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Data Input Table – Do Not Delete

Item	Location	Bookmark name	X ^{1,2}	Record of input ^{3,4}
Report Title – first line	Pages i and ii	T1		25 Point Census Report 2001
Report Title – second line	Pages i and ii	T2		
Report Title – third line	Pages i and ii	T3		
Report Title or Heading – first line	Left aligned in headers	HL1		25 Point Census Report 2001
Report Title or Heading – second line	Left aligned in headers	HL2		
Group Name	Right aligned in headers – first line	HR1		jdt, Mott MacDonald
Client/Associate (where applicable)	Right aligned in headers – second line	HR2		West Midlands Districts
Project Number	Footers	PRJNR		47995
Report Number	Footers	RPTNR		037
Revision Letter	Issue and Revision Record on page ii and footers	REV		A
Date of issue or report	Page i, Issue and Revision Record on page ii and footers	DATE		April 2002
Initials of word processor	Footers	INI		DMK

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25 Point Census Report 2001



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1 Introduction

The data for this report has been collected from twenty five permanent automatic traffic counters spread proportionately throughout different road types and districts within the West Midlands county. Originally from the old 'Hundred Point Census Survey', they formed the twenty five permanent sites of the hundred locations which were monitored each year. The other seventy five locations were carried out as a mixture of either once monthly or four times yearly automatic counts which were then grossed up to annual figures using patterns from the permanent counts. These 'Hundred Point Surveys' originated in 1978 but in order to cut costs were reduced to the remaining twenty five sites in 1996. The locations and distributions of these sites can be found in Table 1 below. A further 25 sites are also monitored quarterly which also classify vehicles by type and speed. These will be used to monitor changes in vehicle classifications and speeds and when combined with data from the 25 point census surveys should also provide information on seasonal variations.

Table 1 Location of Survey Sites

Reference Number	District	Road Type	Location
HP05	Wolverhampton	Class. Princ.	Lichfield Road Stubby Ln to Peacock Ave
HP10	Coventry	Class. Princ.	Kenilworth Road North of Cannon Hill Road
HP20	Birmingham	Class. Princ	Stratford Road Fernley Rd to Evelyn Rd
HP23	Sandwell	Class. Princ	Dudley Port Tividale St to Fisher St
HP24	Birmingham	Class. Princ.	Watford Road Woodfall Ave to Northfield Rd
HP02	Birmingham	Class. Non-Princ	Salisbury Road Park Hill to Salisbury Close
HP04	Birmingham	Class. Non-Princ.	Wharfdale Road Rushy Ln to Blythwood Rd
HP08	Solihull	Class. Non-Princ	Tanworth Lane North of Lady Ln
HP27	Walsall	Class. Non-Princ.	Foley Road East Streetly Rd to F'ston Rd
HP29	Dudley	Class. Non-Princ.	Grange Road Halesowen By Pass to Illey Ln
HP44	Birmingham	Unclassified	Bulls Lane East of Bulls Lane Farm
HP45	Dudley	Unclassified	Uffmoor Lane Hagley Rd to Blakedown Rd
HP46	Dudley	Unclassified	Newland Grove Hallchurch Rd to Woodside Rd
HP47	Coventry	Unclassified	Arundel Road Foresters Rd to Bettman Close
HP48	Coventry	Unclassified	Torrington Avenue Wolfe Road to Templar Ave
HP49	Wolverhampton	Unclassified	Northwood Park Rd Ireton Rd to Northwood Pk Cl
HP50	Wolverhampton	Unclassified	Mount Road Wakeley Hill to Dewsbury Drive
HP52	Birmingham	Unclassified	Sherwood Road Painswick Rd to Highfield Rd
HP54	Birmingham	Unclassified	Windermere Road Wakegreen Rd to Ashleigh Gar
HP56	Birmingham	Unclassified	Jerry's Lane Sheddington Rd to Raford Rd
HP58	Walsall	Unclassified	Dangerfield Lane Stanley Rd to Broadwaters Rd
HP61	Walsall	Unclassified	St Annes Road Temple Rd to Stringes Ln
HP64	Sandwell	Unclassified	Shakespeare Road Swann Walk to Kennedy Walk
HP68	Solihull	Unclassified	Creynolds Lane Stratford Rd to Cheswick Way
HP73	Wolverhampton	Unclassified	Coppice Road Meadow Road to Cranford Road

2 Purpose of Report

Under the SLS agreement, the purpose of the report is to inform districts of changes in total travel within the West Midlands County over the 2001 period. Changes are reported in vehicle-kilometres travelled, which, in addition to increases or decreases in traffic levels, also incorporate changes in road lengths from year to year.

3 Results

3.1 Changes in West Midlands Traffic

The tables below detail the results of the analysis showing increases or decreases in traffic on roads excluding motorways since 1987.

