

West Bromwich Cordon Survey

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West Bromwich Cordon Report 2006

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1.1 Introduction

This report is being undertaken as part of the Local Transport Plan monitoring process. The purpose of the report is to give an indication of the level of vehicular activity into West Bromwich Town Centre, to indicate existing and future levels of transport demand and to monitor the effects of transport policy. The manual surveys have been undertaken by Sandwell Borough Council, while the automatic surveys and analysis have been undertaken by Mott MacDonald.

1.2 Methodology

The most effective method of obtaining the necessary data is to monitor traffic flows crossing a cordon around the town centre. Sites are positioned on all the main roads, with further sites on some of the minor roads so as to obtain a 'closed' cordon. The idea is to capture all vehicles entering the area centre.

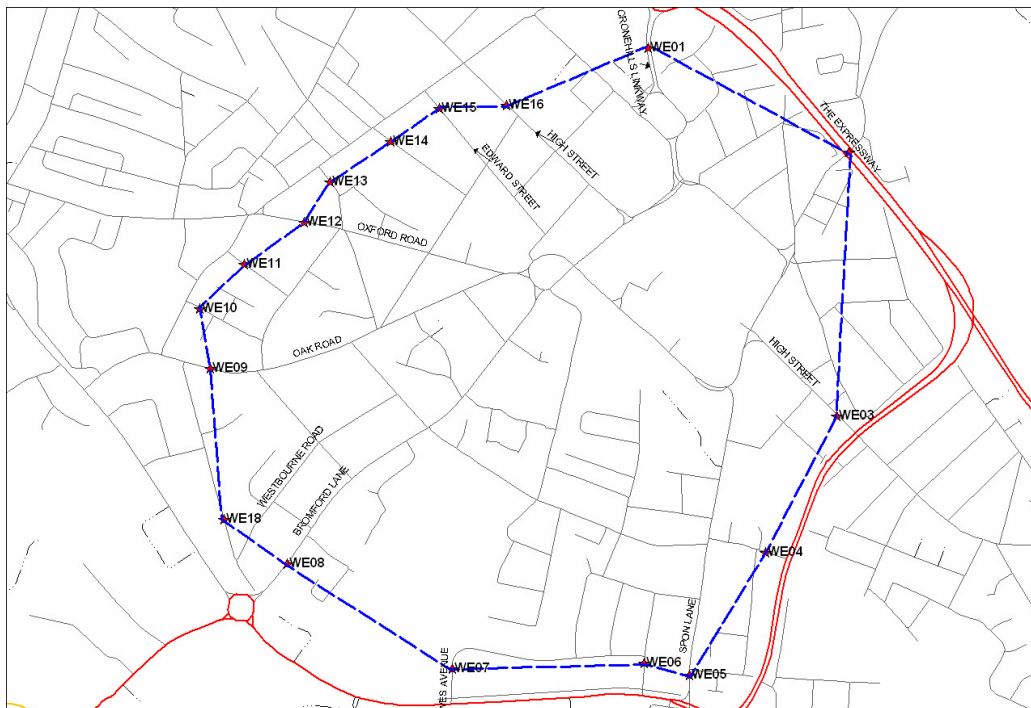
Counters are used that record the vehicles automatically (ATC's). In this way, data for a full week is collected, enabling 24 hour average weekday data to be presented.

Four sites (WE03, WE05, WE08 and WE16) are also surveyed manually by Sandwell Borough Council staff. This data is used to estimate the modal split of the automatic data and also to estimate the number of people travelling into the centre by private vehicle.

A complementary bus cordon survey has been undertaken by Centro, the results from which feed into this report.

Collection of the data took place during week beginning Monday 13th March 2006. The same sites are monitored during the same weeks biennially to maintain consistency in the data.

