	2,627	2,645	23,058	21,899	54,982	69,051	0.80
Jn56 to Jn57	Wherstead to Nacton	2,746	2,412	2,593	2,975	22,800	21,976	55,920	67,665	0.83
Jn57 to Jn58	Nacton to Levington Seven Hills	2,177	1,868	2,212	1,993	19,698	17,842	52,551	74,441	0.71
Jn58 to Jn59	Levington Seven Hills to Trimley					13,042	12,018	29,400	69,569	0.42
Jn59 to Jn60	Trimley to Felixstowe Dockspur	1,498	1,656	1,584	1,706	14,372	14,905	35,102	76,094	0.46
Jn60 to Jn61	Felixstowe Dockspur to Port of Felixstowe					8,315	8,018	19,161	54,523	0.35
Jn61 to Jn62	Port of Felixstowe to Felixstowe Dock Gate									

Notes: (1) Congestion Reference Flows are calculated in accordance with TA 46/97 (2) Blank boxes indicate where no data was obtainable.

Link Congestion

- 3.4 Link 'Stress' may be expressed as the ratio of the AADT to the CRF and when this ratio exceeds unity (1.0) the section may be defined as being under stress. Table 3.1 shows no sections of the A14 between Girton and Felixstowe currently under stress although some sections are close to this situation, particularly around Cambridge.
- 3.5 Traffic can be observed at a standstill along certain sections of the A14 during critical peak periods for no apparent reason, despite stress levels being less than 1.0. This indicates that in general the existing pockets of congestion along the route are not caused by a lack of link capacity but due to other factors.
- 3.6 Methods to relieve congestion should therefore concentrate on other solutions, such as improving junction capacity rather than increasing link capacity.

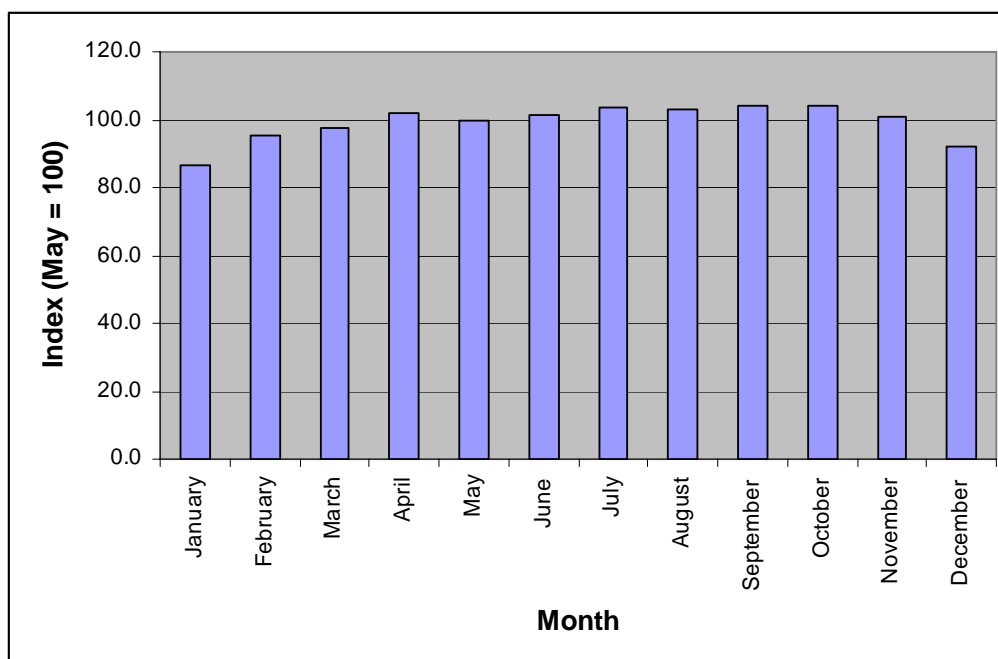
Other Congestion Factors

- 3.7 The factors that cause traffic congestion and queuing along the A14 are primarily considered to be junction related caused by, for example:
- ◆ Traffic queuing back on to the A14 mainline carriageway when key junctions reach capacity;
 - ◆ Traffic diverging off the main line into a single lane on approach to the diverge, leading to the approach lane reaching critical capacity.

VARIATION IN TRAFFIC FLOWS

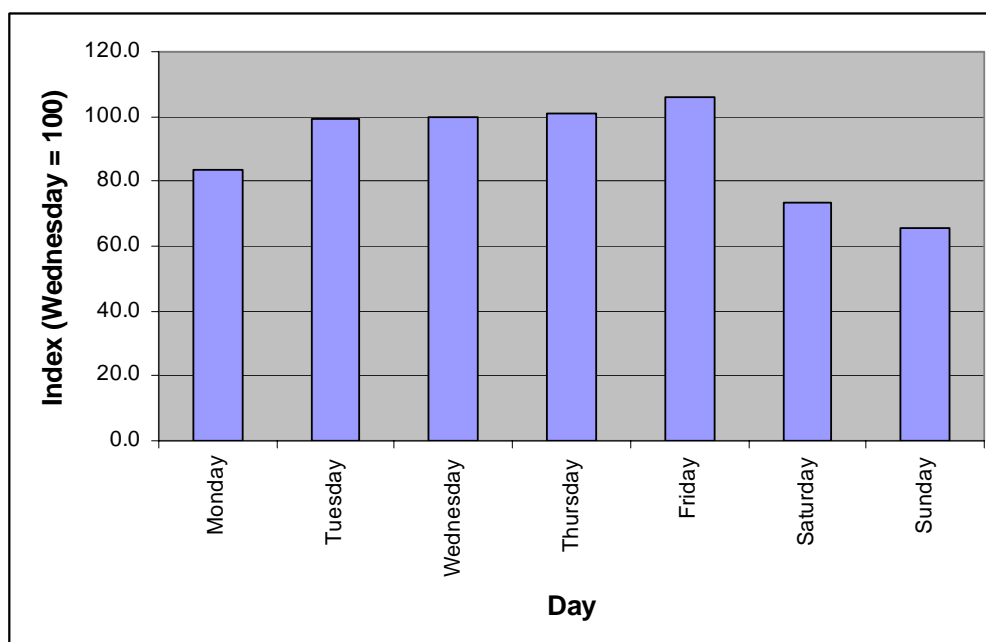
- 3.8 Figures 3.1 and 3.2 illustrate the seasonal and daily variation along the A14. They have been calculated from continuously recorded ATC data obtained from various sections of the A14 (see note 2) for 2003. The May flow is taken as the base index of 100 for the seasonal variation and the Wednesday flow taken as the base index of 100 for the weekly profiles.

Figure 3.1 – Monthly Variation in Traffic Flow on A14



Notes: (1) Data taken from TRADS website.
(2) Data is average 12-hour AADT for May 2003 for links 3132, 3334, 3536, 4041, 4849 (Eastbound only), 5152, 5354, 5657, 5960.

Figure 3.2 – Daily Variation in Traffic Flow on the A14



Notes: (1) Data taken from TRADS website.
(2) Data is average 12-hour AADT for May 2004 for links 3132, 3334, 3536, 4041, 4849 (Eastbound only), 5152, 5354, 5657, 5960.

Monthly Variation

- 3.9 Figure 3.1 indicates a slight increase in traffic along the A14 from January to April. From April to October the flow remains fairly constant, but falls slightly over November and December.

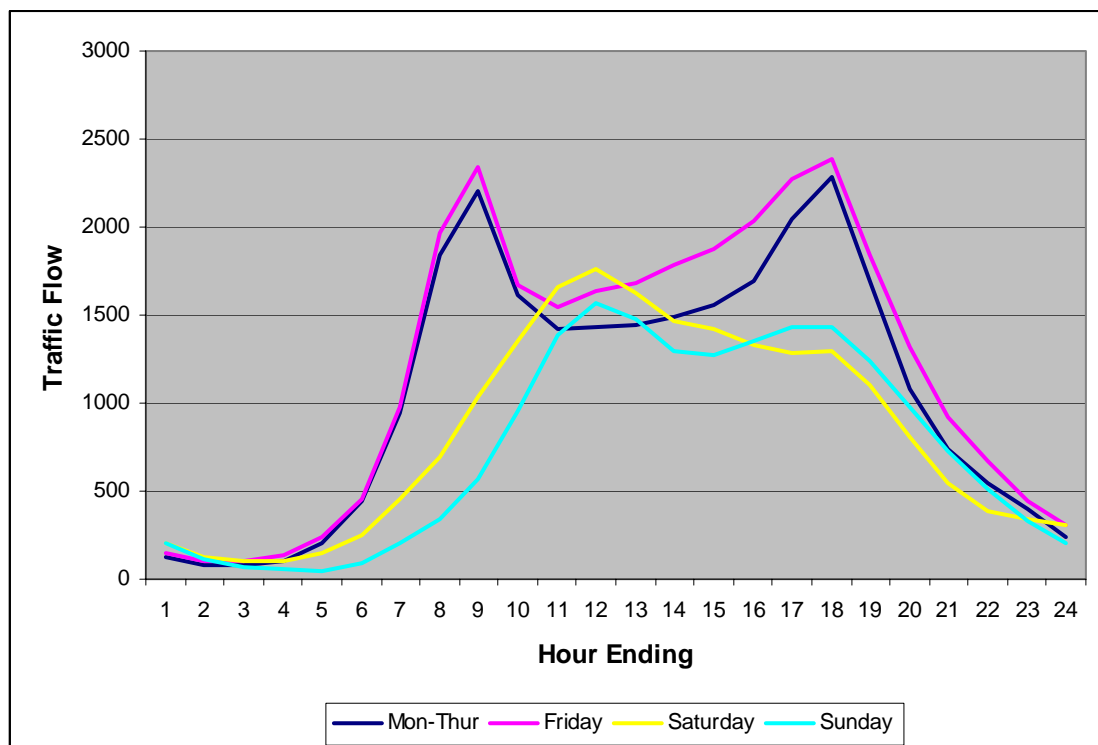
Daily Variation

- 3.10 Traffic flows on the A14 also vary throughout the week as shown in Figure 3.2, with a pronounced peak exhibited on an average Friday, some 10% higher than the average flows between Monday and Thursday. Weekend traffic flows are considerably lower than flows during the week.

Hourly Variation

- 3.11 Figure 3.3 illustrates the hourly variation in traffic flow along the A14 for typical mid-week days, Fridays, Saturdays and Sundays during May 2004. The figures were derived from continuously recorded two-way ATC flow data from various sections of the A14 (see note 2).

Figure 3.3 – Hourly Variation in Traffic Flow on the A14



- Notes: (1) Data taken from TRADS website.
(2) Data is average 12-hour AADT for May 2004 for links 3132, 3334, 3536, 4041, 4849 (Eastbound only), 5152, 5354, 5657, 5960.

- 3.12 Figure 3.3 shows that, on a typical weekday (both mid-week and Friday), traffic flows start to build at a fairly constant rate until the morning peak (hour ending 9.00am). The flows then decline until midday, from which point the traffic rises gradually until the evening peak at the hour ending 6.00pm. At that point, traffic flow decays at a fairly uniform rate until midnight.
- 3.13 On Saturdays and Sundays, flows peak during the hour ending 12.00. As with the weekday flows, the Sunday flow reduces slightly and increases again until an evening peak, before then decaying at a fairly uniform rate to midnight. The Saturday flow declines gradually until the hour ending 6.00pm before declining more rapidly until midnight. Apart from the noon peak, flows on Saturday and Sunday during the day are generally significantly lower than the mid-week and Friday flows.

TRAFFIC FORECAST

- 3.14 Traffic is forecast to continue to grow along the A14 in line with eastern growth patterns, taking account of the above average development pressures in the region. With regard to the function of the road, it is considered that traffic forecasts should be based on NRTF97, but with the car element modified by the ratio of TEMPRO Policy (data set 1.5) forecasts for the Eastern Region to national (GB).
- 3.15 Table 3.2 below shows the forecast growth in traffic on the A14 from 2002 to 2015 by vehicle type, with 2004 as the base year.

Table 3.2 – A14 Traffic Growth by Vehicle Types

Year	Index 2004 = 100					Total
	Car	LGV	OGV1	OGV2	PSV	
2002	0.962	0.956	0.985	0.951	0.987	0.961
2003	0.981	0.978	0.992	0.975	0.993	0.980
2004	1.000	1.000	1.000	1.000	1.000	1.000
2005	1.019	1.023	1.008	1.026	1.007	1.020
2006	1.038	1.046	1.015	1.052	1.014	1.039
2007	1.055	1.069	1.024	1.077	1.021	1.057
2008	1.071	1.092	1.032	1.104	1.028	1.076
2009	1.088	1.115	1.040	1.131	1.035	1.094
2010	1.105	1.140	1.048	1.158	1.042	1.112
2011	1.121	1.164	1.057	1.186	1.049	1.131
2012	1.138	1.191	1.066	1.216	1.057	1.150
2013	1.155	1.218	1.076	1.247	1.065	1.170
2014	1.173	1.246	1.086	1.278	1.074	1.190
2015	1.190	1.275	1.096	1.311	1.082	1.210

FUTURE LINK CONGESTION

- 3.16 Table 3.3 predicts how CRF stress levels are likely to change over the next decade at each section of the A14, in line with forecast traffic growth. Stress levels of between 0.75 and 1 are highlighted in orange, whilst stress levels exceeding 1.0 are shown in red.

Table 3.3 – CRF Values: 2004 to 2014

Link No	AADT	CRF	Stress		
			2004	2009	2014
3132	61,208	68,182	0.90	0.98	1.07
3233	67,775	73,682	0.92	1.01	1.09
3334	58,198	66,822	0.87	0.95	1.04
3435	54,490	60,154	0.91	0.99	1.08
3536	39,913	87,721	0.46	0.50	0.54
3637	59,355	86,461	0.69	0.75	0.82
3738	70,617	119,895	0.59	0.64	0.70
3839	31,272	58,434	0.54	0.59	0.64
3940	37,480	63,156	0.59	0.65	0.71
4041	43,069	66,421	0.65	0.71	0.77
4142					
4243	42,028	59,498	0.71	0.77	0.84
4344	45,230	65,783	0.69	0.75	0.82
4446	40,020	50,480	0.79	0.87	0.94
4647					
4748	37,324	66,275	0.56	0.62	0.67
4849	39,954	79,867	0.50	0.55	0.60
4950	37,358	72,184	0.52	0.57	0.62
5051	36,273	66,868	0.54	0.59	0.65
5152	50,150	70,142	0.71	0.78	0.85
5253	61,527	76,315	0.81	0.88	0.96
5354	47,787	66,528	0.72	0.79	0.85
5455	49,169	63,797	0.77	0.84	0.92
5556	54,982	69,051	0.80	0.87	0.95
5657	55,920	67,665	0.83	0.90	0.98
5758	52,551	74,441	0.71	0.77	0.84
5859	29,400	69,569	0.42	0.46	0.50
5960	35,102	76,094	0.46	0.50	0.55
6061	19,161	54,523	0.35	0.38	0.42
6162					

- 3.17 By 2009 the A14 between Histon Interchange and Milton Interchange is likely to have exceeded link capacity at certain times of the day, and by 2014, this is likely to include between Girton (J31) and Stow Cum Quay (J35) Interchanges. However, it is noted there is the Ellington to Fen Ditton TPI Scheme covering the A14 between Girton (J31) and Fen Ditton (J34) Interchanges that would lead to an increase in link capacity.

- 3.18 By 2014 several stretches of the A14, particularly around Bury St Edmunds and Ipswich, will be approaching capacity at certain times of the day.

ACCIDENT ANALYSIS

- 3.19 Table 3.4 summarises the total number of Personal Injury Accidents, by severity along the studied length of the A14 for the last five years. The Severity Index is calculated as the sum of fatal and serious accidents divided by the total number of personal injury accidents.

Table 3.4 – Accidents from 1999 to 2003 Summarised by Severity

	1999	2000	2001	2002	2003	Total
Fatal	5	5	9	4	4	27
Serious	20	21	16	18	11	86
Slight	61	76	88	92	71	388
Total	86	102	113	114	86	501
Severity Index	0.29	0.25	0.22	0.19	0.17	0.23

- 3.20 Table 3.5 shows the numbers of personal injury accidents (PIA), section by section, over the five year period from 1999 to 2003, together with the accident rate in terms of PIA per million vehicle kilometres travelled. The observed accident rates for the A14 are then compared with the national average accident rates (as obtained from DMRB Vol 13.1, Pt 2, Ch 3, May 2004) for that type of road (modern two-lane and three-lane dual carriageways with hard-strips).
- 3.21 Table 3.5 shows that, with the exception of link 4849, the observed accident rate for the A14 is significantly lower than the national accident rate for modern two-lane and three-lane dual carriageways. However, it is noted that Link 4849 is scheduled to be improved as part of the Haughley Bends TPI scheme.
- 3.22 It has been concluded therefore, that at present, there is not a significant accident problem on the A14 between Girton and Felixstowe.

Table 3.5 – Accidents from 1999 to 2003 Summarised by Section

		Link Length (km)			2001	2002	2003	Total	PIA per MVkm	National Average PIA per MVkm	% Difference
Ref	Section		1999	2000							
3132	Girton to Histon	2.9	3	5	5	5	9	27	0.042	0.089	48%
3233	Histon to Milton	2.7	4	2	2	4	2	14	0.023	0.089	25%
3334	Milton to Fen Ditton	1.5	1	3	5	0	0	9	0.028	0.089	32%
3435	Fen Ditton to Stow Cum Quy	3.9	2	2	5	5	2	16	0.023	0.089	26%
3536	Stow Cum Quy to Nine Mile Hill	6.5	3	6	8	8	2	27	0.031	0.089	34%
3637	Nine Mile Hill to Exning	8.4	11	10	18	15	9	63	0.035	0.089	40%
3738	Exning to Newmarket Waterhall	4.2	2	7	5	5	3	22	0.021	0.089	23%
3839	Newmarket Waterhall to Kentford	5.3	6	3	4	6	3	22	0.034	0.089	39%
3940	Kentford to Higham	3.2	2	1	2	1	1	7	0.016	0.089	18%
4041	Higham to Risby	4.6	3	2	2	0	1	8	0.011	0.089	12%
4142	Risby to Westley	2.5	1	1	2	2	0	6		0.089	
4243	Westley to St Saviours	3.2	1	1	1	0	1	4	0.008	0.089	10%
4344	St Saviours to Moreton Hall	2.1	0	3	3	3	1	10	0.029	0.089	32%
4446	Moreton Hall to Beyton	6.3	11	15	14	11	14	65	0.072	0.089	81%
4647	Beyton to Woolpit	5.3	3	4	3	4	1	15		0.089	
4748	Elmswell to Quarries Cross	5.3	5	5	4	4	8	26	0.039	0.089	44%
4849	Quarries Cross to Stowmarket North	2.7	10	3	4	6	3	26	0.130	0.089	146%
4950	Stowmarket North to Stowmarket Cedars	3.1	0	1	1	0	2	4	0.011	0.089	12%
5051	Stowmarket Cedars to Beacon Hill	6.1	3	1	6	4	2	16	0.020	0.089	22%
5152	Beacon Hill to Claydon	5.2	2	3	4	5	5	19	0.021	0.089	23%
5253	Claydon to Ipswich White House	2.1	2	1	0	0	1	4	0.009	0.089	10%
5354	Ipswich White House to Sproughton	3.0	1	1	0	1	1	4	0.008	0.089	9%
5455	Sproughton to Copdock	2.9	1	6	0	1	3	11	0.022	0.089	25%
5556	Copdock to Wherstead	3.1	1	2	2	1	0	6	0.010	0.089	11%
5657	Wherstead to Nacton	4.9	0	7	4	8	4	23	0.025	0.089	28%
5758	Nacton to Levington Seven Hills	3.4	3	3	3	9	1	19	0.035	0.089	39%
5859	Levington Seven Hills to Trimley	5.6	1	2	5	2	6	16	0.027	0.089	30%
5960	Trimley to Felixstowe Dockspur	2.2	2	0	0	1	0	3	0.011	0.089	12%
6061	Felixstowe Dockspur to Port	1.7	2	2	1	3	1	9	0.061	0.089	68%
6162	Port to Felixstowe Dock Gate	1.8	0	0	0	0	0	0		0.089	
	Total		86	102	113	114	86	501			

4. CONGESTION ANALYSIS

INTRODUCTION

- 4.1 In order to identify problems and issues along the A14, consultations have taken place with stakeholders including Area 6 personnel, the police and local authorities. The minutes and responses to the consultation can be found in Appendix D.

CONGESTION ANALYSIS

- 4.2 From the consultations and traffic analysis that have taken place, it is clear that a number of junctions are operating poorly and subsequently cause congestion problems on sections of the A14. This chapter will identify those junctions.
- 4.3 The junctions have been sub-divided into two categories; those with **existing congestion problems** and those that it is considered will have **future congestion problems**. Thus, junctions with regular congestion that affects the A14 mainline are categorised as having existing problems, whilst those with present-day occasional congestion problems are categorised as likely to have future problems.
- 4.4 The purpose of this study is to propose solutions to existing congestion problems along the A14, recognising that it would be difficult to propose value for money solutions to problems that are not already existing. However, it should be noted that the frequency of congestion occurring at those locations with occasional congestion is likely to grow with forecasted increases in traffic flows, such that congestion could become an “every day” occurrence.

CAUSES OF CONGESTION

- 4.5 Chapter 3 has shown that the A14 within the study area is not subject to link stress levels above 1.0. This suggests that A14 congestion is not caused by link capacity issues but by junction related problems. This hypothesis has been borne out from consultation with informed organisations.
- 4.6 The two principal causes of congestion on the A14 (which will be referred to as Type A and Type B within this report) and those which affect main line traffic approaching the affected junctions, have been determined as:
- ◆ Traffic queuing back on to the A14 mainline carriageway when key junctions reach capacity, causing congestion for mainline traffic as the effective available carriageway is reduced by one lane (**Type A**)
 - ◆ Traffic diverging off the main line into a single lane on approach to the diverge, leading to this approach lane reaching critical capacity (**Type B**).

Existing Problems

- 4.7 Several junctions on the A14 have been identified as being particularly susceptible to congestion and are known to cause existing problems on the A14 mainline. These junctions (with the form of congestion issue identified) are:
- ◆ Girton Interchange (J31) – westbound Type B;
 - ◆ Milton Interchange (J33) – eastbound and westbound Type A;
 - ◆ St Saviours Interchange (J43) – eastbound and westbound Type A;
 - ◆ Moreton Hall Interchange (J44) – eastbound and westbound Type A;
 - ◆ White House (J52) – eastbound Type A; and
 - ◆ Copdock Interchange (J55) – eastbound Type A.
- 4.8 Congestion issues were separately identified on the Orwell Bridge Crossing, but as the CRF calculations have shown a satisfactory stress level, it would appear the link capacity issues are related to reduced lane capacities due to physical and other features.

Future Problems

- 4.9 The following locations were identified as being where future congestion is likely to arise on the A14:
- ◆ Histon Interchange (J32) – eastbound and westbound Type A;
 - ◆ Stow Cum Quy (J35) – eastbound and westbound Type A;
 - ◆ Nine Mile Hill (J36) – westbound Type B; and
 - ◆ Newmarket Waterhall (J38) – eastbound Type B

Solutions

- 4.10 The solution for **Type A** congestion would be to either:
- ◆ Improve the overall junction capacity, or if this is not readily possible due to junction exit capacity issues then;
 - ◆ Reallocate capacity from the side roads in favour of the A14 off slip, or if this is not possible then;
 - ◆ Lengthen the A14-off deceleration lane to form an auxiliary lane to minimise the impact of queuing traffic on the A14 main-line traffic flow.
- 4.11 The solutions for the **Type B** congestion would be achieved through the introduction of a two lane diverge.
- 4.12 Solutions regarding Orwell Bridge will be identified later in this report.

5. EXISTING PROBLEMS

JN 31 - GIRTON INTERCHANGE

Problem

- 5.1 Girton Interchange is a major interchange for westbound A14 traffic between the M11, the A428 and the A14 to the midlands. Unusually the A428 bound traffic remains on the mainline carriageway and all other traffic turns off. Severe queuing occurs at this Interchange, particularly during the Friday PM peak periods.
- 5.2 The queues form as the turning-off traffic enters Lane 1 (inside lane) ready to turn off and share the short single lane exit that then splits into two towards the M11 and A14-west. As the majority of westbound traffic is turning off at Jn 31, the link capacity of Lane 1 and the single lane exit is readily exceeded.
- 5.3 Table 5.1 below shows the stress level calculated for the single lane exit off the A14 westbound from the dual carriageway, and shows the single lane exit is significantly over capacity during both AM and PM peak periods.

Table 5.1 – Stress Levels for Girton Interchange

Time	Junction Number	Junction Location		AADT	CRF	Stress
		From	To			
AM	31	A14 Westbound (Girton)	M11 and A14	17,250	12,566	1.37
PM	31	A14 Westbound (Girton)	M11 and A14	17,250	12,802	1.35

Solution

- 5.4 A possible solution could be to provide a two lane exit for diverging westbound traffic. However, it is understood that an LNMS is being considered by Area 8 and so will not be considered further as part of this study.
- 5.5 The interchange is also covered by the proposed A14 Ellington to Fen Ditton TPI scheme.

Recommendation

- 5.6 Review the Area 8 LNMS.

JN 33 - MILTON INTERCHANGE

- 5.7 Milton Interchange is a large grade separated roundabout between the A14, A10, A1309 and Milton Village. The interchange is located to the north of Cambridge and has five entry arms that all carry substantial volumes of traffic. The interchange is fully signalised with the signals operating on fixed time plans. Unusually, there are no queue detectors on the slip road approaches to the interchange that could give priority to A14 traffic.
- 5.8 The roundabout regularly operates at capacity during the morning and evening peak periods, with queuing on the A14 off-slips frequently observed backing onto the A14 mainline carriageway. Severe queues form, particularly on the A10 and Milton Village approaches during morning peak periods and on the A1309 Milton Road entry during the evening peak period. The congestion is particularly compounded during the morning peak period when traffic occasionally queues back from the Science Park junction on the A1309 approach into Cambridge.

