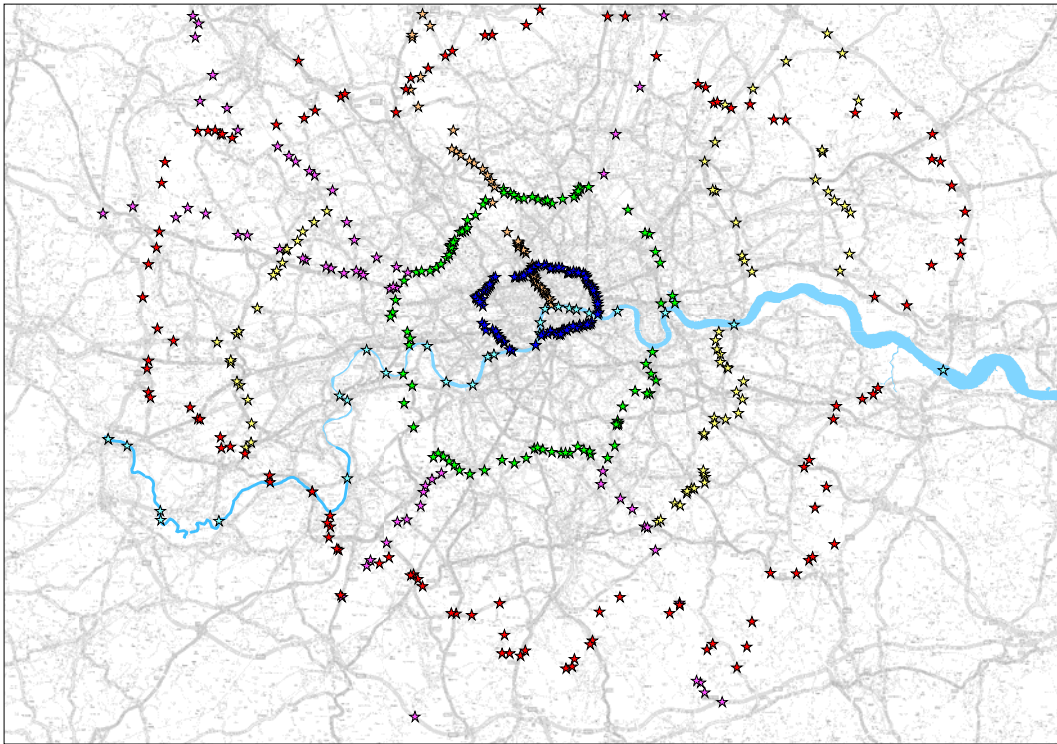


Network Performance Traffic Analysis Centre

TAC Traffic Note 3
March 2012

TfL Cordon and Screenline Surveys 1971 – 2011



Précis:

An historical summary and analysis of traffic counts recorded through the TfL Cordon and Screenline count programme from 1971 to 2011.



0 Document Control

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0.4 Document Summary

This document provides a summary and analysis of traffic counts recorded through the TfL Cordon and Screenline count programme from 1971 to 2011.

0.5 Document History

Version	Date	Changes since previous issue
0.1	20/12/2011	2010 update of central & inner cordon and Thames screenline data, 2011 update of boundary cordon & Northern screenline
0.2	23/01/2012	Checked over and finalised
0.3	02/03/2012	Chief Traffic Analyst comments
1.0	02/03/2012	

0.6 Distribution

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1 Executive summary

1.1 The report provides a historical summary and analysis of traffic counts recorded through the TfL Cordon and Screenline count programme from 1971 to 2011. The report summarises the trends in traffic volume crossing each cordon/screenline broken down by vehicle type and time of day. Highlights from the most recent surveys show that:

- All motor vehicle traffic crossing the central cordon continues to fall and has reached its lowest levels since surveys began
- All motor vehicle traffic crossing the inner cordon has reverted to a downward trend following a slight increase in the 2008 survey
- The number of vehicles crossing the London Boundary per weekday is 2.5 million. It has increased by over 70% since 1971 but has remained relatively flat since 1998
- All motor vehicle traffic crossing the Thames screenline continues to fall and has reached its lowest levels since surveys began
- In general more cars are observed crossing the cordons on weekends than on weekdays but overall there is less weekend traffic due to fewer other vehicles, especially goods vehicles
- The number of cyclists crossing the central cordon per weekday continues to increase significantly and is now at 137,000
- The number of cyclists crossing the Thames bridges per weekday has doubled since 2000, to over 67,000 in 2010

1.2 The note is updated annually by the Traffic Analysis Centre who manage the TfL cordon/screenline databases which hold traffic count data collected through the survey programme.



2 Introduction

- 2.1 This traffic note, produced by the Traffic Analysis Centre (TAC) within TfL provides a summary and analysis of the road traffic flows monitored through a programme of cordon and screenline surveys. TAC manages the TfL database that holds all the validated survey data for the London cordon and screenline surveys. It is planned that this note will be updated annually and this edition contains information from all surveys completed until summer 2011.
- 2.2 The purpose of the programme is to estimate traffic flows on different parts of the network and to monitor trends in traffic in London. Historically traffic flows have been counted on defined cordons and screenlines according to a regular cycle of surveys to contribute to long-run series of traffic trends. The surveys continue a series of counts begun by the Greater London Council in the 1970s, and continued by the Department for Transport before transferring to TfL.
- 2.3 Regular surveys are undertaken of three different cordons and three different sets of screenlines within Greater London. These are shown on a map (Figure 2) on page 7.
- 2.4 The cordon surveys are formed of the:
- **Central cordon** within a radius of 2.5 - 3 kms from a centre at Aldwych surveyed annually since 2001 (Note – this cordon is not the same as the Congestion Charging cordon);
 - **Inner cordon** enclosing an area roughly corresponding to the old London County Council but excluding much of the boroughs of Greenwich and Lewisham surveyed once every 3 years, increased to once every 2 years from 2009;
 - **Boundary cordon** roughly corresponding to the administrative boundary of Greater London and lying entirely within the M25 orbital motorway surveyed once every 3 years, increased to once every 2 years from 2009.
- 2.5 The screenline surveys are made up of the:
- **Thames screenline** covering all the Thames crossings from Runnymede Bridge (M25/A30) in the west to the Dartford crossings in the east surveyed once every 2 years;
 - **Northern screenline** running from the River Thames at The Temple to the M25 motorway east of South Mimms surveyed once every 2 years;
 - **Five radial screenlines**, running outwards from the Inner London cordon to beyond the M25 motorway. They consist of the Kent/Surrey line, following the Croydon/Bromley boundary and extending to Limpsfield; the South West line using the Southern Region railway line from Wimbledon to Malden Manor, then running south to Leatherhead Common; the North West line following the Western Region railway line to Denham; the Harrow line following the London Midland Region line to Hatch End, then running across country to the M25 west of Huntonbridge; and the River Lea line along the river from Tottenham Hale to Waltham Abbey. These are surveyed once every 3 years;



- **Four peripheral screenlines** in outer London, based on the River Crane from Felthamhill to Northwick Park in West London, the River Roding and River Ram in North East London, and the South East line from Woolwich to West Wickham.
- 2.6 The studies are based on a sample of 6-minute manual classified traffic counts taken four times each hour over a 16-hour period from 6 am to 10 pm (12 hours prior to the mid 1990's). Counts are taken on every road site crossing the cordon or screenline. On a sample of up to 20 sites the counts are extended to cover 24 hours and the results used to estimate night time counts for each vehicle type on other roads. Prior to 1990 overnight counts were made at much smaller numbers of sites and estimates of night-time flows from this period should be treated with caution.
- 2.7 The vehicle classification includes All Motor Vehicles (AMV) split into Cars (Car), Taxis (Taxi), Buses and Coaches (Bus), Light Goods Vehicles (LGV), Medium Goods Vehicles (MGV), Heavy Goods Vehicles (HGV) and Powered Two Wheelers (PTWs). These last four categories are defined as:
- LGV: Goods vehicles with 2 axles, 4 wheels
 - MGV: Goods vehicles with 2 axles, 6 wheels
 - HGV: Goods vehicles with 3 or more axles
 - PTW: Motorcycles, scooters and mopeds
- In addition Pedal Cycles (Cycles) are also counted.
- 2.8 The time periods referred to and summarised for the purposes of this note are:
- Morning peak: 7:00am – 10:00am
 - Off peak: 10:00am – 4:00pm
 - Evening Peak 4:00pm – 7:00pm
 - Late evening: 7:00pm – 0:15am
 - Night: 0:15am – 7:00am
 - Daytime: 7:00am to 7:00pm
- 2.9 Historically the surveys have been carried out on weekdays only. Additional weekend surveys were carried out in 2008 and 2009 to enable comparisons to be made between weekday and weekend traffic patterns. These are also summarised in this report.



2.10 Figure 1 below shows the long term trend in AMV traffic crossing each of the three cordons based on 24 hour combined direction flows. AMV traffic crossing the Central and Inner cordons remained fairly consistent over three decades between 1970 and 2000, rising steadily and peaking in 1989 and 1990 respectively. More recently, over the last decade, AMV traffic crossing the Central Cordon has been steadily decreasing and in 2010 AMV traffic crossing the Central Cordon reached its lowest flow since the surveys started, with a 35% reduction compared to the 1989 peak. On the Inner Cordon AMV traffic has also shown reductions over the last decade. Conversely, AMV traffic on the Boundary Cordon steadily increased from when surveys began in 1971 until the late 1990s, and has been relatively stable since.

Figure 1 – Long term trend in cordon crossings for all motor vehicles, 1971 to 2011

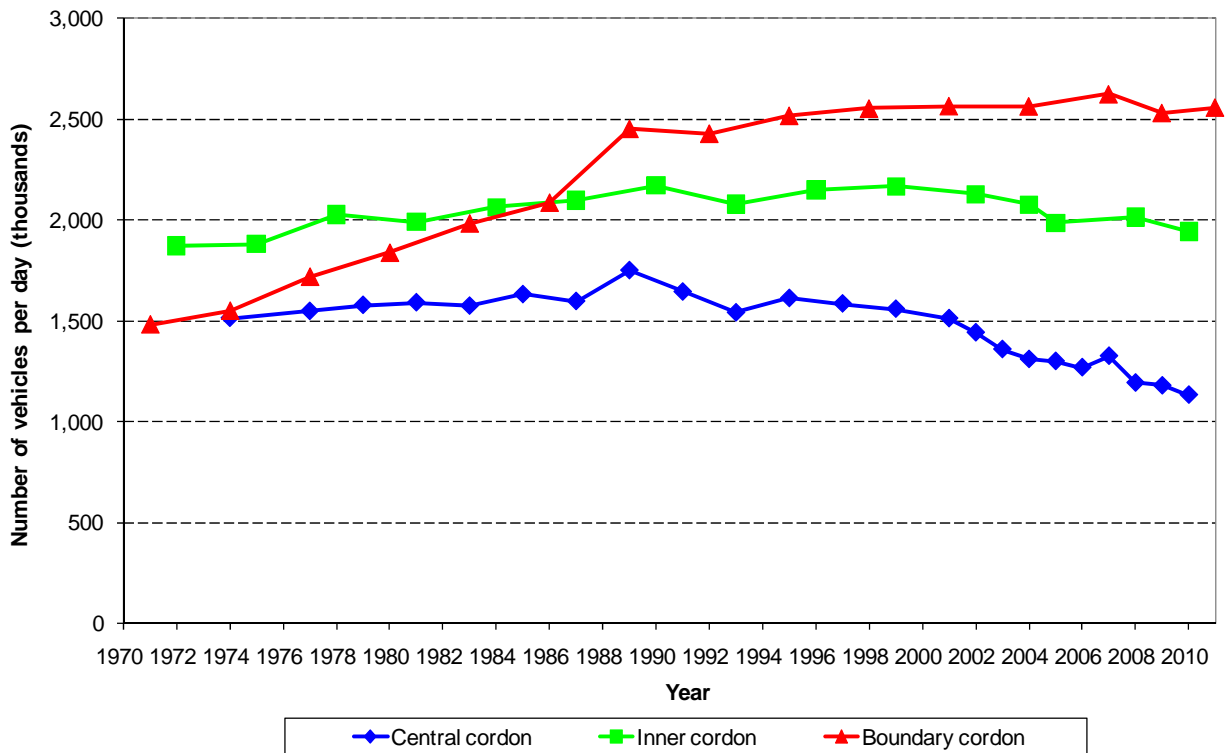
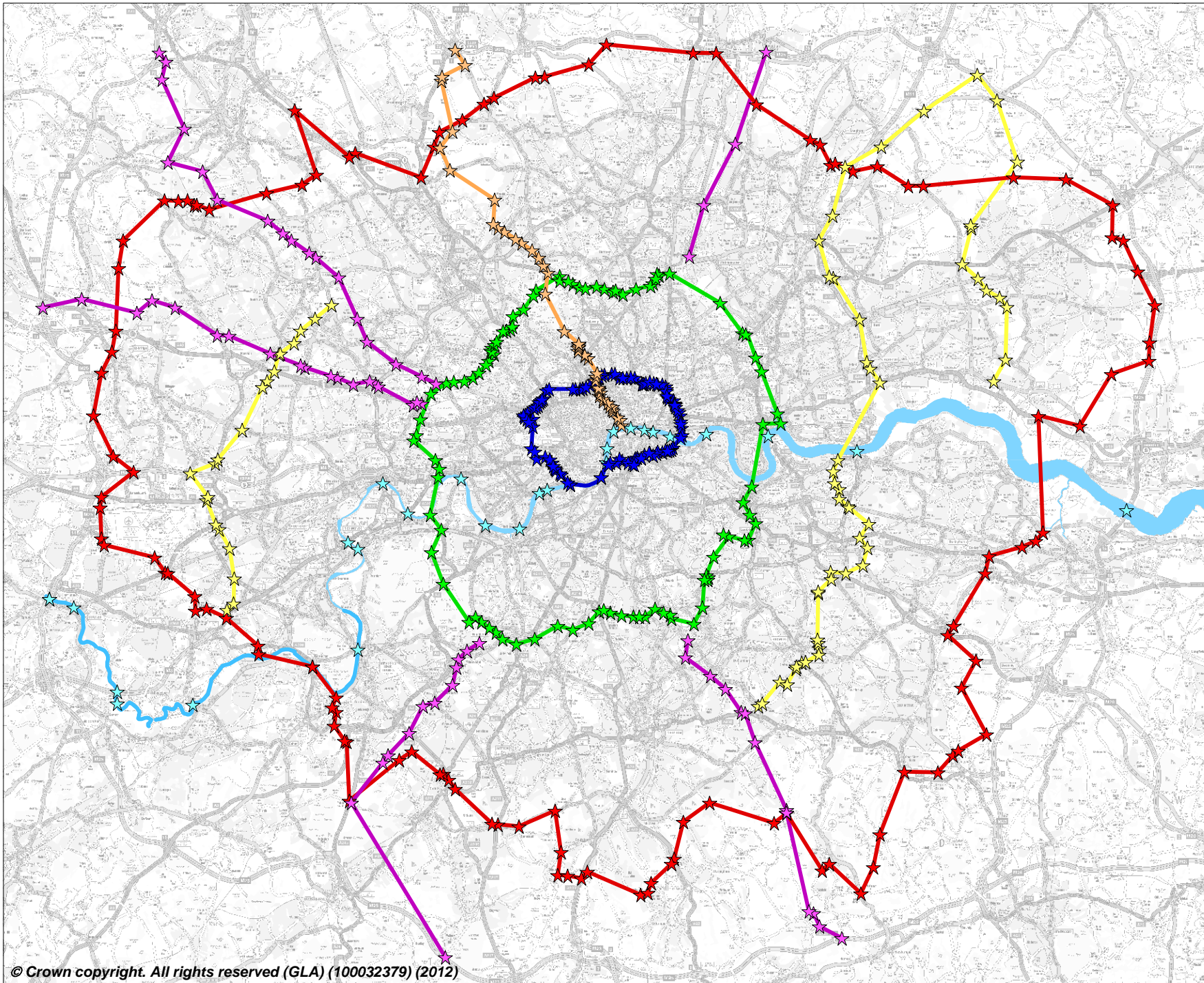


Figure 2 – Locations of cordon and screenline count sites monitored by TfL survey programme



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**Cordon and
screenline sites**

- ★ Central cordon
- ★ Inner cordon
- ★ Outer cordon
- ★ Thames screenline
- ★ Northern screenline
- ★ Radial screenlines
- ★ Peripheral screenlines



3 Central Cordon 1974 to 2010

3.1 This section provides a summary and analysis of traffic crossing the Central Cordon. The cordon is made up of 103 count sites which are surveyed in the autumn. Table 1 below shows the trend in AMV traffic crossing the cordon by time period for 1974 to 2010. For the morning and evening peak periods the flows are additionally shown by inbound and outbound directions, when the flows are most tidal.