Table 2 Total Travel in 000's Vehicle-kilometres 1987-2001, Annual (Excluding Motorways)

Year	Trunk & Principal	Class. Non-Principal	Unclassified	Total	Index *
1987	3,930,340	2,169,067	4,420,868	10,520,275	1.00
1988	4,054,790	2,374,591	4,293,024	10,722,405	1.02
1989	4,149,164	2,413,580	4,458,009	11,020,753	1.05
1990	4,181,260	2,444,819	4,720,705	11,346,785	1.08
1991	4,111,890	2,412,564	4,826,348	11,350,801	1.08
1992	4,061,026	2,438,890	4,839,255	11,339,172	1.08
1993	4,335,394	2,463,260	5,293,126	12,091,781	1.15
1994	4,148,750	2,564,577	5,457,778	12,171,105	1.16
1995	4,144,658	2,570,209	5,108,289	11,823,156	1.12
1996*	4,019,491	2,589,957	5,170,552	11,780,000	1.12
1997	4,094,473	2,589,129	4,890,616	11,574,218	1.10
1998	4,392,671	2,577,502	4,891,325	11,861,497	1.13
1999**	4,163,875	2,621,209	5,145,809	11,930,893	1.13
2000**	4,105,498	2,598,439	5,075,567	11,779,504	1.12
2001**	4,048,384	2,641,537	5,100,234	11,790,154	1.12

*1996 Figures based on an incomplete year. Final figures estimated from three quarters instead of four.

**The figures shown in Table 2 from 1999 to 2001 have been calculated using 1998 DTLR road lengths. The figures from 1999-2001 therefore do not reflect any changes in road length since the same road lengths from 1998 were used for each of these years.

In 1999 the DTLR changed the way it calculated road length data. Previously the DTLR had relied on local authorities to collect this data. It is now done using a geographical information system (GIS), together with Ordnance Survey (OS) data. Local Authorities still have input into defining classified roads since they have local knowledge about recent re-classifications of road types. Minor road lengths are now based on OS data, rather than local authority returns. This in effect ended the time series data. To create a new series that would be of use, the figures for 1997 and 1998 have been adjusted to the new (1999) road lengths and a new series started from 1997. This Time Series can be seen in Table 3.

Table 3 Total Travel in 000's Vehicle-kilometres 1997-2001, Annual (Excluding Motorways)

Year	Trunk & Principal	Class. Non-Principal	Unclassified	Total	Index
1996	4,157,015	2,784,274	5,469,666	12,410,955	1.02
1997	4,228,389	2,642,472	5,352,977	12,223,838	1.00
1998	4,355,427	2,669,508	5,282,182	12,307,118	1.01
1999	4,128,571	2,714,776	5,557,002	12,400,349	1.01
2000	4,070,045	2,689,205	5,514,442	12,273,692	1.00
2001	4,025,501	2,746,269	5,546,772	12,318,541	1.01

Between 2000 and 2001 there has been an overall increase of 0.4% on all roads excluding motorways. Traffic on Trunk and Principal roads continues to decline probably due in part to the re-classification of some roads.

Table 4 Total Travel in 000's Vehicle-kilometres 1987-2001 7-9am Ave Weekday (Excluding Motorways)

Year	Trunk & Principal	Class. Non-Principal	Unclassified	Total	Index
1987	86,826	53,664	105,889	246,381	1.00
1988	89,986	58,498	97,711	246,199	1.00
1989	90,552	61,360	103,577	255,489	1.04
1990	91,935	60,459	115,087	267,482	1.09
1991	88,871	56,693	117,378	262,944	1.07
1992	85,611	55,780	112,562	253,954	1.03
1993	90,888	57,995	117,322	266,205	1.08
1994	83,242	60,366	128,113	271,722	1.10
1995	84,473	61,572	120,020	266,065	1.08
1996*	81,369	63,074	122,126	266,569	1.08
1997	81,718	62,722	119,826	264,266	1.07
1998	88,904	63,203	112,684	264,791	1.07
1999**	82,549	62,150	119,738	264,437	1.07
2000**	78,681	61,877	118,568	259,125	1.05
2001**	76,576	63,001	121,645	261,223	1.06

*1996 Figures based on an incomplete year. Final figures estimated from three quarters instead of four.

**See note on Table 2

Table 5 Total Travel in 000's Vehicle-kilometres 1997-2001 7-9am Ave Weekday (Excluding Motorways)

Year	Trunk & Principal	Class. Non-Principal	Unclassified	Total	Index
1996	81,292	65,501	130,855	277,648	1.02
1997	84,391	62,514	124,307	271,212	1.00
1998	88,150	65,459	121,688	275,297	1.02
1999	81,849	64,369	129,306	275,524	1.02
2000	78,001	64,038	128,820	270,860	1.00
2001	76,144	65,499	132,295	273,938	1.01

During the morning peak overall traffic levels have increased slightly by 1.1%. Most of this increase occurred again on unclassified roads.