Solution

- 5.9 Cambridgeshire County Council is proposing improvements to the interchange to enable development to occur. The improvements proposed include:
- ◆ Dedicated left turn 'express lane' between Milton Road and the A14 westbound on-slip;
 - ◆ Spiral markings;
 - ◆ Three lane circulatory on the northern and southern sections of the roundabout whilst retaining the two-lane over bridges;
 - ◆ Two lane A10 approach flaring to a three lane entry; and
 - ◆ Three lane A14 westbound off-slip approach.
- 5.10 These proposals have been examined in detail and it is considered that they will have a dramatic reduction in congestion at the interchange, reducing the risk of A14 off-slip traffic queuing onto the A14 mainline.
- 5.11 These proposals are programmed for implemented in 2006 and it is therefore not considered necessary to review the interchange further in this report. The interchange is also covered by the proposed A14 Ellington to Fen Ditton TPI Scheme.

Recommendation

- 5.12 Monitor the implementation of Cambridgeshire County Council's proposals for the interchange.

JN 43 - BURY ST EDMUNDS ST SAVIOURS INTERCHANGE

- 5.13 Bury St Edmunds St Saviours Interchange is a typical two bridge grade separated roundabout, with the A14 passing over the roundabout. The interchange itself has very short slip roads with poor vertical alignment.
- 5.14 Traffic at the interchange is known to queue back from both the eastbound and westbound off-slips and onto the main line carriageway during the morning peak hour. During this time period there is also extensive queuing on the A134 dual carriageway approach from the north.

Surveys

- 5.15 Supplementary surveys have been undertaken as part of this study and presented in Appendix C of this report. The surveys were undertaken during both the morning and evening peak hour and monitored both queuing and traffic flows.

AM Peak Hour

- 5.16 Figure 5.1 summarises the queuing observed during the morning peak hour. The supplementary surveys showed little queuing on the eastbound off slip during the morning peak hour, but did reveal extensive queuing on the westbound off slip with a maximum of 10 vehicles queuing for approximately a 5 minute period onto the A14 mainline carriageway.
- 5.17 Queuing in excess of 400 metres was observed on the A134 southbound approach.
- 5.18 The survey showed extensive queuing exiting the junction towards Bury St Edmunds during the morning peak hour.

PM Peak Hour

- 5.19 The supplementary surveys showed little queuing at the interchange during the evening peak hour.

Analysis

- 5.20 The survey revealed that the junction operates at capacity during the morning peak hour but that capacity is actually constrained by limited exit capacity towards Bury St Edmunds. Therefore, simply increasing junction capacity will not reduce the risk of traffic queuing back onto the A14 mainline carriageway.

Proposal

- 5.21 An auxiliary lane could be provided for diverging traffic. However, as shown in Figure 5.2, there would be considerable difficulty fitting in an auxiliary lane as the verge would need extensive earthworks and already has several major constraints such as signing and structures. It is not considered that such works would offer value for money, particularly as the A14 mainline queuing was only observed for less than 5 minutes.

Recommendation

- 5.22 Although no scheme is proposed to alleviate congestion onto the A14 at junction 43, it is recommended that queuing on both the eastbound and westbound off approach be monitored by an automatic queue detection system.

Figure 5.1 – St Saviours Interchange – Summary of AM Peak Hour Queuing

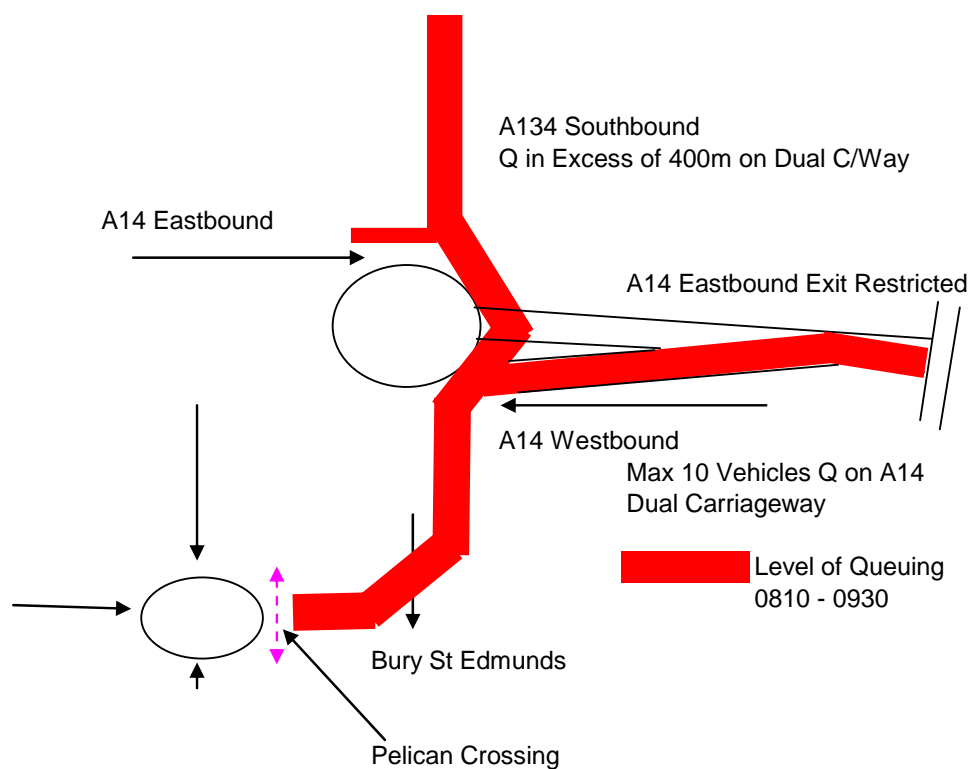


Figure 5.2 – St Saviours Interchange – Westbound Off Slip



JN 44 - MORETON HALL INTERCHANGE, BURY ST EDMUNDS

- 5.23 Moreton Hall Interchange, Bury St Edmunds is a typical two bridge grade separated, signal controlled roundabout, with the A14 passing over the roundabout. Through consultation, it is understood that the interchange suffers from serious congestion problems every morning. Local political pressure exists to improve the junction. At present, priority is given to traffic exiting the A14. This leads to extensive queues along Bedingfeld Way (the southbound approach to the interchange for local traffic).
- 5.24 It is understood that traffic queues mainly onto the A14 mainline from the westbound off-slip, but sometimes also queues onto the A14 from the eastbound off-slip.

Surveys

- 5.25 Supplementary surveys have been undertaken as part of this study and presented in Appendix C of this report. The surveys were undertaken during both the morning and evening peak hour and monitored both queuing and traffic flows.

AM Peak Hour

- 5.26 Figure 5.3 summarises the queuing observed during the morning peak hour. The supplementary surveys showed little queuing on either the eastbound or westbound A14 off slips during the morning peak hour, but did show southbound queuing both on the approach to the interchange and exiting the junction towards Bury St Edmunds.

PM Peak Hour

- 5.27 The supplementary surveys showed little queuing at the interchange during the evening peak hour.

Analysis

- 5.28 The survey revealed that the junction operates at capacity during the morning peak hour and that capacity is actually constrained by limited exit capacity towards Bury St Edmunds. Therefore, simply increasing junction capacity will not reduce the risk of traffic queuing back onto the A14 mainline carriageway.

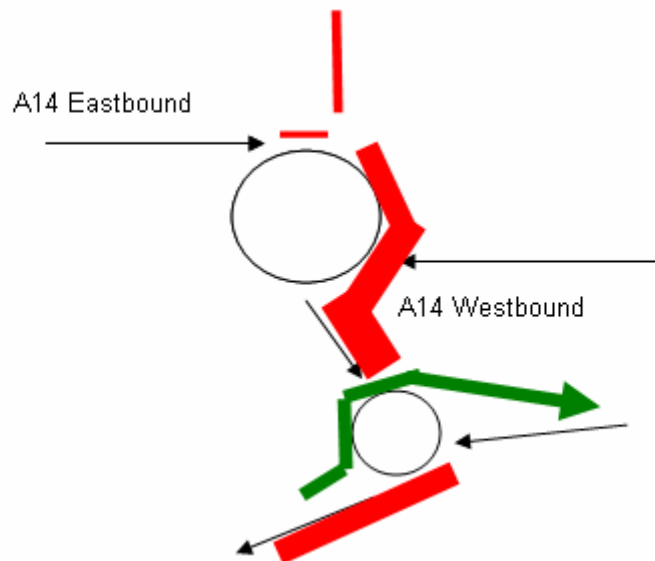
Proposal

- 5.29 An auxiliary lane could be provided by diverging traffic to minimise the risk of queuing onto the A14 mainline. However, the supplementary surveys showed no queuing onto the A14 on the day of survey. Such auxiliary lanes would therefore offer poor value for money.

Recommendation

- 5.30 Although no scheme is proposed to alleviate congestion onto the A14 at junction 44, it is recommended that queuing on the westbound off slip be monitored by an automatic queue detection system.

Figure 5.3 – Moreton Hall Interchange – Summary of AM Peak Hour Queuing



JN 53 - IPSWICH WHITE HOUSE INTERCHANGE

- 5.31 Ipswich White House Interchange is a single-bridge grade separated interchange, with the A14 passing under the bridge. The slip roads are connected into the local highway network through a roundabout located on the north side of the interchange, which then gives access to the west side of Ipswich via the A1156 and directly to an Asda superstore.
- 5.32 Following consultation, it is understood that the interchange has a congestion problem during the morning peak. Queuing can occur on the eastbound off-slip onto the A14 during exceptional periods, e.g. for football matches, Christmas shopping, etc. The situation is accentuated by the close proximity of Jn 52 Claydon Interchange. Vehicles accelerating onto the A14-eastbound from Jn 52 conflict with vehicles slowing (and potentially queuing) to exit at Jn 53.
- 5.33 It is also understood that a significant volume of traffic turns onto and then off the mainline between Jn 52 and 53, increasing weaving movements between the junctions.
- 5.34 The distance between the Jn 52 on slip and Jn 53 off slip is just 487 metres.

Surveys

- 5.35 Supplementary surveys have been undertaken as part of this study and presented in Appendix C of this report. The surveys were undertaken during the morning peak hour only and monitored both queuing and traffic flows.
- 5.36 The maximum length of queue observed on the A14 eastbound off-slip was 180m, and did not back onto the A14 mainline. However, it was noted that this queue length was erratic and very susceptible to the volume of traffic crossing northbound across the bridge, having exited westbound off the A14.
- 5.37 It was also noted during the survey, that on occasions the exit towards Ipswich would also block back onto the roundabout and interfere with its operation.
- 5.38 During the survey, the Local Police were also on site monitoring traffic and they commented that exit blocking does occur at the junction “on a regular basis, especially on Mondays and when it is raining”.

Analysis

- 5.39 The survey revealed that the junction operates at capacity during the morning peak hour but that capacity is actually constrained by limited exit capacity towards Ipswich, and that the capacity of the eastbound off-slip is sensitive to the volume of traffic exiting off the A14 westbound.

Proposal

- 5.40 A third auxiliary lane could be provided for eastbound traffic between junctions 52 and 53. This would:
- ◆ Increase the weaving length for traffic between Jn 52 and Jn 53;
 - ◆ Minimise the risk of queuing traffic impinging on A14 eastbound mainline traffic flow; and
 - ◆ Remove local traffic movements between Jn 52 and Jn 53 from the A14 mainline.
- 5.41 However, the supplementary surveys showed no actual queuing onto the A14 on the day of survey, and that therefore such an auxiliary lane would offer poor value for money.

Recommendation

- 5.42 Although no scheme is proposed to alleviate congestion on the A14 at junction 53, it is recommended that queuing on the eastbound off slip be monitored by an automatic queue detection system.

JN 55 - COPDOCK INTERCHANGE

Introduction

- 5.43 Copdock Interchange is a large grade separated roundabout located to the south of Ipswich town centre. It forms the interchange between the A14 trunk road between Felixstowe and the Midlands, the A12 trunk road between Colchester and London and the A1214 London Road to Ipswich town centre.
- 5.44 Dedicated left turn lanes are currently provided on three of the four approaches:
- ◆ A12-south to A14-west;
 - ◆ A1214 north to A14 east; and
 - ◆ A14-east to A12-south.
- 5.45 The roundabout junction is under normal priority control except for the A14 eastbound entry which is controlled by full time traffic signals. The junction is unusual in that it has a single lane circulatory carriageway throughout, except for the northbound circulatory across the A14.
- 5.46 Congestion is a serious issue at the interchange particularly for A12 northbound traffic, with regular queuing extending several hundred metres back from the interchange during peak periods towards the A12 Capel St Mary Interchange. This congestion also blocks access to the A12-south and A14-west segregated lane, which compounds the problem.
- 5.47 It is understood that when traffic queues back to the Capel St Mary Interchange, a significant proportion of traffic between the A12-south to A14-west will then rat-run through Sproughton on the B1113 to avoid these delays. This rat-running causes congestion elsewhere, such as at the A1071 roundabout junction with the B1113.
- 5.48 Traffic also queues back on the A14 eastbound off-slip, which can be a particular problem for eastbound A14 traffic due to the lack of forward visibility.

Surveys

- 5.49 A full turning movement survey was undertaken on Wednesday 30th April 2003, as part of a previous study. The data collected for that study has been used to analyse the roundabout for this study. Interestingly, approximately half the traffic on the A14, both east and west of the interchange, turns through the junction, predominately to and from the A12-south.

Base Analysis

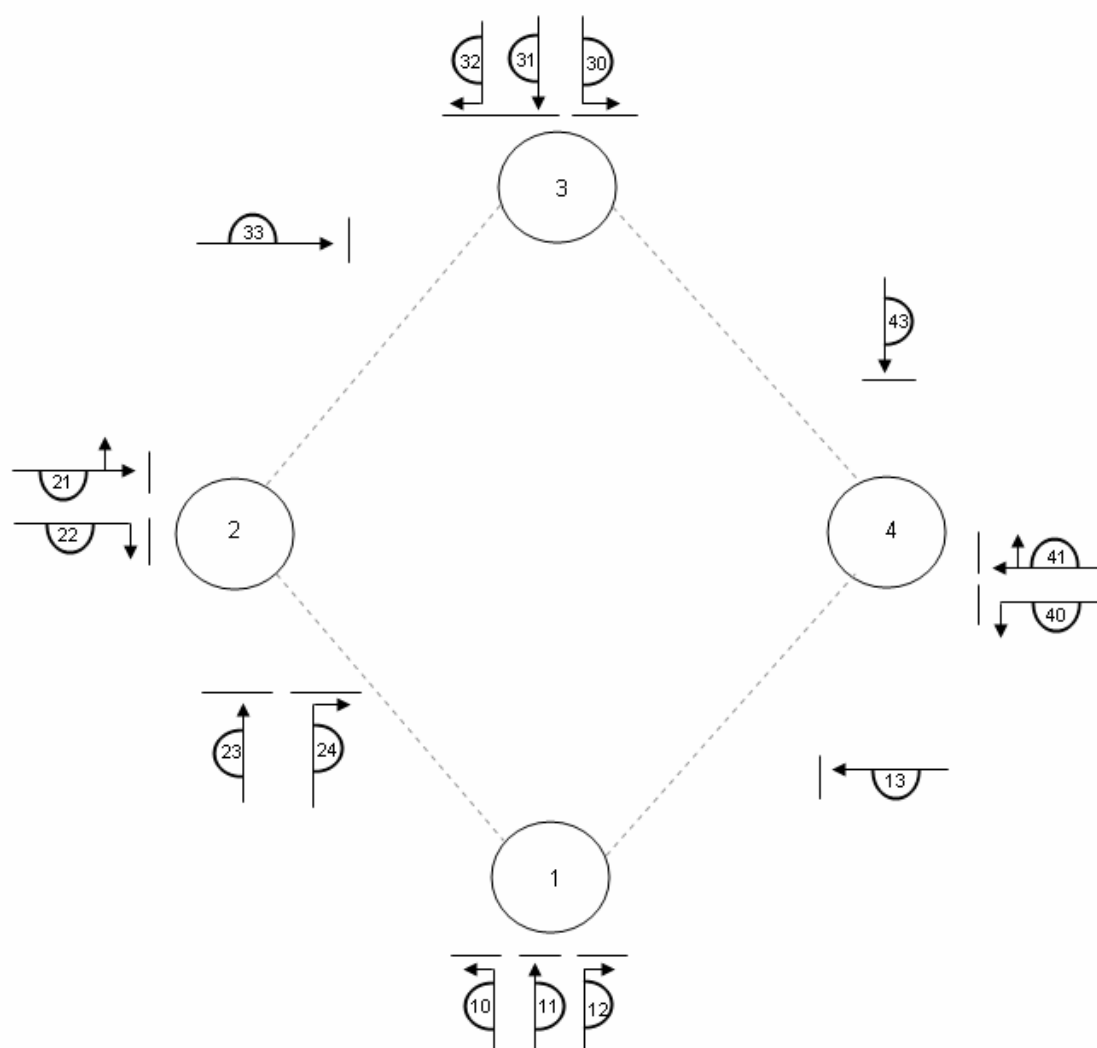
- 5.50 The performance of the interchange has been assessed for the morning (8-9am) and evening (5-6pm) peak hour time periods using TRANSYT, a propriety software programme developed by TRL for assessing linked signal controlled junctions and signalised roundabouts. The nodes under priority control have been modelled using slope and intercept coefficients obtained from ARCADY. A TRANSYT node / link diagram is presented in Figure 5.4.
- 5.51 Table 5.2 presents a summary of the TRANSYT assessment for Copdock Interchange for the current (base) situation.

Table 5.2 – TRANSYT Assessment of Copdock Interchange – Base

Entry Arm	Link No	AM Peak		PM Peak	
		Saturation (%)	Queue (PCU)	Saturation (%)	Queue (PCU)
Approach					
A12 Northbound	10	45	0	38	0
	11	90	4	66	0
	12	99	14	91	0
A14 Eastbound	21	64	7	86	12
	22	116	83	112	110
A1214 Southbound	30	26	0	24	0
	31	93	11	110	133
A14 Westbound	41	78	2	89	4
Circulatory					
Westbound	13	27	0	25	0
Northbound	23	111	69	90	16
	24	112	82	108	102
Eastbound	33	49	0	49	0
Southbound	43	65	1	68	1

- 5.52 Table 5.2 shows the interchange overloaded both for the morning and evening peak hour assessments. The critical node during both assessments is that between the A14 eastbound off and the northbound circulatory carriageway (with a maximum degree of saturation of 116%), and during the PM peak between the eastbound circulatory and the A1214 southbound approach.
- 5.53 The morning peak hour assessment shows north circulatory queues of 82 vehicles, equivalent to nearly 500 metres. This would lead to A12 northbound queuing onto the interchange and blocking of the A14 westbound segregated lane.
- 5.54 Analysis of accident data reveals that the majority of accidents at the junction involved nose-to-tail collisions. This type of accident is common on the approach to traffic signals in congested areas.

Figure 5.4 – TRANSYT Node / Link Diagram Base Copdock Interchange



Solutions

- 5.55 The Base TRANSYT has shown the critical node on the interchange is between the A14 eastbound off slip and the northbound circulatory. Capacity can be increased at this point by converting the existing signal to MOVA controlled and increasing the number of A14 off-slip lanes from two to four lanes. It is recognised that it is not practical to widen the northbound circulatory approach.
- 5.56 Widening the A14 eastbound off slip would allow two inside lanes (Lane 1 and Lane 2) to be signed for the A1214 Ipswich and the two outside lanes (Lane 3 and Lane 4) to be signed A12 southbound. This increase in capacity would allow more green time to be given to the northbound circulatory.
- 5.57 Providing two lanes A14 eastbound and A12 southbound would necessitate providing a two lane exit for southbound traffic. Removal of the segregated A14 westbound to A12 southbound lane would provide the two lanes required without the need for lane widening.
- 5.58 Full signalisation of the interchange would require the A1214 to A14 eastbound and A12 northbound to A14 westbound segregated lanes to be removed. However:
- ◆ These lanes do not carry critical traffic movements;
 - ◆ The A12 northbound to A14 westbound segregated lane is poorly utilised under congested conditions; and
 - ◆ Removal of the A1214 to A14 eastbound lane would allow a two-lane exit between the eastbound circulatory and A14 eastbound on-slip, thus increasing capacity for this critical movement.
- 5.59 The A12 northbound and A1214 southbound entries should also be widened to three-lanes.
- 5.60 It is therefore recommended that the following improvements are made to improve the overall capacity of the interchange:
- ◆ Fully signalised junction under MOVA control;
 - ◆ Three lane circulatory on the northern section of the roundabout whilst retaining two-lane over bridges (although the southbound bridge is currently marked out as single lane);
 - ◆ Widening the A14 eastbound off slip to four lanes;
 - ◆ Widening the A14 westbound off slip to three lanes;
 - ◆ Removal of segregated left turn lanes on the A12 northbound, A1214 southbound and A14 westbound approaches; and

- ♦ Extending the A12 and A1214 dedicated left turn lanes to a distance of 110 metres back from the stop line.

Assessment of Copdock Interchange Proposals

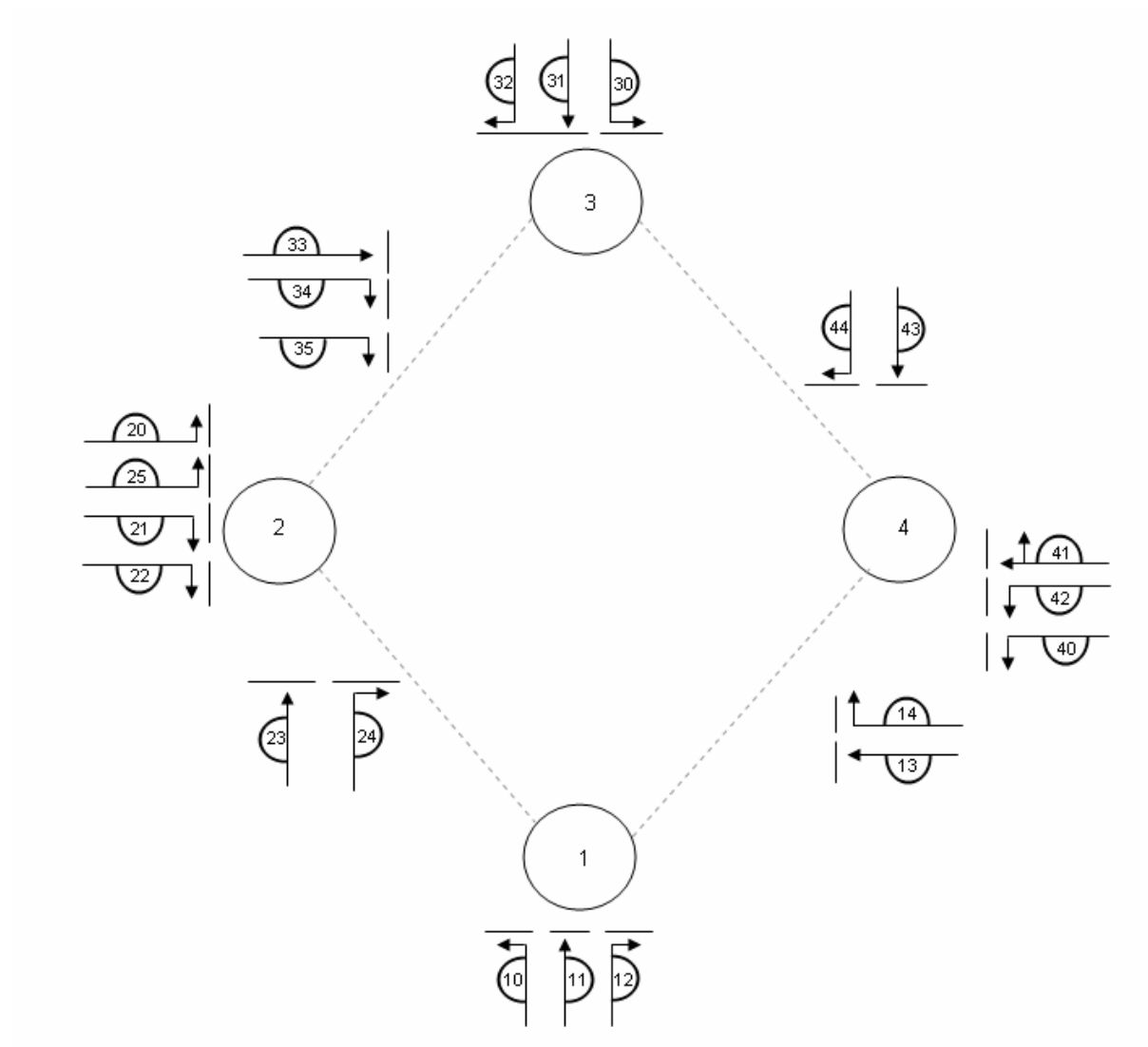
- 5.61 Copdock Interchange has been assessed with the proposed changes for the morning (8-9am) and evening (5-6pm) peak hour time periods using TRANSYT. The assessment has been carried out for both the Base Year (2003), Year 2010 and Year 2015. A TRANSYT link / node diagram is presented in Figure 5.5.
- 5.62 Table 5.3 presents a summary of the TRANSYT assessment for Copdock Interchange (with proposals) using Base Year (2003) traffic flows.

Table 5.3 – TRANSYT Assessment of Copdock Interchange Improvements

Entry Arm	Link No	AM		PM	
		Saturation	Queue (PCU)	Saturation	Queue (PCU)
Approach					
A12 Northbound	10	87	16	79	12
	11	75	12	61	8
	12	84	15	85	15
A14 Eastbound	20	44	3	56	5
	21	87	10	79	8
	22	87	10	79	8
	25	48	4	61	5
A1214 Southbound	30	71	8	62	7
	31	58	7	62	7
	32	57	6	69	9
A14 Westbound	40	83	10	89	12
	41	64	6	67	7
	42	77	9	89	13
Circulatory					
Westbound	13	86	11	83	12
	14	27	3	13	2
Northbound	23	87	19	82	16
	24	88	19	79	15
Eastbound	33	69	4	68	3
	34	65	10	65	10
	35	44	8	43	8
Southbound	43	84	12	87	15
	44	78	9	87	14

- 5.63 The results for both the morning and evening peaks show that the roundabout would operate within capacity, with a maximum degree of saturation of 88%. This compares with the Base Situation where a maximum degree of 116% was reported, suggesting an overall 30% improvement in capacity.