Table 1 – All motor vehicle traffic crossing the Central Cordon by time of day and direction, 1974 to 2010

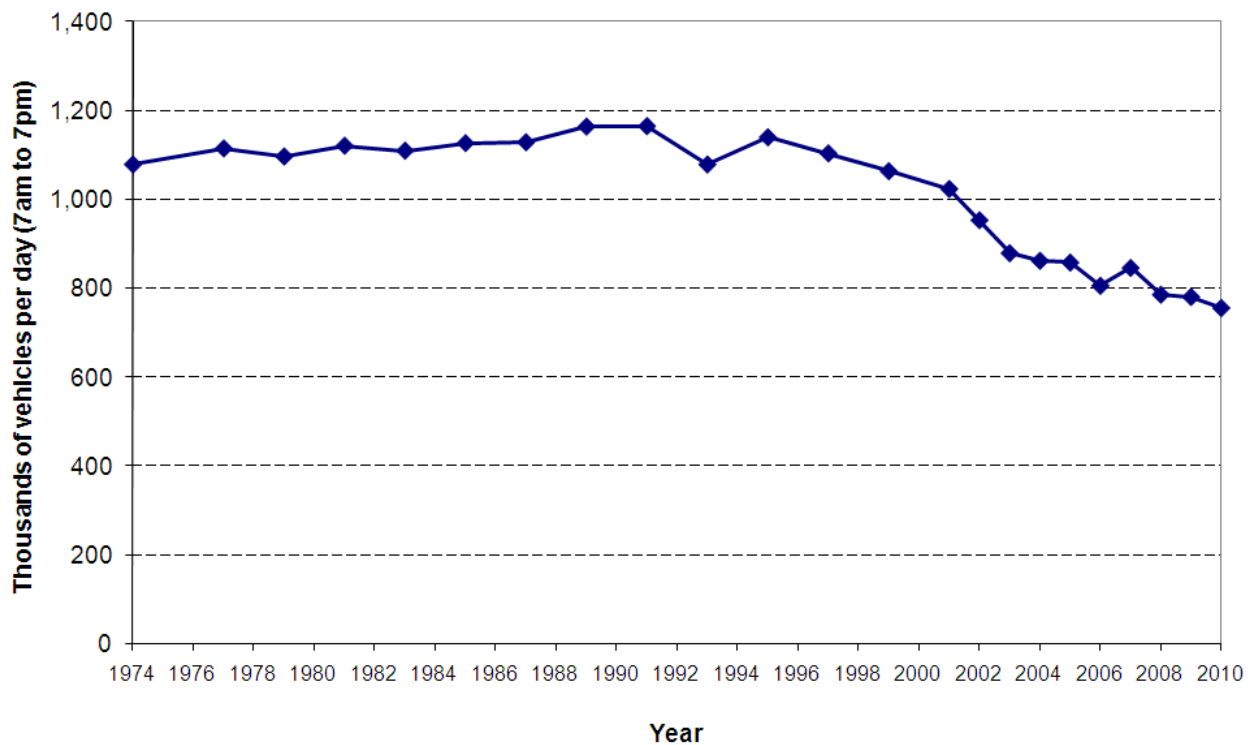
Year	Thousands of vehicles										
	Morning peak			Off peak	Evening peak			Daytime Total	Late Evening	Night	24 hour Total
	In	Out	Both	Both	In	Out	Both	Both	Both	Both	Both
1974	175	93	267	502	128	181	309	1,078	295	141	1,514
1977	186	98	284	517	125	187	312	1,114	298	136	1,548
1979	186	93	279	515	124	180	303	1,096	360	123	1,578
1981	189	100	289	522	122	186	308	1,120	357	114	1,591
1983	182	97	279	520	125	185	310	1,109	353	112	1,574
1985	184	100	284	530	127	185	312	1,126	390	115	1,631
1987	178	108	287	533	134	174	308	1,128	334	135	1,597
1989	188	110	298	551	137	177	314	1,163	423	163	1,750
1991	183	111	294	560	138	172	310	1,164	335	145	1,644
1993	170	105	274	509	131	163	294	1,078	317	145	1,541
1995	180	110	289	545	133	172	305	1,139	324	149	1,612
1997	171	108	279	525	131	169	300	1,103	326	156	1,585
1999	163	106	269	502	132	160	292	1,063	333	163	1,559
2001	163	101	264	479	122	157	279	1,023	324	166	1,512
2002	147	96	243	453	114	143	257	953	315	174	1,442
2003	134	88	221	419	108	131	239	879	308	171	1,359
2004	132	86	218	411	103	131	234	862	295	152	1,310
2005	130	88	219	403	105	131	236	858	287	155	1,300
2006	125	82	208	378	94	126	220	806	291	172	1,269
2007	128	84	212	402	105	127	232	846	303	177	1,326
2008	118	79	197	373	97	119	216	786	261	147	1,193
2009	119	81	201	368	96	116	212	781	253	144	1,179
2010	113	75	188	358	95	115	210	756	243	135	1,133

3.2 Since peaking in the late '80s and early '90s, total 24 hour AMV traffic has steadily reduced. This trend continued with the introduction of Congestion Charging in 2003. Similar trends are reflected in all the time periods of the day. Despite a slight increase in 2007, traffic in the period 2008 to 2010 recorded reductions maintaining the overall downward trend. This is consistent with the traffic trends reported through the DfT National Road Traffic Census Count programme (See Traffic Note 1).



3.3 As the night-time flows are based on counts at a very few sites they are subject to large sampling variation and must be treated with caution. The trend in 'all daytime' traffic flow is therefore a more reliable indicator of the general trends. Figure 3 shows the long term trend in daytime (7am to 7pm) AMV traffic crossing the central cordon from 1973 to 2010. Similar to the trend in 24 hour flows, there has been a steady reduction since the mid 1990s with 2007 being the exception. In 2010 the lowest number of vehicles crossing the Central Cordon was recorded since the surveys began.

Figure 3 – Long term trend in daytime all motor vehicle traffic crossing the Central Cordon, 1974 to 2010



3.4 Table 2 overleaf shows the trends in combined direction all day traffic crossing the Central Cordon by vehicle type for 1974 to 2010.



Table 2 – Combined direction 24 hour traffic crossing the Central Cordon by vehicle type, 1974 to 2010

Year	Pedal cycles	Motor - cycles	Thousands of vehicles							All motor vehicles
			Cars	Taxis	LGV	MGV	HGV	Buses & coaches		
1974	..	44	1020	120	162	131 ¹	..	37	1514	
1977	27	76	1018	137	149	98	32	38	1548	
1979	39	75	1063	136	146	91	33	35	1579	
1981	46	77	1078	125	141	94	36	39	1591	
1983	47	81	1071	125	134	91	32	39	1574	
1985	44	79	1105	131	155	93	30	38	1631	
1987	30	65	1086	131	173	90	17	34	1597	
1989	43	79	1160	158	204	94	18	37	1750	
1991	37	68	1094	162	181	84	16	39	1644	
1993	35	65	1017	161	172	77	10	39	1541	
1995	45	72	1061	159	181	86	12	41	1612	
1997	51	82	1030	162	178	75	13	45	1585	
1999	56	85	997	169	183	69	13	44	1559	
2001	51	92	942	172	190	58	13	45	1512	
2002	61	91	895	166	181	50	14	46	1442	
2003	65	92	791	182	179	47	14	53	1359	
2004	72	93	764	168	175	43	12	55	1310	
2005	87	88	743	177	179	44	14	56	1300	
2006	98	91	707	184	173	44	12	58	1269	
2007	103	91	734	202	180	42	14	62	1326	
2008	104	81	645	172	182	39	13	60	1193	
2009	120	80	649	163	173	40	11	62	1179	
2010	137	79	606	161	179	39	12	57	1133	

¹ Medium and heavy goods vehicle classes combined.

- 3.5 Table 2 shows that car traffic makes up the majority of AMV traffic with a 53% share of the total AMV traffic in 2010. Taxis and LGVs account for 14% and 16% of the total respectively, with other modes accounting for the remainder. Car traffic has consistently fallen over the last decade (apart from in 2007), most markedly in 2003 after the introduction of congestion charging. This is shown graphically in Figure 4 overleaf.
- 3.6 In recent years LGV, MGV, and HGV traffic has remained fairly constant although over the longer term there has been a shift in the proportion of goods traffic from HGV & MGV classification to LGV. After peaking in 2001 and remaining relatively constant for several years, motorcycle traffic has been falling since 2007. A similar trend in motorcycle traffic has been observed for Central London through the DfT National Road Traffic Count programme. Over the last 4 years bus traffic has remained relatively constant and remains 60% higher than it was in the 1970s.



- 3.7 The number of pedal cycles crossing the Central Cordon has risen significantly in the last 5 years to more than double the 2001 levels in 2010, and over three times the 1970s levels. This is consistent with the trends shown in automatic cycle monitoring. 2010 saw the largest year-on-year increase in pedal cycles crossing the cordon.
- 3.8 Figure 4 below shows how combined direction all day traffic crossing the Central Cordon has changed for each vehicle type from 1993 to 2010.

Figure 4 – Combined direction all day traffic crossing the Central Cordon by vehicle type, 1993 to 2010

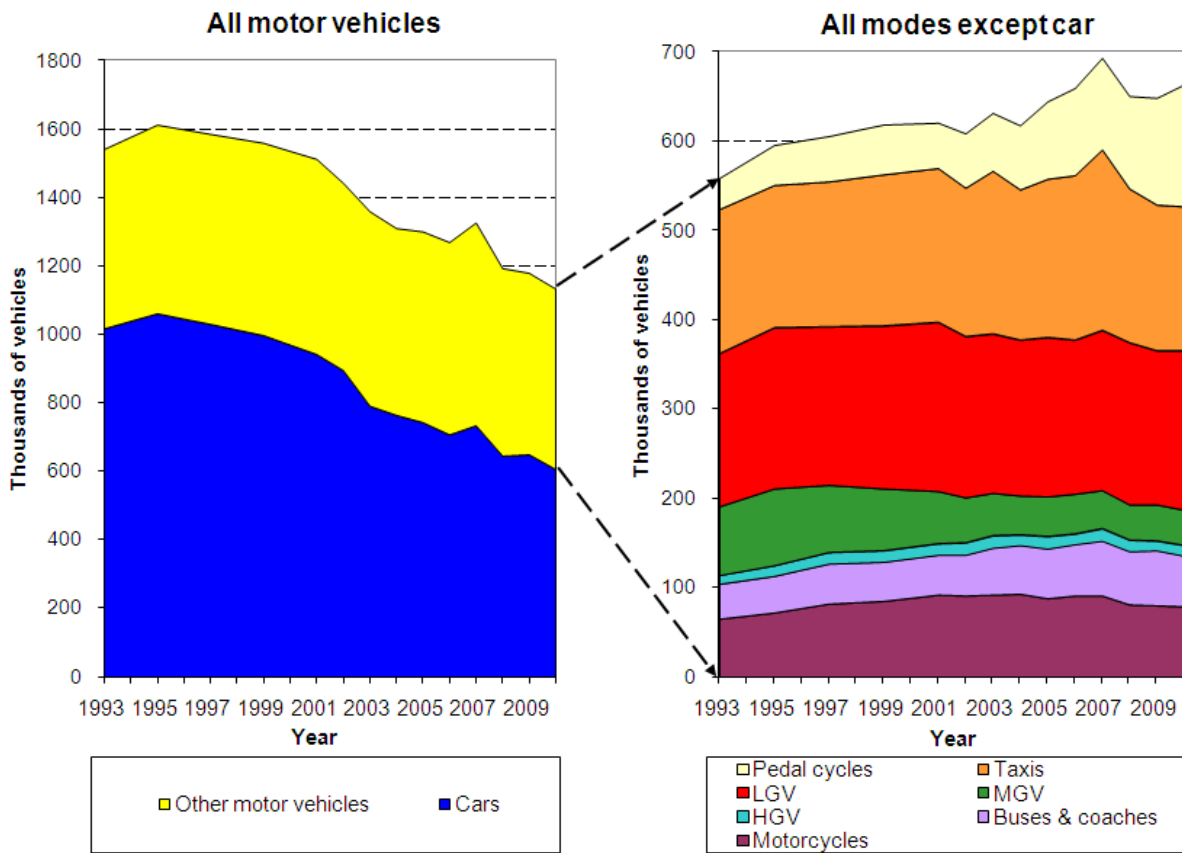
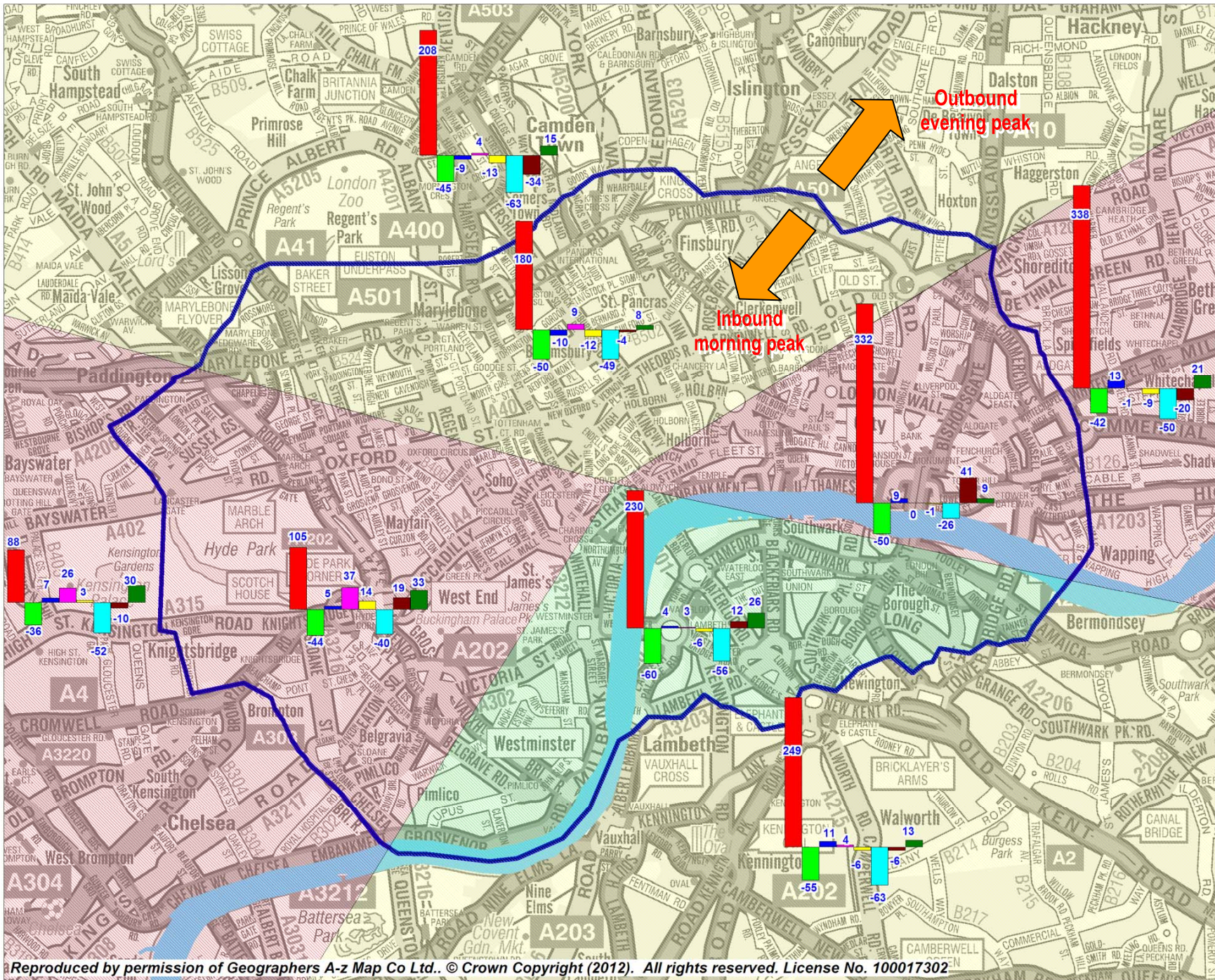


Figure 5 – Central Cordon traffic by quadrant: Map of percentage change from 1995-99 to year 2010



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Percentage Change for All Motor Vehicles

- 30% reduction or less
- 30-40% reduction
- 40% reduction or more

Percentage Change by Vehicle Type

- Cycles
- Cars
- Taxis
- Motorcycles
- LGVs
- MGVs
- HGVs
- Buses and coaches

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- 3.9 Figure 5 on the previous page shows how total traffic flows into and out of Central London have changed by quadrant in 2010 compared to the base average of 1995-1999. The areas within the cordon represent the changes in the morning peak inbound direction whilst the areas outside the cordon represent the changes in the evening peak outbound direction. Additionally the mini graphs in each sector show the percentage change in flow by vehicle type.
- 3.10 The quadrants are defined as:
North sector: Edgware Road (A5) in Lisson Grove to Kingsland Road (A10) in Shoreditch;
East sector: Hackney Road (A1208) in Shoreditch to River Thames (north side);
South sector: All count sites on the southern side of the River Thames;
West sector: River Thames (north side) to Paddington Green in Lisson Grove.
- 3.11 Figure 5 shows the morning inbound and evening outbound peak AMV traffic crossing the cordon has reduced for all sectors in 2010 compared to the 1995-1999 base average. The south sector has seen the largest decrease in AMV traffic (39% in the outbound direction and 42% in the inbound), whilst the west has seen the smallest decrease (22% in the outbound direction and 25% in the inbound).
- 3.12 There has been significant growth in the levels of cycle traffic for all sectors and both time periods. The most prominent growth is evident in the east, where the number of cycles crossing the cordon has increased approximately 3 fold in both the morning and evening peaks. Motorcycle traffic has risen across most sectors of the cordon, with growth particularly prominent in the west. LGV traffic has shown slight decreases for the majority of sectors in both the morning and evening peaks with the largest decreases of 13% observed in the northern outbound direction. MGV traffic has decreased more considerably across all sectors and both time periods. Bus and coach traffic has increased significantly across all sectors and both time periods.