Table 6 Total Travel in 000's Vehicle-kilometres 1987-2001 4-6pm Ave Weekday (Excluding Motorways)

Year	Trunk & Principal	Class. Non-Principal	Unclassified	Total	Index
1987	94,551	57,793	115,553	267,898	1.00
1988	96,936	61,458	114,386	272,781	1.02
1989	97,053	64,494	117,040	278,589	1.04
1990	99,374	63,493	129,861	292,729	1.09
1991	95,760	62,460	129,680	287,901	1.07
1992	94,537	62,792	129,256	286,586	1.07
1993	97,904	64,614	135,571	298,091	1.11
1994	96,173	65,504	143,331	305,008	1.14
1995	95,341	65,523	135,454	296,318	1.11
1996*	92,351	65,409	138,853	296,292	1.11
1997	91,440	66,966	134,635	293,041	1.09
1998	97,208	66,464	134,560	298,232	1.11
1999**	93,243	66,392	138,976	298,612	1.11
2000**	90,753	65,120	135,877	291,750	1.09
2001**	86,841	66,634	138,942	292,418	1.09

*1996 Figures based on an incomplete year. Final figures estimated from three quarters instead of four.

**See note on Table 2

Table 7 Total Travel in 000's Vehicle-kilometres 1997-2001 4-6pm Ave Weekday (Excluding Motorways)

Year	Trunk & Principal	Class. Non-Principal	Unclassified	Total	Index
1996	92,263	67,926	152,566	312,756	1.02
1997	94,431	68,435	144,882	307,747	1.00
1998	96,384	68,836	145,313	310,533	1.01
1999	92,453	68,762	150,082	311,297	1.01
2000	89,969	67,395	147,626	304,990	0.99
2001	86,350	69,276	151,107	306,734	1.00

3.2 Comparisons With Traffic Changes in Great Britain

Table 8 Total Travel in 000's Vehicle Kilometres – All Roads Excluding Motorways

Year	West Midlands		Great Britain	
	Veh/Km	Index	Veh/Km	Index
1987	10,520,275	1.00	300,400,000	1.00
1988	10,722,405	1.02	321,200,000	1.07
1989	11,020,753	1.05	347,900,000	1.16
1990	11,346,785	1.08	349,200,000	1.16
1991	11,350,801	1.08	350,600,000	1.17
1992	11,339,172	1.08	350,600,000	1.17
1993	12,091,781	1.15	348,300,000	1.16
1994	12,171,105	1.16	355,900,000	1.18
1995	11,823,156	1.12	360,000,000	1.20
1996	11,780,000	1.12	368,800,000	1.23
1997	11,574,218	1.10	374,600,000	1.25
1998	11,861,497	1.13	377,900,000	1.26
1999**	12,400,349	1.00	372,600,000	1.00
2000	12,273,692	0.99	373,600,000	1.00
2001	12,318,541	0.99		

Source: jdt 25pt census and Transport Statistics Great Britain 2001 Edition

* See note on table 2

3.3 Daily Variations

Figures in Table 6 show the percentage of 24 hour flow contained in selected times on an average weekday on the three types of road. For example, on unclassified roads the 12-hour (0700-1900) flow is 80.5% of the 24-hour total flow. The percentages in Table 6 can also be used to convert short-term counts into flows

covering a longer time period. For instance to convert a 12-hour flow on an unclassified road to a 24-hour flow, the 12-hour flow should be divided by 0.805

Table 9 Percentage of 24 Hour Traffic Flows in Selected Periods of an Average Weekday 2001

Time Period	Trunk and Principal	Classified Non-Principal	Unclassified	All Roads
0800-0900	6.6	9.0	9.1	7.6
1700-1800	7.4	8.5	8.9	7.9
0700-1900 (12hr)	75.6	80.6	80.5	77.6
0600-2200 (16hr)	83.8	87.7	87.5	85.3
0600-2400 (18hr)	96.5	97.9	97.9	97.0

3.4 Weekly Variations

Tables 7 to 9 provide factors by which flows on a particular day should be divided to give the flow on an average weekday. For example, to convert a 24 hour count undertaken on a Monday on an unclassified road to an average weekday, divide by 0.949.