Figure 5.5 – TRANSYT Node / Link Diagram Copdock Interchange with Improvements



Future Year Assessment

5.64 The Proposed improvements have been assessed for future years of 210 and 2015.

2010 Future year Assessment

5.65 Table 5.4 presents a summary of the 2010 TRANSYT assessment for Copdock Interchange.

Table 5.4 – 2010 Future Year TRANSYT Assessment of Copdock Interchange

Entry Arm	Link No	AM		PM	
		Saturation	Queue (PCU)	Saturation	Queue (PCU)
Approach					
A12 Northbound	10	99	33	89	16
	11	85	16	69	10
	12	95	23	96	24
A14 Eastbound	20	50	4	64	6
	21	99	21	89	12
	22	99	21	89	12
	25	54	4	69	6
A1214 Southbound	30	80	10	70	8
	31	66	8	71	9
	32	64	7	78	11
A14 Westbound	40	94	15	100	27
	41	72	8	76	8
	42	87	12	101	31
Circulatory					
Westbound	13	97	21	94	18
	14	31	4	15	2
Northbound	23	98	33	92	21
	24	99	41	89	20
Eastbound	33	78	8	77	5
	34	74	13	73	12
	35	49	9	49	9
Southbound	43	95	23	99	34
	44	88	13	98	32

5.66 The results of both the morning and evening peak hour assessment show that the roundabout operates within capacity for the morning peak hour but very slightly over capacity for the evening peak hour. Several of the links are close to their capacity, but only link 42 operates above capacity.

2015 Future year Assessment

5.67 Table 5.5 presents a summary of the 2015 TRANSYT assessment for Copdock Interchange.

Table 5.5 – 2015 Future Year TRANSYT Assessment of Copdock Interchange

Entry Arm	Link No	AM		PM	
		Saturation	Queue (PCU)	Saturation	Queue (PCU)
Approach					
A12 Northbound	10	107	98	97	25
	11	93	21	75	11
	12	103	63	104	69
A14 Eastbound	20	54	5	69	7
	21	107	53	97	19
	22	107	53	97	19
	25	59	5	75	7
A1214 Southbound	30	88	13	77	10
	31	72	9	77	10
	32	70	9	85	13
A14 Westbound	40	102	35	109	68
	41	79	9	82	10
	42	95	17	110	77
Circulatory					
Westbound	13	103	44	99	28
	14	33	4	16	2
Northbound	23	105	91	99	38
	24	106	99	93	24
Eastbound	33	79	8	81	7
	34	75	13	78	14
	35	50	9	53	9
Southbound	43	100	39	107	99
	44	92	19	106	101

5.68 The results of the morning peak hour assessment for 2015 show that the roundabout operates slightly above capacity. The A12 northbound, A14 eastbound and A14 westbound entry arms operate above capacity as well as links 13, 23, 24 and 43 on the circulatory, which would lead to significant queues forming.

5.69 During the evening peak, the congestion problems are less severe, although the A12 northbound and A14 westbound entry arms and links 43 and 44 on the circulatory still operate above capacity.

5.70 The results for the morning and evening peaks for 2015, with the suggested improvements, show that the roundabout would operate slightly above capacity. This would indicate that the improvements suggested be thought of as a short term strategy to the problem, with a longer term TPI scheme necessary.

-
- 5.71 A more detailed assessment of the proposed improvements for Copdock can be found in the Copdock Interchange Scheme Identification Study.

6. FUTURE PROBLEMS

INTRODUCTION

- 6.1 As well as the junctions mentioned that already cause congestion problems on the A14, there are also junctions and links that are likely to cause problems in the near future. These are:

- ◆ Histon Interchange (J32) – eastbound and westbound Type A
- ◆ Stow Cum Quy (J35) – eastbound and westbound Type A
- ◆ Nine Mile Hill (J36) – westbound Type B
- ◆ Newmarket Waterhall (J38) – eastbound Type B

JN 32 - HISTON INTERCHANGE

- 6.2 Histon Interchange is a large grade separated roundabout between the A14 and B1049, located to the north of Cambridge. The Interchange is fully signalised with the signals operating on fixed time plans. Unusually, there are no queue detectors on the slip road approaches to the interchange that could otherwise give priority to A14 traffic.
- 6.3 The roundabout regularly operates at capacity during the morning and evening peak periods. The main queuing at the interchange materialises in the form of extensive queuing on the B1049 southbound approach onto the interchange during the AM peak and northbound during the PM peak.
- 6.4 Although there is queuing on the A14 off-slips, it is only considered to queue back onto the A14 mainline occasionally and is not sufficient to warrant immediate action.

Solution

- 6.5 There are a number of existing proposals to improve the capacity of the interchange. The Section 278 Agreement with the Highways Agency and the Section 106 Agreement with Cambridgeshire County Council both enable a proposed housing development on land to the south of the interchange. It is also noted that the interchange is within the scope of the A14 Ellington to Fen Ditton TPI scheme.

Recommendation

- 6.6 No action is taken, but that the situation is monitored.

JN 35 - STOW CUM QUY INTERCHANGE

- 6.7 Stow Cum Quy Interchange, located to the north-east of Cambridge is a large grade separated roundabout between the A14 and A1303. The A1303 provides access both to Cambridge and in the eastbound direction to Newmarket. In the westbound direction traffic from Newmarket can slip directly onto the A14 at Nine Mile Hill Interchange (Jn 36). North of the interchange there is a signalised junction between the A1303 / B1102 which itself provides access to Burwell and beyond.
- 6.8 The interchange operates under normal roundabout priority control, with a segregated lane provided for traffic between the A14 westbound off-slip towards the A1303 west (Cambridge).
- 6.9 Traffic can often be observed queuing on the A14 off-slips, but seldom queues back onto the A14. However, it is expected that given a small amount of growth, the traffic could start to queue back onto the A14, particularly off the A14 eastbound off-slip during the evening peak hour.

Solution

- 6.10 It is likely that queuing on the A14 eastbound off-slip is exit capacity problems linked to the finite capacity of the B1102 with A1303 signal controlled junction. This would suggest that simply increasing junction capacity at the Stow Cum Quy interchange would not be an effective solution.
- 6.11 The preferred solution would therefore be to provide an auxiliary lane for eastbound exiting traffic. It is recognised that such a scheme would offer poor value for money based on present day levels of congestion. In order to provide evidence of value for money, it would first be necessary to monitor the frequency of queuing back onto the A14.

Recommendation

- 6.12 Although no scheme is proposed to alleviate congestion onto the A14 at junction 35, it is recommended that queuing on the eastbound off-slip be monitored by an automatic queue detection system.

JN 36 - NINE MILE HILL INTERCHANGE

- 6.13 At Nine Mile Hill Interchange there is only a single lane exit for westbound traffic diverging to the A11. Although there are currently no observed problems, CRF calculations indicate that the Interchange operates over capacity during the morning peak. This would suggest that if traffic flows on the interchange were to increase only slightly, there may be a significant congestion problem.

- 6.14 Table 6.1 shows the current CRF and stress levels calculated for traffic turning off the A14 westbound onto the A11 southbound.

Table 6.1 – CRF Calculation for A14 Westbound Traffic Turning onto the A11 Southbound

Peak	Junction No.	Junction Location		AADT	CRF	Stress
		From	To			
AM	36	A14 Westbound	A11 Southbound	10,476	10,070	1.04
PM	36	A14 Westbound	A11 Southbound	10,476	14,963	0.70

Solution

- 6.15 The long term solution would be to add a two-lane diverge and additional signing.

Recommendation

- 6.16 No immediate action is taken but that the situation is monitored.

JN 38 - NEWMARKET WATERHALL INTERCHANGE

- 6.17 At Newmarket Waterhall Interchange there is only a single lane exit for eastbound traffic diverging to the A11 towards Norwich. Although there is currently no observed congestion problem, CRF calculations indicate that the Interchange operates over capacity during the evening peak. This would suggest that if traffic flows on the interchange were to increase only slightly, there may be a significant congestion problem.
- 6.18 Despite the apparent lack of congestion at this junction, a problem exists which is caused by long moving queues in the off lane and late 'swooping' in by exiting vehicles to avoid moving queues.
- 6.19 Table 6.2 shows the current CRF and stress levels calculated for traffic turning off the A14 eastbound onto the A11 northbound.

Table 6.2 – CRF Calculation for A14 Eastbound Traffic Turning onto the A11 Northbound

Peak	Junction No.	Junction Location		AADT	CRF	Stress
		From	To			
AM	38	A14 Eastbound	A11 Northbound	15,375	20,578	0.75
PM	38	A14 Eastbound	A11 Northbound	15,375	14,681	1.05

Solution

- 6.20 The long term solution would be to add a two-lane diverge and additional signing.

Recommendation

- 6.21 No immediate action is taken but that the situation is monitored.

ORWELL BRIDGE

- 6.22 At Orwell Bridge, a congestion problem exists even though CRF calculations indicate that the Bridge should operate well within capacity.
- 6.23 It is considered that capacity is reduced by the 'boxed-in' effect created by the parapets and crash barriers on the bridge. This may cause some vehicles to travel more slowly than they would when travelling on a more open stretch of road.
- 6.24 When the capacity of the road is approached, traffic conditions can become turbulent, particularly when there is a mix of fast and slow moving vehicles. In this instance, the speed mix is exacerbated by the HGVs slowly climbing the quite steep gradient to the crest of the bridge. Link capacity under such conditions can become variable, and are seriously compromised by the braking of faster moving cars mixing with slower moving vehicles, particularly when attempting to overtake HGVs in high wind conditions whilst experiencing the 'boxed in' effect.

Solution

- 6.25 It is considered that capacity of the road would be optimised if the speed mix of vehicles were reduced. This suggests there could be a strong case for either variable speed limits or a fixed reduced speed limit along the route, which would smooth out the traffic speed and maximise the capacity of the road.

Recommendation

- 6.26 It is recommended that the idea of variable speed limits be investigated further.

7. CONCLUSIONS

JUNCTIONS IN NEED OF IMMEDIATE IMPROVEMENT

Jn 31 - Girton Interchange

- 7.1 This interchange will be improved by a LNMS undertaken by Area 8 and so does not need to be considered in this study.

Jn 33 - Milton Interchange

- 7.2 This interchange is currently under review by Cambridgeshire County Council.
- 7.3 The proposed improvements include:
- ◆ Dedicated left turn 'express lane' between Milton Road and the A14 westbound on-slip;
 - ◆ Spiral markings;
 - ◆ Three lane circulatory on the northern and southern sections of the roundabout whilst retaining the two-lane over bridges;
 - ◆ Two lane A10 approach flaring to a three lane entry; and
 - ◆ Three lane A14 westbound off-slip approach.
- 7.4 These proposals may be implemented in 2006 and so there is no need to consider improvements as part of this study.

Jn 55 - Copdock Interchange

- 7.5 In order to reduce peak hour congestion and delays on the approaches to the roundabout, it is recommended that the following improvements are made:
- ◆ Fully signalised junction;
 - ◆ Three lane circulatory on the northern section of the roundabout whilst retaining two-lane over bridges (although the southbound bridge is currently marked out as single lane);
 - ◆ Widening the A14 west entry to four lanes;
 - ◆ Widening the A14 east entry to three lanes;
 - ◆ Extending the A12 northbound and A1214 southbound dedicated left turn lanes to a distance of 110 metres back from the stop line; and
 - ◆ Removal of dedicated left turn lanes on the A12 northbound approach, the A1214 southbound approach and the A14 westbound approach.

FUTURE STUDY

Orwell Bridge

- 7.6 Due to the mixture of fast and slow moving vehicles, there is a strong case for either a variable speed limit or a fixed reduced speed limit along the route. It is considered that this would smooth out traffic and help to reduce congestion and maximise the capacity of the road.
- 7.7 It is recommended that this idea is investigated more thoroughly in a future study

JUNCTIONS WHERE CONGESTION SHOULD BE MONITORED

- 7.8 Congestion should be monitored at the following junctions:

- ◆ Jn 32 Histon Interchange;
- ◆ Jn 35 Stow Cum Quy Interchange;
- ◆ Jn 36 Nine Mile Hill Interchange;
- ◆ Jn 38 Newmarket Waterhall Interchange;
- ◆ Jn 43 St Saviours Interchange;
- ◆ Jn 44 Morton Hall Interchange; and
- ◆ Jn 53 White House Interchange.

POTENTIAL IMPROVEMENTS

- 7.9 The following sites and solutions should be considered further:

Jn 36 Nine Mile Hill Interchange

- ◆ Add a two-lane diverge for westbound traffic and additional signing.

Jn 38 Newmarket Waterhall Interchange

- ◆ Add a two-lane diverge for eastbound traffic and additional signing.

Jn 43 Bury St Edmunds St Saviours Interchange

- ◆ Add westbound auxiliary lane for diverging traffic.

Jn 53 Whitehouse Interchange

- ◆ A third lane between Junction 52 and 53.

APPENDIX A – AUTOMATIC TRAFFIC COUNT (ATC) DATA

A.1 Automatic Traffic Count (ATC) Data – TRADS

Monthly classified during May 2004 for site 6/9237

EB, A14, MILTON, J33 - J34(E547700, N261800) view site location on map

24 Hour Flows by Day of Month

24 Hour Flows by Day of Month																											
Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV					
																	1	24182	10.4	2	20148	6					
	b 3	18639	10.3		4	30266	22.3		5	31215	23.7		6	32040	23.7		7	34237	21.3		8	21316	11.2	9	19680	7.3	
		10	30528	22		11	31013	23.3		12	31738	23.1		13	32277	23.3		14	33920	20.8		15	21787	10.9	16	19905	7.3
		17	30819	22.4		18	30740	23.7		19	31590	22.9		20	32878	22.4		21	34646	20.1		22	22809	10.6	23	20247	7.4
		24	29589	21.8		25	30834	23		26	31501	23.1		27	32339	23		28	34772	20.2		29	25278	11.3	30	19927	6.2
	b 31	20618	9.3																								

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT'	AWT'
24hr	26039	30713	31511	32384	34394	23074	19981		28299	31008	28299	31008
%HGV	18.4	23.1	23.2	23.1	20.6	10.9	6.8		19	21.8	19	21.8
18hr	25312	29718	30449	31275	33243	22017	19335		27335	29999	27335	29999
%HGV	17.6	21.7	21.6	21.4	19	9	6.5		17.6	20.3	17.6	20.3
16hr	24625	29081	29738	30420	32313	21291	18672		26591	29235	26591	29235
%HGV	17.6	21.7	21.6	21.5	19.1	9	6.4		17.7	20.4	17.7	20.4
12hr	21175	25254	25627	25884	27402	18789	15702		22833	25068	22833	25068
%HGV	17.4	21.4	21.4	21.3	19.1	8.6	5.9		17.4	20.2	17.4	20.2
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	141	86	59	65	107	270	794	1505	1533	1559	1572	1699	1786	1671	1689	1783	2210	2385	1783	1193	845	617	427	260
HGV	24	25	24	36	64	140	250	289	238	284	295	318	344	355	368	369	341	269	220	174	135	89	64	55
Tue	140	90	87	118	176	386	1058	2163	2197	1964	1664	1613	1690	1731	1852	2081	2801	3232	2267	1342	858	570	400	238
HGV	60	56	63	92	128	234	392	434	322	423	459	482	485	516	542	541	498	390	311	231	174	108	71	64
Wed	141	104	114	126	196	383	1034	2202	2311	1988	1655	1598	1746	1717	1941	2141	2743	3231	2355	1491	928	658	448	263
HGV	66	74	85	103	152	254	416	455	387	420	437	481	493	502	562	549	478	401	308	237	185	115	74	71
Thu	155	111	106	134	194	408	1067	2229	2247	1916	1688	1661	1765	1792	1956	2173	2883	3252	2325	1632	1056	781	531	324
HGV	74	69	82	106	155	285	446	480	379	409	467	507	485	491	577	541	514	380	286	251	196	120	86	75
Fri	174	125	117	140	209	386	1028	2165	2159	1827	1698	1851	2061	2149	2334	2638	3061	3115	2344	1738	1272	873	535	395
HGV	76	78	87	108	162	255	429	477	387	398	436	480	483	507	530	501	448	320	260	201	177	118	78	74
Sat	271	158	129	131	151	217	422	749	1161	1594	2014	2143	2082	1813	1696	1514	1428	1396	1198	970	656	453	387	339
HGV	62	68	69	89	108	135	168	184	179	171	173	155	139	121	123	104	99	96	74	59	42	32	29	24
Sun	255	122	79	56	51	84	175	356	621	1079	1628	1803	1697	1412	1384	1334	1447	1482	1460	1225	919	650	418	245
HGV	21	15	11	9	17	28	39	49	52	65	85	80	79	71	79	79	82	92	104	96	76	57	34	31
M-Th	144	98	92	111	168	362	988	2025	2072	1857	1645	1643	1747	1728	1860	2045	2659	3025	2183	1415	922	657	452	271
HGV	56	56	64	84	125	228	376	415	332	384	415	447	452	466	512	500	458	360	281	223	173	108	74	66
M-Fr	150	103	97	117	176	367	996	2053	2089	1851	1655	1684	1810	1812	1954	2163	2740	3043	2215	1479	992	700	468	296
HGV	60	60	68	89	132	234	387	427	343	387	419	454	458	474	516	500	456	352	277	219	173	110	75	68
M-Su	182	114	99	110	155	305	797	1624	1747	1704	1703	1767	1832	1755	1836	1952	2368	2585	1962	1370	933	657	449	295
HGV	55	55	60	78	112	190	306	338	278	310	336	358	358	366	397	383	351	278	223	178	141	91	62	56

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event

o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9238

WE, A14, MILTON, J34 - J33(E547700, N261800) view site location on map

24 Hour Flows by Day of Month

ET Flow Flows by Day of Month																						
Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
																	1	24004	10.6	2	21042	6
	b 3	22493	9.5	4	32551	21.6	5	33609	23.1	6	32961	21.8	7	35022	21	8	22045	10.4	9	22005	7.7	
	10	33160	21.5	11	33487	22.8	12	33804	22.4	13	33878	23	14	34918	20.2	15	22474	10.6	16	21453	7.3	
	17	32542	21.9	18	33045	23	19	33880	22.8	a 20	35519	21.8	a 21	36400	19.3	22	23440	10.3	23	22210	7.4	
	24	31684	20.7	25	32073	23	26	33622	22.7	27	34464	22.6	28	35659	19.9	29	23565	10.5	30	20017	6.3	
	b 31	23212	9.2																			

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT*	AWT*
24hr	28618	32789	33729	34206	35500	23106	21345		29899	32968	29899	32968
%HGV	17.5	22.6	22.7	22.3	20.1	10.5	7		18.5	21.1	18.5	21.1
18hr	27615	31496	32392	32841	34053	22024	20580		28714	31679	28714	31679
%HGV	16.4	21	21	20.5	18.2	8.8	6.5		17	19.5	17	19.5
16hr	26916	30785	31627	31974	33241	21261	20026		27975	30908	27975	30908
%HGV	16.1	20.7	20.8	20.3	18.1	8.8	6.4		16.8	19.3	16.8	19.3
12hr	23242	26806	27459	27674	28843	18690	17092		24258	26804	24258	26804
%HGV	15.3	19.7	19.6	19.4	17.5	8.5	6.1		16.1	18.4	16.1	18.4
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	122	73	74	82	168	484	958	1939	2242	1898	1689	1789	1829	1827	1851	1956	2239	2271	1712	1179	887	650	445	254
HGV	29	21	34	56	107	247	315	331	275	324	314	309	312	316	321	316	290	240	214	187	153	122	102	76
Tue	140	92	79	122	237	624	1326	2935	3394	2387	1700	1678	1761	1905	1884	2029	2614	2707	1812	1181	835	638	467	244
HGV	73	62	54	91	174	353	484	520	446	492	479	463	473	457	472	441	421	345	265	252	202	156	135	94
Wed	168	118	91	114	240	606	1326	2879	3548	2340	1772	1663	1774	1918	1962	2143	2701	2815	1944	1285	860	699	471	294
HGV	94	81	61	86	182	361	511	524	476	482	514	479	464	456	464	451	431	353	289	288	211	173	129	103
Thu	166	114	94	123	242	626	1298	2880	3603	2334	1707	1705	1798	1962	2015	2218	2735	2802	1917	1263	981	758	535	331
HGV	94	79	67	90	187	381	495	533	496	509	474	480	462	454	479	447	423	331	276	245	211	164	127	110
Fri	206	133	121	134	263	590	1163	2639	3342	2216	1994	2128	2149	2275	2350	2458	2795	2582	1915	1516	1039	681	477	335
HGV	97	85	76	100	205	375	462	511	482	495	517	522	460	455	448	396	319	240	200	203	158	138	98	79
Sat	239	154	128	114	127	319	529	867	1242	1646	1911	2010	1871	1644	1524	1482	1515	1648	1330	931	640	471	377	385
HGV	79	68	54	61	74	150	153	182	188	187	181	151	143	123	109	87	86	70	73	58	39	37	27	35
Sun	283	135	104	71	59	112	253	520	803	1164	1527	1669	1594	1491	1439	1607	1781	1916	1582	1203	868	611	353	201
HGV	31	16	19	21	20	33	41	76	72	84	83	93	85	74	72	87	96	108	107	78	62	58	33	28
M-Th	149	99	85	110	222	585	1227	2658	3197	2240	1717	1709	1791	1903	1928	2087	2572	2649	1846	1227	891	686	480	281
HGV	73	61	54	81	163	336	451	477	423	452	445	433	428	421	434	414	391	317	261	243	194	154	123	96
M-Fr	160	106	92	115	230	586	1214	2654	3226	2235	1772	1793	1862	1977	2012	2161	2617	2635	1860	1285	920	685	479	292
HGV	77	66	58	85	171	343	453	484	435	460	460	451	434	428	437	410	377	302	249	235	187	151	118	92
M-Su	189	117	99	109	191	480	979	2094	2596	1998	1757	1806	1825	1860	1861	1985	2340	2392	1745	1223	873	644	446	292
HGV	71	59	52	72	136	271	352	382	348	368	366	357	343	334	338	318	295	241	203	187	148	121	93	75

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event

o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9239

W/B, A14, GIRTON(E542700, N261500) view site location on map

24 Hour Flows by Day of Month

Mon			Flow	%HGV	Tue			Flow	%HGV	Wed			Flow	%HGV	Thu			Flow	%HGV	Fri			Flow	%HGV	Sat			Flow	%HGV	Sun			Flow	%HGV				
																												1	24334	11.2	2	22409	6.4					
			b 3	24013	10.2				4	33070	23				5	34027	24.7				a 6	32671	23.6				7	35796	22.4				8	22642	11.3	9	23753	8
			10	34113	23.4				11	34237	24.2				12	34438	24.2				13	34814	24.4				14	36028	21.3				15	23309	11.3	16	23244	7.8
			17	33503	23.4				18	33917	24.4				19	34487	24.5				20	35321	23.6				a 21	34763	21.6				22	23976	11.1	23	23887	7.9
			24	30153	23.1				a 25	30579	25				26	34279	24.4				27	35320	24.2				28	36232	21.5				29	25323	10.9	30	21568	6.9
			b 31	25930	9.3																																	

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT*	AWT*
24hr	29542	32951	34308	34532	35705	23917	22972		30561	33407	30561	33407
%HGV	18.7	24.1	24.4	24	21.7	11.1	7.4		19.8	22.7	19.8	22.7
18hr	28349	31436	32764	32978	34096	22727	22199		29221	31924	29221	31924
%HGV	17.6	22.5	22.6	22.1	19.8	9.4	7		18.2	21	18.2	21
16hr	27609	30703	31952	32142	33318	21978	21559		28465	31144	28465	31144
%HGV	17.3	22.2	22.4	21.9	19.7	9.4	6.8		18	20.8	18	20.8
12hr	23503	26371	27406	27668	28773	19275	18210		24458	26744	24458	26744
%HGV	16.7	21.4	21.5	21.1	19.1	9	6.6		17.4	20	17.4	20
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	129	75	82	98	220	589	1113	1813	1872	1909	1849	1927	1876	1843	1905	2021	2324	2322	1844	1282	992	718	473	268
HGV	32	23	39	59	120	274	360	349	308	365	350	343	351	359	359	344	304	261	224	192	174	135	109	83
Tue	148	110	89	128	293	747	1499	2693	2610	2161	1799	1674	1687	1869	1987	2198	2811	2874	2011	1267	877	689	473	260
HGV	73	72	63	90	195	388	547	544	487	518	534	482	478	509	518	491	440	360	280	252	219	166	141	102
Wed	167	135	97	130	291	725	1499	2692	2784	2132	1922	1764	1853	2007	2081	2260	2903	2878	2130	1332	953	763	497	315
HGV	98	88	72	91	203	411	583	565	519	526	576	536	520	535	510	483	449	362	305	292	220	184	139	108
Thu	182	121	103	137	295	716	1481	2716	2812	2141	1805	1797	1908	2022	2138	2400	2917	2911	2103	1327	952	715	517	320
HGV	100	83	77	96	208	413	561	578	531	552	529	523	514	523	520	496	439	346	288	249	215	177	135	112
Fri	199	137	124	154	308	689	1318	2452	2628	2066	2134	2290	2337	2435	2481	2630	2743	2535	2044	1537	1034	656	460	319
HGV	98	90	83	108	221	409	531	550	524	545	569	580	521	524	485	417	328	240	220	199	177	141	105	80
Sat	243	162	123	126	173	364	590	939	1346	1753	2114	2042	1911	1642	1542	1463	1506	1641	1375	1014	636	463	362	386
HGV	84	75	61	60	86	164	184	201	203	197	203	164	167	131	121	98	90	78	76	61	45	38	32	38
Sun	252	126	95	75	85	141	267	526	881	1324	1680	1824	1692	1507	1485	1638	1876	2035	1741	1406	1000	676	409	231
HGV	31	18	20	21	26	38	47	84	87	103	95	104	99	87	84	93	110	119	122	95	70	65	42	31
M-Th	157	110	93	123	275	694	1398	2479	2520	2086	1844	1791	1831	1935	2028	2220	2739	2746	2022	1302	944	721	490	291
HGV	76	67	63	84	182	372	513	509	461	490	497	471	466	482	477	454	408	332	274	246	207	166	131	101
M-Fr	165	116	99	129	281	693	1382	2473	2541	2082	1902	1890	1932	2035	2118	2302	2740	2704	2026	1349	962	708	484	296
HGV	80	71	67	89	189	379	516	517	474	501	512	493	477	490	478	446	392	314	263	237	201	161	126	97
M-Su	189	124	102	121	238	567	1110	1976	2133	1927	1900	1903	1895	1904	1946	2087	2440	2457	1893	1309	921	669	456	300
HGV	74	64	59	75	151	300	402	410	380	401	408	390	379	381	371	346	309	252	216	191	160	129	100	79