Figure 1: Location of Automatic Traffic Count Sites



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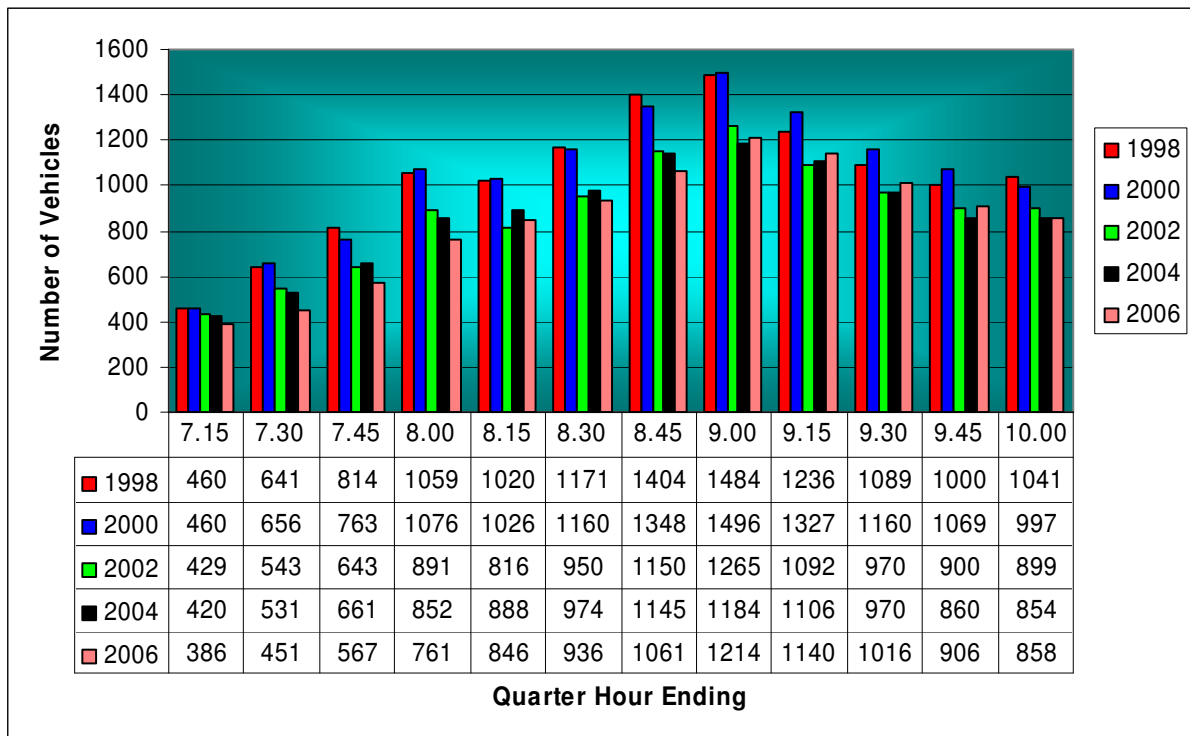
Automatic Traffic Count Results

Table 1: Number of vehicles crossing the cordon in the Morning Peak (07.30 - 09.30)

	1996	1998	2000	2002	2004	2006	2006 (07.00-10.00)
Inbound Total	8781	9277	9356	7777	7780	7541	10142
Outbound Total	6570	6785	6862	5831	5714	5399	7526

- Inbound, traffic has decreased from 2004 to 2006 by 3.1%.
- Outbound, the numbers of vehicles decreased by 5.5%.

Figure 2: Inbound Vehicles by Quarter Hour (07.00-10.00)



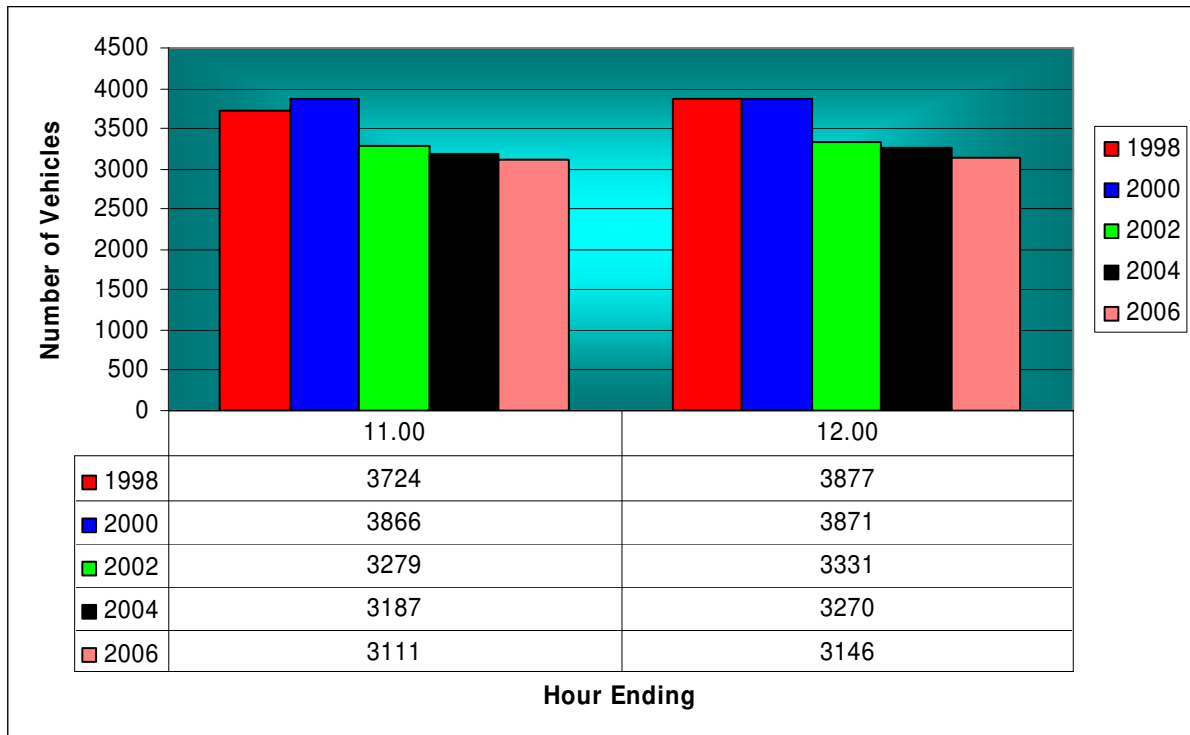
- Figure 2 shows decreases in traffic in the early morning time periods during 2006. However, increases occurred during the later morning peak period from 08.45 to 10.00.