Table 10 Proportion of Flows to Average Weekday Flows – Trunk and Principal Roads

Time Period	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0700-0900	0.94	1.01	1.03	1.02	1.00	0.43	0.20
1600-1800	0.97	1.00	1.01	1.01	1.00	0.75	0.67
0700-1900	0.96	0.99	1.01	1.01	1.02	0.80	0.66
24 Hour	0.95	0.99	1.00	1.01	1.04	0.84	0.71

Table 11 Proportion of Flows to Average Weekday Flows – Classified Non-Principal Roads

Time Period	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0700-0900	0.95	1.02	1.03	1.02	0.98	0.34	0.17
1600-1800	0.97	1.01	1.02	1.02	0.97	0.68	0.59
0700-1900	0.95	1.00	1.01	1.01	1.02	0.80	0.65
24 Hour	0.94	0.99	1.01	1.02	1.03	0.82	0.68

Table 12 Proportion of Flows to Average Weekday Flows – Unclassified Roads

Time Period	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0700-0900	0.95	1.01	1.03	1.02	0.98	0.32	0.13
1600-1800	0.95	1.01	1.02	1.01	0.99	0.61	0.46
0700-1900	0.95	0.99	1.01	1.01	1.04	0.74	0.54
24 Hour	0.94	0.99	1.01	1.01	1.05	0.76	0.58

Table 13 Proportion of Flows to Average Weekday Flows – All Roads

Time Period	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0700-0900	0.95	1.01	1.03	1.02	0.99	0.39	0.18
1600-1800	0.97	1.00	1.02	1.02	0.99	0.72	0.62
0700-1900	0.96	0.99	1.01	1.01	1.02	0.79	0.65
24 Hour	0.95	0.99	1.01	1.02	1.04	0.93	0.69

Seasonal Variations

The following graphs have been produced using the 25 permanent volume counts.