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event

o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9240

EB, A14, GIRTON(E542700, N261500) view site location on map

24 Hour Flows by Day of Month

Mon	Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
	b 3	20358	10.8		4	32923	22.7		5	33875	24.1		6	34794	24.1		7	37501	21.9	
	10	33495	22.7		11	33717	23.8		12	34593	23.7		13	35051	23.8		14	37234	21.1	
	17	33448	23		18	33855	24		19	34472	23.6		20	35010	23.4		21	36857	21.1	
	24	30194	23.2		25	32250	24		26	34415	23.8		27	35203	23.6		28	38328	20.8	
	b 31	22655	9.6																	

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT*	AWT*
24hr	28030	33186	34339	35015	37480	24798	21686		30647	33610	30647	33610
%HGV	19	23.6	23.8	23.7	21.2	11.3	7.3		19.6	22.4	19.6	22.4
18hr	27111	32022	33100	33724	36167	23647	20942		29530	32424	29530	32424
%HGV	18.4	22.3	22.3	22.1	19.7	9.4	7		18.3	21	18.3	21
16hr	26331	31287	32313	32887	35203	22858	20108		28712	31604	28712	31604
%HGV	18.4	22.3	22.3	22.1	19.8	9.5	6.9		18.3	21	18.3	21
12hr	22744	27283	28055	28233	29938	20096	16633		24711	27250	24711	27250
%HGV	18.1	21.8	21.9	21.8	19.8	9.1	6.4		18	20.8	18	20.8
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	188	110	76	81	125	340	868	1797	2411	1910	1769	1844	1902	1753	1700	1758	1993	2156	1751	1189	867	663	482	298
HGV	25	30	28	44	73	156	285	316	299	310	352	355	398	389	401	397	361	286	243	193	149	101	74	62
Tue	182	108	102	126	198	449	1171	2609	3569	2567	1859	1752	1677	1847	1862	2035	2491	2834	2181	1377	858	597	460	275
HGV	67	65	72	98	137	259	446	472	399	468	510	532	524	567	606	592	542	412	331	257	191	119	93	72
Wed	174	123	128	136	218	461	1158	2691	3724	2521	1874	1735	1822	1873	1963	2136	2445	2915	2355	1507	959	634	489	299
HGV	74	81	92	109	171	278	471	515	460	481	502	538	551	573	628	612	516	434	331	261	201	119	97	77
Thu	194	122	119	147	217	492	1192	2648	3628	2472	1910	1835	1804	1864	2012	2193	2657	2910	2303	1680	1066	716	525	312
HGV	84	77	88	118	166	310	505	523	465	458	510	572	558	545	641	599	570	404	315	278	205	126	100	82
Fri	202	143	123	162	226	458	1113	2689	3409	2312	1923	2047	2165	2264	2390	2639	2818	2838	2444	1861	1372	919	571	393
HGV	85	84	87	122	176	280	475	550	478	455	496	548	566	571	586	558	491	351	283	224	194	125	90	78
Sat	289	171	129	140	167	255	469	847	1306	1758	2153	2327	2148	1891	1760	1603	1505	1481	1318	1051	735	509	423	366
HGV	72	74	73	95	121	140	178	202	202	190	187	181	158	139	134	129	114	102	87	73	51	37	33	26
Sun	299	149	68	61	63	104	221	424	703	1146	1626	1803	1668	1456	1396	1463	1609	1662	1678	1401	1081	772	519	315
HGV	25	18	12	12	20	32	49	56	68	89	98	91	86	80	84	90	96	105	117	111	91	62	43	36
M-Th	185	116	106	123	190	436	1097	2436	3333	2368	1853	1792	1801	1834	1884	2031	2397	2704	2148	1438	938	653	489	296
HGV	63	63	70	92	137	251	427	457	406	429	469	499	508	519	569	550	497	384	305	247	187	116	91	73
M-Fr	188	121	110	130	197	440	1100	2487	3348	2356	1867	1843	1874	1920	1985	2152	2481	2731	2207	1523	1024	706	505	315
HGV	67	67	73	98	145	257	436	475	420	434	474	509	519	529	572	552	496	377	301	243	188	118	91	74
M-Su	218	132	106	122	173	366	885	1958	2679	2098	1873	1906	1884	1850	1869	1975	2217	2399	2004	1438	991	687	496	323
HGV	62	61	65	85	123	208	344	376	339	350	379	402	406	409	440	425	384	299	244	200	155	98	76	62

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event


o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9255

EB, A14, BOTTISHAM(E555000, N259700) view site location on map

24 Hour Flows by Day of Month

Mon	Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
															1			2		
3			4			5			6			7			8			9		
10			11			12			13			14			15			16		
17			18			19			20			21			22			23		
24			25			26	20281	0	27	20798	0	28	23867	0	29	18093	0	30	13321	0
 31	14544	0																		

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT*	AWT*
24hr	14544		20281	20798	23867	18093	13321		18682	19872	18682	19872
%HGV												
18hr	14126		19370	19896	22925	17196	12848		17920	19079	17920	19079
%HGV												
16hr	13422		18875	19255	22112	16658	12349		17298	18416	17298	18416
%HGV												
12hr	11150		15926	16234	17970	14852	10475		14561	15320	14561	15320
%HGV												
No.days	1,-	-,-	1,-	1,-	1,-	1,-	1,-		6,0	4,0	6,0	4,0


Hourly Variation


H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	94	67	55	46	54	102	145	283	507	797	1141	1200	1135	970	978	985	1025	1069	1060	874	687	566	435	269
HGV																								
Tue																								
HGV																								
Wed	136	90	103	114	159	309	721	1178	1277	1208	1092	1044	1105	1084	1288	1310	1787	2009	1544	1152	690	386	289	206
HGV																								
Thu	132	88	101	123	148	310	704	1181	1166	974	1007	1195	1070	1190	1348	1538	1923	2088	1554	1036	742	539	389	252
HGV																								
Fri	136	103	110	111	180	302	680	1164	1122	1031	1047	1302	1447	1524	1742	1951	1976	2112	1552	1266	1148	1048	464	349
HGV																								
Sat	211	129	118	114	141	184	346	607	894	1147	1570	1666	1506	1464	1359	1279	1188	1174	998	649	474	337	290	248
HGV																								
Sun	165	118	77	33	30	50	99	266	483	780	1125	1250	1091	930	866	798	961	1062	863	696	646	433	299	200
HGV																								
M-Th	121	82	86	94	120	240	523	881	983	993	1080	1146	1103	1081	1205	1278	1578	1722	1386	1021	706	497	371	242
HGV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M-Fr	125	87	92	99	135	256	563	952	1018	1003	1072	1185	1189	1192	1339	1446	1678	1820	1428	1082	817	635	394	269
HGV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M-Su	146	99	94	90	119	210	449	780	908	990	1164	1276	1226	1194	1264	1310	1477	1586	1262	946	731	552	361	254
HGV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

 Bank Holiday

 Weather

 Accident

 Time change

 Road Works

 Sporting Event


 Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9256

WB, A14, BOTTISHAM(E555000, N259700) view site location on map

24 Hour Flows by Day of Month

Mon	Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
3			4			5			6			7			1			2		
10			11			12			13			14			15			16		
17			18			19			20			21			22			23		
24			25			26	23580	0	27	24311	0	28	25865	0	29	17594	0	30	15142	0
 31	18953	0																		

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT*	AWT*
24hr	18953		23580	24311	25865	17594	15142		21231	23177	21231	23177
%HGV												
18hr	18437		22385	22999	24551	16564	14528		20222	22093	20222	22093
%HGV												
16hr	17760		21927	22464	24052	16004	14064		19688	21550	19688	21550
%HGV												
12hr	14514		18859	19468	20650	13957	11853		16810	18372	16810	18372
%HGV												
No.days	1,-	-,-	1,-	1,-	1,-	1,-	1,-		6,0	4,0	6,0	4,0

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	116	89	68	37	66	140	229	352	567	943	1386	1554	1424	1314	1284	1338	1444	1546	1362	1244	1079	694	381	296
HGV																								
Tue																								
HGV																								
Wed	122	105	73	88	226	581	1234	2549	2614	1739	1404	1216	1174	1319	1357	1368	1401	1549	1169	861	587	386	277	181
HGV																								
Thu	142	100	83	110	262	615	1085	2530	2553	1825	1286	1306	1313	1345	1431	1407	1570	1649	1253	887	611	413	291	244
HGV																								
Fri	178	107	120	118	260	531	1049	2298	2338	1697	1746	1796	1587	1569	1619	1523	1548	1609	1320	1127	770	456	284	215
HGV																								
Sat	162	127	109	103	166	363	566	944	1177	1405	1614	1712	1385	1174	1065	970	890	862	759	684	489	308	267	293
HGV																								
Sun	212	102	91	52	59	98	209	404	582	879	1173	1284	1131	1012	854	885	1073	1478	1098	892	655	455	282	182
HGV																								
M-Th	127	98	75	78	185	445	849	1810	1911	1502	1359	1359	1304	1326	1357	1371	1472	1581	1261	997	759	498	316	240
HGV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M-Fr	140	100	86	88	204	467	899	1932	2018	1551	1456	1468	1375	1387	1423	1409	1491	1588	1276	1030	762	487	308	234
HGV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M-Su	155	105	91	85	173	388	729	1513	1639	1415	1435	1478	1336	1289	1268	1249	1321	1449	1160	949	699	452	297	235
HGV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

 Bank Holiday

 Weather

 Accident

 Time change

 Road Works

 Sporting Event

 Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9917

WB, A14, RISBY(E577300, N266150) view site location on map

24 Hour Flows by Day of Month

Daily Flow by Day of Month																						
Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
																	1	16956	9.3	2	14875	4.2
	b 3	17081	8.5	4	23435	21.4	5	23161	26.3	6	24166	22.9	7	24755	20.8	8	15793	9.4	a 9	16566	6.3	
	10	23684	21.9	11	23747	24	12	24357	23	13	24135	23.5	14	24795	19.9	15	16120	9.6	16	15868	6.7	
	17	23700	22.2	18	23903	23.5	19	24706	23	20	24575	23.1	21	24840	19.6	22	15958	9.4	23	15832	6.7	
	24	23447	21.3	25	23678	23.7	26	24615	22.9	27	24738	22.9	28	25766	19.7	29	17153	9.7	30	14387	5.1	
	b 31	17286	8.3																			

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT^	AWT^
24hr	21040	23691	24210	24404	25039	16396	15506		21469	23676	21469	23676
%HGV	17.4	23.1	23.8	23.1	20	9.5	5.8		18.6	21.6	18.6	21.6
18hr	20010	22341	22810	22997	23656	15495	15043		20336	22362	20336	22362
%HGV	16	21.2	21.6	20.9	17.6	7.4	5.6		16.7	19.5	16.7	19.5
16hr	19585	21878	22310	22504	23151	15040	14680		19878	21885	19878	21885
%HGV	15.7	20.8	21.4	20.6	17.5	7.4	5.5		16.5	19.3	16.5	19.3
12hr	16627	18707	19081	19269	19880	13296	12493		17050	18712	17050	18712
%HGV	15	19.7	20.3	19.5	16.9	7.1	5.1		15.7	18.4	15.7	18.4
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

Heavy Variation		H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	Mon		69	49	54	95	239	523	1069	1608	1629	1316	1256	1340	1266	1276	1276	1437	1556	1531	1136	832	617	440	281	144
	HGV		15	13	28	57	120	223	242	239	212	224	201	199	205	205	201	217	217	195	172	138	115	88	71	56
	Tue		88	68	66	140	293	696	1528	2467	2448	1648	1301	1247	1241	1260	1310	1426	1564	1672	1124	724	528	392	284	179
	HGV		56	49	46	92	188	324	407	388	350	350	323	307	301	282	293	292	289	286	227	192	152	116	86	80
	Wed		113	91	71	142	299	684	1492	2396	2321	1619	1298	1294	1313	1334	1373	1466	1682	1772	1214	736	568	433	311	189
	HGV		70	62	50	94	200	337	426	393	399	409	332	307	302	293	284	297	307	291	248	193	157	122	85	86
	Thu		112	90	75	137	305	689	1490	2396	2460	1644	1347	1306	1283	1301	1379	1482	1669	1745	1259	767	566	413	301	193
	HGV		75	66	50	99	205	348	416	385	380	372	328	328	296	285	292	292	300	272	232	182	151	110	91	77
	Fri		122	96	90	154	317	605	1371	2197	2243	1635	1497	1536	1482	1505	1531	1584	1745	1693	1232	891	614	396	306	199
	HGV		73	61	64	105	224	315	384	382	352	361	340	314	285	280	261	229	208	186	152	124	102	79	59	55
	Sat		146	96	78	103	173	305	497	715	935	1182	1380	1470	1287	1116	1053	1107	1118	1102	831	561	401	287	258	196
	HGV		65	48	39	50	89	116	110	121	115	116	116	106	85	56	55	47	45	43	34	18	21	20	14	13
	Sun		118	70	59	59	57	100	223	375	588	866	1091	1238	1149	969	997	1256	1456	1333	1175	890	653	421	228	135
	HGV		6	9	9	13	11	17	38	44	49	58	59	54	49	45	44	56	59	57	62	46	44	34	12	19
	M-Th		96	75	67	129	284	648	1395	2217	2215	1557	1301	1297	1276	1293	1335	1453	1618	1680	1183	765	570	420	294	176
	HGV		54	48	44	86	178	308	373	351	335	339	296	285	276	266	268	275	278	261	220	176	144	109	83	75
	M-Fr		101	79	71	134	291	639	1390	2213	2220	1572	1340	1345	1317	1335	1374	1479	1643	1683	1193	790	579	415	297	181
	HGV		58	50	48	89	187	309	375	357	339	343	305	291	278	269	266	265	264	246	206	166	135	103	78	71
	M-Su		110	80	70	119	240	515	1096	1736	1803	1416	1310	1347	1289	1252	1274	1394	1541	1550	1139	772	564	397	281	176
	HGV		51	44	41	73	148	240	289	279	265	270	243	231	218	207	204	204	204	190	161	128	106	81	60	55

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event




o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9918

EB, A14, RISBY(E577300, N266150) view site location on map

24 Hour Flows by Day of Month

ET Road Flows by Day of month																							
Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV	
																	1	18504	8.7	2	14959	4.7	
		3	13822	8.8	4	23000	22	5	23822	23.4	6	24400	23.1	7	26735	20.3	8	16717	9.3	9	14881	6.2	
		10	23037	21.9	11	23349	23.2	12	24382	22.4	13	24449	22.8	14	26618	20		15	16929	9.4	16	14645	6.5
		17	23047	22.4	18	23595	23.3	19	24509	22.2	20	24318	22.5	21	26262	19.2	22	16603	9.3	23	14785	6.6	
		24	22815	20.9	25	23287	22.7	26	24588	22.5	27	24939	22.4	28	28183	19.7	29	19784	9.5	30	15117	4.8	
		31	14821	8.3																			

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT'	AWT'
24hr	19508	23308	24325	24527	26950	17707	14877		21600	23723	21600	23723
%HGV	17.8	22.8	22.6	22.7	19.8	9.2	5.8		18.3	21.2	18.3	21.2
18hr	18975	22573	23511	23716	26081	16874	14361		20870	22971	20870	22971
%HGV	17.4	21.7	21.3	21.4	18.5	7.5	5.5		17.2	20.1	17.2	20.1
16hr	18420	22039	22963	23098	25325	16312	13807		20280	22369	20280	22369
%HGV	17.4	21.7	21.3	21.4	18.6	7.6	5.4		17.3	20.2	17.3	20.2
12hr	16029	19418	20004	19966	21635	14457	11464		17567	19410	17567	19410
%HGV	17.1	21.1	20.7	21.1	18.5	7.1	5		16.9	19.8	16.9	19.8
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21


Hourly Variation


H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	140	77	57	47	65	148	391	962	1325	1091	1218	1258	1286	1217	1282	1375	1672	1866	1480	908	617	475	321	234
HGV	20	16	19	20	30	70	133	183	162	176	195	229	249	273	292	294	286	219	186	144	106	79	49	39
Tue	139	90	68	86	120	232	523	1369	1883	1424	1271	1231	1257	1334	1430	1630	2112	2531	1948	1049	623	427	321	213
HGV	45	42	44	60	79	150	242	299	249	272	310	341	361	383	430	434	394	349	265	200	145	101	63	48
Wed	150	95	81	99	136	254	546	1374	1939	1540	1328	1251	1324	1353	1499	1716	2142	2568	1971	1177	738	499	326	222
HGV	50	52	54	73	95	169	259	315	274	281	311	322	367	394	428	427	411	331	282	207	160	118	66	50
Thu	149	90	84	94	132	261	556	1348	1979	1425	1257	1267	1298	1373	1473	1774	2170	2591	2010	1210	816	550	369	249
HGV	53	50	53	69	99	175	277	339	286	280	298	347	381	418	411	454	392	331	262	189	165	109	62	55
Fri	160	112	91	110	148	248	533	1282	1804	1354	1217	1351	1477	1629	1814	2120	2579	2842	2167	1431	990	736	456	300
HGV	51	60	54	71	107	166	262	297	284	260	289	348	362	403	409	400	386	328	233	185	146	114	67	52
Sat	233	132	110	90	108	162	263	461	870	1200	1549	1658	1554	1415	1305	1174	1107	1140	1024	740	499	352	302	259
HGV	47	46	47	51	71	103	123	117	108	101	111	101	92	76	72	72	64	60	51	38	30	20	14	13
Sun	206	118	73	44	28	47	126	229	421	769	1211	1371	1152	976	941	958	1061	1225	1149	953	745	520	328	226
HGV	14	9	11	10	8	14	29	36	34	40	38	51	42	35	48	53	58	62	68	58	56	33	24	17
M-Th	145	88	73	82	113	224	504	1263	1782	1370	1269	1252	1291	1319	1421	1624	2024	2389	1852	1086	699	488	334	230
HGV	42	40	43	56	76	141	228	284	243	252	279	310	340	367	390	402	371	308	249	185	144	102	60	48
M-Fr	148	93	76	87	120	229	510	1267	1786	1367	1258	1272	1328	1381	1500	1723	2135	2480	1915	1155	757	537	359	244
HGV	44	44	45	59	82	146	235	287	251	254	281	317	344	374	394	402	374	312	246	185	144	104	61	49
M-Su	168	102	81	81	105	193	420	1004	1460	1258	1293	1341	1335	1328	1392	1535	1835	2109	1678	1067	718	508	346	243
HGV	40	39	40	51	70	121	189	227	200	201	222	248	265	283	299	305	284	240	192	146	115	82	49	39

 Bank Holiday

 Weather

 Accident

 Time change

 Road Works

 Sporting Event

 Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9919

EB, A14, TOT HILL, STOW MARKET(E603750, N260350) view site location on map

24 Hour Flows by Day of Month

Mon	Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
	b 3	14141	8.9		4	22132	24.7		5	22925	26.8		6	23515	25.7		7	24109	23.9	
	10	22666	24.4		11	23094	26.4		12	23331	25.8		13	23818	25.9		14	24209	22.8	
	17				18				19				20				21			
	24				g 25	11395	18.4		26	23570	21.4		27	24065	21.2		28	25408	19.1	
	b 31	14813	6.9																	

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT'	AWT'
24hr	17207	18874	23275	23799	24575	16677	15435		19977	21546	19977	21546
%HGV	15.1	24.1	24.6	24.2	21.9	9.9	5.2		18.9	22.3	18.9	22.3
18hr	16578	18045	22121	22649	23433	15844	14922		19084	20565	19084	20565
%HGV	14.2	22.6	22.7	22.4	20	7.9	5		17.4	20.6	17.4	20.6
16hr	16106	17509	21508	22025	22725	15228	14481		18511	19974	18511	19974
%HGV	14	22.4	22.6	22.4	20.1	8	5		17.4	20.6	17.4	20.6
12hr	13793	14837	18470	18854	19365	13384	12463		15880	17063	15880	17063
%HGV	13.6	21.8	21.9	21.8	19.9	7.6	4.6		16.8	20.1	16.8	20.1
No.days	3,3	3,3	3,3	3,3	3,3	4,4	4,4		23,23	15,15	23,23	15,15

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	69	45	42	61	118	293	502	862	979	945	1189	1302	1207	1229	1165	1271	1322	1274	1049	719	616	475	310	162
HGV	10	10	16	32	72	112	129	167	150	161	145	159	146	158	157	171	173	144	135	92	86	80	53	42
Tue	56	41	36	82	167	446	808	1405	1510	961	789	763	780	811	1304	1421	1724	1979	1389	836	581	447	344	192
HGV	31	26	23	61	114	206	265	279	271	248	215	215	220	210	341	351	342	297	236	174	139	122	82	72
Wed	124	79	71	113	218	550	972	1769	2160	1474	1204	1209	1235	1316	1391	1492	1748	1985	1488	916	626	524	384	229
HGV	75	55	50	86	153	285	338	348	351	363	326	330	350	365	341	376	350	296	253	198	158	121	87	71
Thu	115	86	70	108	237	535	989	1895	2158	1487	1267	1218	1239	1335	1343	1537	1824	2015	1537	978	669	534	408	216
HGV	57	58	52	84	172	269	346	376	365	364	331	332	343	359	331	385	360	308	257	189	150	121	79	69
Fri	125	81	78	123	234	502	963	1741	2021	1449	1289	1352	1319	1569	1633	1674	1864	1901	1553	1071	739	587	414	293
HGV	62	50	58	92	176	246	337	381	358	373	336	334	316	361	340	326	298	233	191	143	125	111	67	60
Sat	174	97	87	87	136	253	371	567	845	1093	1297	1418	1299	1180	1237	1246	1134	1142	926	669	478	326	319	297
HGV	61	44	42	50	90	113	133	127	126	133	112	115	92	72	60	55	48	41	34	27	23	18	13	16
Sun	176	99	56	53	43	87	197	349	530	843	1170	1254	1157	1015	1069	1326	1416	1291	1044	809	592	419	287	154
HGV	11	9	6	7	9	12	48	52	56	40	54	42	43	38	43	46	53	52	46	40	38	25	10	14
M-Th	91	63	55	91	185	456	818	1483	1702	1217	1112	1123	1115	1173	1301	1430	1655	1813	1366	862	623	495	362	200
HGV	43	37	35	66	128	218	270	293	284	284	254	259	265	273	293	321	306	261	220	163	133	111	75	64
M-Fr	98	66	59	97	195	465	847	1534	1766	1263	1148	1169	1156	1252	1367	1479	1696	1831	1403	904	646	513	372	218
HGV	47	40	40	71	137	224	283	310	299	302	271	274	275	291	302	322	305	256	214	159	132	111	74	63
M-Su	120	75	63	90	165	381	686	1227	1458	1179	1172	1217	1177	1208	1306	1424	1576	1655	1284	857	614	473	352	220
HGV	44	36	35	59	112	178	228	247	240	240	217	218	216	223	230	244	232	196	165	123	103	85	56	49

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event



o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9921

EB, A14, BAYLHAM(E611300, N253300) view site location on map

24 Hour Flows by Day of Month

24-hour flows by Day of month																						
Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
																	1	20642	9	2	18320	4.8
		3	18786	9.6	4	26661	21.4	5	27280	22.8	6	27790	22.6	7	28927	20.6	8	19886	9.2	9	19105	5.7
		10	26735	21.7	11	27067	22.5	12	27414	22.2	13	28142	22.1	14	28625	20	15	20924	9.1	16	18457	6.9
		17	26740	22	18	27296	22.5	19	27838	21.7	20	27847	22.2	21	28864	20	22	19446	9.2	23	17919	7
		24	26424	21.1	25	27236	22	26	27627	22.4	27	28173	22.5	28	29808	20.5	29	20600	9.7	30	17589	5.3
		31	19316	9.3																		

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT*	AWT*
24hr	23600	27065	27540	27988	29056	20300	18278		24832	27049	24832	27049
%HGV	17.7	22.1	22.3	22.3	20.3	9.2	6		18.1	21	18.1	21
18hr	22955	26175	26612	27067	28102	19471	17704		24012	26182	24012	26182
%HGV	17.3	21.2	21.2	21.2	19.2	7.8	5.8		17.2	20.1	17.2	20.1
16hr	22391	25586	25980	26428	27372	18826	17131		23387	25551	23387	25551
%HGV	17.3	21.2	21.2	21.3	19.3	8	5.8		17.2	20.1	17.2	20.1
12hr	19593	22550	22816	23122	23727	16549	14570		20418	22361	20418	22361
%HGV	17	20.5	20.5	20.8	19	7.6	5.4		16.8	19.6	16.8	19.6
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	105	65	60	61	104	251	623	1541	1917	1482	1567	1640	1556	1536	1557	1589	1755	1983	1472	982	685	509	378	186
HGV	16	16	20	24	42	85	182	252	230	243	249	279	289	314	333	342	307	270	217	160	120	86	53	32
Tue	110	85	80	97	169	349	916	2311	2868	1938	1571	1439	1457	1461	1608	1697	2104	2416	1681	1043	599	477	389	201
HGV	40	44	49	57	93	154	308	387	334	335	363	384	404	422	456	445	413	356	309	223	160	115	71	49
Wed	120	90	91	105	154	368	887	2280	2892	1879	1608	1447	1423	1482	1630	1770	2123	2466	1817	1118	646	514	427	205
HGV	49	52	58	67	92	179	313	373	384	351	368	373	399	428	461	460	416	358	313	230	157	126	78	46
Thu	130	90	79	107	169	346	927	2296	2881	1981	1489	1454	1462	1531	1634	1779	2179	2502	1936	1142	699	538	419	221
HGV	52	53	52	69	102	174	336	384	392	375	338	380	422	435	458	499	436	369	305	208	160	123	76	49
Fri	131	102	87	105	168	361	880	2190	2743	1859	1576	1518	1572	1742	1873	2003	2263	2400	1990	1325	807	633	450	281
HGV	53	53	49	65	101	175	317	382	373	356	353	389	393	429	438	430	391	310	261	193	136	120	78	43
Sat	191	131	101	95	107	204	396	665	1132	1480	1965	1935	1672	1506	1381	1196	1165	1252	1200	911	574	396	333	313
HGV	43	45	41	52	60	103	140	159	145	129	133	133	115	90	83	77	66	66	61	47	30	19	18	13
Sun	241	105	65	54	37	70	163	283	534	1012	1630	1945	1568	1274	1225	1163	1259	1414	1263	1048	800	549	353	220
HGV	12	9	8	10	9	15	29	46	40	48	66	72	66	59	70	73	74	81	81	81	57	35	21	16
M-Th	116	83	78	93	149	329	838	2107	2640	1820	1559	1495	1475	1503	1607	1709	2040	2342	1727	1071	657	510	403	203
HGV	39	41	45	54	82	148	285	349	335	326	330	354	379	400	427	437	393	338	286	205	149	113	70	44
M-Fr	119	86	79	95	153	335	847	2124	2660	1828	1562	1500	1494	1550	1660	1768	2085	2353	1779	1122	687	534	413	219
HGV	42	44	46	56	86	153	291	356	343	332	334	361	381	406	429	435	393	333	281	203	147	114	71	44
M-Su	147	95	80	89	130	278	685	1652	2138	1662	1629	1625	1530	1505	1558	1600	1835	2062	1623	1081	687	517	393	232
HGV	38	39	40	49	71	126	232	283	271	262	267	287	298	311	328	332	300	259	221	163	117	89	56	35