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Table 2: Number of vehicles crossing the cordon in the Morning Off-Peak Period (10.00-12.00)

	1996	1998	2000	2002	2004	2006
Inbound Total	7508	7601	7737	6610	6457	6257
Outbound Total	6570	7258	7401	6479	6345	5851

Figure 3: Off-Peak Inbound Vehicles by Hour (10.00-12.00)



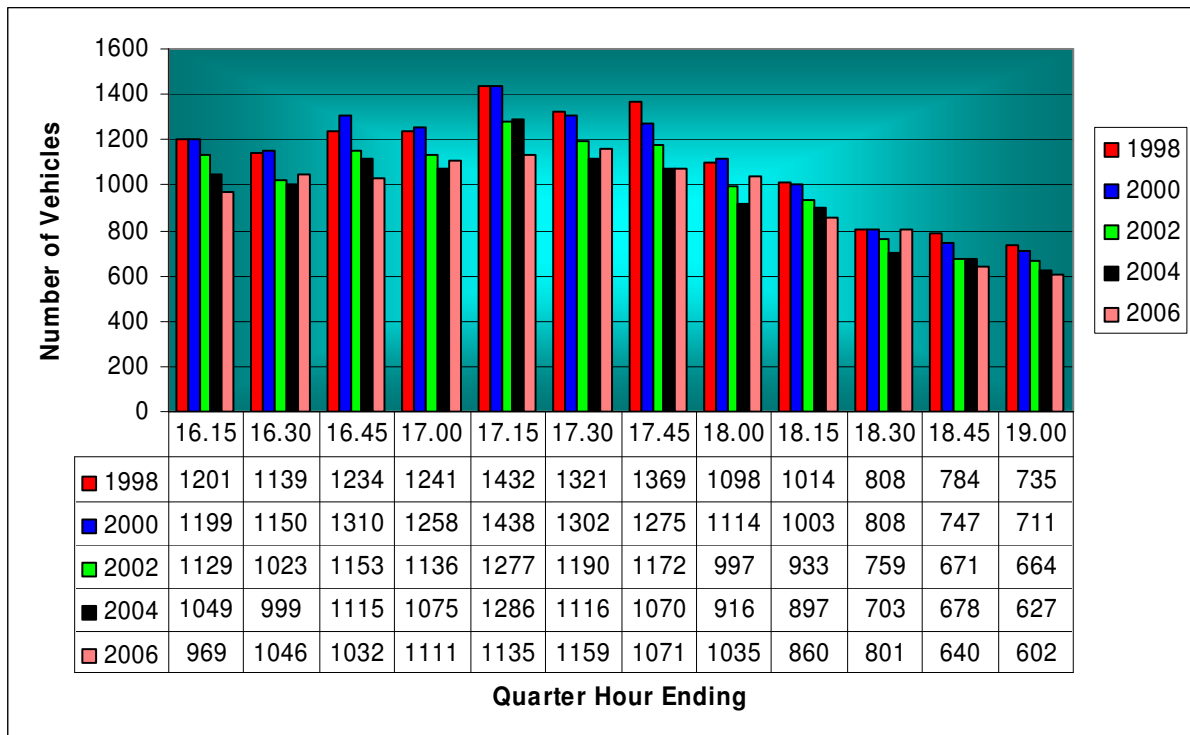
- Traffic during the off-peak period decreased by 3.1% inbound compared with 2004.
- Outbound, traffic fell by around 7.9%.

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Table 3: Number of vehicles crossing the cordon in the Evening Peak (16.00-18.00)

	1996	1998	2000	2002	2004	2006
Inbound Total	7133	7830	7869	7130	7041	6959
Outbound Total	8961	10035	10046	9077	8626	8558

Figure 4: Outbound Evening Peak Hour Flows (16.00-19.00)



- Figure 4 shows fluctuating changes in quarter hour periods in 2006 compared with 2004. Some quarter hours have increased while others have decreased. Table 3 shows that during 2005, inbound traffic

decreased by 1.2%, continuing the trend seen in previous years. Overall, traffic decreased marginally by 0.7% in the outbound direction.