3.13 Table 3 below shows the trends in AMV traffic by time period crossing the Central Cordon for each quadrant over the last nine years.

Table 3 – All motor vehicle traffic crossing the Central Cordon by quadrant and time of day, 2002 to 2010

		Thousands of vehicles										
Sector	Year	Morning peak			Off peak	Evening peak			Daytime Total	Late Evening	Night	24 hour Total
		In	Out	Both	Both	In	Out	Both	Both	Both	Both	Both
North	2002	43	27	70	133	32	43	76	278	88	47	413
	2003	40	25	65	122	31	40	71	258	91	49	398
	2004	40	26	66	124	31	40	71	261	85	45	391
	2005	38	25	63	115	30	39	69	247	83	42	373
	2006	36	21	57	102	26	35	61	220	78	45	343
	2007	37	22	59	113	29	37	66	238	84	46	368
	2008	35	21	57	106	27	34	61	224	72	39	335
	2009	35	21	56	105	27	34	61	221	70	37	328
	2010	32	21	53	101	26	33	59	213	69	34	316
	East	2002	19	12	31	56	15	17	32	119	39	27
2003		18	11	30	58	15	18	33	120	42	25	187
2004		17	10	27	51	13	16	28	106	33	20	159
2005		18	12	31	55	15	18	33	119	37	24	180
2006		17	12	28	51	13	17	30	109	42	26	178
2007		19	12	30	60	16	19	35	126	46	29	201
2008		17	11	27	56	14	17	32	115	38	24	177
2009		16	11	27	51	13	15	28	106	33	24	164
2010		16	10	26	50	14	17	30	107	35	23	165
South		2002	42	24	66	110	27	37	64	240	80	47
	2003	34	19	53	89	23	30	53	195	68	41	303
	2004	35	19	54	90	23	32	54	198	71	39	307
	2005	34	19	53	90	22	31	54	197	65	37	298
	2006	34	19	53	84	20	28	49	186	63	41	290
	2007	35	20	55	90	24	33	57	202	70	46	318
	2008	30	18	48	79	20	28	48	175	57	36	268
	2009	30	19	50	81	21	27	48	179	60	35	274
	2010	30	17	46	80	22	27	49	176	56	34	265
	West	2002	43	33	76	154	41	45	86	316	108	54
2003		41	32	73	150	39	43	83	306	108	56	470
2004		40	31	71	146	37	43	80	297	106	49	452
2005		39	32	71	143	38	43	81	296	101	52	449
2006		38	32	70	141	35	45	80	291	108	59	458
2007		37	30	67	138	36	38	74	279	105	56	439
2008		36	29	65	132	35	40	76	273	93	47	413
2009		38	30	68	132	35	39	75	275	89	48	412
2010		35	28	63	126	33	38	72	260	83	43	387



- 3.14 Additional weekend surveys of the Central Cordon were undertaken for the first time in Spring 2008. These counts provide a comparison with the weekday counts collected through the normal count programme. Table 4 overleaf shows the weekday and weekend counts for the Central Cordon. The weekend counts were conducted over 16 hours (6am to 10pm) so for comparative purposes the time periods presented in Table 4 differ to those previously used and are defined as follows; Morning Peak (7am to 10pm), Daytime Off Peak (10am to 4pm), Evening Peak (4pm to 7pm), Evening Peak (4pm to 7pm), Late Evening (7pm to 10pm), All Day (6am to 10pm).
- 3.15 Table 4 shows that car traffic crossing the central cordon is actually higher on a Saturday and Sunday compared to a weekday over the 6am to 10pm period. The majority of the extra car traffic seen at the weekend occurs after the morning peak. These increases in car traffic on weekend days are greatly offset by significant reductions in goods vehicle traffic meaning that the number of AMVs crossing the Central Cordon is higher on a weekday by over 200,000. The number of pedal cycles crossing the cordon on weekend days is significantly less, indicating weekday cycling traffic is mainly made up of commuters.



Table 4 – Comparison of weekday and weekend traffic crossing the Central Cordon by time of day and mode

		Thousands of vehicles								
Day of the week	Time period	Dir	Pedal cycles	Motor-cycles	Cars	Taxis	LGV	MGV & HGVs	Buses & coaches	All motor vehicles
Weekday	Morning peak	In	26	17	66	10	22	7	6	128
		Out	6	5	45	8	15	6	5	84
		Both	32	23	111	17	37	13	11	212
	Daytime off peak	In	11	12	105	25	35	11	10	199
		Out	8	12	101	26	40	13	10	203
		Both	19	24	206	52	75	24	21	402
	Evening peak	In	8	8	64	14	11	2	5	105
		Out	21	16	70	16	16	3	6	127
		Both	29	24	134	30	27	5	11	232
	Late evening	In	4	4	55	15	5	1	4	84
		Out	12	8	59	17	6	1	4	96
		Both	16	12	114	32	11	3	8	180
	All day (6am to 10pm)	In	50	44	306	67	79	24	26	546
		Out	48	42	289	68	80	24	27	530
		Both	98	86	595	134	158	48	53	1,075
Saturday	Morning peak	In	3	3	45	6	11	4	4	73
		Out	2	2	34	5	8	3	3	55
		Both	4	5	79	10	19	8	7	128
	Daytime off peak	In	8	7	128	20	13	4	9	181
		Out	7	7	120	18	15	4	9	174
		Both	15	14	249	38	29	8	17	355
	Evening peak	In	3	3	68	11	5	1	4	91
		Out	4	4	69	11	5	1	4	95
		Both	7	7	137	21	10	1	9	186
	Late evening	In	2	2	66	10	3	1	3	85
		Out	3	3	61	10	3	1	3	81
		Both	4	5	127	20	6	1	7	166
	All day (6am to 10pm)	In	16	16	316	47	35	10	20	445
		Out	15	15	293	45	33	10	21	417
		Both	31	32	609	92	68	20	41	861
Sunday	Morning peak	In	2	2	39	4	4	1	3	53
		Out	1	1	29	3	3	1	3	40
		Both	3	3	68	8	7	2	6	93
	Daytime off peak	In	7	5	142	16	7	1	7	178
		Out	6	5	129	15	8	1	7	166
		Both	13	10	271	31	15	3	14	344
	Evening peak	In	3	3	74	8	3	1	4	92
		Out	4	3	80	9	4	1	4	101
		Both	7	6	154	17	7	1	7	193
	Late evening	In	2	2	62	9	2	1	3	80
		Out	2	3	65	9	3	1	3	84
		Both	4	5	127	18	5	1	7	164
	All day (6am to 10pm)	In	13	12	324	38	18	4	19	415
		Out	14	12	311	38	18	4	17	400
		Both	27	24	636	76	36	8	36	815



4 Inner Cordon 1972 to 2010

4.1 This section provides a summary and analysis of traffic crossing the Inner Cordon. The cordon is made up of 95 count sites which are surveyed in June/July each year. Table 5 below shows the trend in AMV traffic crossing the cordon by time period for 1972 to 2010. For the morning and evening peak periods the flows are additionally shown by inbound and outbound directions, when the flows are most tidal.

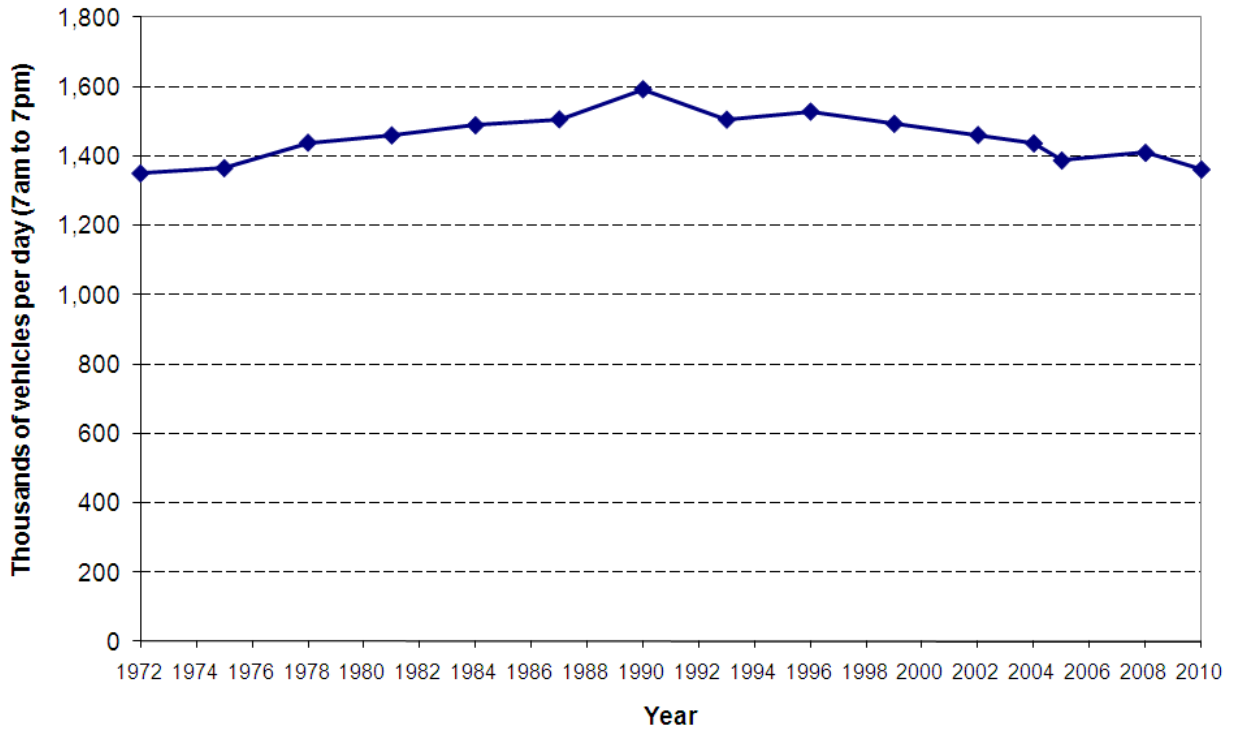
Table 5 – All motor vehicle traffic crossing the Inner Cordon by time of day and direction, 1972 to 2010

Year	Morning peak			Off peak	Evening peak			Daytime Total	Late Evening	Night	24 hour Total
	In	Out	Both	Both	In	Out	Both	Both	Both	Both	Both
1972	250	135	385	560	160	245	406	1,351	370	151	1,872
1975	259	132	392	577	154	242	396	1,366	365	151	1,882
1978	273	130	404	617	157	261	418	1,439	425	163	2,027
1981	281	131	411	627	158	262	421	1,460	403	129	1,992
1984	282	133	416	645	163	266	429	1,489	444	131	2,064
1987	274	138	412	667	163	263	426	1,506	425	167	2,098
1990	284	155	439	700	182	271	453	1,592	434	147	2,173
1993	254	143	397	684	174	250	424	1,505	418	157	2,080
1996	240	158	398	701	180	249	429	1,528	441	182	2,150
1999	250	150	400	678	173	241	415	1,493	466	209	2,168
2002	230	149	379	674	178	229	408	1,461	451	218	2,129
2004	226	151	377	663	180	217	398	1,437	434	206	2,078
2005	223	145	368	632	165	223	388	1,388	400	200	1,988
2008	228	146	375	643	169	223	392	1,410	402	204	2,015
2010	216	143	359	623	165	215	379	1,362	388	195	1,945

- 4.2 After peaking during the 1990s, total 24 hour AMV traffic has steadily decreased. 2008 levels showed a small increase however the downward trend continued in 2010. Similar trends are reflected in all the time periods of the day.
- 4.3 As the night-time flows are based on counts at a very few sites, they are subject to large sampling variation and must be treated with caution. The trend in 'all daytime' traffic flow is therefore a more reliable indicator of general trend.
- 4.4 Figure 6 on the next page shows the long term trend in daytime (7am to 7pm) AMV traffic crossing the Inner Cordon from 1972 to 2010. As with 24 hour flows there has been a steady reduction in daytime flows since the mid 1990s with a slight increase observed in 2008 and a continuation of the downward trend in 2010.



Figure 6 – Long term trend in daytime all motor vehicle traffic crossing the Inner Cordon, 1972 to 2010



4.5 Table 6 below shows the trends in combined direction all day traffic crossing the Inner Cordon by vehicle type for 1972 to 2010.

Table 6 – Combined direction 24 hour traffic crossing the Inner Cordon by vehicle type, 1972 to 2010

Year	Thousands of vehicles								All motor vehicles
	Pedal cycles	Motor - cycles	Cars	Taxis	LGV	MGV	HGV	Buses & coaches	
1972	..	45	1,395	25	200	170 ²	..	37	1,872
1975	..	60	1,439 ¹	..	175	121	52	36	1,882
1978	20	72	1,502	36	196	130	54	37	2,027
1981	27	77	1,502	35	184	115	45	34	1,992
1984	33	77	1,552	42	202	117	38	36	2,064
1987	24	58	1,606	40	216	110	34	35	2,098
1990	25	60	1,652	49	239	106	30	36	2,173
1993	27	53	1,606	39	227	94	22	39	2,080
1996	30	60	1,644	47	232	100	24	44	2,150
1999	31	70	1,635	60	251	80	26	47	2,168
2002	25	70	1,593	52	279	64	25	46	2,129
2004	31	69	1,553	53	265	55	28	53	2,078
2005	34	64	1,510	44	237	56	25	52	1,988
2008	44	71	1,427	65	299	67	31	56	2,015
2010	52	67	1,405	49	286	55	27	56	1,945

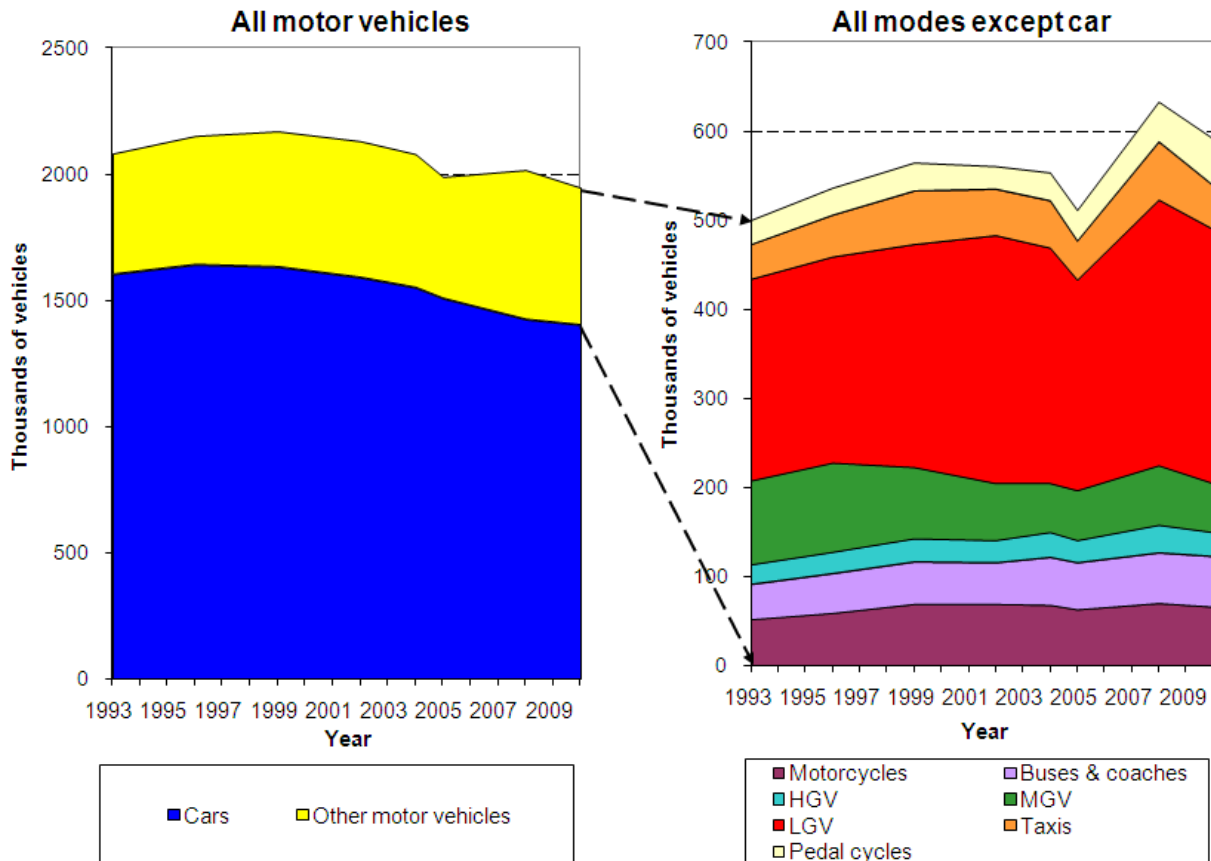
1 Including taxis.