Figure 1 Traffic on Trunk and Principal Roads 2001

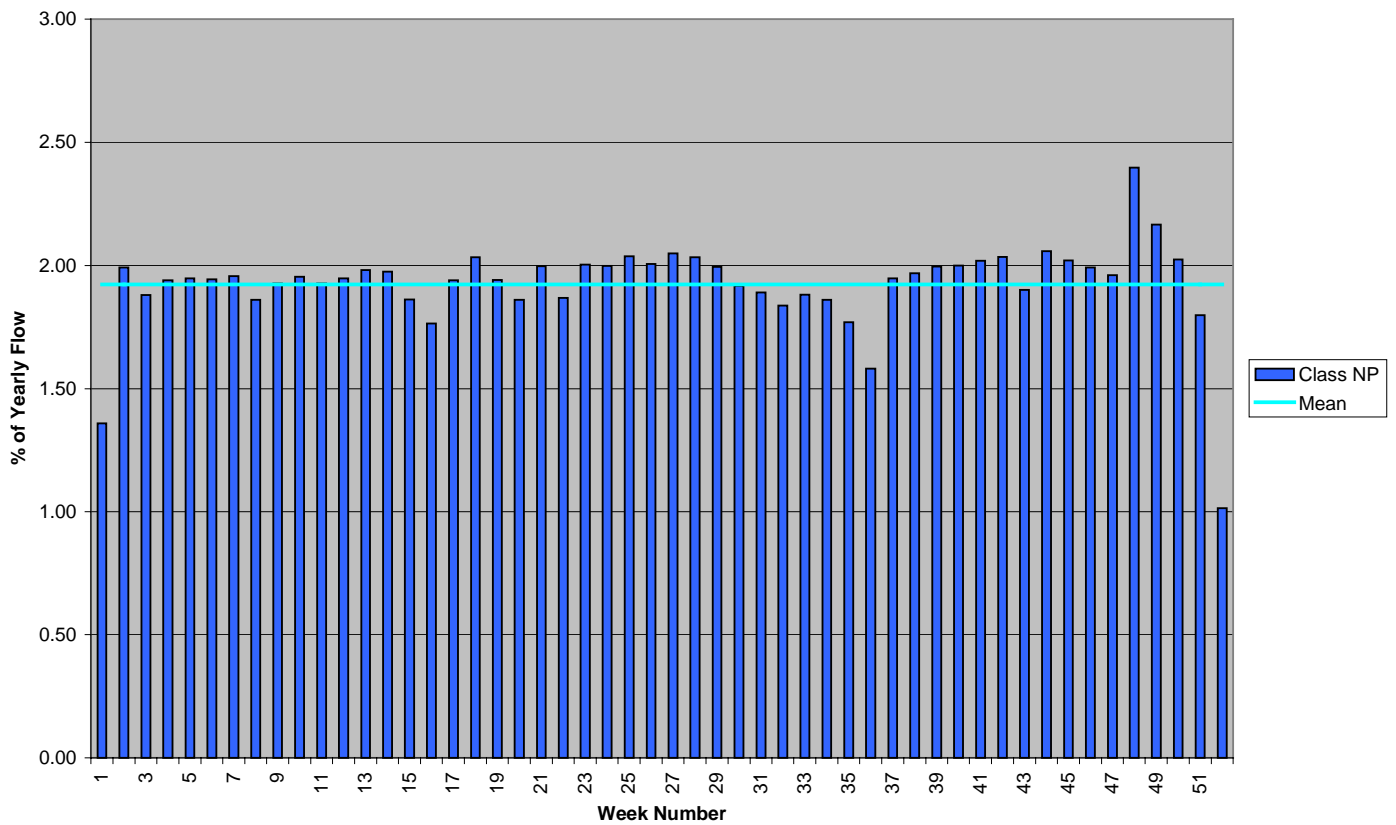


Figure 2 Traffic on Classified Non-Principal Roads 2001

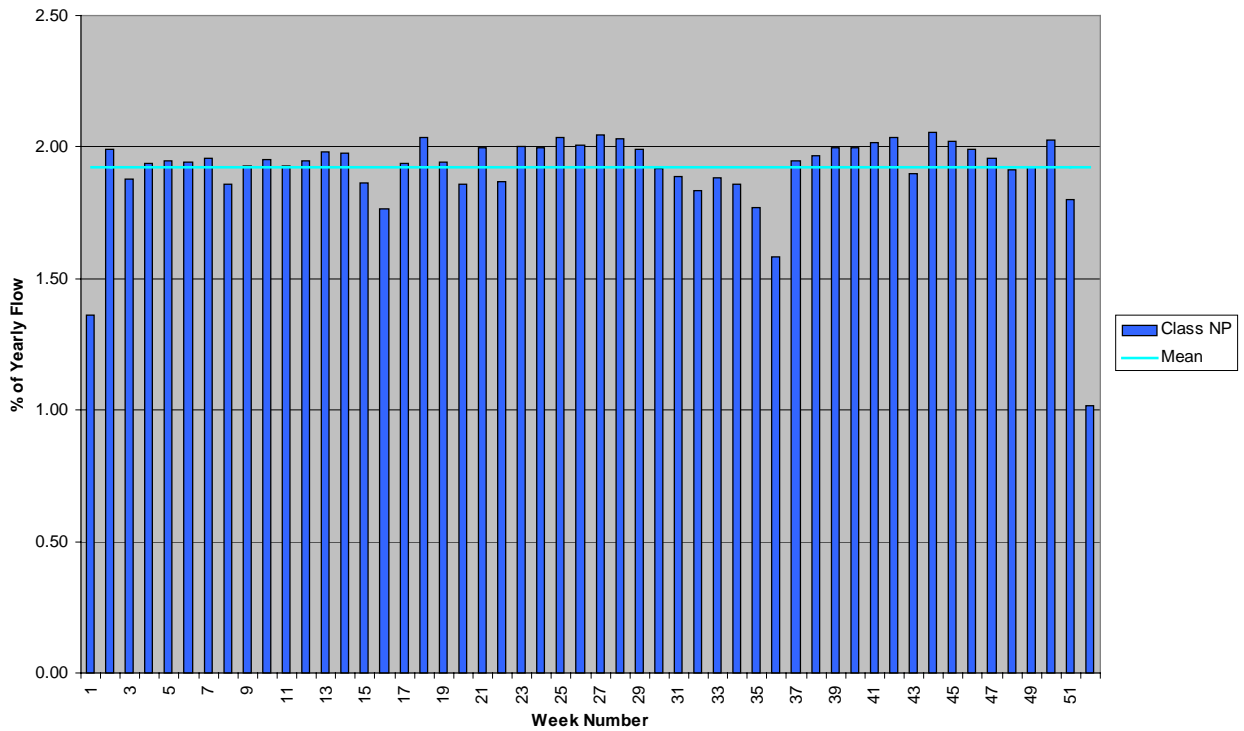


Figure 3 Traffic on Unclassified Roads 2001

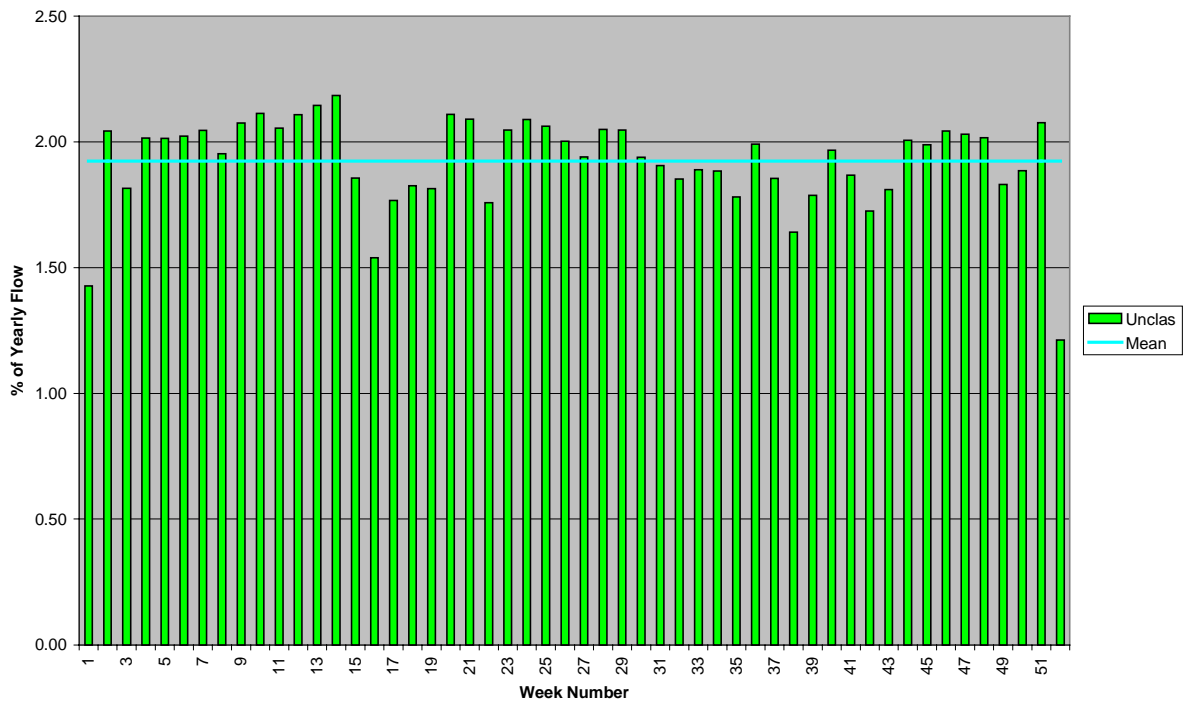