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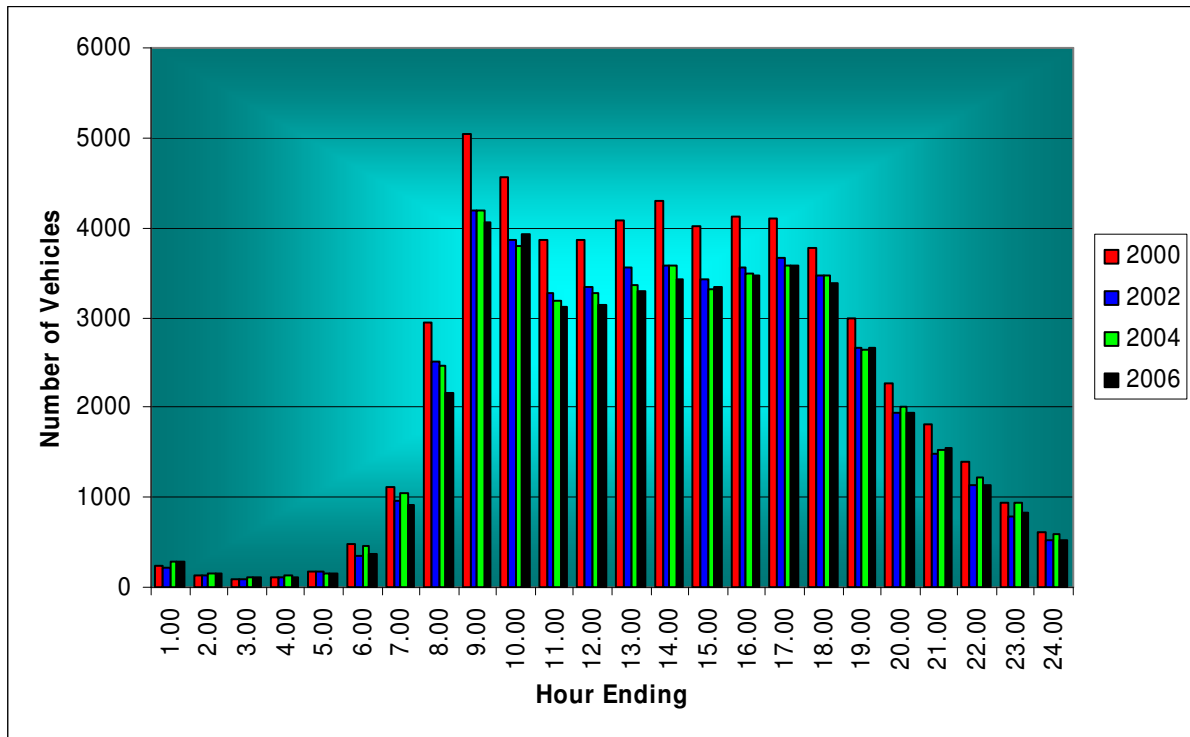
Table 4: Total Vehicles by Time Period on an Average Day

	07.30 - 09.30	10.00 - 12.00	16.00 - 18.00	07.00 – 1900 (12 hour)	00.00 – 24.00 (24 hour)
2000					
Inbound	9356	7737	7869	47647	57022
% of 24 hr	16.4	13.6	13.8	83.6	100
Outbound	6862	7401	10046	47440	57157
% of 24 hr	12.0	12.9	17.6	83.0	100
NET	2494	336	-2177	207	135
2002					
Inbound	7777	6610	7130	41047	48966
% of 24hr	15.9	13.5	14.6	83.8	100
Outbound	5831	6479	9077	42097	50553
% of 24hr	11.5	12.8	17.9	83.3	100
NET	1946	131	-1946	1050	1587
2004					
Inbound	7780	6457	7041	40351	48939
% of 24hr	15.9	13.2	14.4	82.4	100
Outbound	5714	6345	8626	40446	49135
% of 24hr	11.6	12.9	17.5	82.6	100
NET	2066	112	-1585	95	196
2006					
Inbound	7541	6257	6959	39540	47639
% of 24hr	15.8	13.1	14.6	83.0	100
Outbound	5399	5851	8558	38959	47180
% of 24hr	11.4	12.4	18.1	82.6	100
NET	2142	406	-1589	581	459

- In 2006, 15.8% of traffic flowing into the town centre on a typical weekday crossed the cordon line between the hours of 7.30a.m. and 9.30a.m.
- 18.1% of outbound traffic crossed the cordon line between 1600-1800.
- 13.1% of the daily traffic into the town centre occurred during the off peak time period (1000-1200).
- Around 83% of average daily inbound traffic crossed the cordon during the main 12hr day (0700-1900).
- 82.6% of outbound traffic crossed the cordon within the same period.
- The number of vehicles counted on an average weekday in 2006 were less than those counted in 2004. Inbound traffic flows were 2.6% lower and outbound 4.0% lower.

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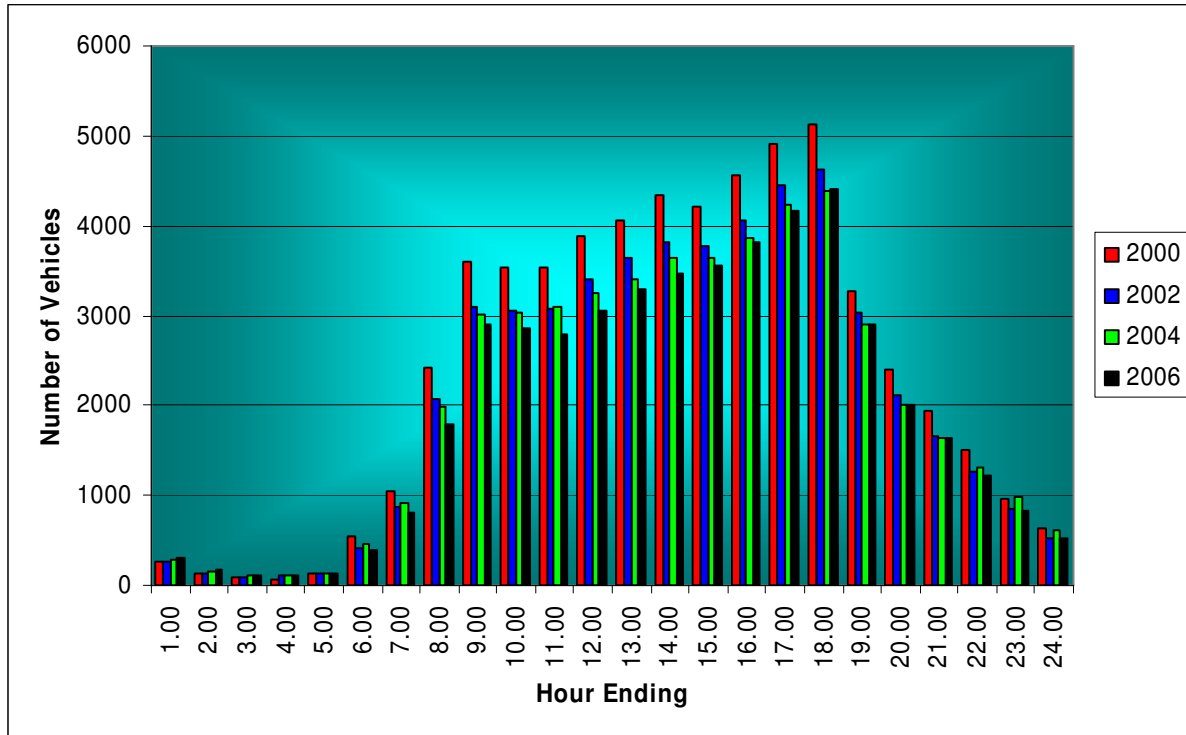
Figure 5: 24 Hour Flows Inbound