2 Medium and heavy goods vehicle classes combined.



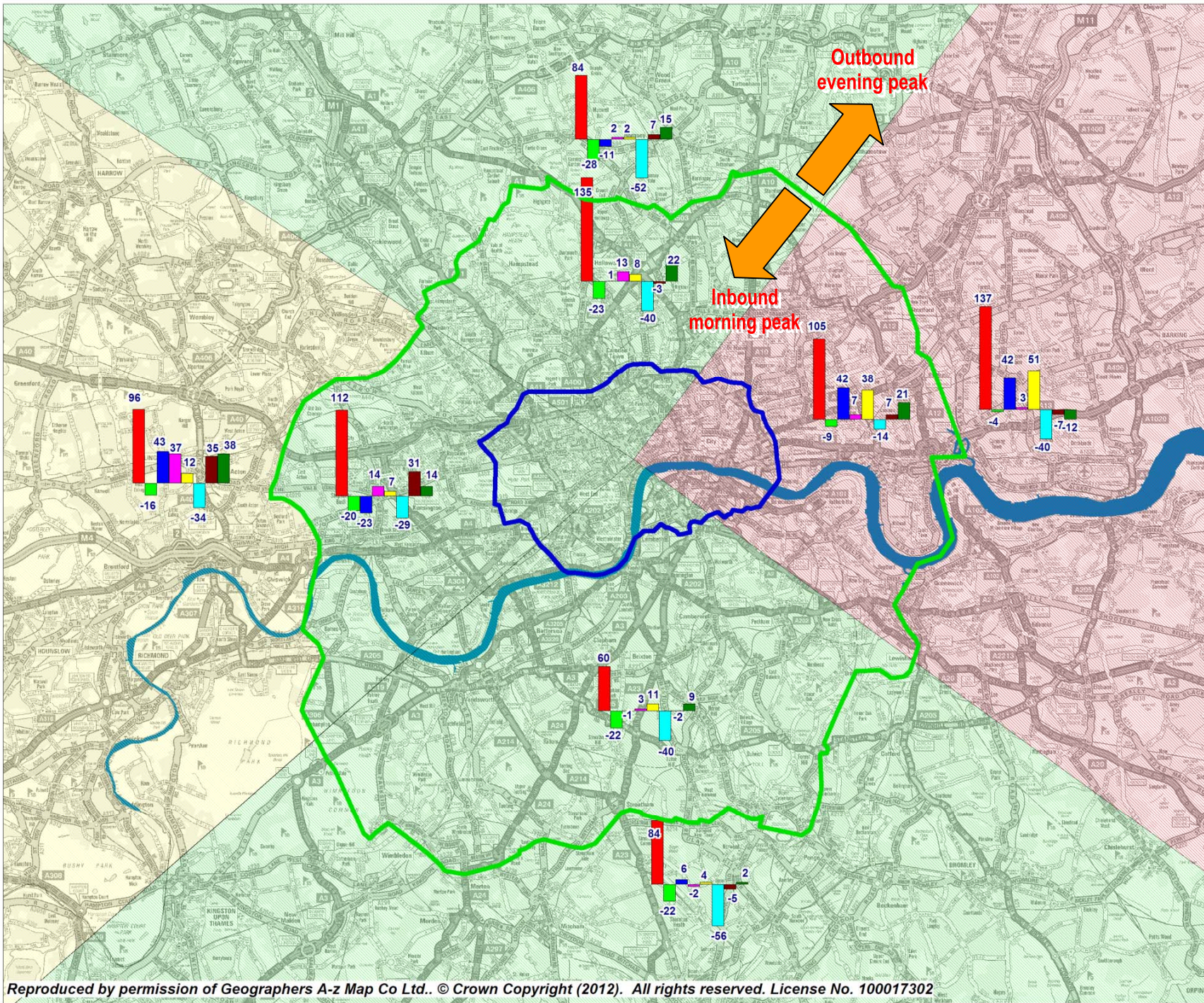
- 4.6 Table 6 shows that car traffic makes up over 70% of the AMV traffic crossing the Inner Cordon in 2010. After a steady increase since the Inner Cordon surveys began in the 1970s, car traffic peaked in the 1990s and has shown a reduction of 15% over the last 7 surveys.
- 4.7 Since the 1970s there has been a shift in the proportion of goods traffic from HGV and MGV classification to LGV. Bus traffic has also shown significant growth since the early 1990s and in 2010 was over 50% higher than the 1970s.
- 4.8 After a period of fluctuation during the 1990s, the number of pedal cycles crossing the Inner Cordon has more than doubled between 2002 and 2010 to over 50,000.
- 4.9 Figure 7 shows how the modal split for combined direction traffic crossing the Inner Cordon has changed post-1993.

Figure 7 – Combined direction all day traffic crossing the Inner Cordon by vehicle type, 1993 to 2010



- 4.10 Figure 8 overleaf shows how total traffic flows into and out of Inner London have changed by quadrant in 2010 compared to the base average of 1996-1999. The areas within the cordon represent the changes in the morning peak inbound direction, whilst the areas outside the cordon represent the changes in the evening peak outbound direction. Additionally the mini graphs in each sector show the percentage change in flow by vehicle type.

Figure 8 – Inner Cordon traffic by quadrant: Map of percentage change from 1996-99 to year 2010



**Network
Performance
Traffic Analysis
Centre**

- Inner Cordon
- Central Cordon

- Percentage Change for All Motor Vehicles**
- 0-10% increase
 - 0-10% reduction
 - 10% reduction or more

- Percentage Change by Vehicle Type**
- Cycles
 - Cars
 - Taxis
 - Motorcycles
 - LGVs
 - MGVs
 - HGVs
 - Buses and coaches



- 4.11 The quadrants are defined as
- North sector:** Shoot up Hill (A5) in Brondesbury to High Road (A10) in Tottenham;
 - East sector:** Lea Bridge Road (A104) in Lea Bridge to Loam Pit Vale (A20) in Lewisham;
 - South sector:** Vicars Hill in Ladywell to Roehampton Vale (A3) in Putney Vale;
 - West sector:** Clarence Lane in Roehampton to Exeter Road in Brondesbury.
- 4.12 Figure 8 shows that morning inbound and evening outbound peak AMV traffic crossing the cordon in 2010 compared to the 1996-99 base average has reduced for all sectors with the exception of the eastern quadrant. The northern and southern sectors show reductions of greater than 10% in both directions whilst the west sector exhibits a 14% decrease for the inbound morning peak and a 9% decrease for the outbound evening peak. The only sector to have experienced an increase in 2010 compared to the 1996-1999 base average is the east with both inbound morning peak and outbound evening peak traffic recording small increases.
- 4.13 There has been considerable growth in the levels of cycle traffic for all sectors and all time periods. The most prominent growth is evident in the eastern sector, where the number of cycles crossing the cordon has more than doubled in both directions. Motorcycle traffic has increased in the west, but remains fairly stable elsewhere. LGV traffic has shown significant increases in the majority of sectors for both the morning inbound and evening outbound peaks, with the highest observed in the eastern sector (38% and 50% respectively). Conversely MGW traffic has reduced in all sectors. Taxi traffic has increased by over 40% in the east.



4.14 Table 7 below shows the trends in AMV traffic by time period crossing the Inner Cordon for each quadrant since 1996.

Table 7 – All motor vehicle traffic crossing the Inner Cordon by quadrant and time of day, 1996 to 2010

		Thousands of vehicles										
Sector	Year	Morning peak			Off peak	Evening peak			Daytime Total	Late Evening	Night	24 hour Total
		In	Out	Both	Both	In	Out	Both	Both	Both	Both	Both
North	1996	51	35	86	159	43	56	99	344	103	39	485
	1999	55	30	84	153	38	55	93	331	108	43	481
	2002	48	30	78	146	39	49	89	313	98	42	453
	2004	45	30	75	140	37	46	84	299	95	43	437
	2005	48	29	77	134	35	49	85	296	86	38	420
	2008	45	28	72	132	35	46	81	285	85	39	409
	2010	44	28	72	128	34	43	77	277	80	36	393
East	1996	49	37	86	157	38	58	96	339	92	48	480
	1999	62	31	93	151	35	55	90	334	103	58	495
	2002	59	32	92	154	38	53	91	337	103	64	504
	2004	56	37	94	163	47	49	95	352	105	60	517
	2005	54	33	87	150	35	56	91	328	91	56	476
	2008	63	37	100	172	42	63	105	376	105	66	548
	2010	56	36	92	163	39	58	97	351	97	61	510
South	1996	79	47	126	212	55	83	137	475	140	53	667
	1999	81	48	129	209	53	79	132	470	143	62	674
	2002	73	47	120	212	55	77	132	464	142	64	670
	2004	73	44	117	201	53	72	125	442	130	57	629
	2005	71	45	116	196	52	71	123	436	127	60	622
	2008	72	44	116	190	51	67	118	425	120	54	599
	2010	67	43	110	186	50	66	117	413	121	55	588
West	1996	59	40	99	173	45	52	97	370	106	42	518
	1999	53	41	94	166	47	52	99	358	113	47	518
	2002	49	39	89	162	46	51	97	347	107	47	502
	2004	52	39	91	159	43	51	94	344	105	46	495
	2005	50	38	88	152	43	46	88	328	96	46	470
	2008	48	38	86	149	41	47	88	323	91	44	459
	2010	48	36	85	147	42	47	89	321	90	42	454



- 4.15 Additional weekend surveys of the Inner Cordon were undertaken for the first time in Autumn 2007. These counts provide a comparison with the weekday counts collected through the normal count programme. Table 8 overleaf shows the weekday and weekend counts for the Inner Cordon. The weekend counts were conducted over 16 hours (6am to 10pm) so for comparative purposes the time periods presented in Table 8 differ to those previously used and are defined as follows; Morning Peak (7am to 10pm), Daytime Off Peak (10am to 4pm), Evening Peak (4pm to 7pm), Evening Peak (4pm to 7pm), Late Evening (7pm to 10pm), All Day (6am to 10pm).
- 4.16 As observed on the Central Cordon, Table 8 shows that all day car traffic crossing the Inner Cordon is higher on weekend days than on a weekday. The only time this is the reverse is during the morning peak. However overall AMV traffic crossing the Inner Cordon is higher on a weekday by over 100,000 vehicles, which is mainly due to the greater volume of goods vehicle traffic compared to a Saturday or Sunday. Unlike that observed on the Central Cordon, the volume of pedal cycles crossing the Inner Cordon on a weekday does not significantly reduce on a Saturday or Sunday.



Table 8 – Comparison of weekday and weekend traffic crossing the Inner Cordon by time of day and mode

		Thousands of vehicles								
Day of the week	Time period	Dir	Pedal cycles	Motor-cycles	Cars	Taxis	LGV	MGV & HGVs	Buses & coaches	All motor vehicles
Weekday	Morning peak	In	6	11	146	4	39	12	5	216
		Out	3	3	103	2	22	9	4	144
		Both	8	14	249	6	61	21	9	360
	Daytime off peak	In	3	8	226	9	53	22	9	326
		Out	3	8	217	7	59	23	9	323
		Both	6	15	443	16	112	45	17	649
	Evening peak	In	2	5	133	4	19	5	4	170
		Out	5	9	152	4	31	6	4	206
		Both	7	14	285	9	50	10	9	376
	Late evening	In	1	3	105	4	11	4	3	130
		Out	3	5	112	4	14	4	4	143
		Both	4	8	217	8	25	7	7	273
	All day (6am to 10pm)	In	13	28	637	23	133	45	23	888
		Out	13	26	604	18	131	44	22	844
		Both	26	54	1,241	41	264	88	45	1,733
Saturday	Morning peak	In	2	3	94	3	20	7	4	130
		Out	1	2	79	1	12	6	3	104
		Both	3	5	173	4	33	12	7	234
	Daytime off peak	In	5	7	295	6	25	6	8	347
		Out	5	8	292	5	30	8	8	350
		Both	10	15	586	12	55	14	16	698
	Evening peak	In	2	4	158	3	9	1	4	178
		Out	3	4	153	3	11	2	4	178
		Both	5	8	311	6	20	3	8	356
	Late evening	In	1	3	123	3	5	1	3	138
		Out	1	3	119	3	6	1	3	135
		Both	2	6	242	6	12	2	6	273
	All day (6am to 10pm)	In	10	18	685	15	64	17	19	818
		Out	10	17	656	13	62	18	19	785
		Both	21	35	1,341	29	126	35	39	1,603
Sunday	Morning peak	In	1	2	70	2	8	2	3	86
		Out	1	1	58	1	5	2	3	70
		Both	2	3	128	3	13	4	6	156
	Daytime off peak	In	5	5	301	6	15	3	7	336
		Out	4	5	290	5	16	3	6	326
		Both	9	10	591	11	31	6	13	662
	Evening peak	In	2	3	157	3	6	1	3	174
		Out	3	3	154	3	7	1	3	172
		Both	5	6	311	6	13	2	7	346
	Late evening	In	1	2	119	3	5	1	3	132
		Out	1	2	120	3	5	1	3	135
		Both	2	5	239	6	10	2	6	267
	All day (6am to 10pm)	In	9	13	658	14	35	8	17	744
		Out	9	12	634	13	34	8	16	716
		Both	19	24	1292	27	70	15	32	1460



5 Boundary Cordon 1971 to 2011

5.1 This section provides a summary and analysis of traffic crossing the Boundary Cordon. The cordon is made up of 117 count sites which are surveyed in June/July each year. Table 9 below shows the trend in AMV traffic crossing the cordon by time period for 1971 to 2011. For the morning and evening peak periods the flows are additionally shown by inbound and outbound directions, when the flows are most tidal.