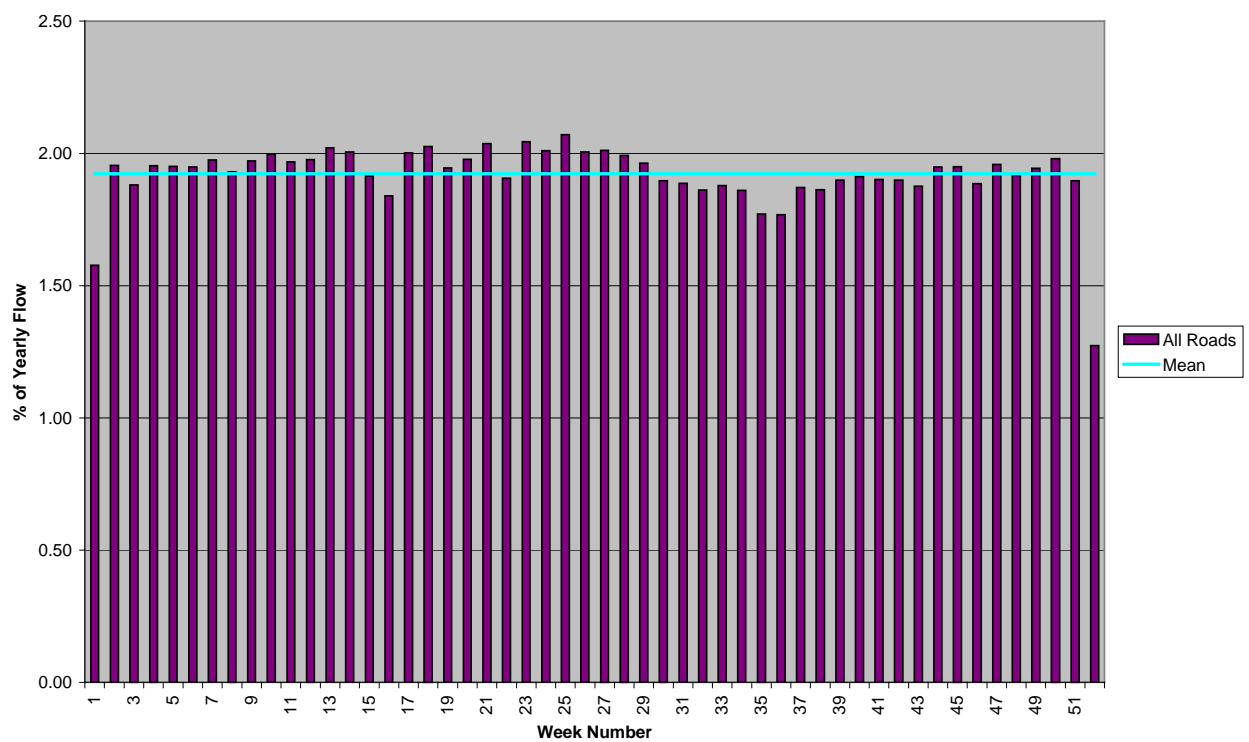


Figure 4 Traffic on All Roads (Excluding Motorways) 2001



The largest variations in traffic throughout the year can be seen on unclassified roads. Traffic on trunk and principal roads varies very little from week to week.