- Figure 5 shows the distribution of vehicles entering West Bromwich town centre by hour over the 24 hour period.
- Most hourly periods showed decreases in traffic compared with 2004. The exceptions to this were in the 0900-1000 period and the late evening period.

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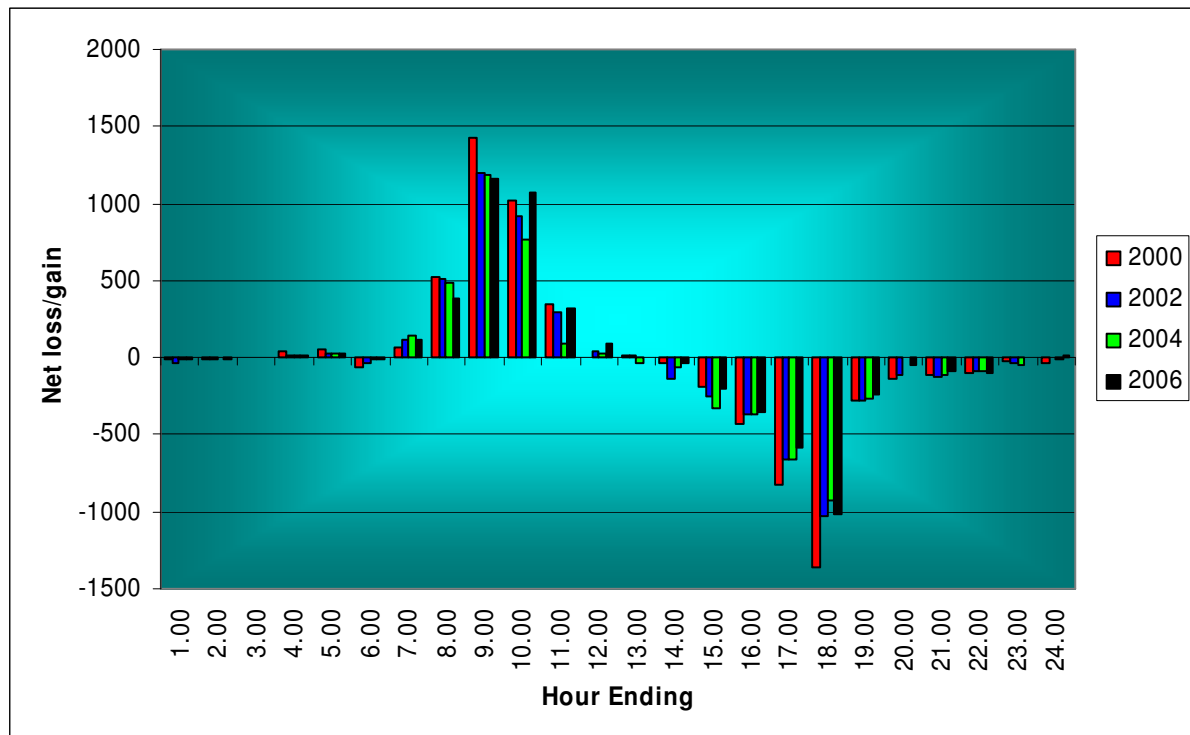
Figure 6: 24 Hour Flows Outbound



- Figure 6 shows the corresponding outbound flow by hour over the 24 hour period.
- Similar to the inbound direction, most hourly periods showed a decrease compared with 2004. However, there were very slight increases in some of the late evening periods just as in the inbound direction.