Table 9 – All motor vehicle traffic crossing the Boundary Cordon by time of day and direction, 1971 to 2011

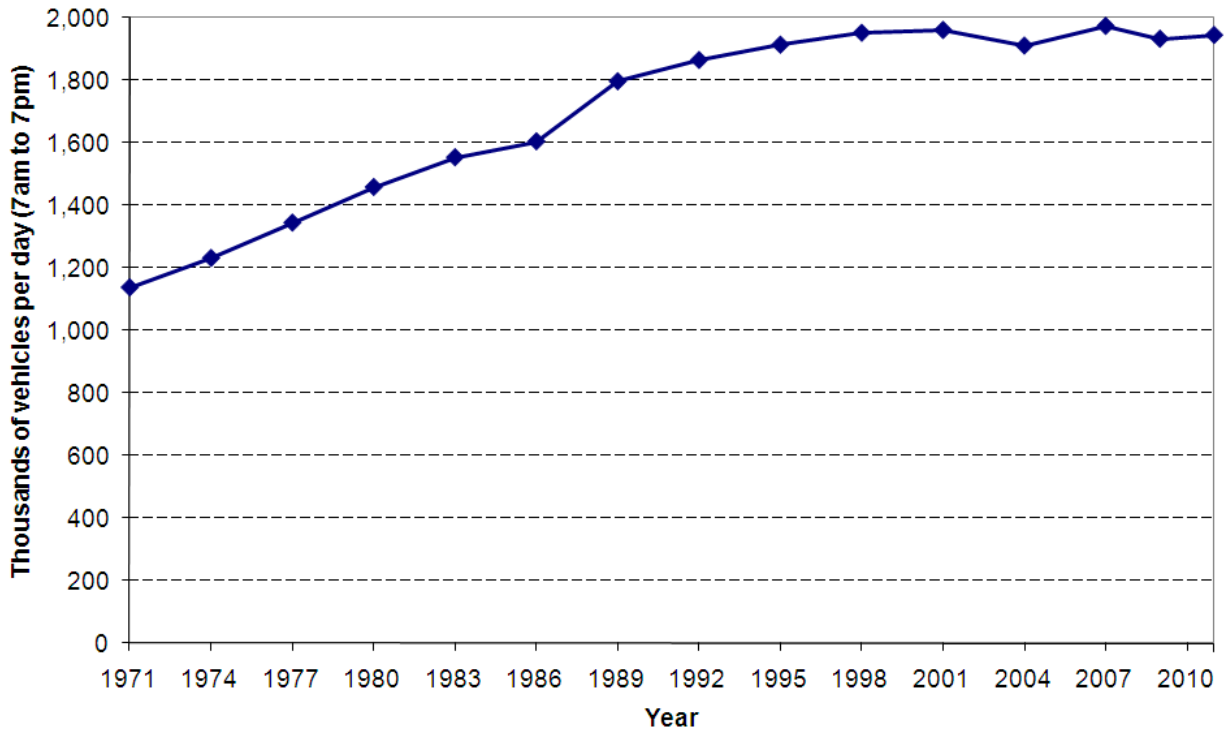
Year	Thousands of vehicles										
	Morning peak			Off peak	Evening peak			Daytime Total	Late Evening	Night	24 hour Total
	In	Out	Both	Both	In	Out	Both	Both	Both	Both	Both
1971	208	131	339	451	147	200	347	1,137	285	60	1,482
1974	224	145	369	489	161	212	373	1,231	256	63	1,550
1977	247	150	397	542	166	239	405	1,344	299	76	1,719
1980	266	161	427	599	174	257	431	1,458	302	78	1,838
1983	281	169	450	636	190	276	466	1,553	341	90	1,984
1986	286	181	467	650	198	288	486	1,604	361	123	2,087
1989	302	209	511	748	226	312	538	1,796	464	194	2,454
1992	315	216	531	787	233	313	546	1,864	420	146	2,430
1995	314	228	542	805	246	320	566	1,913	440	166	2,519
1998	317	238	555	823	257	316	573	1,951	422	182	2,555
2001	306	245	551	836	264	309	573	1,960	438	169	2,567
2004	292	232	524	848	251	286	537	1,910	449	207	2,566
2007	296	251	547	847	272	307	579	1,973	443	210	2,626
2009	285	240	525	837	264	305	570	1,932	403	198	2,533
2011	300	243	543	837	262	301	563	1,944	397	220	2,560

5.2 Since the 1970s total 24 hr AMV traffic crossing the Boundary Cordon has increased by over 70%. Since 1998 total AMV traffic has remained relatively stable and shows a slight increase in 2011 compared to the previous survey.

5.3 As the night-time flows are based on counts at a very few sites, they are subject to large sampling variation and must be treated with caution. The trend in 'all daytime' traffic flow is therefore a more reliable indicator of the general trend. Figure 9 on the next page shows the long term trend in daytime (7am to 7pm) AMV traffic crossing the Boundary Cordon from 1971 to 2011. Similar to the trend in 24 hour flows there has been a steady increase since the Boundary Cordon surveys began in the 1970s, although this rate of increase has slowed in recent years



Figure 9 – Long term trend in daytime all motor vehicle traffic crossing the Boundary Cordon, 1971 to 2011



5.4 Table 10 below shows the trends in combined direction all day traffic crossing the Boundary Cordon by vehicle type for 1971 to 2011.

Table 10 – Combined direction 24 hour traffic crossing the Boundary Cordon by vehicle type, 1971 to 2011

Year	Thousands of vehicles								
	Pedal cycles	Motor - cycles	Cars	Taxis	LGV	MGV	HGV	Buses & coaches	All motor vehicles
1971	..	25	1131 ¹	..	150	91	64	21	1482
1974	..	28	1178 ¹	..	157	100	67	21	1550
1977	15	46	1335	5	137	110	66	20	1719
1980	14	44	1440	6	145	111	74	18	1838
1983	15	46	1565	6	159	111	77	19	1984
1986	16	41	1661	8	192	110	58	17	2087
1989	15	36	1991	10	225	115	58	18	2454
1992	12	33	1983	10	229	101	54	19	2430
1995	13	37	2023	10	255	117	55	22	2519
1998	10	38	2049	12	265	112	56	24	2555
2001	9	42	2048	14	300	84	56	22	2567
2004	9	35	2053	16	301	79	60	22	2566
2007	11	37	2054	16	346	80	67	27	2626
2009	14	36	1992	17	338	69	56	25	2533
2011	15	35	2000	19	346	73	64	25	2560

¹ Including taxis.



- 5.5 Table 10 shows car traffic to make up the majority of the AMV total (around 78% in recent surveys). Since the Boundary Cordon surveys began in the 1970s, car traffic has steadily increased to approximately 2,000,000 vehicles per day recorded in 2011.
- 5.6 Over recent surveys there has been a significant increases recorded in LGV traffic and is now more than double the level it was in the early 1980s. Over the same period MGV traffic has shown a general decline. HGV, PTW and bus traffic have remained relatively unchanged with small fluctuations over recent years.
- 5.7 The number of pedal cycles crossing the Boundary Cordon has shown increases since 2007 after slight reductions in the 2001 and 2004 surveys.
- 5.8 Figure 10 below shows how the combined direction all day traffic crossing the Boundary Cordon has changed for each vehicle type from 1995 to 2011.

Figure 10 – Combined direction all day traffic crossing the Boundary Cordon by vehicle type, 1995 to 2011

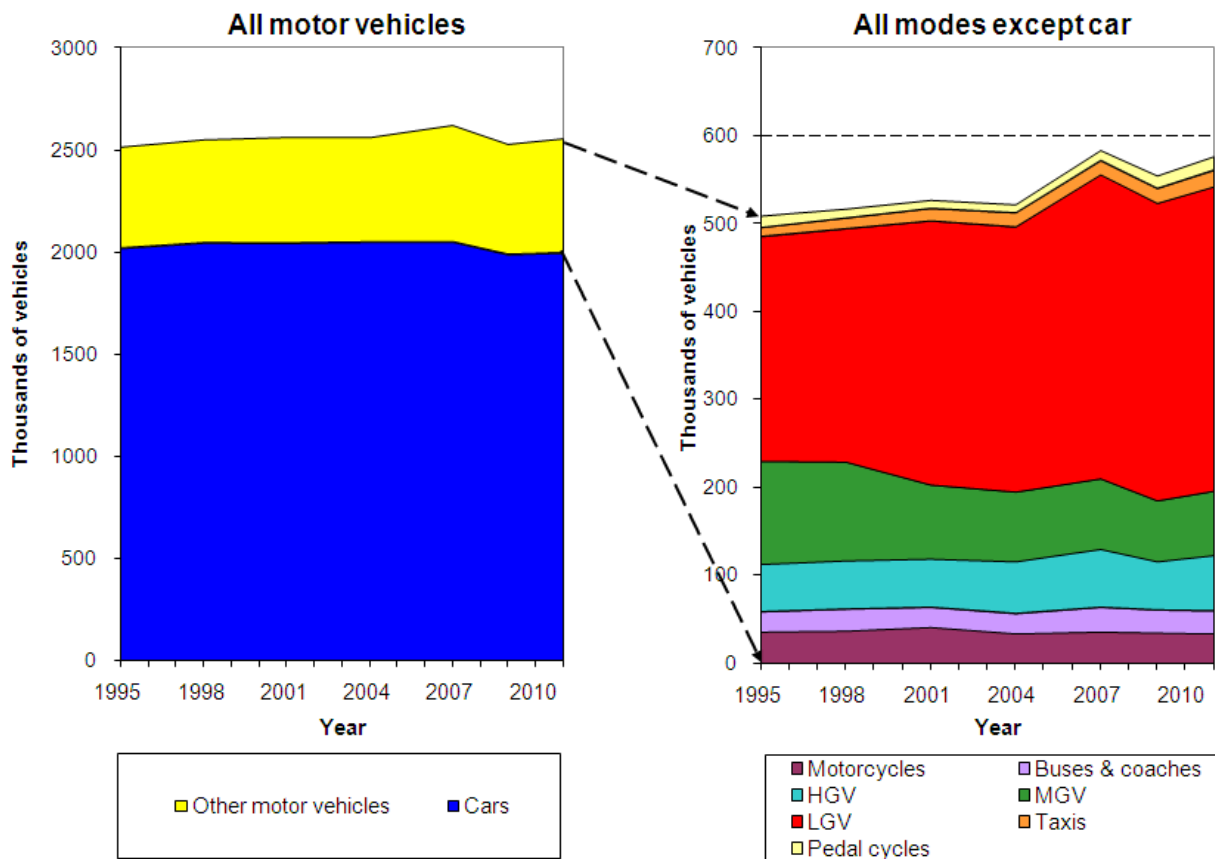
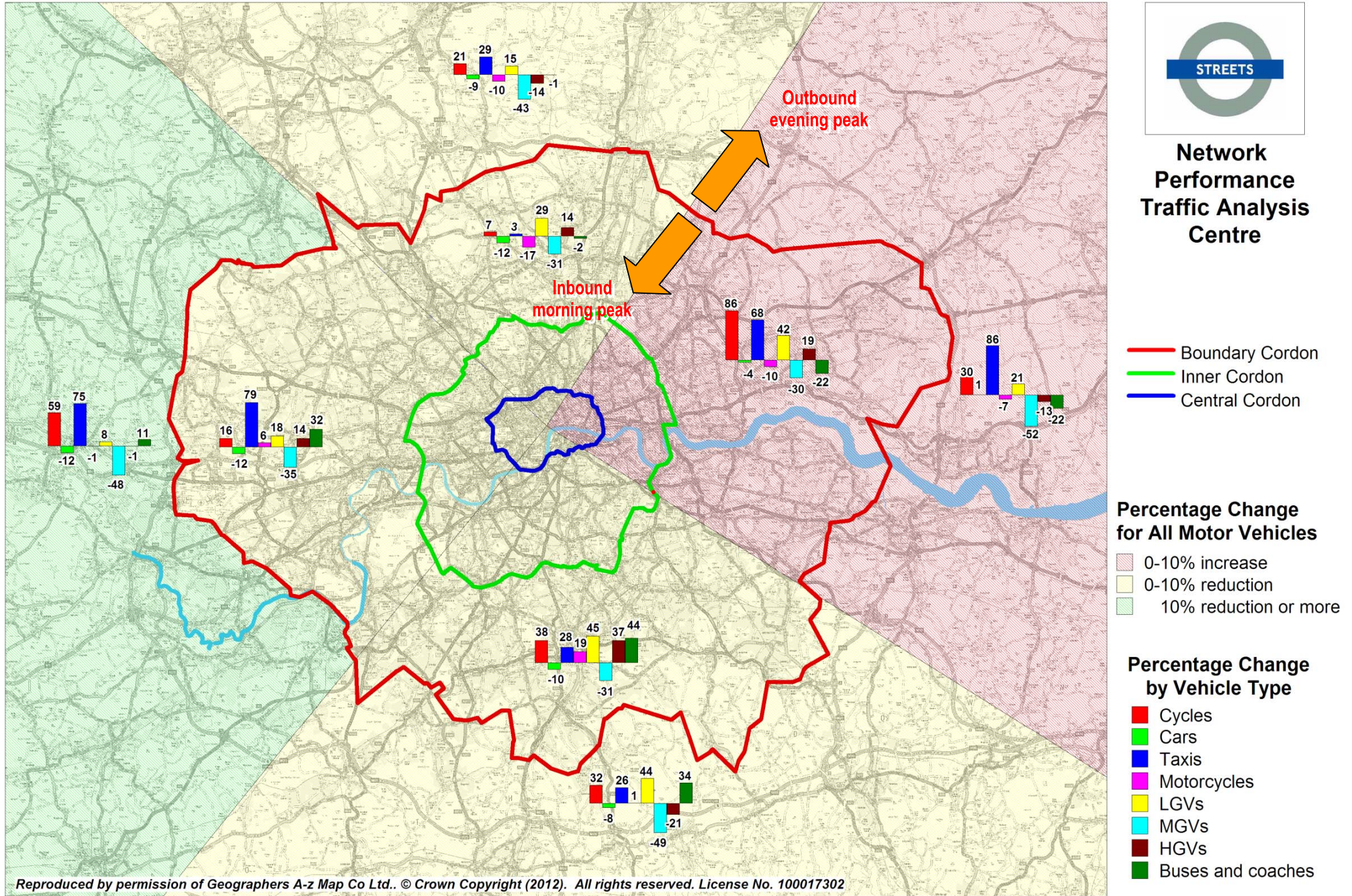


Figure 11 – Boundary Cordon traffic by quadrant: Map of percentage change from 1995-98 to year 2011



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- 5.9 Figure 11 on the previous page shows how total traffic flows into and out of outer London has changed by quadrant in 2011 compared to the base average of 1995-1998. The areas within the cordon represent the changes in the morning peak inbound direction whilst the areas outside the cordon represent the changes in the evening peak outbound direction. Additionally the mini graphs in each sector show the percentage change in flow by vehicle type.
- 5.10 The quadrants are defined as:
North sector: M1 Yorkshire Motorway in Aldenham to Sewardstone Road (A112);
East sector: Epping New Road in Epping Forest (A104) to Sidcup By-Pass (A20) in Sidcup;
South sector: Hockenden Lane in Crockenhill to Esher By-Pass (A3) in Hook;
West sector: Woodstock Lane in Hook to The Common (A4140) in Stanmore.
- 5.11 Figure 11 shows that in 2011 compared to the 1995-1998 base average AMV traffic crossing the boundary cordon reduced in all sectors apart from the eastern area which saw small increases of 1% inbound in the morning peak and 2% outbound in the evening peak. The western sector has recorded the most significant reductions of around 10% in both the morning peak inbound and evening peak outbound.
- 5.12 Within the vehicle types there have been more mixed changes in traffic levels. Car traffic has reduced in all sectors apart from a slight increase in the eastern outbound area. Taxi and LGV traffic levels have recorded significant increases in the majority of sectors in both directions, whereas MGW traffic has recorded significant decreases. Bus and coach traffic has increased in the western and southern sectors, remained relatively stable in the northern sector and decreased in the eastern sector. The number of cycles crossing the boundary cordon has increased for all sectors with significant increases of more than 50% for the eastern inbound and western outbound sectors.
- 5.13 Table 11 overleaf shows the trends in AMV traffic by time period crossing the Boundary Cordon for each quadrant since 1995.