 Bank Holiday

 Weather

 Accident

 Time change

 Road Works

 Sporting Event





 Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9922

WB, A14, BAYLHAM(E611300, N253300) view site location on map

24 Hour Flows by Day of Month

24 Hour Flows by Day of Month																											
Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV					
																	1	21623	15.9	2	18283	9.4					
		3	17485	13.4		4	26439	29.7		5	27902	31.8		6	28107	31.1		7	29506	29	8	20271	16.3		9	19291	11.8
		10	27030	30.2		11	27711	31.6		12	28080	30.7		13	28733	30.9		14	29822	27.7		15	21612	15	16	18175	11.4
		17	26452	29.9		18	27705	30.6		19	28832	30		20	28875	30.6		21	29896	28.1		22	20138	15.8	23	17577	12.6
		24	26869	30.4		25	28091	31.5		26	28354	31.4		27	28976	31.3		28	31388	29.3		29	21967	16.8	30	17771	11.3
		31	18571	13.8																							

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT*	AWT*
24hr	23281	27487	28292	28673	30153	21122	18219		25318	27577	25318	27577
%HGV	25	30.8	31	31	28.5	15.9	11.3		25.9	29.4	25.9	29.4
18hr	22298	26118	26816	27233	28711	20069	17531		24110	26235	24110	26235
%HGV	24	29.2	29.2	29.2	26.8	14.2	11.1		24.4	27.8	24.4	27.8
16hr	21678	25331	25977	26329	27716	19202	16920		23307	25406	23307	25406
%HGV	24	29.3	29.3	29.3	27.1	14.4	11.1		24.6	27.9	24.6	27.9
12hr	18503	21635	22149	22389	23511	16802	14494		19926	21637	19926	21637
%HGV	23.8	29.2	29.1	29.4	27.3	14.3	10.7		24.5	27.9	24.5	27.9
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21


Hourly Variation


H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	97	76	63	86	199	462	903	1404	1511	1285	1343	1444	1408	1482	1488	1638	1933	2018	1549	968	727	577	405	215
HGV	18	24	27	55	142	209	307	391	397	363	334	349	359	381	390	397	409	350	271	206	158	123	87	65
Tue	128	78	89	121	275	677	1353	2134	2291	1638	1332	1380	1419	1486	1612	1789	2168	2576	1811	1038	708	598	506	281
HGV	66	45	60	97	226	362	500	645	640	580	484	502	483	470	505	563	567	490	372	248	189	164	115	95
Wed	182	99	93	136	284	683	1291	2210	2266	1792	1405	1401	1419	1587	1625	1751	2295	2541	1858	1086	794	656	520	319
HGV	93	62	70	107	235	373	510	661	616	609	485	493	484	509	552	573	583	492	393	267	214	163	114	99
Thu	145	102	80	139	294	681	1299	2171	2266	1622	1456	1469	1487	1638	1666	1862	2300	2556	1897	1150	839	652	585	319
HGV	79	60	59	116	239	369	511	671	636	593	524	512	504	532	530	586	591	510	389	269	210	150	130	99
Fri	151	116	109	164	301	602	1238	2099	2169	1638	1587	1694	1644	1828	1862	2064	2363	2623	1941	1343	928	696	576	418
HGV	71	61	70	125	253	317	483	669	626	570	548	548	504	527	545	570	521	455	335	273	193	130	100	95
Sat	222	146	104	101	189	290	503	794	1067	1368	1564	1642	1578	1470	1578	1562	1493	1532	1154	841	610	447	466	401
HGV	73	56	56	62	137	129	184	221	235	275	255	255	214	175	191	174	154	141	100	80	60	47	47	34
Sun	240	144	79	56	59	111	222	384	579	942	1279	1399	1341	1231	1273	1700	1723	1449	1195	986	709	510	383	227
HGV	24	20	14	10	18	26	78	82	98	119	130	142	134	124	110	159	163	157	130	108	83	57	36	26
M-Th	138	89	81	121	263	626	1212	1980	2084	1584	1384	1424	1433	1548	1598	1760	2174	2423	1779	1061	767	621	504	284
HGV	64	48	54	94	211	328	457	592	572	536	457	464	458	473	494	530	538	461	356	248	193	150	112	90
M-Fr	141	94	87	129	271	621	1217	2004	2101	1595	1425	1478	1475	1604	1651	1821	2212	2463	1811	1117	799	636	518	310
HGV	65	50	57	100	219	326	462	607	583	543	475	481	467	484	504	538	534	459	352	253	193	146	109	91
M-Su	166	109	88	115	229	501	973	1599	1736	1469	1424	1490	1471	1532	1586	1767	2039	2185	1629	1059	759	591	492	311
HGV	61	47	51	82	179	255	368	477	464	444	394	400	383	388	403	432	427	371	284	207	158	119	90	73

 Bank Holiday

 Weather

 Accident

 Time change

 Road Works

 Sporting Event




 Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9923

EB, A14, IPSWICH WESTERN BYPASS(E613300, N246300) view site location on map

24 Hour Flows by Day of Month

Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV	
																	1	20331	10.4	2	17600	5.1	
		3	18212	10	4	26251	26.4	5	27014	27.8	6	27650	27.6	7	28749	24.9	8	19891	11	9	17710	6.5	
		10	26799	26.6	11	26814	27.5	12	27182	27	13	27604	27.1	14	28708	24.4	15	19834	10.2	16	18152	6.8	
		17	27027	26	18	27089	26.9	19	28085	25.6	20	27299	26.8	21	28844	24.3	22	18895	10.3	23	17517	7	
		24	26517	25.5		25	25404	0	26	27506	26.8	27	27904	26.5	28	30013	24.1	29	20407	10.8	30	17108	5
		31	18667	9.5																			

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT*	AWT*
24hr	23444	26390	27447	27614	29079	19872	17617		24494	26794	24494	26794
%HGV	20.9	27.3	26.8	27	24.4	10.6	6.1		21.7	25.4	21.7	25.4
18hr	22767	25495	26503	26670	28145	19084	17111		23682	25916	23682	25916
%HGV	20.5	26.4	25.7	25.9	23.3	9.2	5.8		20.8	24.4	20.8	24.4
16hr	22253	24951	25934	26118	27495	18527	16603		23125	25350	23125	25350
%HGV	20.5	26.4	25.7	25.9	23.4	9.3	5.7		20.8	24.5	20.8	24.5
12hr	19494	21862	22717	22810	23828	16359	14302		20196	22142	20196	22142
%HGV	20.2	26	25.3	25.6	23.4	8.8	5.2		20.5	24.2	20.5	24.2
No.days	5,5	4,3	4,4	4,4	4,4	5,5	5,5		31,30	21,20	31,30	21,20

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	97	58	57	68	125	272	649	1377	1822	1406	1522	1687	1621	1595	1633	1616	1766	2025	1425	973	659	478	347	167
HGV	15	19	21	29	56	101	236	336	327	310	290	335	341	344	395	395	353	294	207	178	127	91	62	36
Tue	99	80	78	90	186	361	952	2066	2679	1775	1499	1472	1518	1552	1241	1722	2076	2590	1675	1067	621	449	361	184
HGV	38	45	52	53	111	166	378	519	494	440	432	464	493	495	545	536	504	423	327	241	178	123	83	51
Wed	108	90	92	101	177	378	924	2085	2730	1774	1572	1488	1515	1558	1634	1806	2144	2616	1796	1125	687	481	382	186
HGV	48	54	58	67	118	198	374	531	503	438	454	460	474	517	533	567	516	419	326	242	175	135	87	49
Thu	117	90	73	101	189	376	916	2082	2708	1788	1427	1471	1524	1571	1649	1811	2211	2684	1886	1155	729	508	353	199
HGV	54	56	52	65	122	197	391	527	517	466	432	455	502	517	556	575	541	436	322	226	176	128	79	56
Fri	126	90	80	98	179	361	891	2038	2583	1761	1552	1575	1705	1777	1883	2061	2359	2587	1950	1338	839	600	406	245
HGV	54	51	51	62	119	191	376	552	514	471	439	482	489	492	536	525	476	341	258	206	151	126	84	49
Sat	165	119	86	85	117	216	429	657	1009	1338	1732	1894	1714	1525	1450	1331	1266	1284	1159	847	530	361	294	263
HGV	42	46	39	45	68	108	175	209	188	160	157	153	124	101	85	75	67	67	54	44	30	19	18	14
Sun	201	88	51	48	38	81	162	269	510	935	1515	1878	1676	1373	1320	1246	1207	1240	1133	958	702	479	320	188
HGV	14	10	13	13	10	20	38	59	57	48	57	59	62	54	59	70	63	77	70	72	57	39	20	18
M-Th	105	80	75	90	169	347	860	1903	2485	1686	1505	1530	1545	1569	1539	1739	2049	2479	1696	1080	674	479	361	184
HGV	39	44	46	54	102	166	345	478	460	414	402	429	453	468	507	518	479	393	296	222	164	119	78	48
M-Fr	109	82	76	92	171	350	866	1930	2504	1701	1514	1539	1577	1611	1608	1803	2111	2500	1746	1132	707	503	370	196
HGV	42	45	47	55	105	171	351	493	471	425	409	439	460	473	513	520	478	383	288	219	161	121	79	48
M-Su	130	88	74	84	144	292	703	1511	2006	1540	1546	1638	1610	1564	1544	1656	1861	2147	1575	1066	681	479	352	205
HGV	38	40	41	48	86	140	281	390	371	333	323	344	355	360	387	392	360	294	223	173	128	94	62	39

 Bank Holiday

 Weather

 Accident

 Time change

 Road Works

 Sporting Event

 Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9924

WB, A14, IPSWICH WESTERN BYPASS[E613300, N246300] view site location on map

24 Hour Flows by Day of Month

Mon	Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
	b 3 16008	9.3		4 24420	27		5 25944	29.5		6 25986	28.7		7 27514	26.1		1 19764	11.7		2 16917	4.6
	10 25083	27.7		11 25674	29.2		12 25912	29.1		13 26610	28.7		14 27971	25.3		15 18903	11.2		16 16815	7.5
	17 25220	27.2		18 25686	28.4		19 26784	27.7		20 26610	28.2		21 27718	25.2		22 18101	11.6		23 16190	7.4
	24 24920	26.6		a 25 24425	0		26 26225	28.4		27 26774	28.1		28 28885	25.2		29 19892	12.1		30 16274	5.5
	b 31 16800	8.8																		

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT'	AWT'
24hr	21606	25051	26216	26495	28022	19078	16589		23293	25478	23293	25478
%HGV	21.7	28.4	28.6	28.4	25.4	11.7	6.4		22.9	26.7	22.9	26.7
18hr	20797	23850	24922	25239	26759	18187	16068		22260	24313	22260	24313
%HGV	20.5	26.5	26.6	26.4	23.4	9.7	6.1		21.1	24.8	21.1	24.8
16hr	20295	23220	24242	24531	26012	17559	15594		21636	23660	21636	23660
%HGV	20.3	26.4	26.6	26.4	23.5	9.9	6		21.1	24.7	21.1	24.7
12hr	17486	19981	20866	21089	22243	15474	13467		18658	20333	18658	20333
%HGV	20.1	26.1	26.3	26.2	23.8	9.5	5.4		20.8	24.6	20.8	24.6
No.days	5,5	4,3	4,4	4,4	4,4	5,5	5,5		31,30	21,20	31,30	21,20

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	82	55	55	76	188	354	776	1226	1448	1238	1329	1375	1346	1427	1427	1543	1860	1893	1374	909	641	483	320	182
HGV	14	16	27	49	139	175	241	281	286	292	272	287	300	299	333	335	355	262	199	152	123	100	73	59
Tue	118	69	83	122	261	549	1169	1838	2191	1589	1332	1326	1365	1411	1187	1696	2109	2352	1587	972	613	486	390	241
HGV	60	42	59	100	207	344	407	464	469	461	424	443	424	419	453	509	488	368	289	203	163	134	101	90
Wed	157	86	94	135	281	541	1139	1910	2202	1705	1332	1365	1382	1498	1529	1684	2217	2373	1671	1011	697	530	414	266
HGV	82	54	68	111	233	334	421	476	477	512	415	453	436	474	493	514	523	408	312	215	181	125	95	89
Thu	140	81	84	134	281	538	1142	1887	2186	1619	1399	1414	1379	1546	1555	1770	2191	2423	1720	1050	726	525	450	258
HGV	73	51	64	110	235	334	423	480	489	515	460	463	428	469	474	522	525	401	287	225	174	129	102	85
Fri	145	97	94	158	284	487	1072	1856	2119	1597	1547	1629	1600	1743	1784	1974	2244	2423	1727	1251	840	606	438	309
HGV	69	55	64	128	241	299	406	498	494	480	468	484	455	443	474	493	417	338	239	185	144	93	78	74
Sat	195	113	90	89	177	227	446	694	1000	1304	1514	1637	1539	1366	1426	1353	1293	1332	1016	757	510	372	341	288
HGV	67	47	52	57	132	110	160	175	191	202	180	154	139	96	87	85	66	54	40	38	35	25	23	14
Sun	186	104	54	38	54	85	188	320	489	846	1238	1385	1335	1183	1217	1501	1491	1358	1103	891	602	446	286	188
HGV	13	13	9	7	20	20	63	56	57	60	62	59	57	56	54	63	74	68	62	51	51	30	21	22
M-Th	124	73	79	117	253	496	1057	1715	2007	1538	1348	1370	1368	1471	1425	1673	2094	2260	1588	986	669	506	394	237
HGV	57	41	55	93	204	297	373	425	430	445	393	412	397	415	438	470	473	360	272	199	160	122	93	81
M-Fr	128	78	82	125	259	494	1060	1743	2029	1550	1388	1422	1414	1525	1496	1733	2124	2293	1616	1039	703	526	402	251
HGV	60	44	56	100	211	297	380	440	443	452	408	426	409	421	445	475	462	355	265	196	157	116	90	79
M-Su	146	86	79	107	218	397	847	1390	1662	1414	1384	1447	1421	1453	1446	1646	1915	2022	1457	977	661	493	377	247
HGV	54	40	49	80	172	231	303	347	352	360	326	335	320	322	338	360	350	271	204	153	124	91	70	62

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event

o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9925

EB, A14, IPSWICH SOUTHERN BYPASS, E OF ORWELL BRIDGE(E618200, N241200) view site location on map

24 Hour Flows by Day of Month

LY Road Flows by Day of Month																											
Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV					
																	1	24773	12.4	2	22455	7.6					
	b 3	18902	10.9		4	29099	23		5	30815	24.3		6	31411	23.7		7	34017	21.6	a 8	24451	12.1	9	20157	8.7		
		10	30923	22.8		11	30620	24.5		12	31312	23.6		13	31527	23.7		14	34844	20.8		15	23861	12.4	16	21542	8.6
		17	31021	22.4		18	31217	23.9		19	32226	23.4		20	31519	23.5		21	34155	21		22	23037	11.6	23	19848	9.5
		24	30496	22.2		25	30662	23		26	31821	21.8		27	32608	21.7		28	35828	19.5		29	26373	9.6	30	21160	5.4
	b 31	21424	8.1																								

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT'	AWT'
24hr	26553	30400	31544	31766	34711	24499	21032		28643	30994	28643	30994
%HGV	18.5	23.6	23.3	23.1	20.7	11.6	7.9		19.2	21.9	19.2	21.9
18hr	25875	29501	30552	30819	33713	23612	20416		27784	30092	27784	30092
%HGV	18.2	22.8	22.4	22.2	19.9	10.4	7.6		18.4	21.2	18.4	21.2
16hr	25293	28812	29837	30065	32777	22930	19877		27084	29356	27084	29356
%HGV	18.1	22.9	22.4	22.3	19.9	10.5	7.5		18.5	21.2	18.5	21.2
12hr	22408	25343	26162	26063	27979	20386	17650		23713	25591	23713	25591
%HGV	17.8	22.6	22.2	22.2	20.2	10.1	7		18.2	21.1	18.2	21.1
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	116	77	60	85	114	226	663	1622	2213	1673	1829	2029	1927	1880	1776	1747	1915	2173	1625	1027	694	501	365	217
HGV	16	21	20	28	43	77	174	302	312	299	311	339	361	366	399	391	365	313	231	183	141	97	66	43
Tue	114	98	89	98	165	335	936	2392	3256	2009	1626	1604	1693	1747	1811	1892	2314	2929	2071	1240	757	537	426	264
HGV	38	49	57	47	95	148	281	439	474	437	427	475	508	521	570	557	532	439	352	259	188	121	95	54
Wed	169	115	90	112	175	333	929	2395	3276	2182	1723	1727	1732	1788	1822	1990	2409	2983	2135	1329	819	598	460	255
HGV	53	59	58	64	106	159	289	461	465	443	441	482	493	538	568	571	536	444	355	276	180	141	98	54
Thu	152	110	92	107	171	317	965	2412	3229	1978	1646	1717	1718	1778	1851	2023	2413	2992	2308	1458	897	682	468	286
HGV	55	60	58	63	106	147	313	473	477	392	422	473	498	538	556	583	555	459	359	281	193	138	86	53
Fri	170	124	98	104	164	339	924	2338	3154	2044	1829	1901	1987	2061	2167	2394	2742	2990	2374	1751	1226	898	572	364
HGV	55	60	54	65	94	156	286	446	480	426	452	498	503	525	549	543	492	412	318	268	186	139	98	69
Sat	237	148	118	81	104	199	500	791	1189	1604	1972	2299	2278	1984	1959	1789	1619	1537	1365	994	629	421	358	324
HGV	54	60	64	47	62	86	168	203	224	210	211	207	188	163	153	144	139	111	96	80	57	40	32	33
Sun	229	136	85	58	31	77	232	368	661	1279	1992	2359	2356	1876	1696	1541	1291	1163	1067	860	668	466	324	215
HGV	28	21	21	21	8	18	48	94	83	90	121	121	120	116	104	109	93	99	88	80	72	52	31	24
M-Th	138	100	83	101	156	303	873	2205	2994	1961	1706	1769	1768	1798	1815	1913	2263	2769	2035	1264	792	580	430	256
HGV	41	47	48	51	88	133	264	419	432	393	400	442	465	491	523	526	497	414	324	250	176	124	86	51
M-Fr	144	105	86	101	158	310	883	2232	3026	1977	1731	1796	1811	1851	1885	2009	2359	2813	2103	1361	879	643	458	277
HGV	43	50	49	53	89	137	269	424	442	399	411	453	473	498	528	529	496	413	323	253	178	127	89	55
M-Su	170	115	90	92	132	261	736	1760	2425	1824	1802	1948	1956	1873	1869	1911	2100	2395	1849	1237	813	586	425	275
HGV	43	47	47	48	73	113	223	345	359	328	341	371	382	395	414	414	387	325	257	204	145	104	72	47

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event

o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9926

WB, A14, IPSWICH SOUTHERN BYPASS, E OF ORWELL BRIDGE(E618200, N241200) view site location on map

24 Hour Flows by Day of Month

Mon	Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
															1	21286	8.9	2	21903	3.3
b 3	23421	7.3	4	28393	19	5	29776	21.8	6	29686	21.9	7	29867	19.6	8	22267	8.1	9	22437	4.7
10	29971	19.6	11	29279	21.8	12	29411	21.1	13	30039	20.8	14	31117	19	15	21809	8.5	a 16	23447	5
17	29870	19.3	18	29866	21	19	30671	20.5	20	30003	20.8	21	30360	20.3	22	20984	8.1	23	21606	5.2
24	29271	19.4	25	29704	21.2	26	30134	20.7	27	30685	20.3	28	31196	18.8	29	21676	8.7	30	20024	3.9
b 31	24492	6.4																		

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT*	AWT*
24hr	27405	29311	29998	30103	30635	21604	21883		27277	29490	27277	29490
%HGV	15	20.8	21	20.9	19.4	8.4	4.4		16.5	19.5	16.5	19.5
18hr	26389	27889	28537	28657	29136	20562	21302		26067	28121	26067	28121
%HGV	14.1	19.1	19.1	19	17.4	6.7	4.2		14.9	17.8	14.9	17.8
16hr	25793	27254	27827	27873	28406	19778	20719		25378	27430	25378	27430
%HGV	13.9	18.9	19	19	17.3	6.7	4.2		14.9	17.7	14.9	17.7
12hr	22441	23793	24200	24210	24861	17376	17833		22102	23901	22102	23901
%HGV	13.7	18.3	18.5	18.5	17.1	6.6	4.1		14.6	17.3	14.6	17.3
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	97	58	66	107	251	437	744	1315	1796	1322	1543	1719	1765	1803	1965	2119	2521	2715	1858	1130	836	643	399	197
HGV	9	14	27	55	121	179	194	228	262	231	242	233	264	262	295	293	298	253	210	128	107	87	69	52
Tue	105	71	90	155	366	636	1122	1985	2672	1722	1454	1422	1537	1569	1678	2055	2677	3099	1925	1059	696	584	415	220
HGV	46	36	55	100	223	315	352	363	439	409	349	346	348	320	347	431	397	333	277	178	134	118	90	76
Wed	147	80	99	175	342	619	1100	1989	2646	1770	1438	1483	1568	1619	1723	2049	2774	3056	2087	1156	743	629	455	255
HGV	72	45	68	126	220	320	359	362	422	425	368	371	353	364	374	380	389	362	308	187	138	113	89	83
Thu	125	88	98	155	359	622	1051	1971	2635	1738	1430	1436	1529	1670	1744	2041	2775	3208	2034	1191	785	636	528	257
HGV	60	49	67	114	221	333	341	350	452	423	367	349	390	396	367	390	400	336	260	189	144	123	99	73
Fri	156	86	110	191	354	604	1000	1905	2519	1697	1647	1723	1800	1852	1925	2298	2539	3010	1947	1209	768	568	408	323
HGV	66	44	72	137	238	329	337	373	427	397	377	350	348	351	354	357	391	305	218	139	105	88	69	68
Sat	214	119	102	127	205	277	459	663	1050	1380	1677	1807	1653	1554	1528	1554	1600	1619	1291	889	590	465	466	318
HGV	64	50	49	66	105	105	112	115	153	162	133	132	101	75	69	63	60	48	38	26	21	20	35	14
Sun	196	96	50	47	86	106	223	332	506	903	1317	1519	1631	1640	1795	2063	2284	2179	1663	1242	849	572	384	199
HGV	11	10	6	8	16	16	22	26	45	43	45	56	56	58	60	71	80	102	88	45	35	26	19	17
M-Th	119	74	88	148	330	579	1004	1815	2437	1638	1466	1515	1600	1665	1778	2066	2687	3020	1976	1134	765	623	449	232
HGV	47	36	54	99	196	287	312	326	394	372	332	325	339	336	346	374	371	321	264	171	131	110	87	71
M-Fr	126	77	93	157	334	584	1003	1833	2454	1650	1502	1557	1640	1703	1807	2112	2657	3018	1970	1149	766	612	441	250
HGV	51	38	58	106	205	295	317	335	400	377	341	330	341	339	347	370	375	318	255	164	126	106	83	70
M-Su	149	85	88	137	280	472	814	1451	1975	1505	1501	1587	1640	1672	1765	2026	2453	2698	1829	1125	752	585	436	253
HGV	47	35	49	87	163	228	245	260	314	299	269	262	266	261	267	284	288	248	200	127	98	82	67	55

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event

o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9927

EB, A14, TRIMLEY HEATH(E628400, N236800) view site location on map

24 Hour Flows by Day of Month

Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
																	1	13837	7.3	2	16003	2.1
	b 3	10914	3.8	4	17475	19.4	5	18697	22	6	19211	21.6	7	18998	19.9	8	13962	7.2	a 9	12451	2.7	
	10	18253	20.7	11	18658	22.8	12	18707	22.1	13	19098	21.7	14	19704	19.6	15	13898	7.5	16	15513	2.8	
	17	18912	20.1	18	19281	22.1	19	19853	21	20	19126	21.5	21	19023	19.1	22	13768	6.7	23	14362	3.4	
	24	18150	19.9	25	18915	21.7	26	18984	21.3	27	19416	20.6	28	19271	18.6	29	14013	7.1	30	14141	2.1	
	b 31	13937	3.7																			