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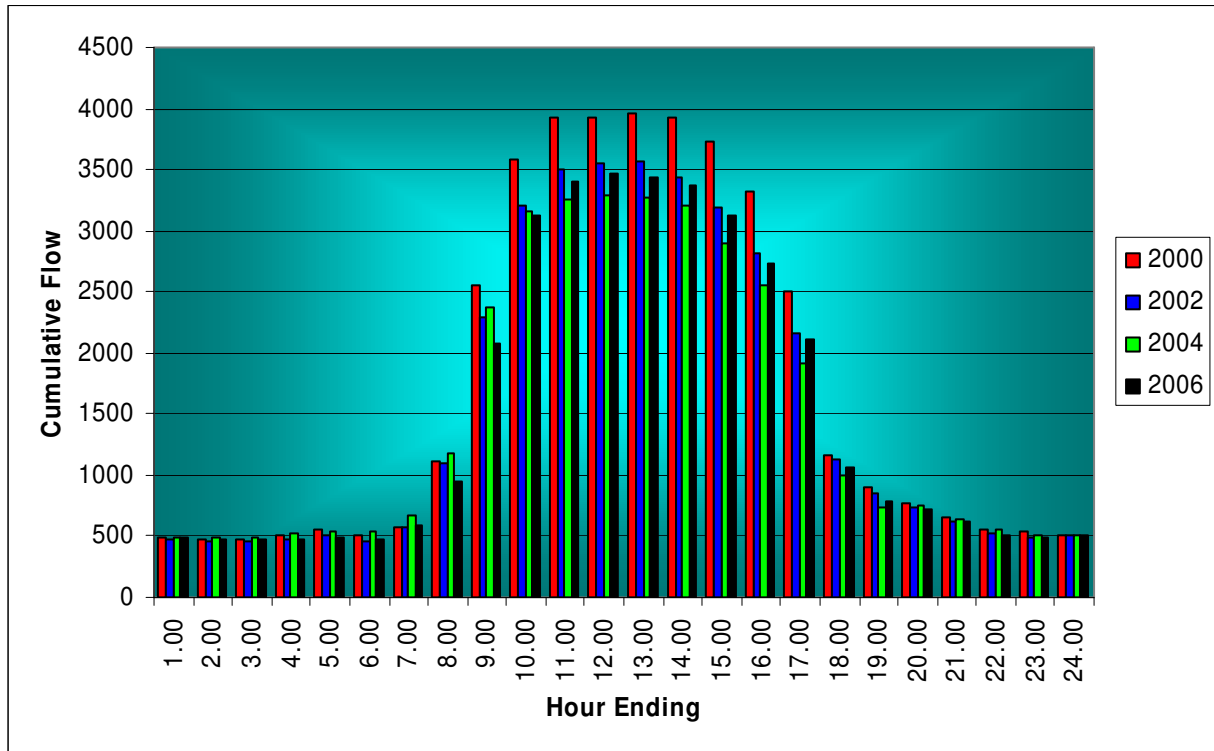
Figure 7: Net Loss/Gain in Vehicles Over 24 hour Period



- Figure 7 shows the net gain in vehicles to the cordon by hour from 2000 to 2006.
- In 2006, the highest single hour was 09.00-10.00 when 2,230 more vehicles entered the town centre than left it.
- Correspondingly, the highest hour in the evening was 17.00-18.00 when 1,599 more vehicles left the town centre than entered it.

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Figure 8: Accumulation of Vehicles in West Bromwich Town Centre Cordon 2000-2006



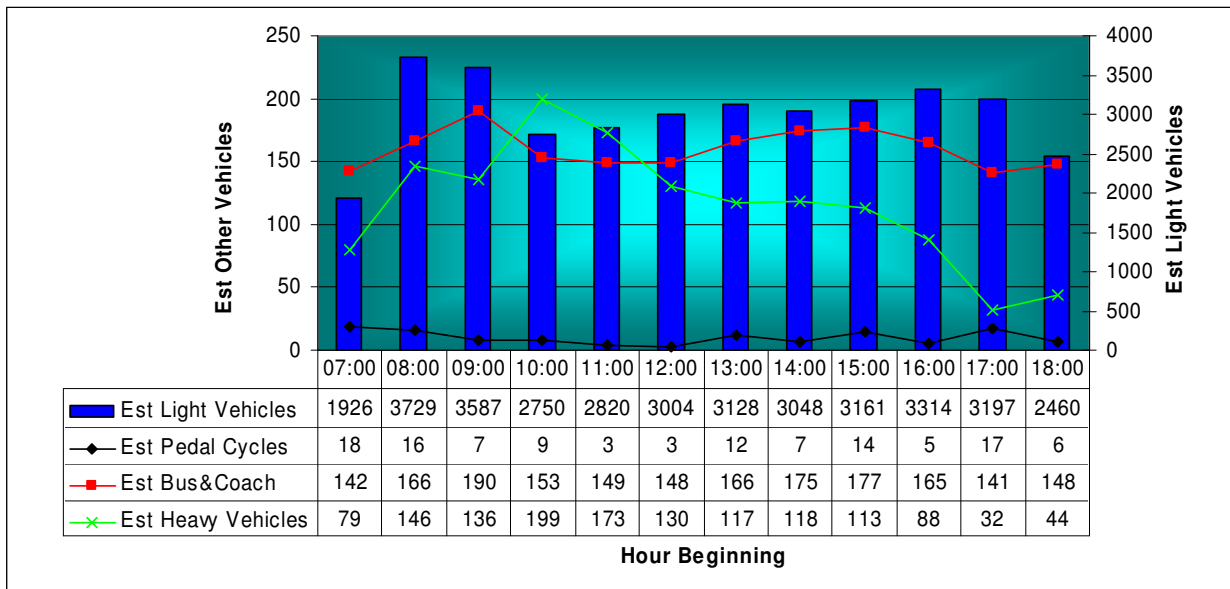
- Figure 8 shows the accumulation of vehicles during the 24 hour period in West Bromwich town centre.
- The highest number of vehicles remaining inside the town centre occurs during 12.00-13.00 when there were an estimated 3,467 vehicles within the cordon.