Table 11 – All motor vehicle traffic crossing the Boundary Cordon by quadrant and time of day, 1995 to 2011

		Thousands of vehicles										
Sector	Year	Morning peak			Off peak	Evening peak			Daytime Total	Late Evening	Night	24 hour Total
		In	Out	Both	Both	In	Out	Both	Both	Both	Both	Both
North	1995	56	34	91	132	37	57	94	316	73	27	417
	1998	54	36	90	135	40	54	94	319	69	31	418
	2001	51	35	86	135	40	50	91	311	65	28	405
	2004	47	32	79	125	36	43	78	282	68	33	383
	2007	51	37	88	137	40	48	88	313	69	34	416
	2009	51	36	88	133	40	50	89	310	63	33	406
	2011	51	37	88	135	40	51	91	314	64	36	414
East	1995	82	55	137	205	61	85	146	488	114	49	651
	1998	85	57	143	212	63	86	149	503	108	57	668
	2001	89	63	151	230	76	90	166	547	126	55	729
	2004	84	62	145	251	67	87	154	551	122	63	736
	2007	81	69	150	246	78	88	166	562	121	65	748
	2009	78	66	144	244	72	93	166	554	114	63	731
	2011	85	64	149	245	68	87	155	549	110	70	729
South	1995	64	55	119	171	57	66	122	413	96	32	541
	1998	64	56	121	173	59	63	122	416	92	34	542
	2001	60	57	117	178	57	64	121	415	99	29	544
	2004	58	54	111	189	62	64	126	426	91	41	558
	2007	59	57	117	184	61	62	122	423	96	37	557
	2009	59	56	115	180	60	61	121	417	86	39	542
	2011	62	57	119	181	61	62	123	423	86	41	550
West	1995	111	85	195	297	91	113	204	696	157	58	910
	1998	114	88	201	303	96	113	209	713	154	59	927
	2001	107	90	197	293	91	105	196	686	146	56	889
	2004	104	84	188	284	86	92	179	651	168	70	889
	2007	104	88	192	280	93	109	203	675	158	73	906
	2009	97	82	178	280	92	102	194	652	139	64	855
	2011	102	85	187	277	92	101	194	657	137	72	866



- 5.14 Additional weekend surveys of the Boundary Cordon were undertaken for the first time in Autumn/Winter 2007 and Spring 2008. These counts provide a comparison with the weekday counts collected through the normal count programme. Table 12 overleaf shows the weekday and weekend counts for the Boundary Cordon. The weekend counts were conducted over 16 hours (6am to 10pm) so for comparative purposes the time periods presented in Table 12 differ to those previously used and are defined as follows; Morning Peak (7am to 10pm), Daytime Off Peak (10am to 4pm), Evening Peak (4pm to 7pm), Evening Peak (4pm to 7pm), Late Evening (7pm to 10pm), All Day (6am to 10pm).
- 5.15 Table 12 shows that, unlike the Central and Inner Cordons, the number of cars crossing the Boundary Cordon is lower on a weekend day compared to a weekday. The only time this is the reverse is during the off peak, when Saturday and Sunday car volumes are approximately 200,000 higher. Goods vehicle traffic on a Saturday and Sunday is less than half when compared to a normal weekday. Pedal cycle levels on a Saturday and Sunday do not differ much to a normal weekday, unlike the pattern observed on the Central Cordon.



Table 12 – Comparison of weekday and weekend traffic crossing the Boundary Cordon by time of day and mode

		Thousands of vehicles									
Day of the week	Time period	Dir	Pedal cycles	Motor-cycles	Cars	Taxis	LGV	MGV & HGVs	Buses & coaches	All motor vehicles	
Weekday	Morning peak	In	2	5	225	1	44	17	3	296	
		Out	1	3	196	1	33	15	3	251	
		Both	3	8	421	2	77	32	6	547	
	Daytime off peak	In	1	4	312	3	60	31	5	414	
		Out	1	5	318	2	69	34	5	433	
		Both	3	9	630	5	129	64	9	847	
	Evening peak	In	2	4	226	1	30	8	3	272	
		Out	2	6	250	1	38	9	2	307	
		Both	3	10	475	3	68	17	5	579	
	Late evening	In	1	2	140	1	13	4	1	163	
		Out	1	3	141	1	14	5	2	165	
		Both	2	5	281	2	27	9	3	328	
	All day (6am to 10pm)	In	6	17	946	7	163	65	12	1,211	
		Out	6	18	939	6	163	66	12	1,203	
		Both	11	35	1885	13	326	131	24	2414	
	Saturday	Morning peak	In	1	1	112	1	19	7	2	143
			Out	1	1	117	1	17	7	2	145
			Both	2	3	229	1	36	15	4	287
Daytime off peak		In	3	5	416	2	32	10	4	468	
		Out	2	5	418	2	36	11	3	475	
		Both	5	9	834	4	68	20	7	943	
Evening peak		In	1	2	201	1	12	3	2	220	
		Out	1	2	195	1	13	3	2	215	
		Both	1	4	396	2	25	5	4	435	
Late evening		In	0	1	116	1	5	1	1	126	
		Out	0	1	115	1	6	1	1	125	
		Both	0	2	232	1	11	3	3	251	
All day (6am to 10pm)		In	5	9	860	5	73	23	9	980	
		Out	4	9	861	4	74	23	9	981	
		Both	9	18	1,722	9	147	47	18	1,961	
Sunday		Morning peak	In	1	1	74	1	8	3	1	87
			Out	2	1	84	1	8	2	1	97
			Both	2	2	157	1	16	5	3	184
	Daytime off peak	In	4	5	402	2	23	5	3	440	
		Out	3	5	399	2	23	5	3	436	
		Both	6	10	801	4	45	10	6	876	
	Evening peak	In	1	2	194	1	9	2	1	209	
		Out	0	2	173	1	8	2	1	188	
		Both	1	3	367	2	17	4	3	397	
	Late evening	In	0	1	118	1	5	2	1	127	
		Out	0	1	108	1	5	2	1	117	
		Both	0	2	226	1	10	4	2	244	
	All day (6am to 10pm)	In	5	9	798	5	46	12	7	877	
		Out	5	8	774	4	45	12	7	850	
		Both	10	17	1573	9	91	24	14	1728	



6 Thames Screenline 1976 to 2010

6.1 This section provides a summary and analysis of traffic crossing the Thames Screenline. The screenline is made up of 30 sites surveyed in June/July each year and includes all bridges and tunnels crossing the River Thames open to vehicles. The summary tables presented in this section only include the 23 sites which are within the Greater London Boundary. Table 13 below shows the trend in AMV traffic crossing the Thames Screenline by time period for 1976 to 2010. For the morning and evening peak periods the flows are additionally shown by inbound and outbound directions, when the flows are most tidal. For the purposes of the Thames Screenline traffic travelling from the south "Surrey" side to the North "Middlesex" side is considered inbound/northbound. Traffic travelling in the opposite direction is considered outbound/southbound.

Table 13 – All motor vehicle traffic crossing the Thames Screenline by time of day, 1976 to 2010

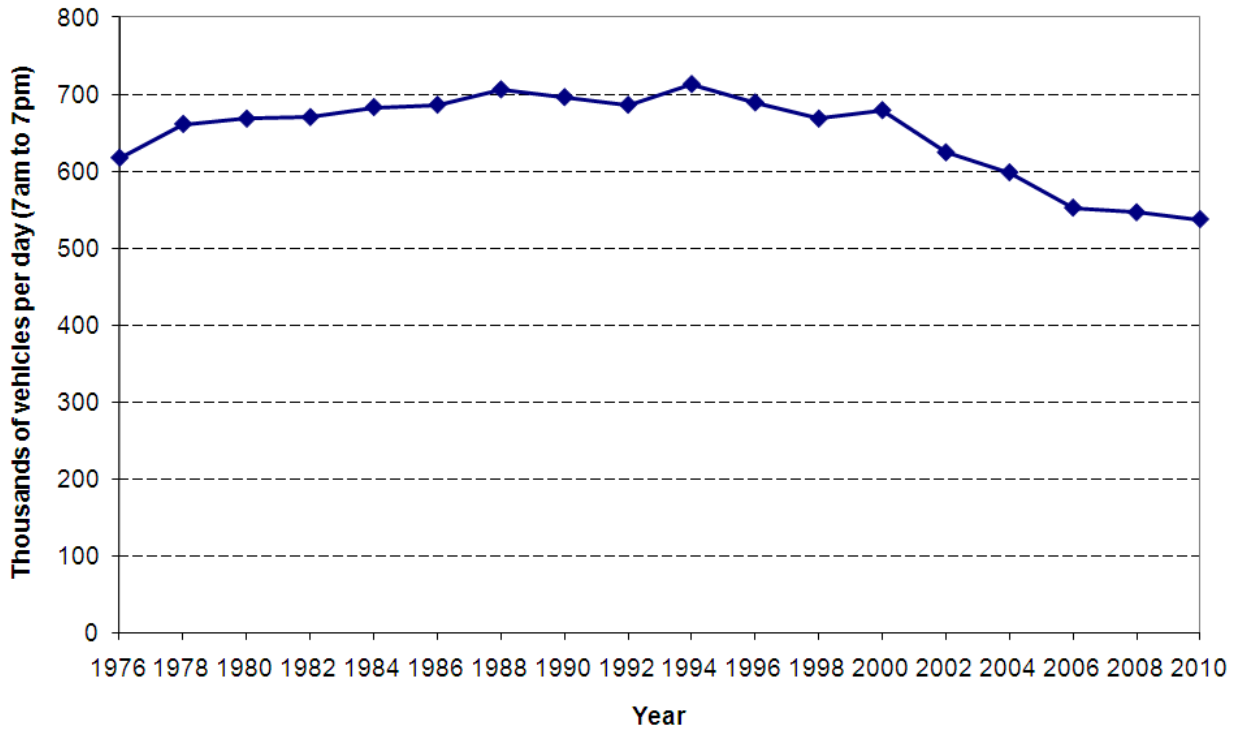
Year	Thousands of vehicles										
	Morning peak			Off peak	Evening peak			Daytime Total	Late Evening	Night	24 hour Total
	In	Out	Both	Both	In	Out	Both	Both	Both	Both	Both
1976	109	68	177	267	71	101	173	617	168	63	848
1978	114	69	182	290	79	108	187	661	172	66	899
1980	117	70	187	293	78	111	189	668	151	38	857
1982	112	70	182	299	78	111	189	670	210	55	935
1984	119	71	190	299	81	113	194	683	222	53	958
1986	115	73	188	305	80	112	192	686	213	66	965
1988	120	76	196	316	84	110	194	706	204	73	983
1990	118	76	194	309	84	108	192	696	181	62	939
1992	113	74	187	313	80	106	186	686	191	77	954
1994	114	77	191	325	89	109	198	713	203	74	989
1996	112	78	190	310	83	106	189	689	196	93	977
1998	105	73	179	305	81	103	184	668	185	80	933
2000	110	73	183	312	81	104	185	679	195	89	963
2002	99	70	168	285	78	94	171	624	193	96	913
2004	86	72	159	275	78	86	164	598	184	90	872
2006	87	63	150	250	69	84	153	552	174	95	821
2008	88	62	149	249	67	80	147	546	169	83	798
2010	83	60	143	246	69	79	147	537	155	81	772

6.2 As Table 13 shows, total 24 hour AMV traffic increased over the period for 1976 to 1988 and remained relatively unchanged from 1988 to 1994. Since 1994 AMV traffic has shown a steady reduction, with only a slight increase between 1998 and 2000. In 2010 AMV traffic crossing the Thames Screenline was the lowest observed since surveys began in the 1970s.

6.3 As the night-time flows are based on counts at a very few sites, they are subject to large sampling variation and must be treated with caution. The trend in 'all daytime' traffic flow therefore may be a more reliable indicator of general trend. Figure 12 on the next page shows the long term trend in daytime (7am to 7pm) AMV traffic crossing the Thames Screenline from 1976 to 2010. As with 24 hour flows there has been a steady reduction in daytime flows since the mid 1990s.



Figure 12 – Long term trend in daytime all motor vehicle traffic crossing Thames Screenline, 1976 to 2010



6.4 Table 14 below shows the trends in combined direction all day traffic crossing the Thames Screenline by vehicle type for 1976 to 2010.

Table 14 – Combined direction 24 hour traffic crossing the Thames Screenline by vehicle type, 1976 to 2010

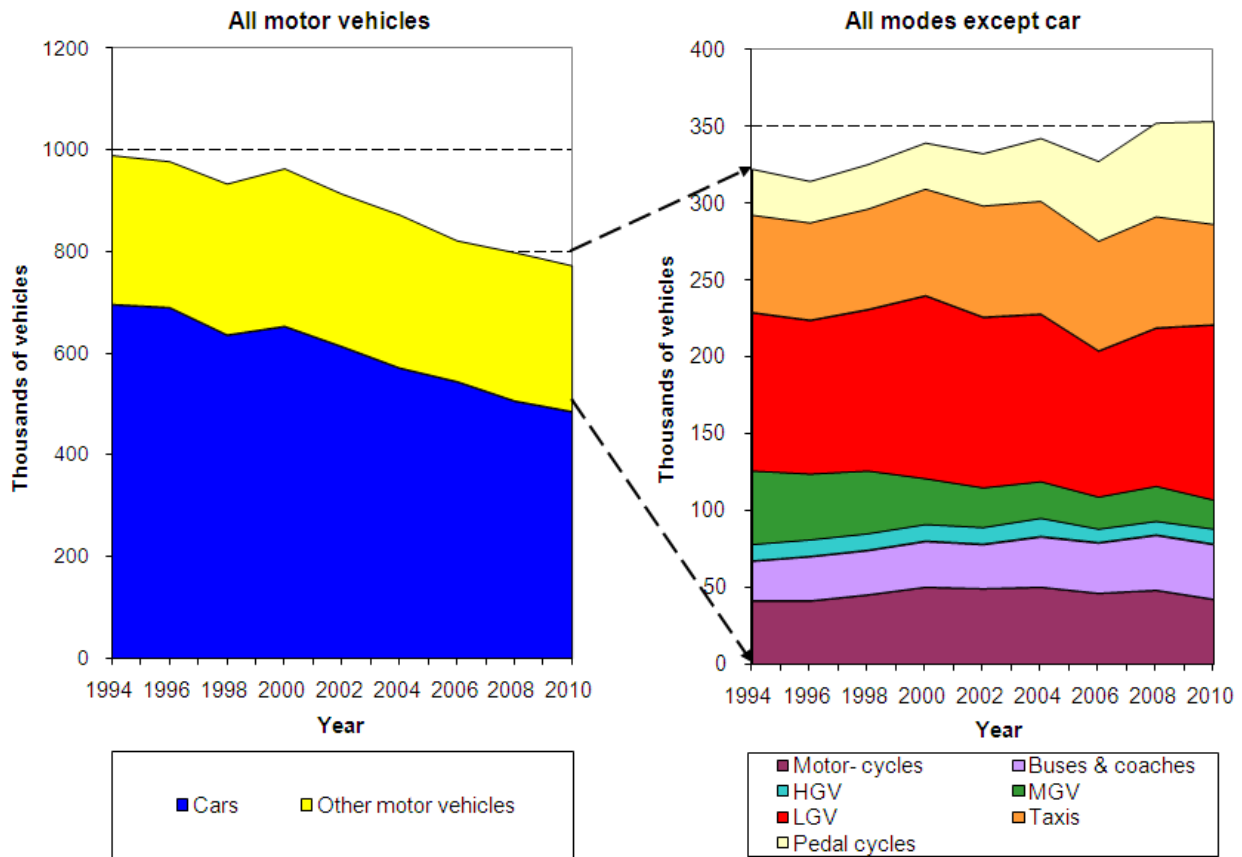
Year	Thousands of vehicles								All motor Vehicles
	Pedal cycles	Motor-cycles	Cars	Taxis	LGV	MGV	HGV	Buses & coaches	
1976	14	43	601	31	68	57	23	24	848
1978	16	44	635	36	73	59	27	26	899
1980	18	42	604	31	77	55	24	24	857
1982	32	49	669	42	75	52	24	24	935
1984	26	48	682	46	81	53	20	28	958
1986	24	45	686	61	86	47	14	26	965
1988	24	43	686	69	99	48	16	22	983
1990	23	40	663	54	102	45	13	22	939
1992	25	39	670	72	95	44	10	24	954
1994	30	41	696	64	103	48	11	26	989
1996	27	41	690	64	100	43	11	29	977
1998	29	45	636	66	105	41	11	29	933
2000	30	50	653	70	119	30	11	30	963
2002	34	49	613	73	111	26	11	29	913
2004	41	50	571	74	109	24	12	33	872
2006	52	46	544	72	95	21	9	33	821
2008	61	48	506	73	103	23	9	36	798
2010	67	42	485	66	114	19	10	36	772



6.5 Table 14 shows that car traffic crossing the Thames Screenline has shown a reduction since peaking in the 1990s. In 2010 the lowest number of cars crossing the Thames Screenline was recorded since surveys began in the 1970s. Pedal cycles crossing the Thames Screenline have shown significant increases since the 1990s. This is also reflected in the regular monthly Thames Bridge surveys of pedestrians and cyclists.

6.6 Figure 13 below shows how the combined direction all day traffic crossing the Thames Screenline has changed for each vehicle type from 1994 to 2010.