3.5 Changes in Vehicle Classifications.

From 2001 only four sites are now permanently monitored. The remaining 21 sites are monitored 4 times per year, evenly spread throughout the year and across the 18 corridors.

Figure 5 12 Hour Average Weekday Vehicle Classifications 1998-2001

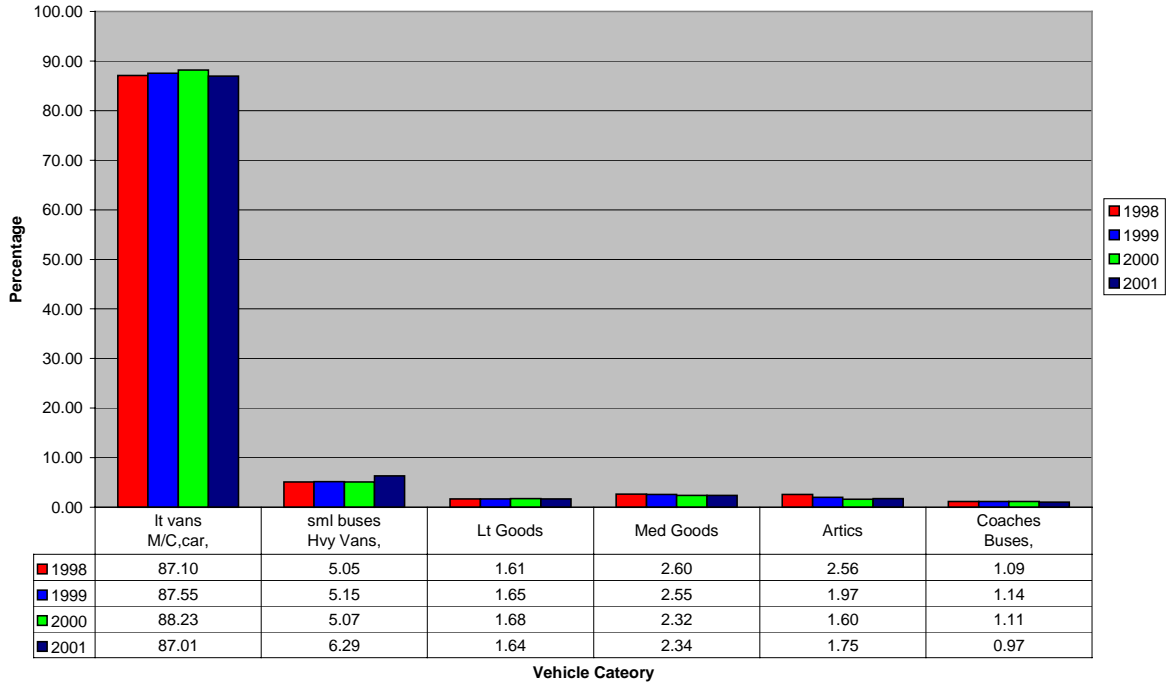


Figure 6 12 Hour Saturday Vehicle Classifications 1998-2001

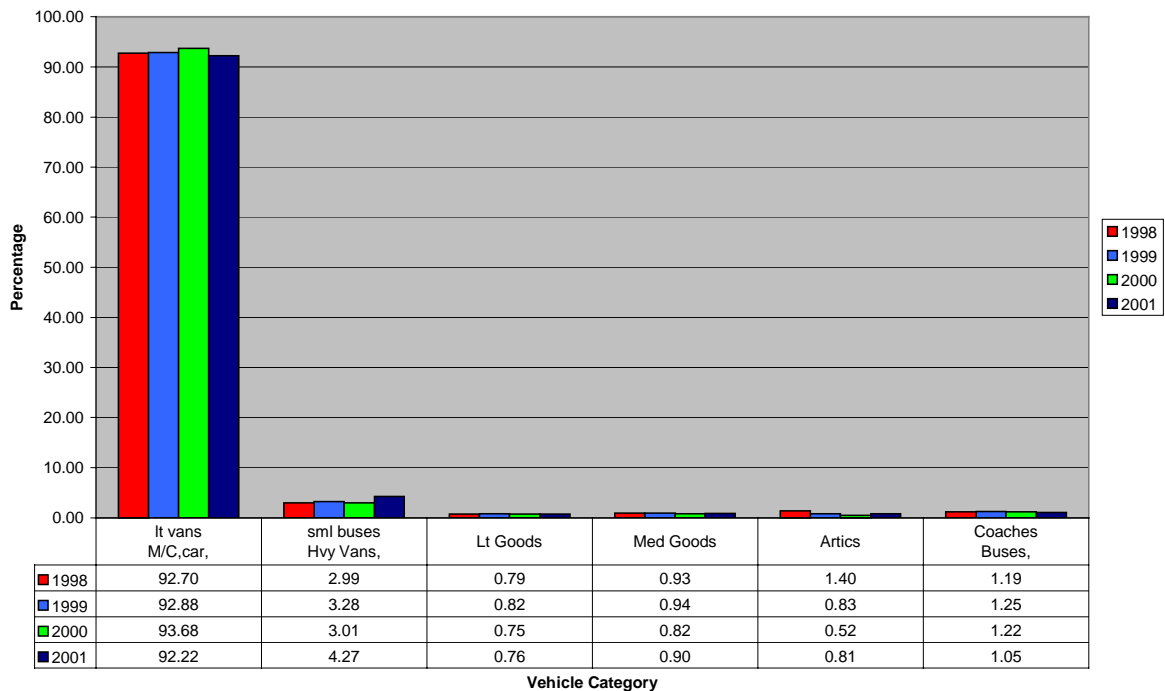
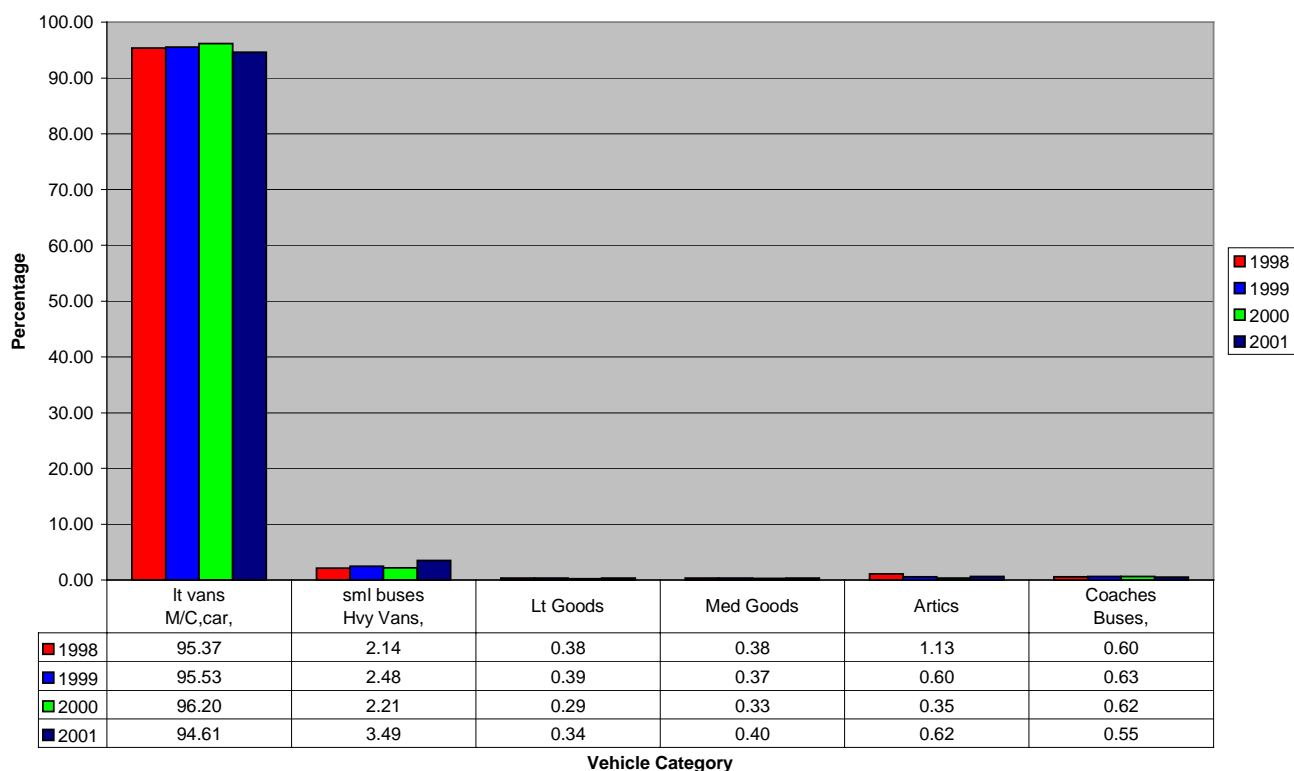


Figure 7 12 Hour Sunday Vehicle Classifications 1998-2001



Comparisons of vehicle compositions in 2001 with previous years is not really possible since the way data was collected changed in 2001. Prior to this the data was based on 25 permanent sites located on principal roads. In 2001 only four sites continued to be permanent with the remaining sites monitored four times a year. The vehicle mix on the four remaining roads may therefore vary from the aggregated data from the 25 sites depending on bus routes, vicinity to the motorway and industrial estates etc.