* N.B. In calculating accumulation of vehicles, the ratio of inbound to outbound vehicles was balanced and a nominal 500 vehicles were added in as an estimate of vehicles remaining inside the cordon overnight

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1.4 Mode of Travel

Figure 9: Estimated Inbound Vehicles by Mode 2006.



- The manual surveys give us an indication of mode of travel data.
- For the purpose of Figure 9, 'light vehicles' includes motorcycles, cars, taxis and light vans less than 1.5T. The heavy goods category includes all vehicles over 1.5T.
- The vehicle mode is estimated by multiplying the percentage vehicle type taken from the manual surveys and the number of vehicles taken from the automatic traffic count survey.

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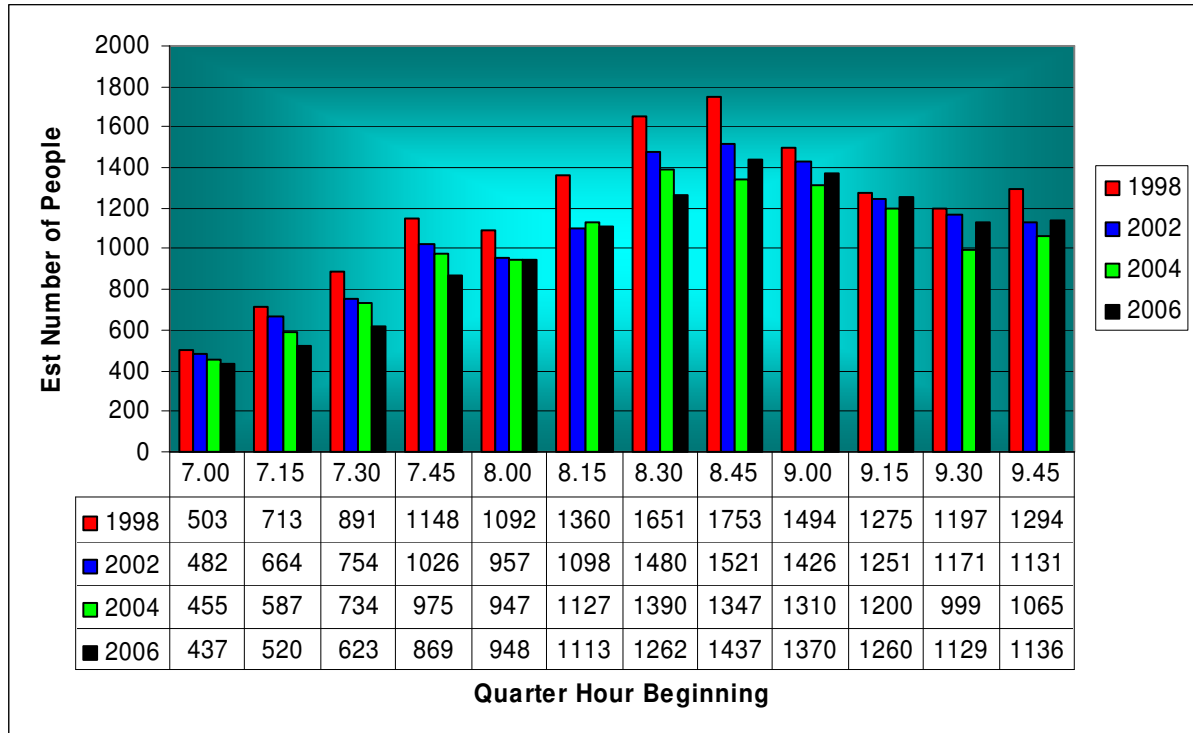
Table 5: Estimates of Persons from Occupancy Data 2006