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT ^a	AWT ^a
24hr	16033	18582	19060	19213	19249	13896	14494		17218	18427	17218	18427
%HGV	15.1	21.5	21.6	21.3	19.3	7.1	2.6		16.4	19.9	16.4	19.9
18hr	15479	17796	18212	18413	18414	13274	14113		16528	17662	16528	17662
%HGV	15.1	20.9	20.6	20.4	18.2	5.8	2.6		15.6	19.1	15.6	19.1
16hr	15024	17252	17609	17814	17806	12755	13741		16000	17101	16000	17101
%HGV	15.1	20.9	20.8	20.5	18.3	6	2.5		15.7	19.2	15.7	19.2
12hr	12882	14682	14896	15010	15055	10875	12207		13658	14505	13658	14505
%HGV	15	20.8	20.6	20.3	18.5	5.9	2.4		15.5	19.2	15.5	19.2
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	63	43	45	75	121	208	577	729	1102	819	993	1166	1142	1111	1111	1110	1127	1297	1176	704	478	382	289	167
HGV	4	6	8	11	24	34	70	112	103	103	130	163	183	201	227	217	189	166	139	116	84	62	41	26
Tue	73	60	72	98	173	311	749	1075	1634	1006	961	1011	1066	1129	1170	1159	1382	1663	1427	824	567	430	350	194
HGV	23	26	36	29	74	100	146	189	175	156	193	258	279	305	343	325	316	260	247	184	142	89	67	33
Wed	115	73	71	109	177	303	702	1056	1622	994	996	1056	1101	1156	1155	1249	1397	1674	1443	911	582	519	397	207
HGV	36	40	40	47	84	113	147	193	165	165	198	267	273	311	339	346	326	263	225	201	125	106	71	30
Thu	96	69	61	107	173	294	748	1064	1633	1019	992	1075	1113	1157	1190	1233	1386	1701	1449	940	621	495	390	210
HGV	34	38	38	46	76	118	169	195	178	152	202	245	290	310	341	338	316	258	224	192	130	102	65	35
Fri	106	83	74	102	168	303	698	1035	1598	1003	1009	1070	1125	1218	1266	1295	1438	1587	1413	939	620	495	363	246
HGV	38	41	38	41	81	115	140	180	176	164	204	253	265	296	322	306	252	192	165	146	108	84	61	35
Sat	139	95	73	63	84	167	503	417	569	719	1001	1099	1126	1085	1087	1040	928	885	919	657	431	289	280	239
HGV	28	33	29	28	39	59	94	107	89	70	75	63	58	46	35	32	23	19	20	11	13	6	4	3
Sun	142	77	48	32	19	62	273	208	335	829	1364	1560	1578	1389	1327	1142	926	729	822	538	413	310	228	144
HGV	2	1	1	2	1	3	9	21	22	18	28	28	27	30	28	25	19	19	20	19	13	17	7	7
M-Th	87	61	62	97	161	279	694	981	1498	960	986	1077	1106	1138	1157	1188	1323	1584	1374	845	562	457	357	195
HGV	24	28	31	33	65	91	133	172	155	144	181	233	256	282	313	307	287	237	209	173	120	90	61	31
M-Fr	91	66	65	98	162	284	695	992	1518	968	990	1076	1109	1154	1178	1209	1346	1584	1382	864	574	464	358	205
HGV	27	30	32	35	68	96	134	174	159	148	185	237	258	285	314	306	280	228	200	168	118	89	61	32
M-Su	105	71	63	84	131	235	607	798	1213	913	1045	1148	1179	1178	1187	1175	1226	1362	1236	788	530	417	328	201
HGV	24	26	27	29	54	77	111	142	130	118	147	182	196	214	234	227	206	168	149	124	88	67	45	24

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event

o Other

This report includes no estimated data and only includes complete days

Monthly classified during May 2004 for site 6/9928

WB, A14, TRIMLEY HEATH(E628400, N236800) view site location on map

24 Hour Flows by Day of Month

24-hour flows by day of month																						
Mon			Flow	%HGV	Tue	Flow	%HGV	Wed	Flow	%HGV	Thu	Flow	%HGV	Fri	Flow	%HGV	Sat	Flow	%HGV	Sun	Flow	%HGV
																	1	14489	7.4	2	16681	2.3
	b 3	12191	4.1	4	17744	18.4	5	19530	22.2	6	19910	20.9	7	19675	19.2	8	14751	7.2	a 9	13083	2.9	
	10	18519	20	11	19372	22.2	12	19372	21.4	13	19794	21.2	14	20443	18.8	15	14692	7.4	16	16287	3.1	
	17	19217	19.5	18	20003	21.1	19	20412	20.6	20	19683	20.9	21	19932	18.3	22	14534	6.8	23	14981	3.1	
	24	18457	19.4	25	19747	21	26	19759	20.5	27	19959	19.9	28	19998	17.3	29	14641	6.9	30	14504	2.4	
	b 31	14746	3.7																			

Average Flows

	Mon	Tue	Wed	Thu	Fri	Sat	Sun		ADT	AWT	ADT ^a	AWT ^a
24hr	16626	19217	19768	19837	20012	14621	15107		17884	19092	17884	19092
%HGV	14.5	20.7	21.2	20.7	18.4	7.1	2.7		15.8	19.2	15.8	19.2
18hr	15983	18190	18635	18739	18831	13849	14741		16995	18075	16995	18075
%HGV	13.2	18.4	18.7	18.2	15.7	5.1	2.6		13.8	16.9	13.8	16.9
16hr	15559	17660	18073	18156	18214	13320	14338		16474	17532	16474	17532
%HGV	12.9	18.1	18.4	18	15.6	5.2	2.6		13.6	16.7	13.6	16.7
12hr	13467	15177	15430	15540	15670	11543	12608		14205	15056	14205	15056
%HGV	12.1	17	17.6	17	15	5.2	2.5		12.9	15.8	12.9	15.8
No.days	5,5	4,4	4,4	4,4	4,4	5,5	5,5		31,31	21,21	31,31	21,21

Hourly Variation

H.E	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mon	64	39	44	73	149	275	507	890	1186	908	923	980	1027	1176	1159	1241	1322	1463	1191	682	495	408	285	139
HGV	5	9	19	40	96	137	137	131	141	135	115	118	127	132	143	151	155	150	130	91	80	65	54	42
Tue	87	57	75	122	255	430	751	1427	1796	1146	936	894	1019	1064	1121	1285	1387	1750	1354	761	516	455	344	187
HGV	40	28	45	83	185	246	253	252	252	240	187	172	183	169	206	250	237	222	213	148	113	101	80	68
Wed	117	70	84	151	259	453	754	1388	1816	1168	957	976	1022	1115	1114	1259	1413	1805	1399	870	542	477	364	198
HGV	56	37	60	104	185	257	263	221	243	254	208	214	205	204	221	223	237	251	230	153	106	93	75	74
Thu	101	71	82	127	269	447	739	1395	1827	1175	943	967	1033	1115	1156	1253	1426	1807	1444	871	557	450	377	207
HGV	49	36	57	95	188	266	253	235	260	249	211	185	189	198	214	230	236	232	200	152	118	103	85	61
Fri	114	80	102	161	274	450	692	1354	1755	1131	997	1043	1095	1161	1242	1339	1483	1670	1402	842	554	457	358	259
HGV	49	37	64	117	201	262	253	227	243	217	190	181	196	196	204	190	199	163	140	95	75	66	59	51
Sat	135	99	96	110	137	194	371	460	714	960	1156	1148	1115	1075	1107	1012	980	961	855	633	424	348	281	249
HGV	43	40	39	55	74	76	74	77	93	95	67	69	50	35	32	23	25	13	15	9	7	8	7	5
Sun	117	64	45	35	36	69	239	232	340	638	1020	1172	1228	1241	1297	1397	1527	1401	1115	672	457	362	278	125
HGV	2	2	2	4	7	7	10	10	21	18	21	24	24	25	29	28	30	48	33	21	14	10	9	8
M-Th	92	59	71	118	233	401	688	1275	1656	1099	940	954	1025	1118	1138	1260	1387	1706	1347	796	528	448	343	183
HGV	38	28	45	81	164	227	227	210	224	220	180	172	176	176	196	214	216	214	193	136	104	91	74	61
M-Fr	97	63	77	127	241	411	689	1291	1676	1106	951	972	1039	1126	1158	1275	1406	1699	1358	805	533	449	346	198
HGV	40	29	49	88	171	234	232	213	228	219	182	174	180	180	198	209	213	204	183	128	98	86	71	59
M-Su	105	69	75	111	197	331	579	1021	1348	1018	990	1026	1077	1135	1171	1255	1363	1551	1251	762	506	422	327	195
HGV	35	27	41	71	134	179	178	165	179	173	143	138	139	137	150	156	160	154	137	96	73	64	53	44

b Bank Holiday

w Weather

a Accident

t Time change

r Road Works

s Sporting Event

o Other

This report includes no estimated data and only includes complete days

APPENDIX B – MANUAL CLASSIFIED COUNT (MCC) DATA

B.1 Manual Classified Count (MCC) Data – DfT Link Census Data

2002 Data

From **Histon Interchange**
To **Milton Interchange**

Direction: Combined

OSGR
545000 261900

Link No.
3233

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	37	3,144	781	791	(27)	4,753
08:00	1	40	4,459	668	720	(18)	5,887
09:00	10	16	3,463	540	778	(19)	4,797
10:00	0	22	2,487	454	815	(11)	3,778
11:00	0	20	2,305	491	826	(8)	3,642
12:00	0	13	2,212	450	769	(9)	3,444
13:00	0	16	2,471	440	835	(8)	3,762
14:00	0	16	2,302	320	863	(17)	3,501
15:00	9	16	2,860	661	848	(28)	4,385
16:00	0	42	3,926	811	769	(23)	5,548
17:00	2	57	4,507	556	592	(14)	5,712
18:00	0	28	3,340	359	528	(10)	4,255
12 hour	22	323	37,476	6,531	9,134	(192)	53,464

From Milton Interchange
To Fen Ditton Interchange

Direction: Combined

OSGR
548000 261720

Link No.
3334

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	1	19	2,788	718	643	(18)	4,168
08:00	2	22	3,575	528	505	(10)	4,630
09:00	0	6	2,955	539	672	(26)	4,172
10:00	0	7	1,974	504	735	(14)	3,220
11:00	1	5	1,563	435	687	(6)	2,690
12:00	0	5	1,794	426	612	(6)	2,837
13:00	0	2	1,974	467	654	(9)	3,097
14:00	0	3	2,279	547	740	(14)	3,569
15:00	0	3	2,176	509	692	(18)	3,380
16:00	0	10	3,665	635	694	(31)	5,004
17:00	0	26	4,358	421	507	(8)	5,312
18:00	0	13	3,147	220	450	(8)	3,830
12 hour	4	121	32,248	5,949	7,591	(168)	45,909

From **Fen Ditton Interchange**
To **Stow Cum Quy Interchange**

Direction: Combined

OSGR
550000 259923

Link No.
3435

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	34	3,176	536	728	(9)	4,474
08:00	0	42	4,286	450	707	(23)	5,485
09:00	0	39	2,535	295	688	(12)	3,557
10:00	0	29	1,608	242	733	(8)	2,612
11:00	0	10	1,399	297	674	(5)	2,380
12:00	0	13	1,386	270	644	(7)	2,313
13:00	0	16	1,512	363	570	(8)	2,461
14:00	0	19	1,686	397	677	(4)	2,779
15:00	0	14	2,070	427	574	(9)	3,085
16:00	1	34	2,890	555	542	(12)	4,021
17:00	0	39	3,696	423	456	(10)	4,614
18:00	2	38	2,640	211	420	(9)	3,309
12 hour	3	327	28,884	4,466	7,413	(116)	41,090

From **Stow Cum Quy Interchange**
To **Nine Mile Hill Interchange**

Direction: Combined

OSGR
555000 259660

Link No.
3536

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	49	2,356	510	660	(9)	3,575
08:00	0	34	2,607	339	587	(18)	3,567
09:00	0	11	1,678	284	555	(21)	2,528
10:00	0	3	1,446	227	550	(6)	2,226
11:00	0	7	1,308	238	622	(13)	2,175
12:00	0	7	1,190	277	595	(9)	2,069
13:00	0	13	1,375	336	475	(5)	2,199
14:00	0	7	1,390	285	587	(5)	2,269
15:00	0	18	1,616	392	527	(7)	2,553
16:00	0	19	1,198	232	277	(8)	1,726
17:00	0	10	1,856	265	471	(15)	2,602
18:00	0	26	1,898	272	413	(17)	2,609
12 hour	0	204	19,918	3,657	6,319	(133)	30,098

From **Nine Mile Hill Interchange**
To **Exning Interchange**

Direction: Combined

OSGR
560000 262970

Link No.
3637

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	51	3,462	887	875	(15)	5,275
08:00	0	39	3,983	646	763	(20)	5,431
09:00	0	19	2,687	539	744	(26)	3,989
10:00	0	9	2,344	468	789	(23)	3,610
11:00	0	18	2,468	408	828	(25)	3,722
12:00	0	7	1,998	414	784	(6)	3,203
13:00	0	8	1,916	429	808	(11)	3,161
14:00	0	9	2,010	392	1,002	(10)	3,413
15:00	0	20	2,104	485	971	(12)	3,580
16:00	0	19	3,081	622	855	(6)	4,577
17:00	0	47	3,565	436	766	(13)	4,814
18:00	0	27	2,756	197	574	(6)	3,554
12 hour	0	273	32,374	5,923	9,759	(173)	48,329

From Exning Interchange
To Newmarket Waterhall Interchange

Direction: Combined

OSGR
566000 266000

Link No.
3738

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	30	2,898	811	977	(61)	4,716
08:00	0	28	3,541	590	832	(27)	4,991
09:00	0	33	2,508	564	851	(30)	3,956
10:00	0	23	2,747	522	905	(33)	4,197
11:00	0	34	3,062	514	862	(45)	4,472
12:00	0	34	3,158	538	873	(37)	4,603
13:00	0	32	3,168	500	788	(29)	4,488
14:00	0	31	3,530	552	772	(31)	4,885
15:00	0	48	3,931	552	745	(51)	5,276
16:00	1	52	4,201	533	691	(45)	5,477
17:00	1	59	5,081	433	564	(34)	6,137
18:00	0	38	4,337	272	432	(30)	5,079
12 hour	2	442	42,162	6,381	9,292	(453)	58,277

From **Newmarket Waterhall Interchange**
To **Kentford Interchange**

Direction: Combined

OSGR
570000 267150

Link No.
3839

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	10	1,726	406	593	(6)	2,735
08:00	0	8	2,123	321	531	(6)	2,983
09:00	0	7	1,806	259	543	(9)	2,615
10:00	0	2	1,270	227	553	(15)	2,052
11:00	0	5	979	196	469	(5)	1,649
12:00	0	6	986	305	505	(4)	1,802
13:00	0	8	1,082	250	585	(6)	1,925
14:00	0	7	1,326	271	562	(5)	2,166
15:00	0	16	1,482	334	551	(12)	2,383
16:00	0	11	1,882	416	577	(24)	2,886
17:00	0	20	2,333	307	475	(18)	3,135
18:00	0	18	1,764	159	439	(6)	2,380
12 hour	0	118	18,759	3,451	6,383	(116)	28,711

From Higham Interchange
To Risby Interchange

Direction: Combined

OSGR
576000 266180

Link No.
4041

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	17	2,264	512	612	(11)	3,405
08:00	0	19	3,180	382	599	(10)	4,180
09:00	0	4	1,896	258	561	(12)	2,719
10:00	0	11	1,412	278	553	(11)	2,254
11:00	0	8	1,518	273	557	(9)	2,356
12:00	0	7	1,477	244	555	(6)	2,283
13:00	1	6	1,697	275	579	(5)	2,557
14:00	0	4	1,654	297	620	(16)	2,575
15:00	0	11	1,920	357	588	(9)	2,876
16:00	0	15	2,453	523	577	(16)	3,568
17:00	0	21	3,075	349	413	(9)	3,858
18:00	0	15	2,160	189	363	(4)	2,727
12 hour	1	138	24,706	3,937	6,577	(118)	35,358

From **Westley Interchange**
To **Bury St Edmunds St Saviours Interchange**

Direction: Combined

OSGR
585000 265300

Link No.
4243

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	13	1,890	498	618	(10)	3,019
08:00	0	13	3,044	396	612	(8)	4,065
09:00	0	9	1,853	295	630	(16)	2,787
10:00	0	11	1,534	268	635	(9)	2,448
11:00	0	12	1,433	275	601	(8)	2,321
12:00	0	8	1,443	266	594	(10)	2,311
13:00	0	9	1,510	276	674	(11)	2,469
14:00	0	10	1,478	335	707	(15)	2,530
15:00	0	13	1,711	320	665	(12)	2,709
16:00	0	6	2,187	482	631	(10)	3,306
17:00	0	17	2,898	363	576	(19)	3,854
18:00	0	10	2,061	163	450	(16)	2,684
12 hour	0	131	23,042	3,937	7,393	(144)	34,503

From **Bury St Edmunds Moreton Hall Interchange**
To **Beyton Interchange**

Direction: Combined

OSGR
590000 263700

Link No.
4446

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	3	1,821	513	585	(12)	2,922
08:00	0	14	2,691	386	472	(10)	3,563
09:00	0	13	1,650	288	524	(11)	2,475
10:00	0	6	1,634	257	542	(10)	2,439
11:00	0	5	1,550	277	484	(6)	2,316
12:00	0	2	1,534	235	481	(6)	2,252
13:00	0	8	1,640	315	520	(5)	2,483
14:00	0	5	1,886	305	469	(10)	2,665
15:00	0	8	2,119	360	512	(8)	2,999
16:00	0	6	2,428	394	492	(7)	3,320
17:00	0	14	3,013	308	361	(14)	3,696
18:00	1	8	1,964	159	315	(12)	2,446
12 hour	1	92	23,930	3,797	5,757	(111)	33,576

From **Elmswell Junction**
To **Quarries Cross Junction**

Direction: Combined

OSGR
601000 261670

Link No.
47A48

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	11	1,804	485	619	(13)	2,919
08:00	0	8	2,526	396	498	(7)	3,428
09:00	0	5	1,642	318	546	(10)	2,511
10:00	0	5	1,166	262	566	(23)	1,999
11:00	0	13	1,170	281	524	(6)	1,988
12:00	0	6	1,102	275	558	(2)	1,941
13:00	0	22	1,138	249	557	(10)	1,966
14:00	0	5	1,141	259	627	(17)	2,032
15:00	0	7	1,373	324	655	(9)	2,359
16:00	0	8	1,751	465	627	(17)	2,851
17:00	0	14	2,478	410	512	(22)	3,414
18:00	0	15	1,779	168	464	(17)	2,426
12 hour	0	119	19,070	3,892	6,753	(153)	29,834

From **Stowmarket North Interchange**
To **Stowmarket Cedars Interchange**

Direction: Combined

OSGR
605000 259700

Link No.
4950

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	1	1,499	467	578	(9)	2,545
08:00	0	4	2,136	344	577	(13)	3,061
09:00	0	5	1,275	265	549	(7)	2,094
10:00	0	3	1,176	217	493	(3)	1,889
11:00	0	1	1,173	257	503	(3)	1,934
12:00	0	4	1,145	236	526	(4)	1,911
13:00	0	4	1,345	265	536	(6)	2,150
14:00	0	5	1,391	301	528	(7)	2,225
15:00	0	7	1,601	334	515	(16)	2,457
16:00	0	9	2,004	386	449	(15)	2,848
17:00	0	13	2,343	313	404	(2)	3,073
18:00	0	2	1,806	135	311	(2)	2,254
12 hour	0	58	18,894	3,520	5,969	(87)	28,441

From **Stowmarket Cedars Interchange**
To **Beacon Hill Interchange**

Direction: Combined

OSGR
610050 255000

Link No.
5051

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	10	1,911	530	645	(9)	3,096
08:00	0	10	2,636	384	566	(17)	3,596
09:00	0	3	1,525	282	609	(23)	2,419
10:00	0	8	1,292	241	501	(8)	2,042
11:00	0	19	1,232	282	617	(9)	2,150
12:00	0	8	1,253	260	585	(10)	2,106
13:00	0	23	1,342	262	552	(7)	2,179
14:00	0	10	1,482	318	594	(14)	2,404
15:00	0	11	1,461	343	678	(14)	2,493
16:00	0	10	2,059	460	607	(10)	3,136
17:00	0	12	2,692	393	560	(13)	3,657
18:00	0	10	2,111	243	424	(5)	2,788
12 hour	0	134	20,996	3,998	6,938	(139)	32,066

From Beacon Hill Interchange
To Claydon Interchange

Direction: Combined

OSGR
612800 250150

Link No.
5152

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	8	2,505	708	352	(9)	3,573
08:00	0	7	3,629	569	661	(19)	4,866
09:00	1	11	2,218	455	734	(34)	3,418
10:00	0	4	1,866	375	677	(15)	2,922
11:00	0	16	1,737	374	564	(8)	2,691
12:00	0	7	1,453	315	560	(8)	2,335
13:00	1	14	1,445	319	587	(14)	2,365
14:00	0	15	1,444	349	666	(13)	2,474
15:00	0	11	1,664	359	732	(28)	2,766
16:00	0	15	2,006	544	570	(20)	3,135
17:00	0	20	2,506	437	468	(22)	3,431
18:00	0	19	2,914	323	603	(14)	3,859
12 hour	2	147	25,387	5,127	7,174	(204)	37,835

From **Sproughton Interchange**
To **Copdock Interchange**

Direction: Combined

OSGR
612400 243250

Link No.
5455

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	10	1,779	587	500	(5)	2,876
08:00	0	13	3,498	594	624	(7)	4,729
09:00	0	5	1,915	365	607	(15)	2,892
10:00	0	1	1,599	364	597	(4)	2,561
11:00	0	7	1,566	344	571	(7)	2,488
12:00	0	6	1,660	384	609	(5)	2,659
13:00	0	6	1,529	327	597	(8)	2,459
14:00	0	4	1,576	366	685	(5)	2,631
15:00	0	13	1,836	445	636	(12)	2,930
16:00	0	8	2,367	609	647	(17)	3,631
17:00	0	14	3,484	601	514	(6)	4,613
18:00	0	8	2,378	271	350	(2)	3,007
12 hour	0	95	25,187	5,257	6,937	(93)	37,476

From **Wherstead Interchange**
To **Nacton Interchange**

Direction: Combined

OSGR
618850 240930

Link No.
5657

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	24	2,320	547	633	(8)	3,524
08:00	1	21	3,536	459	662	(25)	4,678
09:00	0	6	2,058	351	591	(13)	3,006
10:00	0	5	1,487	285	544	(17)	2,321
11:00	0	3	1,581	337	622	(17)	2,543
12:00	0	3	1,708	329	632	(10)	2,672
13:00	0	4	1,553	258	678	(10)	2,493
14:00	0	5	1,876	402	757	(15)	3,040
15:00	0	12	2,178	422	734	(30)	3,346
16:00	0	15	2,765	545	724	(15)	4,049
17:00	0	23	4,016	496	614	(25)	5,149
18:00	4	15	2,402	218	491	(8)	3,126
12 hour	5	136	27,480	4,649	7,682	(193)	39,947

From **Nacton Interchange**
To **Levington Seven Hills Interchange**

Direction: Combined

OSGR
621000 241240

Link No.
5758

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	26	1,835	452	560	(10)	2,873
08:00	1	22	3,006	414	603	(12)	4,045
09:00	0	6	1,640	303	557	(8)	2,506
10:00	0	12	1,674	275	579	(14)	2,540
11:00	0	8	1,705	288	564	(17)	2,565
12:00	0	19	1,825	320	645	(13)	2,809
13:00	0	16	1,889	301	720	(16)	2,926
14:00	0	19	1,914	313	685	(12)	2,931
15:00	0	33	2,206	303	684	(18)	3,226
16:00	0	25	2,653	440	662	(20)	3,780
17:00	0	29	3,394	332	450	(11)	4,205
18:00	0	13	2,511	186	424	(7)	3,134
12 hour	1	228	26,252	3,927	7,133	(158)	37,540

2003 Data

3132

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	45	3,562	735	859	(23)	5,201
08:00	0	24	3,737	629	669	(32)	5,059
09:00	0	25	3,002	560	619	(20)	4,206
10:00	0	9	1,890	425	687	(11)	3,011
11:00	0	9	1,943	463	735	(4)	3,150
12:00	0	11	1,861	391	801	(12)	3,064
13:00	1	12	2,467	474	833	(7)	3,786
14:00	0	17	2,394	531	831	(26)	3,773
15:00	0	25	2,692	568	809	(23)	4,094
16:00	1	39	3,596	652	715	(27)	5,002
17:00	0	37	4,310	436	575	(21)	5,358
18:00	0	25	3,020	260	452	(9)	3,757
12 hour	2	278	34,474	6,124	8,585	(215)	49,461

From **Milton Interchange**
To **Fen Ditton Interchange**

Direction: Combined

OSGR
548000 261720

Link No.
3334

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	54	3,060	901	732	(36)	4,747
08:00	0	59	3,591	707	628	(34)	4,985
09:00	0	44	2,820	550	706	(53)	4,120
10:00	0	16	2,560	554	678	(20)	3,808
11:00	0	33	2,544	597	680	(17)	3,854
12:00	0	26	2,510	538	633	(24)	3,707
13:00	0	21	2,296	382	818	(17)	3,517
14:00	0	31	2,433	477	846	(26)	3,787
15:00	0	34	2,540	440	788	(12)	3,802
16:00	1	30	3,454	602	765	(15)	4,851
17:00	1	72	4,723	472	585	(21)	5,852
18:00	0	48	3,248	246	486	(17)	4,028
12 hour	2	468	35,779	6,466	8,345	(292)	51,058

From Stow Cum Quy Interchange
To Nine Mile Hill Interchange

Direction: Combined

OSGR
555000 259660

Link No.
3536

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	20	2,461	583	553	(16)	3,617
08:00	0	14	2,414	326	455	(15)	3,209
09:00	0	4	1,884	355	501	(22)	2,744
10:00	0	9	1,387	275	552	(12)	2,223
11:00	0	0	1,287	264	512	(7)	2,063
12:00	0	4	1,114	220	544	(5)	1,882
13:00	0	8	1,212	189	628	(11)	2,037
14:00	0	5	1,343	257	645	(16)	2,250
15:00	0	6	1,443	314	660	(12)	2,423
16:00	0	9	2,024	351	644	(10)	3,028
17:00	0	10	2,175	267	475	(3)	2,927
18:00	0	7	1,780	148	417	(8)	2,352
12 hour	0	96	20,524	3,549	6,586	(137)	30,755