Figure 13 – Combined direction all day traffic crossing the Thames Screenline by vehicle type, 1994 to 2010



6.7 Additional weekend surveys of the Thames Screenline were undertaken for the first time in Spring 2009. These counts provide a comparison with the weekday counts collected through the normal count programme. Table 15 overleaf shows the weekday and weekend counts for the Thames Screenline. The weekend counts were conducted over 16 hours (6am to 10pm) so for comparative purposes the time periods presented in Table 15 differ to those previously used and are defined as follows; Morning Peak (7am to 10pm), Daytime Off Peak (10am to 4pm), Evening Peak (4pm to 7pm), Evening Peak (4pm to 7pm), Late Evening (7pm to 10pm), All Day (6am to 10pm).

6.8 As shown in Table 15, all day car traffic levels are seen to be higher on weekend days than normal weekdays. The only time this is the reverse is during the morning peak. Overall AMV traffic is between 75,000 and 125,000 vehicles higher during a normal weekday than on a Saturday or Sunday, which is mainly the result of greater levels of goods traffic. As observed on the Central Cordon the volume of pedal cycles crossing the Thames Screenline on a Saturday and Sunday significantly reduces, indicating the heavy commuting use on a normal weekday.



Table 15 – Comparison of weekday and weekend traffic crossing the Thames Screenline by time of day and mode

		Thousands of vehicles								
Day of the week	Time period	Dir	Pedal cycles	Motor-cycles	Cars	Taxis	LGV	MGV & HGVs	Buses & coaches	All motor vehicles
Weekday	Morning peak	In	15	9	54	5	13	4	3	88
		Out	5	3	39	4	10	3	3	62
		Both	20	13	93	8	22	7	6	149
	Daytime off peak	In	6	6	76	10	21	7	6	126
		Out	5	6	73	10	22	7	6	123
		Both	11	12	149	19	43	15	12	249
	Evening peak	In	5	4	46	6	8	1	3	67
		Out	12	8	53	6	9	1	3	80
		Both	17	12	99	11	17	3	6	147
	Late evening	In	3	2	37	6	3	1	2	52
		Out	6	4	45	6	4	1	3	62
		Both	9	6	82	12	7	2	5	114
	All day (6am to 10pm)	In	29	22	226	27	48	14	15	352
		Out	29	22	218	26	47	14	15	342
		Both	58	44	444	53	95	28	30	694
Saturday	Morning peak	In	2	2	34	2	6	2	2	47
		Out	2	1	31	2	6	2	2	43
		Both	3	3	65	4	12	3	5	90
	Daytime off peak	In	6	4	107	8	9	2	6	136
		Out	5	4	105	7	10	2	6	133
		Both	11	8	212	14	19	4	11	269
	Evening peak	In	2	2	55	4	3	0	3	67
		Out	2	2	56	3	4	1	3	68
		Both	5	4	111	7	7	1	5	135
	Late evening	In	1	1	43	4	2	0	2	52
		Out	1	1	43	4	2	0	2	53
		Both	2	3	86	8	4	1	4	106
	All day (6am to 10pm)	In	11	9	245	17	22	5	13	311
		Out	10	9	241	16	22	5	13	305
		Both	21	17	485	33	45	10	26	616
Sunday	Morning peak	In	1	1	27	2	3	1	2	35
		Out	1	1	24	1	2	0	2	30
		Both	3	2	51	3	5	1	3	64
	Daytime off peak	In	5	3	112	5	5	1	4	131
		Out	5	3	113	4	5	1	4	131
		Both	10	6	225	9	11	2	8	261
	Evening peak	In	2	1	59	3	2	0	2	68
		Out	2	1	59	3	2	0	2	68
		Both	4	3	119	5	4	1	4	136
	Late evening	In	1	1	40	3	2	0	2	47
		Out	1	1	45	3	2	0	2	52
		Both	2	2	84	5	3	1	3	99
	All day (6am to 10pm)	In	9	6	244	12	12	2	10	286
		Out	9	6	245	11	12	2	10	286
		Both	18	12	489	23	24	5	20	573



7 Northern Screenline 1976 to 2011

7.1 This section provides a summary and analysis of traffic crossing the Northern Screenline. The screenline is made up of 45 sites surveyed in June/July each year, running from the M25 east of South Mimms to the River Thames at Temple. The summary tables presented in this section only include the 43 sites which are within the Greater London Boundary. Table 16 below shows the trend in AMV traffic crossing the Northern Screenline by time period for 1976 to 2011.

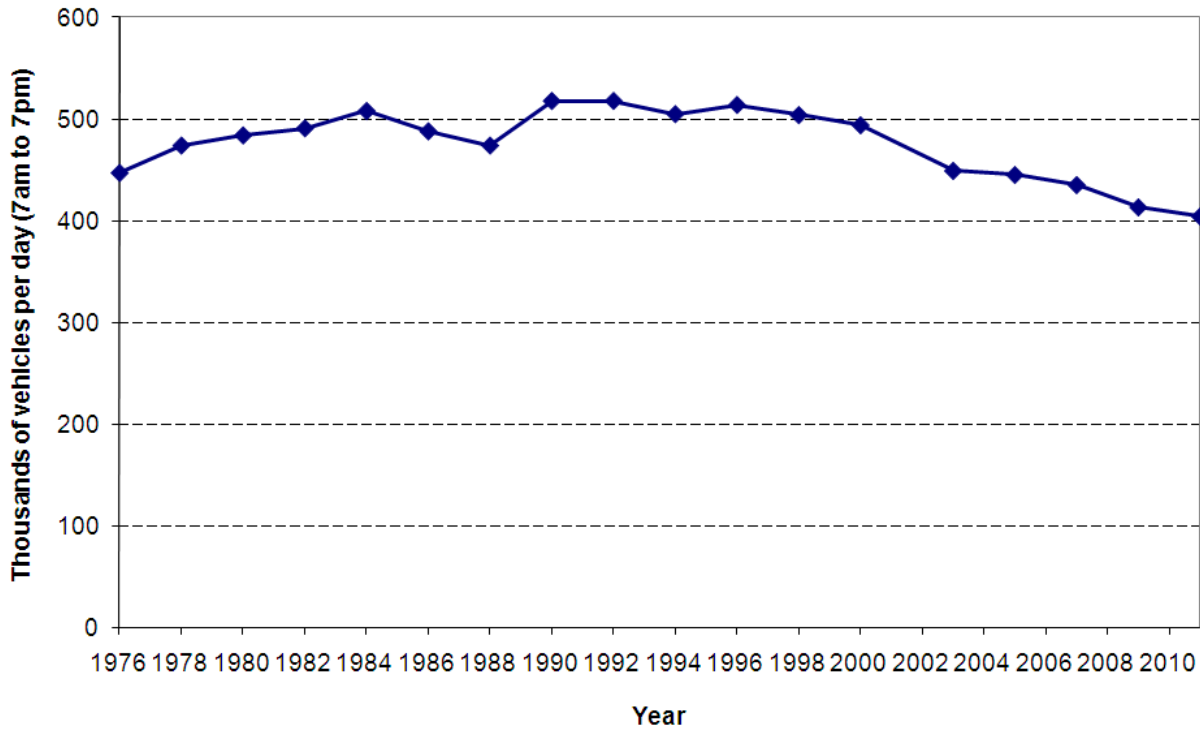
Table 16 – All motor vehicle traffic crossing the Northern Screenline by time of day, 1976 to 2011

Year	Thousands of vehicles						
	Morning peak	Off peak	Evening peak	Daytime Total	Late Evening	Night	24 hour Total
1976	115	206	126	447	94	38	579
1978	121	224	129	474	125	45	644
1980	127	228	131	484	139	39	664
1982	124	235	132	491	136	42	669
1984	131	239	138	508	155	48	711
1986	121	235	132	488	136	41	665
1988	122	226	127	474	118	51	644
1990	132	246	140	518	134	44	697
1992	132	247	139	518	131	47	696
1994	124	242	139	505	149	66	720
1996	130	242	141	514	143	61	718
1998	130	239	136	504	133	52	690
2000	127	232	135	494	145	63	701
2003	115	212	123	449	138	88	675
2005	114	210	121	445	129	66	639
2007	114	203	118	435	135	69	639
2009	107	193	112	413	116	59	587
2011	104	189	110	404	118	69	591

7.2 As the night-time flows are based on counts at a very few sites, they are subject to large sampling variation and must be treated with caution. The trend in 'all daytime' traffic flow therefore may be a more reliable indicator of general trend. Figure 14 on the next page shows the long term trend in daytime (7am to 7pm) AMV traffic crossing the Northern Screenline from 1976 to 2011. From 1976 there is a steady increase in AMV traffic until 1984. It then remains fairly constant until 1996 with some fluctuations, and thereafter declines until 2011.



Figure 14 - Long term trend in daytime all motor vehicle traffic crossing the Northern Screenline, 1976 to 2011



7.3 Table 17 on the next page shows the trends in combined direction all day traffic crossing the Northern Screenline by vehicle type for 1976 to 2011. The majority of the vehicle types show a similar trend to AMV traffic. Over the long term there has been a shift in MGV and HGV traffic to LGV traffic. The number of cycles crossing the Screenline has shown a sharp increase in the past decade, more than doubling since 2003.



Table 17 – Combined direction 24 hour traffic crossing the Northern Screenline by vehicle type, 1976 to 2011

Year	Thousands of vehicles								
	Pedal cycles	Motor - cycles	Cars	Taxis	LGV	MGV	HGV	Buses & coaches	All motor Vehicles
1976	8	23	383	46	62	40	12	13	579
1978	9	25	441	48	60	42	13	13	644
1980	14	29	455	53	62	40	12	12	664
1982	22	34	453	65	61	34	11	12	669
1984	20	36	488	63	63	38	9	13	711
1986	13	33	454	57	64	37	8	12	665
1988	12	28	427	57	78	36	7	11	644
1990	17	33	459	67	82	37	5	13	697
1992	19	30	469	72	74	31	6	14	696
1994	17	29	477	78	77	38	6	14	720
1996	22	31	477	78	78	33	5	16	718
1998	19	30	458	74	73	33	6	15	690
2000	20	34	448	81	90	23	9	16	701
2003	24	35	437	81	74	23	6	19	675
2005	28	33	399	76	81	22	8	20	639
2007	33	33	408	79	77	17	7	19	639
2009	42	29	360	72	81	18	6	20	587
2011	53	28	366	73	80	17	6	21	591

7.4 Additional weekend surveys of the Northern Screenline were undertaken for the first time in Spring 2009. These counts provide a comparison with the weekday counts collected through the normal count programme. Table 18 overleaf shows the weekday and weekend counts for the Northern Screenline. The weekend counts were conducted over 16 hours (6am to 10pm) so for comparative purposes the time periods presented in Table 18 differ to those previously used and are defined as follows; Morning Peak (7am to 10pm), Daytime Off Peak (10am to 4pm), Evening Peak (4pm to 7pm), Evening Peak (4pm to 7pm), Late Evening (7pm to 10pm), All Day (6am to 10pm).

7.5 Table 18 shows that all day traffic for all vehicle types is higher on a normal weekday compared to a Saturday or Sunday. Overall AMV traffic is between 140,000 and 185,000 vehicles higher during a normal weekday than on a Saturday or Sunday.



Table 18 – Comparison of weekday and weekend traffic crossing the Northern Screenline by time of day and mode

		Thousands of vehicles								
Day of the week	Time period	Dir	Pedal cycles	Motor-cycles	Cars	Taxis	LGV	MGV & HGVs	Buses & coaches	All motor vehicles
Weekday	Morning peak	In	6	4	37	5	10	3	2	60
		Out	4	4	34	5	7	2	2	54
		Both	10	8	70	10	17	5	4	114
	Daytime off peak	In	4	5	63	13	16	5	3	104
		Out	3	5	58	12	16	5	3	99
		Both	7	10	121	26	31	9	6	203
	Evening peak	In	4	5	39	7	5	1	2	58
		Out	5	4	40	6	6	1	2	60
		Both	9	8	79	14	11	2	3	118
	Late evening	In	2	2	31	6	2	1	1	43
		Out	3	2	31	6	3	1	1	43
		Both	5	4	62	11	5	1	2	86
	All day (6am to 10pm)	In	17	16	177	32	36	10	8	279
		Out	15	15	169	30	33	10	8	266
		Both	32	31	347	62	69	19	16	544
Saturday	Morning peak	In	1	1	20	2	4	1	1	30
		Out	0	1	18	2	4	1	1	27
		Both	1	2	39	4	8	3	2	57
	Daytime off peak	In	3	2	70	7	7	2	3	90
		Out	2	2	65	7	7	2	3	86
		Both	6	5	134	14	15	4	5	176
	Evening peak	In	1	1	35	3	2	1	1	43
		Out	2	1	36	4	2	1	1	45
		Both	3	2	71	7	5	1	3	88
	Late evening	In	1	1	29	3	1	0	1	36
		Out	1	1	29	3	2	0	1	36
		Both	1	2	58	6	3	1	2	71
	All day (6am to 10pm)	In	6	5	157	16	16	4	6	204
		Out	5	5	151	16	16	4	6	198
		Both	11	10	308	31	32	8	13	402
Sunday	Morning peak	In	1	0	15	2	2	0	1	21
		Out	0	0	14	1	2	0	1	18
		Both	1	1	29	3	3	1	2	39
	Daytime off peak	In	2	2	71	5	4	1	2	85
		Out	2	2	66	6	4	1	2	80
		Both	4	3	137	11	8	1	4	165
	Evening peak	In	1	1	35	3	2	0	1	42
		Out	1	1	38	3	2	0	1	44
		Both	2	2	73	6	3	1	2	86
	Late evening	In	0	1	26	3	1	0	1	32
		Out	1	1	28	3	1	0	1	34
		Both	1	1	54	5	2	1	2	65
	All day (6am to 10pm)	In	4	4	151	13	9	2	5	183
		Out	4	4	147	12	9	2	5	179
		Both	8	7	298	25	17	4	11	362



8 Radial Screenlines 1995 to 2009

8.1 This section provides a summary and analysis of traffic crossing the five Radial Screenlines defined in the introduction (paragraph 1.5) and shown by the map on page 7. The screenline is made up of 66 sites which are surveyed in June/July. The summary tables presented in this section only include the 52 sites which are within the Greater London Boundary. Table 19 below shows the trend in AMV traffic crossing the Radial Screenlines by time period for 1975 to 2009.