Total Veh	Total Pass	Ave Occup		A	B	C	D	E	F	G	Est People Heavy Vehs	Est People in Light and Heavy Vehs			
				Automatically Counted Vehicles	Estimated Number of Buses	Estimated Pedal Cycles	Est. Light Vehs.	Est People Light Vehs	Est People Light Vehs + Ped Cyc	Estimated Heavy Vehs		2006	2004	2002	1998
180	225	1.25	7.00	386	35	3	329	411	414	19	22	437	455	482	503
237	292	1.23	7.15	451	29	3	401	493	497	18	23	520	587	664	713
259	309	1.19	7.30	567	44	3	494	589	593	25	30	623	734	754	891
418	499	1.19	7.45	761	35	8	701	836	844	17	25	869	975	1026	1148
397	473	1.19	8.00	846	55	2	747	890	892	42	56	948	947	957	1092
464	569	1.23	8.15	936	36	4	866	1062	1065	31	48	1113	1127	1098	1360
529	657	1.24	8.30	1061	42	9	962	1195	1204	48	57	1262	1390	1480	1651
575	699	1.22	8.45	1214	33	2	1153	1402	1404	26	34	1437	1347	1521	1753
555	700	1.26	9.00	1140	54	4	1056	1332	1336	26	34	1370	1310	1426	1494
453	590	1.30	9.15	1016	53	0	929	1210	1210	34	50	1260	1200	1251	1275
3650	4496	1.23	0730-0930	7541	353	32	6908	8516	8548	249	334	8882	9030	9511	10664
415	540	1.30	9.30	906	42	4	834	1085	1089	27	40	1129	999	1171	1197
428	594	1.39	9.45	858	41	0	769	1068	1068	48	68	1136	1065	1131	1294
4910	6147	1.25	0700-1000	10142	500	42	9240	11573	11615	360	487	12103	12136	12960	14370

The figures represented in Table 5 are shown in Figure 10.

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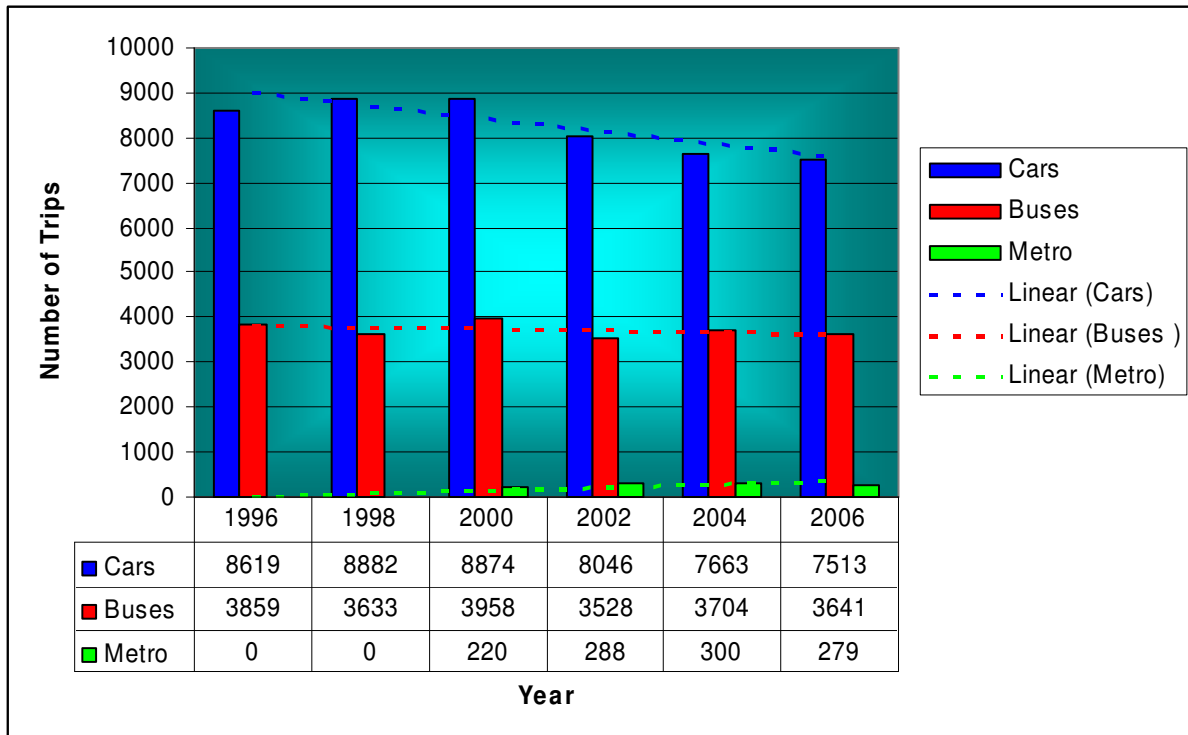
Figure 10: Estimates of Persons Travelling Inbound by Private Transport 07.00-10.00



- Figure 10 illustrates the estimated number of people travelling into West Bromwich town centre by means of private transport. This includes drivers and passengers of all vehicles except buses.
- The largest increases in passengers were seen during the late morning period from 08.45-10.00. Decreases were seen during the early morning period.

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Figure 12: Total Inbound Person Trips 0730-0930



- Between 1996 and 2000 there was a steady increase in the overall number of person trips into West Bromwich during the morning peak. Between 2000 and 2002, however, the total number of person trips fell by nearly 1,200. Since then there has been a steady decline and during 2006 total trips decreased again, this time by 2.0%.
- Since 1998, the number of persons entering the town centre during the morning peak period by car has fallen by over 1,300. The greatest fall has been between 2000 and 2002 with over 800 fewer trips. Car trips continued to decline during 2005 by 2%.
- Bus patronage also fell sharply during 2002 compared with 2000. After recovering in 2004, numbers of passengers fell slightly in 2006 by 1.7%.
- Metro passengers have remained fairly constant for the past 4 years but account for only 2.5% of total trips during the morning peak period.
- All public transport modes accounted for 34.3% of person trips into West Bromwich in 2006; exactly the same as in 2004.