From **Nine Mile Hill Interchange**
To **Exning Interchange**

Direction: Combined

OSGR
560000 262970

Link No.
3637

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	23	3,632	889	841	(9)	5,385
08:00	0	24	4,517	656	889	(18)	6,086
09:00	0	17	3,631	617	867	(20)	5,132
10:00	0	19	2,404	458	930	(22)	3,811
11:00	0	16	2,134	412	808	(11)	3,370
12:00	0	8	2,195	455	721	(11)	3,379
13:00	0	9	2,417	500	816	(20)	3,742
14:00	0	13	2,575	495	810	(16)	3,893
15:00	0	6	2,577	533	833	(22)	3,949
16:00	0	21	2,997	545	729	(25)	4,292
17:00	0	23	3,378	423	644	(25)	4,468
18:00	0	27	2,563	238	511	(14)	3,339
12 hour	0	206	35,020	6,221	9,399	(213)	50,846

From Exning Interchange
To Newmarket Waterhall Interchange

Direction: Combined

OSGR
566000 266000

Link No.
3738

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	15	2,898	785	954	(29)	4,652
08:00	0	10	3,682	644	922	(34)	5,258
09:00	0	3	2,898	505	1,003	(28)	4,409
10:00	0	11	2,885	452	924	(29)	4,272
11:00	0	11	3,195	509	983	(44)	4,698
12:00	0	18	3,123	486	875	(30)	4,502
13:00	0	20	3,331	479	908	(21)	4,738
14:00	0	12	4,087	688	869	(25)	5,656
15:00	0	13	3,947	595	822	(38)	5,377
16:00	0	27	4,840	589	733	(30)	6,189
17:00	0	24	4,683	456	506	(24)	5,669
18:00	0	16	4,288	314	456	(31)	5,074
12 hour	0	180	43,857	6,502	9,955	(363)	60,494

From **Newmarket Waterhall Interchange**
To **Kentford Interchange**

Direction: Combined

OSGR
570000 267150

Link No.
3839

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	12	1,771	361	536	(9)	2,680
08:00	0	8	2,058	308	509	(10)	2,883
09:00	0	7	1,501	189	516	(12)	2,213
10:00	0	8	1,171	185	483	(18)	1,847
11:00	1	7	1,057	169	534	(13)	1,767
12:00	0	2	990	146	494	(6)	1,632
13:00	1	10	1,159	205	545	(4)	1,919
14:00	0	2	1,177	203	533	(10)	1,915
15:00	1	7	1,379	207	585	(13)	2,178
16:00	0	13	1,728	248	496	(10)	2,485
17:00	0	10	2,105	276	480	(9)	2,871
18:00	1	7	1,826	154	412	(12)	2,399
12 hour	4	93	17,922	2,651	6,123	(126)	26,789

From Higham Interchange
To Risby Interchange

Direction: Combined

OSGR
576000 266180

Link No.
4041

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	43	2,224	550	605	(14)	3,422
08:00	0	30	2,930	424	549	(22)	3,933
09:00	0	47	2,124	254	623	(19)	3,048
10:00	0	8	1,689	299	548	(23)	2,544
11:00	0	20	1,559	283	534	(11)	2,396
12:00	0	42	1,742	281	601	(13)	2,666
13:00	0	13	1,559	345	567	(11)	2,484
14:00	0	11	1,541	285	585	(14)	2,422
15:00	0	15	2,206	331	666	(24)	3,218
16:00	0	25	2,404	500	657	(19)	3,586
17:00	0	28	3,257	381	505	(18)	4,171
18:00	0	25	2,331	231	418	(11)	3,005
12 hour	0	307	25,566	4,164	6,858	(199)	36,895

From **Bury St Edmunds St Saviours Interchange**
To **Bury St Edmunds Moreton Hall Interchange**

Direction: Combined

OSGR
585900 265000

Link No.
4344

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	11	2,027	542	668	(14)	3,248
08:00	0	12	2,975	425	643	(13)	4,055
09:00	0	9	1,877	304	593	(10)	2,783
10:00	0	24	1,819	265	626	(5)	2,734
11:00	0	36	1,745	263	531	(6)	2,575
12:00	0	31	1,864	324	573	(4)	2,792
13:00	0	35	2,050	346	599	(4)	3,030
14:00	0	10	2,220	363	619	(6)	3,212
15:00	0	10	2,262	344	639	(9)	3,255
16:00	0	17	2,965	484	541	(7)	4,007
17:00	0	17	3,442	337	375	(6)	4,171
18:00	0	16	2,404	156	308	(9)	2,884
12 hour	0	228	27,650	4,153	6,715	(93)	38,746

From **Bury St Edmunds Moreton Hall Interchange**
To **Beyton Interchange**

Direction: Combined

OSGR
590000 263700

Link No.
4446

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	27	2,174	554	655	(23)	3,410
08:00	0	22	3,184	449	587	(14)	4,242
09:00	0	13	1,779	295	588	(9)	2,675
10:00	0	19	1,309	206	509	(7)	2,043
11:00	0	10	1,244	254	507	(6)	2,015
12:00	0	10	1,294	221	515	(6)	2,040
13:00	0	17	1,373	251	498	(7)	2,139
14:00	0	10	1,537	323	566	(12)	2,436
15:00	0	17	1,595	295	533	(5)	2,440
16:00	0	15	2,247	458	564	(22)	3,284
17:00	0	24	3,159	370	534	(14)	4,087
18:00	0	26	2,227	165	372	(14)	2,790
12 hour	0	210	23,122	3,841	6,428	(139)	33,601

From Elmswell Junction
To Quarries Cross Junction

Direction: Combined

OSGR
601000 261670

Link No.
47A48

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	13	1,869	538	603	(9)	3,023
08:00	0	18	2,526	424	560	(5)	3,528
09:00	0	7	1,654	344	598	(11)	2,603
10:00	0	8	1,360	268	523	(7)	2,159
11:00	0	6	1,236	248	507	(2)	1,997
12:00	0	12	1,162	264	512	(1)	1,950
13:00	0	12	1,403	269	615	(3)	2,299
14:00	0	11	1,349	281	620	(3)	2,261
15:00	0	18	1,480	359	584	(9)	2,441
16:00	0	17	1,943	502	557	(6)	3,019
17:00	0	23	2,584	396	527	(8)	3,530
18:00	0	22	1,936	192	377	(7)	2,527
12 hour	0	167	20,502	4,085	6,583	(71)	31,337

From **Stowmarket Cedars Interchange**
To **Beacon Hill Interchange**

Direction: Combined

OSGR
610050 255000

Link No.
5051

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	15	2,017	582	504	(12)	3,118
08:00	0	9	2,668	390	519	(16)	3,586
09:00	0	8	1,621	344	509	(11)	2,482
10:00	0	3	1,180	267	569	(12)	2,019
11:00	0	6	1,133	263	538	(13)	1,940
12:00	0	5	1,233	253	554	(5)	2,045
13:00	0	4	1,241	238	551	(9)	2,034
14:00	0	6	1,295	308	635	(17)	2,244
15:00	0	5	1,444	382	599	(17)	2,430
16:00	0	4	1,872	437	582	(20)	2,895
17:00	0	11	2,403	421	564	(14)	3,399
18:00	0	6	1,632	206	419	(8)	2,263
12 hour	0	82	19,739	4,091	6,543	(154)	30,455

From Beacon Hill Interchange
To Claydon Interchange

Direction: Combined

OSGR
612800 250150

Link No.
5152

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	17	2,542	711	728	(13)	3,998
08:00	0	17	3,617	582	655	(10)	4,871
09:00	0	12	2,308	371	781	(18)	3,472
10:00	0	11	1,853	284	595	(11)	2,743
11:00	0	18	1,658	338	656	(11)	2,670
12:00	0	9	1,706	338	662	(6)	2,715
13:00	0	19	1,784	350	656	(11)	2,809
14:00	0	11	1,881	419	711	(9)	3,022
15:00	0	5	2,106	443	803	(18)	3,357
16:00	0	14	2,779	620	751	(27)	4,164
17:00	0	21	3,486	556	577	(16)	4,640
18:00	0	13	2,855	281	496	(15)	3,645
12 hour	0	167	28,575	5,293	8,071	(165)	42,106

From Claydon Interchange
To Ipswich White House Interchange

Direction: Combined

OSGR
613300 249000

Link No.
5253

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	24	2,761	788	809	(25)	4,382
08:00	0	19	3,741	633	774	(27)	5,167
09:00	0	10	2,541	464	723	(35)	3,738
10:00	0	19	2,380	449	650	(25)	3,498
11:00	0	25	2,517	478	667	(10)	3,687
12:00	0	22	2,633	500	726	(12)	3,881
13:00	0	20	2,786	529	662	(18)	3,997
14:00	0	29	2,923	612	780	(42)	4,344
15:00	0	32	3,025	603	692	(33)	4,352
16:00	0	31	3,924	729	623	(33)	5,307
17:00	0	38	4,605	528	484	(22)	5,655
18:00	0	23	2,913	362	352	(16)	3,650
12 hour	0	292	36,749	6,675	7,942	(298)	51,658

From **Sproughton Interchange**
To **Copdock Interchange**

Direction: Combined

OSGR
612400 243250

Link No.
5455

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	25	2,034	633	699	(4)	3,391
08:00	0	17	3,494	636	795	(10)	4,942
09:00	0	3	1,970	453	755	(14)	3,181
10:00	0	5	1,621	383	672	(7)	2,681
11:00	0	3	1,467	343	752	(6)	2,565
12:00	0	4	1,585	393	755	(3)	2,737
13:00	0	9	1,807	334	753	(7)	2,903
14:00	0	8	1,794	410	834	(6)	3,046
15:00	0	9	1,967	521	863	(8)	3,360
16:00	0	32	2,633	707	766	(8)	4,138
17:00	0	34	3,785	591	673	(6)	5,083
18:00	0	14	2,454	301	486	(10)	3,255
12 hour	0	163	26,611	5,705	8,803	(89)	41,282

From Copdock Interchange
To Wherstead Interchange

Direction: Combined

OSGR
614000 241500

Link No.
5556

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	24	2,505	590	718	(4)	3,837
08:00	0	23	3,973	491	682	(18)	5,169
09:00	0	11	2,252	382	747	(15)	3,392
10:00	0	11	1,950	369	632	(3)	2,962
11:00	0	12	1,839	357	696	(6)	2,904
12:00	0	10	1,986	390	864	(4)	3,250
13:00	0	9	1,919	330	903	(4)	3,161
14:00	0	19	1,945	345	831	(9)	3,140
15:00	0	20	2,375	451	764	(23)	3,610
16:00	0	27	3,190	671	673	(21)	4,561
17:00	0	33	4,079	532	628	(9)	5,272
18:00	0	12	2,894	274	519	(6)	3,699
12 hour	0	211	30,907	5,182	8,657	(122)	44,957

From Wherstead Interchange
To Nacton Interchange

Direction: Combined

OSGR
618850 240930

Link No.
5657

Hour Starting	In Carriageway						
	Pedal Cycles	Motor Cycles	Cars & Taxis	Light Goods	HGV (inc PSV)	PSV	Total exc p/c
07:00	0	32	2,938	658	565	(9)	4,193
08:00	0	30	4,252	540	543	(26)	5,365
09:00	0	21	2,414	415	664	(16)	3,514
10:00	0	14	2,006	399	507	(5)	2,926
11:00	3	20	1,789	412	624	(11)	2,845
12:00	0	24	2,103	349	660	(3)	3,136
13:00	0	19	2,003	362	624	(8)	3,008
14:00	0	28	2,057	381	747	(12)	3,213
15:00	0	33	2,425	448	774	(15)	3,680
16:00	0	43	3,203	599	689	(18)	4,534
17:00	0	62	4,563	564	578	(13)	5,767
18:00	0	40	2,770	257	476	(4)	3,543
12 hour	3	366	32,523	5,384	7,451	(140)	45,724

APPENDIX C – JUNCTION TRAFFIC COUNTS AND QUEUE LENGTH SURVEYS

- C.1 Jn 43 – Bury St Edmunds St Saviours Interchange
- C.2 Jn 44 – Bury St Edmunds Moreton Hall Interchange
- C.3 Jn 53 – Ipswich White House Interchange

C 1 – Jn 43

Junction 43 - Bury St Edmunds St Saviours Interchange

Queue Length Survey

Date

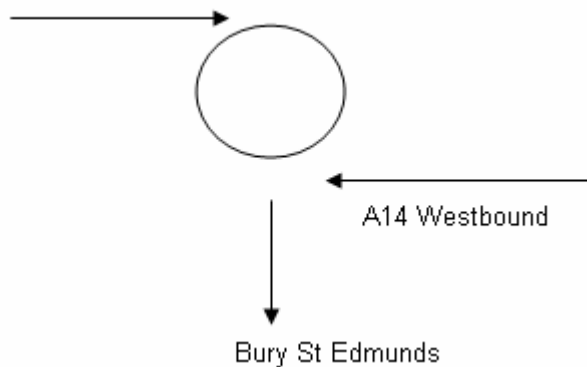
01/02/2005

AM Peak Period	A14 Eastbound OffSlip		A14 Westbound OffSlip	
	Q in Lane (m)		Q in Lane (m)	
Time	Nearside	Offside	Nearside	Offside
08:00	0	0	0	0
08:05	40	15	12	12
08:10	0	0	26	20
08:15	0	0	100	100
08:20	0	0	218	65
08:25	0	0	238	0
08:30	45	0	165	100
08:35	0	0	168	20
08:40	0	0	162	0
08:45	0	0	168	0
08:50	0	0	109	12
08:55	0	0	108	12
09:00	0	0	111	100

Junction Traffic Count

Time Period	Eastbound			Westbound		
	Cars	HGV	Total	Cars	HGV	Total
08:00 - 08:15	102	17	119	211	10	221
08:15 - 08:30	90	18	108	194	12	206
08:30 - 08:45	79	20	99	133	16	149
08:45 - 09:00	99	14	113	178	17	195
Total	370	69	439	716	55	771

A14 Eastbound



Queue Length Survey

Date

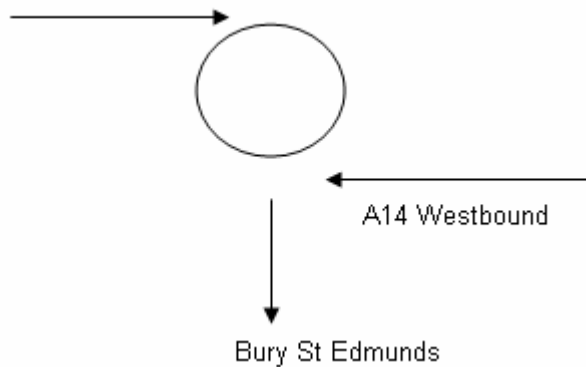
01/02/2005

PM Peak Period	A14 Eastbound OffSlip		A14 Westbound OffSlip	
	Q in Lane		Q in Lane	
Time	Nearside	Offside	Nearside	Offside
17:00	0	0	0	0
17:05	0	0	0	0
17:10	0	0	0	0
17:15	15	5	0	0
17:20	0	95	0	0
17:25	15	55	0	0
17:30	15	15	5	0
17:35	0	0	0	0
17:40	0	45	0	0
17:45	0	0	0	0
17:50	45	10	0	0
17:55	0	0	0	0
18:00	0	0	0	0

Junction Traffic Count

Time Period	Eastbound			Westbound		
	Cars	HGV	Total	Cars	HGV	Total
17:00 - 17:15	110	13	123	180	13	193
17:15 - 17:30	135	11	146	154	9	163
17:30 - 17:45	123	4	127	132	15	147
17:45 - 18:00	142	15	157	109	8	117
Total	510	43	553	575	45	620

A14 Eastbound



C 2 – Jn 44

Junction 44 - Bury St Edmunds Moreton Hall Interchange

Queue Length Survey

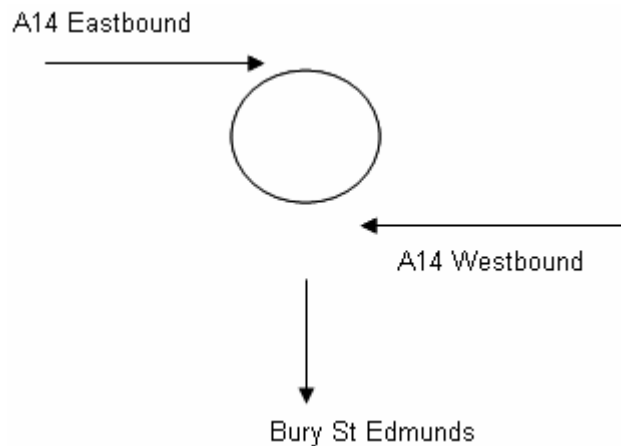
Date

02/02/2005

AM Peak Period	A14 Eastbound OffSlip		A14 Westbound OffSlip	
	Q in Lane (m)		Q in Lane (m)	
Time	Nearside	Offside	Nearside	Offside
08:00	10	10	10	5
08:05	0	0	0	0
08:10	0	0	40	40
08:15	0	0	45	10
08:20	5	10	50	40
08:25	25	50	25	10
08:30	0	0	5	25
08:35	5	20	45	70
08:40	0	25	60	25
08:45	5	75	0	5
08:50	25	50	0	0
08:55	40	50	20	0
09:00	0	0	0	0

Junction Traffic Count

Time Period	Eastbound			Westbound		
	Cars	HGV	Total	Cars	HGV	Total
08:00 - 08:15	183	14	197	208	8	216
08:15 - 08:30	155	15	170	224	3	227
08:30 - 08:45	164	17	181	216	10	226
08:45 - 09:00	183	14	197	173	7	180
Total	685	60	745	821	28	849



Queue Length Survey

Date

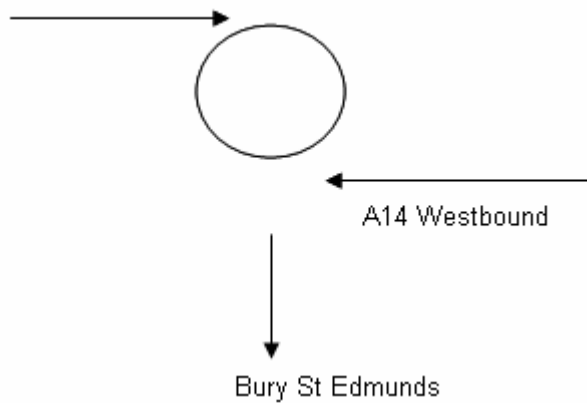
02/02/2005

PM Peak Period	A14 Eastbound OffSlip		A14 Westbound OffSlip	
	Q in Lane		Q in Lane	
Time	Nearside	Offside	Nearside	Offside
17:00	0	0	5	50
17:05	0	0	5	0
17:10	0	0	25	25
17:15	10	0	50	25
17:20	5	0	25	0
17:25	0	0	45	0
17:30	0	0	0	25
17:35	0	0	0	25
17:40	15	5	20	0
17:45	0	0	0	45
17:50	0	0	0	0
17:55	0	0	25	0
18:00	25	10	10	10

Junction Traffic Count

Time Period	Eastbound			Westbound		
	Cars	HGV	Total	Cars	HGV	Total
17:00 - 17:15	160	5	165	72	9	81
17:15 - 17:30	151	5	156	92	3	95
17:30 - 17:45	155	4	159	77	4	81
17:45 - 18:00	148	5	153	109	4	113
Total	614	19	633	350	20	370

A14 Eastbound



C 3 – Jn 53

Junction 53 - Ipswich White House Interchange

Queue Length Survey

Date 03/02/2005

AM Peak Period	Eastbound Off Slip Only	
	Q in Lane (m)	
Time	Nearside	Offside
08:00	20	0
08:05	0	0
08:10	0	0
08:15	50	0
08:20	0	0
08:25	120	0
08:30	180	0
08:35	120	0
08:40	140	0
08:45	80	0
08:50	0	0
08:55	0	0
09:00	0	0

Junction Traffic Count

Time Period	Eastbound Off Slip Only		
	Non-HGV	HGVs	Total
08:00 - 08:15	248	6	254
08:15 - 08:30	277	11	288
08:30 - 08:45	279	17	296
08:45 - 09:00	238	7	245
Total	1042	41	1083

Notes:

All queuing traffic observed tended to be moving queues, sometimes with very large gaps between vehicles

Volume of queuing did depend upon the number of vehicles leaving the A14 westbound off slip.

At 08:12 the volume of vehicles travelling over the bridge (from A14 Westbound off slip) appeared to increase. The result of which a queue developed on the A14 Eastbound off slip but soon cleared. Similar

At 08:22 Queue observed on exit into Ipswich which partially blocked the roundabout. On this occasion momentary.

At 08:28 volume increases over bridge deck and then does not subside quickly.

Whilst on site had reports from the Local Police on site monitoring traffic that exit blocking does occur on a regular basis, especially on Mondays and when it is raining.

APPENDIX D – MINUTES TO MEETINGS AND RESPONSES TO CONSULTATION

Project: HIGHWAYS AGENCY AREA 6

Meeting No: -

Purpose of Meeting: A14 Congestion Study

Minutes By: Dave Boddy

Place of Meeting: Cambridgeshire County Council

Time & Date: 3pm Wed 17 Nov 04

Present:

Dave Boddy

(DB)

John Clough
Bob Tuckwell

(JC)

(RMT)

Representing:

Atkins

Cambridgeshire County Council (CCC)

[post meeting note]

Date of Next Meeting: -

Distribution:

Attendees

Chris Tucker (Atkins)

(CT)

Martin Smith (Atkins)

(MS)

Date Issued: 23 November 2004

File Ref: BW5080/LNMS/83297/CT/18653

NOTES TO RECIPIENTS: -

i)- Departments or individuals are expected to implement any actions as noted.

ii)-These minutes record WS Atkins understanding of the meeting and intended actions arising there from. Your agreement that the minutes form a true record of the discussions will be assumed unless adverse comments are received in writing within five days of receipt of these minutes

		ACTION
1	General	
1.1	Atkins has been commissioned by the HA to identify Local Network Management Schemes (LNMS) for reducing congestion on the A14 east of the M11.	
1.2	The purpose of this meeting is to consult with CCC and seek their views on where congestion occurs on the A14 within the study area, and to seek ideas on any potential solutions.	
2	Congestion Hot Spots	
2.1	<p>RMT thought the biggest congestion on the A14 was on the westbound approach to Girton Interchange, particularly during the PM peak. Caused by principal traffic flow for M11 South and A14 East combining into one lane for the exit.</p> <p>Solution Widen westbound A14 approach from the Girton Road over bridge, to provide a two lane exit.</p>	
2.2	<p>Other Hot Spots</p> <p>Other hot spots were considered to occur at Milton, Histon and Quy Interchange, caused by queuing for the interchanges queuing back onto the main line.</p> <p>General Solution Extend deceleration lanes to make queuing safer and so that queuing traffic does not disrupt mainline traffic flow.</p> <p>Specific Solution Milton Interchange: introduce westbound off slip express lane</p>	

Project: HIGHWAYS AGENCY AREA 6

Meeting No: -

Purpose of Meeting: A14 Congestion Study

Minutes By: Dave Boddy

Place of Meeting: Atkins – Norwich Office

Time & Date: 10am Fri 26th Nov 04

Present:

Dave Boddy
Jon Fox
Ros Howe
Martin Smith
Chris Tucker

(DB)
(JF)
(RH)
(MS)
(CT)

Representing:

Atkins

Date of Next Meeting: - Early January

Distribution:

Attendees

Jim Jervis

(JJ)

Mark Grimsey

(MG)

Date Issued: 26 November 2004

File Ref: BW5080/LNMS/83297/DB/18819

NOTES TO RECIPIENTS: -

i)- Departments or individuals are expected to implement any actions as noted.

ii)-These minutes record WS Atkins understanding of the meeting and intended actions arising there from. Your agreement that the minutes form a true record of the discussions will be assumed unless adverse comments are received in writing within five days of receipt of these minutes

		ACTION
1	General	
1.1	Atkins has been commissioned by the HA to identify Local Network Management Schemes (LNMS) for reducing congestion on the A14 east of the M11.	
1.2	The purpose of this meeting is to clarify the brief and ensure that the project is heading in the right direction.	
2	Deliverables	
2.2	CT confirmed the project deliverable, which was to produce scheme assessments that would feed into the HA Value Management (VM) in May 2005.	
2.1	HA hold two VM workshops annually in May, one for less than £100,000 and one for between £100,000 and £5m, from which funds are allocated and schemes prioritised. It is intended that A14 scheme proposals will go forward to the May 2005 VM workshop, with monies for the schemes allocated by May 2006.	
2.2	For each VM submission will be required <ul style="list-style-type: none"> – A PAR – photographs, – plans and a – score sheet. <p>The PARs should be checked with VK prior to the VM workshop Schemes assessment need to cover cost, design, safety, and potential land constraints A Stage 1 Safety Audit and a brief Environmental Assessment (see Jim Jervis.)</p>	
3	Project Progress	
3.1	DB outlined work already undertaken. This included a description of CRFs, capacity assessments and accident data for the A14.	
4	Actions	
4.1	MS to estimate the scheme costs <ul style="list-style-type: none"> – DB to contact Vanessa for details of an economic assessment. – Study should consider previous lay-by assessment. – CT to supply DB with a previous the A12 Copdock Interchange study – DB to contact the police in both Cambridgeshire C.C and Suffolk C.C. – Operations team to be consulted – All reports will be issued in Pdf format. 	
5.	Programme	
5.1	Project deliverable 31/3/05 to enable CT / MS to prepare for the VM workshop	
5.	Date of Next Meeting	
5.1	It was agreed that the next meeting will take place in early January and will be followed by a drive out in the afternoon	

Project:	HIGHWAYS AGENCY AREA 6	Meeting No:	-
Purpose of Meeting:	A14 Congestion Study	Minutes By:	Dave Boddy
Place of Meeting:	Suffolk County Council offices - Ipswich	Time & Date:	10am Tue 7th Dec 04

Present:

Dave Boddy
Steve Boyle
Mike Gepp
Peter Grimm
Andrew Guttridge
Alan Thorndyke
David Watson

Representing:

(DB)	Atkins
(SB)	St Edmundsbury Borough Council
(MG)	Ipswich Borough Council
(PG)	Suffolk County Council
(AG)	Suffolk County Council
(AT)	Suffolk County Council
(DW)	Suffolk County Council

Date of Next Meeting: N/A

Distribution:**Attendees:**

Ros Howe
Mark Grimsey
Steve Dickinson
Dave Moore
Martin Smith
Lee Cornwell

Date Issued:	13th December 2004	File Ref:	BW5080/LNMS/83297/DB/19029
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NOTES TO RECIPIENTS: -

- i)- Departments or individuals are expected to implement any actions as noted.
- ii)-These minutes record WS Atkins understanding of the meeting and intended actions arising there from. Your agreement that the minutes form a true record of the discussions will be assumed unless adverse comments are received in writing within five days of receipt of these minutes

ACTION

1 General

- 1.1 Atkins has been commissioned by the HA to identify Local Network Management Schemes (LNMS) for reducing congestion on the A14 east of the M11.
- 1.2 The purpose of this meeting is to identify possible congestion issues along the A14 and discuss possible solutions.