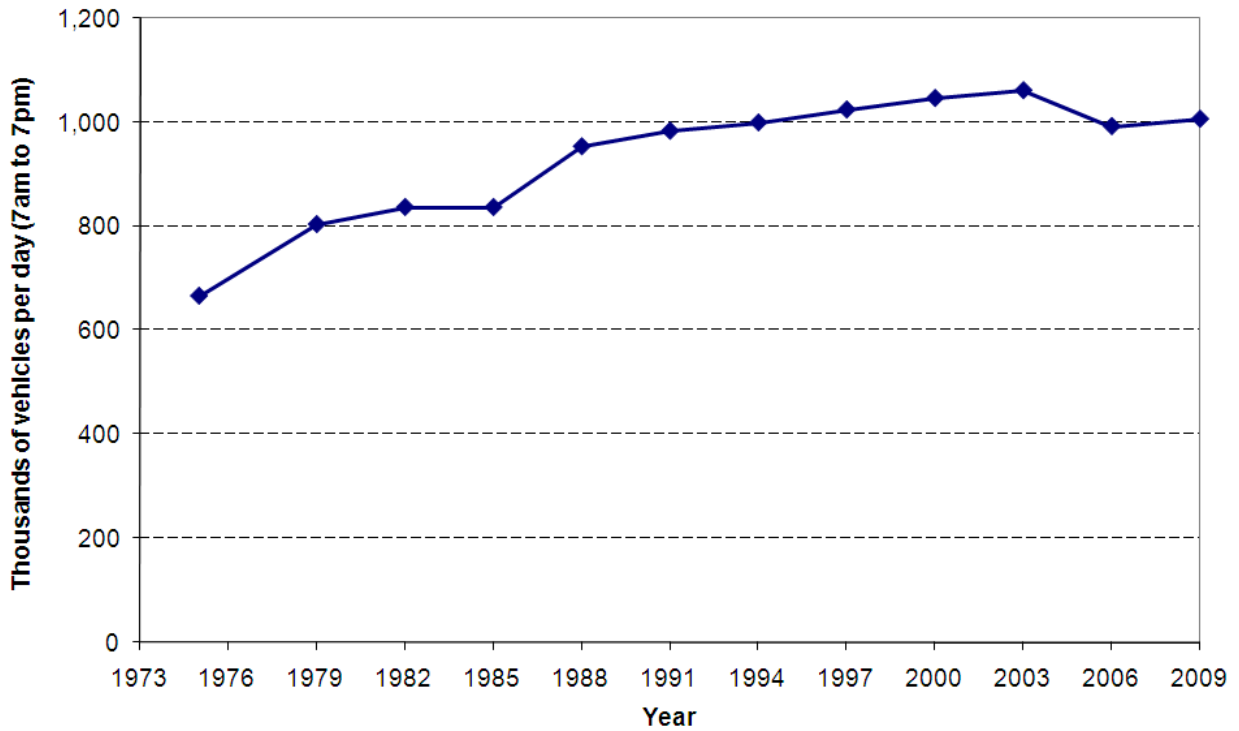
Table 19 – All motor vehicle traffic crossing the Radial Screenlines by time of day, 1975 to 2009

		Thousands of vehicles						
Screenline	Year	Morning peak	Off peak	Evening peak	Daytime Total	Late Evening	Night	24 hour Total
All radial screenlines	1975	193	274	199	666	172	49	889
	1979	235	341	228	804	219	40	1,063
	1982	238	361	238	837	217	42	1,096
	1985	230	368	239	837	244	51	1,132
	1988	266	416	271	954	277	72	1,303
	1991	268	443	273	984	220	80	1,284
	1994	271	448	281	1,000	229	90	1,319
	1997	275	461	288	1,025	254	96	1,374
	2000	277	466	304	1,047	249	95	1,392
	2003	277	486	299	1,062	273	131	1,466
	2006	260	450	283	993	259	116	1,368
2009	266	457	284	1007	234	118	1,359	
North West	1997	80	143	87	310	77	31	418
	2000	79	132	85	296	73	28	398
	2003	79	143	83	305	78	38	421
	2006	74	133	81	289	75	32	396
	2009	72	129	78	279	67	33	379
South West	1997	45	71	48	164	38	13	215
	2000	44	67	49	159	36	11	206
	2003	45	70	48	163	42	18	224
	2006	43	66	45	153	40	15	209
	2009	44	70	44	159	35	15	209
Kent/Surrey	1997	31	48	32	111	28	9	148
	2000	30	50	33	113	25	10	148
	2003	30	50	32	112	28	12	152
	2006	27	43	29	99	24	10	134
	2009	31	49	33	113	25	11	149
Harrow	1997	72	120	75	267	73	22	362
	2000	69	119	77	265	67	22	354
	2003	68	124	76	269	72	32	372
	2006	70	123	76	269	70	28	368
	2009	65	114	70	248	61	29	339
River Lee	1997	48	79	46	173	38	20	231
	2000	54	99	61	214	48	24	286
	2003	55	98	60	213	53	31	297
	2006	46	84	52	182	49	30	262
	2009	54	95	59	208	46	30	283



8.2 As Table 19 on the previous page and Figure 15 below show the trend in AMV traffic crossing the overall Radial Screenline increased until 2003, with similar trends being reflected in each of the individual screenlines since 1994. More recently between 2003 and 2009 AMV traffic fell by 7%. Over the longer term the surveys have indicated an increase in the movement of orbital traffic.

Figure 15 - Long term trend in daytime all motor vehicle traffic crossing the Radial Screenlines, 1975 to 2009



8.3 Table 20 overleaf shows the trends in combined direction all day traffic crossing the Radial Screenlines by vehicle type for 1975 to 2009. The majority of the vehicle types reflect the trend in AMV traffic, with the exception of MGV traffic which has shown a decline over the longer term.



Table 20 – Combined direction 24 hour traffic crossing the Radial Screenlines by vehicle type, 1975 to 2009

Screenline	Year	Thousands of vehicles								
		Pedal cycles	Motor - cycles	Cars	Taxis	LGV	MGV	HGV	Buses & coaches	All motor Vehicles
All radial screenlines	1975	..	22	691	5	74	54	23	15	889
	1979	14	29	818	7	99	67	28	15	1063
	1982	14	32	860	7	99	61	25	12	1096
	1985	12	25	903	7	107	59	20	12	1132
	1988	8	21	1034	7	131	66	31	12	1303
	1991	9	19	1014	7	137	64	30	14	1284
	1994	8	17	1035	8	140	67	36	16	1319
	1997	8	18	1090	8	142	60	39	18	1374
	2000	7	21	1082	9	166	55	39	19	1392
	2003	9	24	1144	9	178	50	38	23	1466
	2006	9	22	1075	8	160	44	37	22	1368
2009	8	20	1045	8	183	40	37	26	1359	
North West	1997	2	5	333	2	45	18	10	5	418
	2000	2	6	310	2	49	17	9	5	398
	2003	2	8	329	2	49	18	9	6	421
	2006	2	6	316	2	45	13	8	6	396
	2009	2	6	292	2	51	12	9	8	379
South West	1997	2	4	178	1	22	8	2	1	215
	2000	2	4	169	2	23	5	2	2	206
	2003	3	5	182	2	26	4	2	2	224
	2006	3	4	170	2	25	4	2	2	209
	2009	2	4	169	2	26	4	2	2	209
Kent/Surrey	1997	1	3	120	1	16	5	1	2	148
	2000	1	3	118	1	18	4	1	3	148
	2003	1	3	120	1	19	4	1	3	152
	2006	1	3	107	1	16	2	1	4	134
	2009	1	2	116	1	22	3	1	4	149
Harrow	1997	2	4	297	2	33	13	5	7	362
	2000	2	5	283	2	38	13	5	8	354
	2003	2	5	298	2	41	12	6	9	372
	2006	2	5	291	2	42	12	6	9	368
	2009	2	5	268	1	40	9	5	10	339
River Lee	1997	1	3	162	1	26	16	20	2	231
	2000	1	4	202	2	38	16	22	2	286
	2003	1	3	215	2	42	11	21	3	297
	2006	1	3	191	1	31	13	21	2	262
	2009	1	4	200	2	44	11	20	2	283



9 Peripheral Screenlines 1975 to 2009

9.1 This section provides a summary and analysis of traffic crossing the four Peripheral Screenlines defined in the introduction (paragraph 1.5) and shown by the map on page 7. The screenline is made up of 72 sites which are surveyed in June/July. The summary tables presented in this section only include the 66 sites which are within the Greater London Boundary. Table 21 below shows the trend in AMV traffic crossing the Peripheral Screenlines by time period for 1975 to 2009.

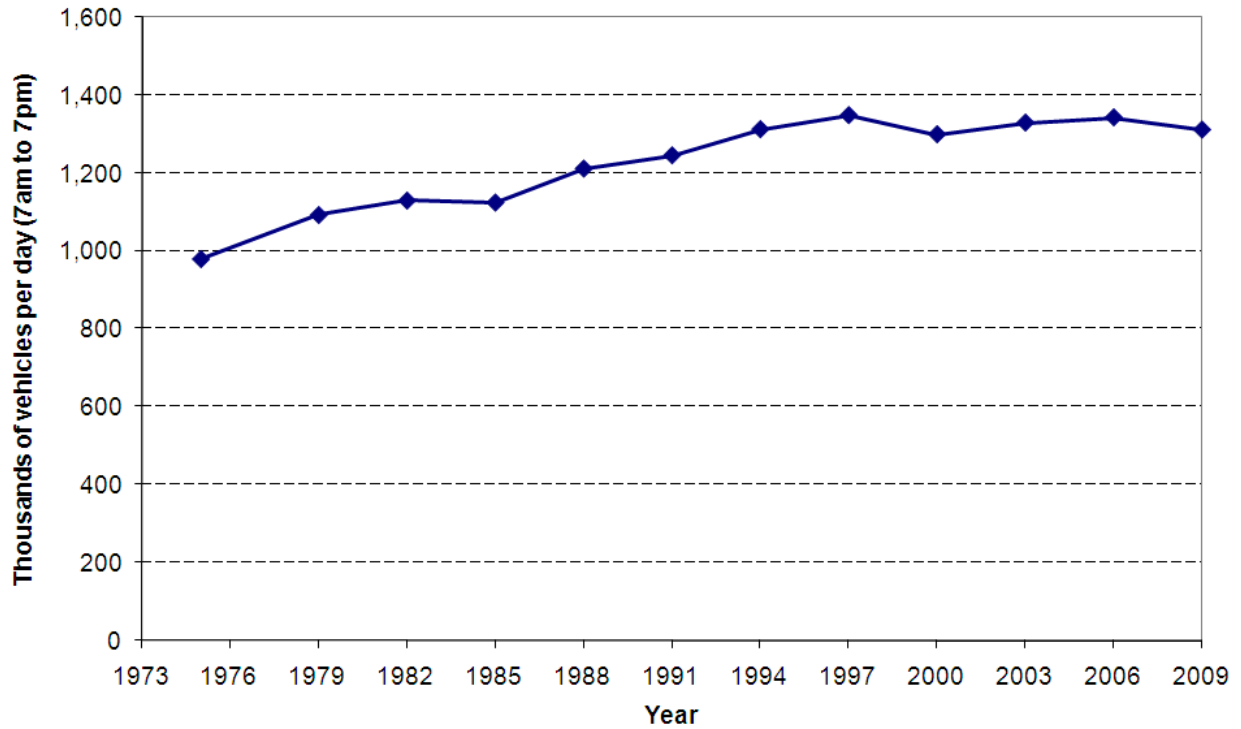
Table 21 – All motor vehicle traffic crossing the Peripheral Screenlines by time of day, 1975 to 2009

		Thousands of vehicles						
Screenline	Year	Morning peak	Off peak	Evening peak	Daytime Total	Late Evening	Night	24 hour Total
All screenlines	1975	288	402	290	980	244	91	1,318
	1979	316	459	318	1,093	289	108	1,490
	1982	314	483	333	1,130	282	89	1,501
	1985	315	476	334	1,125	303	114	1,542
	1988	334	520	358	1,212	296	121	1,629
	1991	336	552	358	1,246	331	114	1,691
	1994	349	590	374	1,313	324	131	1,768
	1997	353	605	391	1,349	360	142	1,851
	2000	343	580	377	1,300	339	156	1,795
	2003	347	601	382	1,330	353	169	1,852
	2006	357	604	382	1,343	349	175	1,867
	2009	344	598	369	1,312	323	155	1,790
River Crane	1997	143	245	156	544	149	58	752
	2000	137	237	156	531	147	65	742
	2003	147	244	160	551	150	68	769
	2006	148	256	164	568	156	75	799
	2009	141	246	152	539	137	65	740
River Roding	1997	59	107	69	234	63	26	323
	2000	63	110	68	241	63	31	335
	2003	59	114	68	241	67	35	342
	2006	70	114	71	256	66	38	360
	2009	67	121	68	256	68	33	357
River Ram	1997	49	75	49	172	44	19	235
	2000	38	65	41	144	36	17	197
	2003	38	66	40	145	37	19	201
	2006	36	60	37	133	34	17	183
	2009	35	59	37	131	30	15	176
South East	1997	103	178	117	398	103	39	540
	2000	104	168	113	384	94	43	521
	2003	103	178	113	393	99	47	539
	2006	103	174	110	387	94	45	525
	2009	102	173	112	386	88	42	516



9.2 Table 21 on the previous page and Figure 16 below show that overall AMV traffic crossing the Peripheral Screenlines increased steadily throughout the 1975 to 1997 period, and has remained relatively constant since with small fluctuations. Interestingly not all the individual screenlines show the same trend. The River Ram screenline in the North East area of London shows a steady reduction over the 1997 to 2009 period.

Figure 16 - Long term trend in daytime all motor vehicle traffic crossing the Peripheral Screenlines, 1975 to 2009



9.3 Table 22 on the following page shows the trends in combined direction all day traffic crossing the Peripheral Screenlines by vehicle type for 1975 to 2009. Over the longer term the majority of the vehicle types have seen an increase in the volume of traffic crossing the Peripheral Screenline reflecting the trend in AMV traffic. Trends for the individual screenlines over the 1997 to 2009 period are more mixed for the each of the vehicle types.



Table 22 – Combined direction 24 hour traffic crossing the Peripheral Screenlines by vehicle type, 1975 to 2009

		Thousands of vehicles								
Screenline	Year	Pedal cycles	Motor - cycles	Cars	Taxis	LGV	MGV	HGV	Buses & coaches	All motor Vehicles
All screenlines	1975	..	38	989	12	116	89	50	25	1318
	1979	14	48	1132	19	129	91	52	18	1490
	1982	18	50	1153	17	130	84	47	21	1501
	1985	12	39	1200	21	141	86	36	19	1542
	1988	9	31	1264	22	174	84	34	19	1629
	1991	10	30	1325	27	178	78	31	22	1691
	1994	11	32	1374	24	189	90	34	24	1768
	1997	9	32	1442	29	198	82	38	30	1851
	2000	9	35	1385	27	220	63	34	30	1795
	2003	9	37	1443	29	222	55	32	34	1852
	2006	10	29	1475	33	208	51	35	36	1867
2009	11	31	1390	28	227	46	30	37	1790	
River Crane	1997	3	9	591	15	76	36	15	9	752
	2000	3	11	585	12	83	27	15	9	742
	2003	4	12	614	12	86	23	13	10	769
	2006	4	10	640	14	84	24	15	12	799
	2009	4	11	584	11	90	19	13	12	740
River Roding	1997	1	6	247	6	38	13	8	5	323
	2000	1	7	248	7	48	12	9	5	335
	2003	1	7	260	7	45	10	9	5	342
	2006	1	6	282	7	38	11	10	5	360
	2009	2	6	272	7	48	11	8	5	357
River Ram	1997	1	5	177	2	29	11	7	3	235
	2000	1	4	148	3	28	8	3	3	197
	2003	1	3	156	3	27	6	3	3	201
	2006	1	3	139	3	25	6	2	5	183
	2009	1	3	136	3	24	5	2	4	176
South East	1997	4	12	426	5	55	22	8	12	540
	2000	4	13	403	6	62	16	7	13	521
	2003	4	14	413	7	65	16	8	15	539
	2006	4	10	414	8	61	10	8	14	525
	2009	5	11	398	7	65	12	7	16	516



10 Contacts for further information

- 10.1 If you require further information on this traffic note or have any other related queries please contact:

Traffic Data
TrafficData@tfl.gov.uk

11 Library of traffic notes

Other traffic notes include:

Traffic Notes

DfT NRTCC Counts

- Traffic Note 1 – Traffic levels on major roads in Greater London 1993-2010 (Update with 2011 flows due in Autumn 2012)

TfL Automatic Traffic Counts

- Traffic Note 2 – Expansion factors for road traffic counts in London
- Technical Note 4 - Validation of radar traffic monitoring equipment (published as an internal working document)
- Technical Note 6 - Validation of automatic traffic & cycle counters 2006 (published as an internal working document)

TfL Cordon and Screenline Counts

- Traffic Note 3 – TfL Cordon and Screenlines 1975 to 2011. (Update with 2012 flows due in Spring 2013).
- Traffic Note 5 – Major and Minor traffic flows measured through TfL Cordon surveys

ITIS/TrafficMaster GPS journey time data

- ITIS – Validation Paper July 2005
- Technical Note 1 – ITIS Speed Survey Data
- Technical Note 2 – Traffic Delays in London on Weekdays, Saturdays and Sundays
- Traffic Note 4 – Total vehicle delay for London 2008-09 (2010-11 update due in Summer 2012)
- Traffic Note 6 – Traffic delays in the London Boroughs 2009-10 (published on LondonStreetWorks website and GIS SharePoint website)

Cycling

- Traffic Note 7 - Weather conditions and the levels of cycling on the TLRN
- Traffic Note 8 – Proportion of cyclists violating red lights
- Traffic Note 9 – Cycling trends in London



- Traffic Note 10 – TfL Pedestrian and Cycle Thames Screenline Surveys 2006-2007
- Traffic Note 11 – Cycling journey time reliability
- Traffic Note 12 - Expansion factors for cycle counts in London (planned for 2012)

Pedestrians

- Traffic Note 13 - Expansion factors for pedestrian counts in London (planned for 2012)

12 Other useful documents

- Travel in London 4 –
<http://www.tfl.gov.uk/assets/downloads/corporate/travel-in-london-report-4.pdf>
- Transport Statistics for Great Britain 2011 –
<http://www.dft.gov.uk/statistics/releases/transport-statistics-great-britain-2011/>