2 Deliverables

- 2.1 Suffolk County Council asked to be kept informed of the process and of all developments.

It was noted that the Felixstowe South Reconfiguration Inquiry, Felixstowe Regional Model and RPG14 were all important considerations.

3 Junction Problems and Possible Improvements

3.1 Junction 62 - A14 Felixstowe Dock Gate 1

Adverse weather lorry management causes queuing and requires marshalling on the A14. The Police and Port Authority need to be contacted to find out the arrangements, the involvement of the emergency services and the predicted growth.

Junction 61 - Port of Felixstowe

The junction contains slip roads which work well in congestion.

Junction 60 - Felixstowe Dockspur Roundabout

All HGVs travelling to the Port turn right into the right-turn lane so some can get squashed and some can tip over. All three lanes are known to queue, particularly outbound vehicles during the peaks. Proposals will be made to the Felixstowe Docks to address these problems. Improvements could include a dedicated right-turn lane.

Junction 59 - Trimley Interchange

No problems.

Junction 58 - Levington Seven Hills Interchange

Long queues are known to form on the Eastern Bypass. A lot of complaints have been received about congestion on the roundabout, particularly on the southbound A12. Eventually, it will become more likely that queuing will form onto the A14 main line. Traffic moving from the A1156 onto the Junction is also a problem.

Junction 57 - Nacton Interchange

Traffic builds up in the morning peaks. Although it does not presently queue onto the A14 it is getting close. Development of the Ransomes Industrial Estate will add to the problem. Accidents are likely to occur due to long queues to get off at Nacton Interchange eastbound during the evening peak as traffic can back onto the slow lanes.

Orwell Bridge

During the peak hours the traffic flow can approach capacity. The CRF of this section needs to be checked. It is unclear how many more years the Bridge will be able to cope with the growth in traffic.

Break downs reduce the capacity of the Bridge. A break down alternative route for the A14 has been signed via Ipswich although it is unlikely that this route will be signed electronically making it difficult to inform the public. UTMIC are required for diversion routes.

Junction 56 - Wherstead Interchange

There does not appear to be too much of a congestion problem, although it is necessary to observe peak hour congestion. Queuing is not believed to be a problem at present on

ACTION

this section although it is believed that queuing could occur in the future.

Junction 55 - Copdock Interchange

Congestion is a serious issue here. Significant works are proposed as part of Felixstowe Docks including detailed designs. A TPI scheme is planned for the A12 and Jim Dickson needs to be consulted on this.

There is an alternative route through Sroughton on the B1113 with traffic trying to avoid congestion through Copdock but this causes congestion elsewhere. Traffic diverting back via the B1113 causes knock-on effects at the A1071 roundabout junction with the B1113.

The northbound queue to Copdock queues back to Capel St Mary during the AM peak.

Junction 54 - Sroughton Interchange

There is no congestion problem

Junction 53 - Ipswich White House Interchange

There is a congestion problem coming into Ipswich from the eastbound approach off during the morning. There are queues onto the A14 and this is made worse by the close proximity of Junction 52. A possible solution is a third lane between Junction 52 and 53.

Junction 52 - Claydon Interchange

No real congestion problem except for a number of accidents which have caused incidents. "Cars run into the central barrier" as reported on the local radio.

Junction 51 - Beacon Hill Interchange

The Junction is known to queue on occasions during the evening peak but this is not a significant peak.

Junction 50 - Stowmarket Cedars Interchange

This should be sorted out as part of the Haulage Scheme. The only issue is the advance signing not at standard intervals and the review of signing.

Junction 49 - Stowmarket North Interchange

Confirmation of when Haughly Bends TPI Scheme starts. A TPI is planned but no one is aware of any problems except for the 50 mph speed limit.

Junction 47A - Elmswell Junction

No problems.

Junction 47 - Woolpit Interchange

There are few problems here. Westbound traffic joining the A14 is a little unsafe.

Tockstock Junction

No problems.

Junction 46 - Beyton Interchange

No problems.

Rougham Junction

No problems – Rookery Crossroads TPI.

Junction 44 - Bury St Edmunds Moreton Hall Interchange

A serious problem exists with a lot of political pressure regarding the junction. Traffic is queued along Bedingfeld Way to give capacity to the Interchange to reduce the impact of queues on the A14 slips.

The Interchange suffers from queuing every morning but this is minimised by holding

ACTION

traffic back along county roads such as Bedingfeld Way.

An additional lane for queuing traffic? Traffic mainly queues onto the A14 mainline from the westbound off slip, but sometimes also queues onto the A14 from the eastbound off slip.

Junction 43 - Bury St Edmunds St Saviours Interchange

Queues back onto the A14 in both directions but would be difficult to widen due to constraints. The solution would be to provide a dedicated third lane for diverging traffic but would be difficult due to development /industrial unit constraints.

Junction 42 - Westley Interchange

Not under pressure.

Junction 41 - Risby Interchange

No problems.

Junction 40 - Higham Interchange

No problems.

Junction 39 - Kentford Interchange

No problems.

Junction 38 - Newmarket Waterhall Interchange

Problems of divergence for A14 eastbound traffic onto the A11. The solution would be a two-lane diverge.

Junction 37 - Exning Interchange

There is local political pressure to improve the capacity on this section. It can become critical given the overload and Stow Cum Quy Interchange. But is there a better solution on how it operates?

Junction 36 - Nine Mile Hill Interchange

No real problem although there are some divergence issues similar to Junction 38.

4 Other Problems

4.1 There is a general problem with HGVs parking along the A14. Overnight laybys along the road are usually full with parked HGVs. This means there will be no where for a vehicle to pull off in an emergency.

A solution could be to build existing laybys to full standard. Suffolk County Council will pass through a report on the problem.

There is a need to look into incident diversion and key planned works.

Project: HIGHWAYS AGENCY AREA 6

Meeting No: 2

Purpose of Meeting: A14 Congestion Study Progress Meeting

Minutes By: Martin Smith

Place of Meeting: Great Blakenham

Time & Date: 1100hrs 18/01/05

Present:

Martin Smith

David Boddy

David Moore

Apologies

Chris Tucker

Representing:

Atkins – Great Blakenham

Atkins – Norwich

Atkins - Chelmsford

Date of Next Meeting: TBA

Distribution:

Attendees
Chris Tucker
Ros Howe
Jon Fox

Date Issued: 27th January 2005

File Ref: 4425080/LNMS/83297/MS/19862

NOTES TO RECIPIENTS:-

i)- Departments or individuals are expected to implement any actions as noted.

		ACTION
1.	Deliverables	
1.1	MS advised that Area 6 would be undertaking a mini VM with the HA in April where schemes arising from this study would be introduced.	
1.2	DB confirmed no problems with current fee to conclude study.	
1.3	Stage 1 RSA and Environmental studies to be arranged for any identified options.	
1.4	MS reiterated the study principle was to review existing problems. Future sites of congestion should be mentioned but not investigated in detail.	
1.5	Site visit undertaken with Mark Grimsey (A14 Design Team Manager) prior to meeting to discuss congestion problems at Copdock and Bury St Edmunds sites	
2.	Project Progress	
2.1	DB confirmed consultation with Suffolk and Cambridgeshire CC/Police complete. The majority of analysis is now complete with solutions being investigated.	
2.2	Girton Interchange pm peak problem on WB. Solution previously identified for two lane diverge.	
2.3	J32 Histon Interchange Developer proposes to improve junction as part of new development. DB recommends to leave option alone for time being.	
2.4	J33 Milton Interchange Proposals from Cambs CC to improve junction layout and ease congestion which may be implemented next year. DB to mention in report and comment on Cambs CC proposals.	DB
2.5	J35 Stow-Cum-Quy Interchange Not a regular congestion spot. EB slip exit does back up but not onto A14 mainline. Not recommended for further investigation.	
2.6	J36 A11 junctions No queuing at diverge but long term solution would be 2 lane diverge and additional signing.	
2.7	J43 St Saviours Interchange Queuing onto A14 mainline in both directions from slip exit. Investigate signalising issues for EB slip exit. Investigate increasing lanes on WB slip exit.	
2.8	J44 Moreton Hall Interchange Congestion is an issue for Suffolk CC as their roundabout signalisation gives priority to trunk road traffic. Exit capacity into Bury St Edmunds will always be a problem. DM to investigate current signalised set up.	DM
2.9	J53 Whitehouse Interchange EB slip exit backs up close to A14 mainline creating problems for Claydon EB slip entry. Feasibility study will look at an auxiliary lane linking Claydon – Whitehouse.	

		ACTION
2.10	<p>J55 Copdock Interchange Considered as part of A12 Congestion Study that concluded 3 lanes circulatory as a solution (gold plated solution). Other options available e.g adjustment of existing signalise, segregated lane + 2 lane circulatory. Scheme likely to be future TPI scheme. DB to identify the quantification of mova with Vanessa Kovacvic. DB to clarify in report why location study has identified further options following last years study.</p>	DB
2.11	<p>Orwell Bridge Analysis shows location is reaching capacity during peak hours. DB believes reduced traffic speed over bridge caused by "boxed in effect" is contributing to the problem. Option to investigate variable speed limits that will require feasibility study.</p>	DB
2.12	<p>J58 Levington Interchange Minor county traffic congestion problems.</p>	
3.	Works to progress	
3.1	Further investigation of Girton, Bury St Edmunds and Copdock schemes with solutions identified and analysed for suitability.	DB
3.2	Further survey works to be identified asap to enable implementation in time for report issue.	DB/DM
3.3	Work on collation of report to commence.	DB
4.	<p>Date of Next Meeting To be confirmed, approximately 1 month after this meeting.</p>	

Project: HIGHWAYS AGENCY AREA 6

Meeting No: 3

Purpose of Meeting: A14 Congestion Study Progress Meeting

Minutes By: Jon Fox

Place of Meeting: Norwich

Time & Date: 1400hrs 28/02/05

Present:

Martin Smith

Chris Tucker

David Boddy

Jon Fox

Representing:

Atkins – Great Blakenham

Atkins – Great Blakenham

Atkins – Norwich

Atkins - Norwich

Date of Next Meeting: TBA

Distribution:

Attendees

Dave Moore

Date Issued: 1st March 2005

File Ref: 4425080/LNMS/83297/JF/20678

NOTES TO RECIPIENTS:-

i)- Departments or individuals are expected to implement any actions as noted.

		ACTION
1.	Project Progress	
1.1	DB confirmed the areas of the A14 which are known to cause congestion. These are Girton Interchange (J31), Milton Interchange (J33), St Saviours Interchange (J43), Moreton Hall Interchange (J44), Whitehouse Interchange (J53) and Copdock Interchange (J55).	
1.2	The study will concentrate on improving junctions that are currently causing problems and not sections that may cause problems in the future. Areas that may cause problems in the future are the A11 junctions in both directions, and Orwell Bridge.	
1.3	Dave Moore has undertaken traffic surveys at Junctions 43 and 44 and the data for these junctions is now available.	
2.	Junction Solutions	
2.1	J31 - Girton Interchange Queuing is known to occur especially during PM. DB will review a PAR for Girton. Libby Sands will be contacted for advice.	DB
2.2	J33 - Milton Interchange Proposals from Cambs CC to improve junction layout and ease congestion which may be implemented next year.	
2.3	J43 - St Saviours Interchange DM traffic surveys suggest queuing onto EB A14 mainline caused by blocking back. It is believed that there is no physical solution to the congestion problem. However, extending the WB auxiliary lane back by about 100m could help to alleviate the problem. The cost of such a scheme may be an issue. A plan of the existing layout is required.	
2.4	J44 – Moreton Hall Interchange DM traffic surveys suggest there is no queuing onto the A14.	
2.5	J53 – Whitehouse Interchange No queuing back onto the A14. Exit blocking can occur when it rains. Queuing is worse during extreme traffic e.g. football traffic. A solution could be to add a third lane between junctions 52 and 53.	
2.6	J55 – Copdock Interchange Roundabout converted to MOVA signalling, followed by conversion to full signalisation. Slip lane widening. Vanessa Kovacevic also supports this plan. JUICE looked at to assess economic benefits. Problems with comparing ARCADY outputs for 'do nothing' with TRANSYT outputs for 'do something'. TRANSYT could be used for the 'do nothing' which would make it easier to compare. Micro simulation was suggested by VK. The solution suggested is not 'gold plated' but would represent a significant improvement at relatively low cost compared to other solutions suggested in previous studies for the interchange. DB to draw up plan for the proposed scheme to prove its physically possible.	DB/JF
2.7	Orwell Bridge Variable speed limit or reduced fixed 50mph speed limit suggested.	
2.8	A11 Junctions Not currently causing a problem so will not be considered in this project,	

		ACTION
although it would be helpful to suggest a year when it will become a problem. Will be suggested that further investigation will be required.		
3.	Works to Progress	
3.1	Economic assessment of Copdock to be completed. Girton Interchange to be investigated further. Plans of Bury St Edmunds to be assessed.	DB/JF
3.2	Work on collation of report to commence.	DB
3.3	MS confirmed deadline for report as 31 st March which was agreed by all.	DB/JF
4.	Date of Next Meeting	
	To be confirmed.	

Fox, Jon E

From: Boddy, David
Sent: 06 December 2004 17:08
To: Fox, Jon E
Subject: FW: 5083297 A14 Congestion study

Response from Dave Moore about traffic signalisation of at junctions on the A14

David

In response to your query I have travelled along the length of the A14 and have identified the traffic signal control sites. This list is compiled from the information I have seen as part of the drive through.

A14 Histon interchange: A14 junction with B1049

This junction is fully signalised and operates using CLF fixed timings during the AM and PM Peak and CLF with limited VA during the off peak periods. With regard to speed detectors on the slip roads it is considered unlikely given the current operation at Milton Interchange.

A14 Milton Interchange:

This junction we all know about. Currently there is no detection on the slip roads to detect queues and high speed vehicles

A14 J/W B1047 Horningsea

Signals are currently provided on the A14 eastbound off slip only and runs using VA detection. Unsure of queue and speed detection, thought unlikely. I can confirm this with CCC if required.

B1102 J/W A1303 Stow Cum Quay

Although this site is on Cambridgeshire's network it could have an impact on the A14. This site operates using MOVA control and has recently been installed by CCC. Further details can be got from CCC if required.

A14 J/W A143 Bury St Edmunds, Near Sugar Factory, Central Junction on the A14 bypass around Bury St Edmunds

This junction comprises of a roundabout which has only the A14 westbound off bound slip and corresponding circulatory carriageway signalised. It would appear that this site is MOVA controlled however as I was travelling around the roundabout it was not clear as to the speed or queue detection on the westbound off slip. Suggest we liaise with SCC for details of this site.

A14 J/W A134 Bury St Edmunds, Eastern junction on the A14 bypass around Bury St Edmunds

This junction comprises of a fully signalised roundabout that would appear to be operating using CLF timings. On the slip road I travelled on there was evidence of speed detection loops but queue loop provision was not clear. Suggest we liaise with SCC for details of this site.

A14/A12 Copdock Interchange

The worst junction for queuing vehicles with long queues on A12 northbound approach.

This junction comprises of a roundabout which has only the A14 eastbound off bound slip and corresponding circulatory carriageway signalised. It would appear that this site operates using VA timings. Currently it is not clear as to the presence of queue detection facilities but it does appear to have speed detection facilities. I can confirm this by talking to Peek Traffic as this is on the HA network.

I hope this information will be of use and if you need me or any of my team to assist please feel free to contact me.

Kind regards

David Moore

From: Clarke, Matt
Sent: 07 December 2004 10:09
To: Fox, Jon E
Cc: Grimsey, Mark
Subject: RE: A14 info

Response from Mark Grimsey when asked for descriptive details of the A14

Starting at Felixstowe

Felixstowe Dock No.1 roundabout (Jcn 61) to the start of the concrete c/way at Levington (junction with U.3129)

Dual 2 lane without metre strips (except through Trimley/Kirton l'chge). Flexible Composite. Built in the very early 1970's (certainly before 1975). Plane & inlay between Kirton l'chge and Levington mid '90's. Reconstructed w/bnd across the C375 junction in late '80's/early '90's.

Trimley/Kirton l'chge originally built as an "at grade" junction. The dual main c/way underneath added in late '80's or early '90's.

Concrete C/way between Levington and Levington 7 Hills l'chge (A.12 North) (Jcn 58)

Dual 2 lane with metre strips. Jointed concrete pavement with 5m bays. Cannot remember if it is reinforced. Designed and built by Suffolk CC. Opened to traffic in November 1982. Only minor concrete repairs since.

Levington 7 Hills l'chge (Jcn 58) to Orwell Bridge

Dual 2 lane with metre strips. Jointed concrete pavement with 5m bays. Cannot remember if it is reinforced, but do have some survey data from 1999/2000 that should tell us. If that is important for you, then I can look it out. Only minor concrete and joint repairs since then. Opened to traffic in November 1982 under a different contract to the bit the other side of Orwell Bridge.

Orwell Bridge

Dual 2 lane with metre strips. Designed by Sir William Halcrow & partners. Built by dutch firm Stevin Construction. Opened in November 1982. Longest single span prestressed concrete bridge in Europe (at the time - don't know if it still is).

<http://www.ipswich.gov.uk/tourism/scenery/scene26.htm>

http://www.orwellrivercruises.co.uk/orwell_bridge.htm - they got name of company wrong!

http://www.slamnet.org.uk/geography/Orwellbridge/orwell_bridge.htm

Orwell Bridge to Copdock Mill l'chge (A.12 South) (Jcn 55).

Dual 2 lane with metre strips. Jointed concrete pavement with 5m bays. Cannot remember if it is reinforced. Only minor concrete and joint repairs since then. Opened to traffic in November 1982 under a different contract to the Orwell Bridge to Levington 7 Hills bit. Originally built with a small temporary roundabout at its junction with the A.12. This operated until 1986 when the A.12 Copdock Mill to Bentley Long Wood and the A.14 Ipswich Western Bypass were opened.

Copdock Mill l'chge (A.12 South) (Jcn 55) to the B.1113 Claydon l'chge (Jcn 52)

Dual 2 lane with metre strips. Jointed concrete pavement with 5m bays. Cannot remember if it is reinforced, but do have some survey data from 2003/04 that should tell us. If that is important for you, then I can look it out. Opened to traffic in 1986.

B.1113 Claydon l'chge (Jcn 52) to Stowmarket (North) Junction (Jcn 49)

Dual 2 lane with metre strips. Opened to traffic in early 1975 (a month after I started with SCC). Built by French's who allegedly nearly went bust during its construction and had to be rescued. Had major maintenance schemes between:

- B.1113 Claydon l'chge (Jcn 52) to A.140 Beacon Hill l'chge (Jcn 51)
- A.140 Beacon Hill l'chge (Jcn 51) to A.1120 Cedar's l'chge (Jcn 50), and
- A.1120 l'chge (Jcn 50) to Hillhouse Viaduct.

All in the 1980's, plus various other more local resurfacing schemes.

Stowmarket (North) Junction (Jcn 49) to Haughley New Street

Dual 2 lane without metre strips (w/bnd) and with metre strips (e/bnd). Built in the late '60's/very early '70's. W/bnd plane & inlayed whole length - for details please see Mark Grimsey/Martin Smith. E/bnd had major maintenance early '90's when the metre strips were added. The whole length of this site is grossly sub-standard, vertical & horizontal alignment, width, "at grade" junctions, visibility etc. A TPI scheme is due to start on site in the next 2 years.

Haughley New Street Bypass

Dual 2 lane with metre strips. Jointed concrete c/way with 5m bays. Cannot remember if it is reinforced, but do are currently carrying out structural survey that should tell us. Opened to traffic in late '70's - either 1977, 78 or 79. Had fairly substantial crack/joint/bay repairs at various times since then. Had one serious concrete "blow-up" in 1980's.

Haughley New Street Bypass to Rougham Nurseries

Built late 1970's - probably 1979. Dual 2 lane with metre strips. Various lengths planed & inlaid since then.

Rougham Nurseries to Moreton Hall I'chge (Jcn 44)

E/bnd = original road, w/bnd built late '60's. Dual 2 lane with metre strips. E/bnd had major maintenance in 1985/86 when metre strips added. W/bnd had major maintenance in 1988/89 when metre strips were added. TPI scheme now "on site" to improve the Rougham Nurseries, Rookery Crossroads and Spinney Cottages junctions - due to complete in 1 year.

Bury St.Edmunds Bypass - Moreton Hall I'chge (Jcn 44) to Westley I'chge (Jcn 42)

Dual 2 lane with metre strips. Opened to traffic in 1972-74 as jointed concrete with 5m bays. Overlaid with a mixture of HRA and SBS modified HRA in late '80's. Problems with rutting and/or reflective cracks since then. Received variety of plane & inlay/crack repairs since.

Westley I'chge (Jcn 42) to B.1506 Kentford I'chge (Jcn 39)

Dual 2 lane with metre strips. Built as single contract mixed off/on-line improvement in late '70's, probably 78 or 79. Only one or two local plane & inlay treatments since.

B.1506 Kentford I'chge (Jcn 39) to A.11 Water Hall I'chge (Jcn 38)

Dual 2 lane with metre strips. Built as a single contract off-line improvement with the next section in the early 1970's. One or two successive plane & inlay treatments since.

A.11 Water Hall I'chge (Jcn 38) to A.11 Nine Mile Hill I'chge (Jcn 36)

Joint A.11/A.14. Dual 3 lane with metre strips. Built as a single contract off-line improvement with the previous section in the early 1970's. Several successive Lane 1 and Lane 1&2 plane & inlay treatments since. Now displaying substantial rutting problems. We are currently carrying out structural investigations on 1 e/bnd and 1 w/bnd length.

A.11 Water Hall I'chge (Jcn 38) to A.1305 Stow-cum-Quy I'chge (Jcn 35)

Dual 2 lane with metre strips. I'm almost sure it was opened to traffic after Newmarket bypass. Originally jointed concrete with 5m bays. Overlaid in an early crack & seat maintenance scheme. TRL trial site. If details are important, then I do have some, and can look them up for you.

A.1305 Stow-cum-Quy I'chge (Jcn 35) to Girton I'chge (Jcn 31)

Dual 2 lane with metre strips. I'm almost sure it was opened to traffic after the previous section. Known for it's embankment/geotech problems. Major maintenance between A.10 Milton (Jcn 33) and Fen Ditton (Jcn 34) in 1999/2000 (I think). Plane & inlay e/bnd across Jcn 31.

No other details after this point I'm afraid.

On a general note, we do have a fairly substantial number of cores throughout it's length.

Meeting

Cambridge Constabulary - Atkins

A14 Cambridge to Felixstowe

December 14th 2004

Junction 31 – M11/A14/A1307 Girton Interchange
<p>Junction straddles both area 6 and 8, A428 carries light traffic flows compared to the A14, although there tends to be a build up of traffic at Hardwick junction.</p> <p>There has recently been an increase in traffic rat running around the A428/A1198 between 06.30-07.00 via Caxton Common to avoid traffic congestion on the A14 Westbound.</p> <p>As part of the A14 widening scheme, it is intended to have 3 lanes to Fenditton.</p> <p>There are also plans to improve the signing and white lining in the Westbound direction on the approach to A428 from the A14.</p> <p>The Police would like to see the closure of the layby on the westbound carriageway in the vicinity of the A428 diverge, and believe that vehicles using this layby contribute to congestion and potential accidents.</p> <p>Apparently there was a scheme to provide 2 diverge lanes for the A428 to access the clover leaf junction but this was shelved at RS2 stage.</p> <p>They also believe that the introduction of anti swooping diamonds as on the M6 would assist with congestion at this location. They would like to see the layby used for emergency purposes only.</p>
Junction 32 – A14/B1049 Histon Interchange
<p>Generally no problems with this junction.</p> <p>Milton Science/Business Park cause queues, Milton improvement, should help, Police not to happy with the proposed arrangement of 2 lane slip road, as they consider this to be dangerous, quoted the Spitalis interchange eastbound on slip as an example. Believe this could become an accident cluster site.</p>
Junction 33 – A14/A10 Milton Interchange
<p>This junction is fairly heavily used by Heavy Goods vehicles accessing the A10 to Ely, generally there are no problems with the slip roads at this junction.</p>
Junction 34 – A14/B1047 Fen Ditton Interchange
<p>No problems.</p>

Junction 35 – A14/A1303 Stow Cum Quy Interchange
Has dedicated lanes, works pretty well.
Junction 36 – A14/A11/A1303 Nine Mile Hill Interchange
<p>No real problems overall, However, if an Incident occurs west of A11 and prior to Milton, Police have difficulty in turning traffic round. This leads to these vehicles in effect being trapped, the nearest point to turn traffic is the A1303 slips.</p> <p>A11/M11 Junction ok 3 lanes.</p>
Junction 37 – A14/A142 Exning Interchange
<p>No particular problems, although short slip roads and turning right at the top of the junction is difficult which causes problems with queues building on the slips causing traffic diverging from the A14 applying their brakes while still on the A14 instead of reducing speed on the slip road.</p> <p>This has lead to a number of stop/start accidents.</p>
Junction 38 – A14/A11/A1304 Newmarket Waterhall Interchange
<p>No particular problems,</p> <p>General comments</p> <p>Police would like to see Cantilever VMS signs prior to junction 36 and junction 31, Nine Mile interchange and Girton interchange respectively, to avoid a buid up of traffic when incidents occur between junctions 36 and 31 allowing traffic to take diversionary action via the A11 and A505.</p> <p>Libby sands of URS Bedford, should be able to provide information on Histon to Girton Clover leaf scheme that was suspended.</p> <p>Martin Smith, Atkins, should be able to provide Symbol signed diversion routes A11/A505/M11. Peter Smith or Libby Sands should be able to provide similar diversion route information for area 8.</p> <p>Peter Smith is highways agency contact for Area 6.</p> <p>Eastbound A428 generally runs ok, merging traffic from A14 to A14(single lane) causes queuing back into area 8, between Bar Hill and Girton interchange.</p>

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