

Transport Statistics Bulletin

Vehicle Speeds in Great Britain 2002

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Rounding of figures: In tables where figures have been rounded to the nearest final digit, there may be an apparent slight discrepancy between the sum of the constituent items and the total as shown.

Conversion factors:	1 kilometre = 0.6214 mile	1 tonne = 0.9842 ton
	1 tonne-km = 0.6116 ton-mile	1 gallon = 4.546 litres
	1 billion = 1,000 million	1 litre = 0.220 gallons

Symbols: The following symbols have been used throughout.

..	= not available	.	= not applicable
-	= Negligible (less than half the final digit shown)	0	= Nil
*	= Sample size too small for reliable estimates.	ow	= of which
{	= subsequent data is disaggregated	}	= subsequent data is aggregated
	= break in the series	P	= provisional data
F	= forecast expenditure	e	= estimated outturn
n.e.s.	= not elsewhere specified	TSO	= The Stationary Office

VEHICLE SPEEDS IN GREAT BRITAIN

2002

DEPARTMENT FOR TRANSPORT
STATISTICS BULLETIN SB(03)24

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INTRODUCTION

National administrations in England, Scotland and Wales are responsible for setting speed limits on motorways and trunk roads. Local authorities have the power to impose or vary speed limits on principal roads and on all other local roads. In order to monitor the compliance of drivers with these speed limits the Department collects speed data from traffic counting sites around Great Britain.

The Department monitors traffic speeds and traffic levels at about 180 sites throughout Great Britain using automatic traffic counters. These are generally situated away from junctions, hills or sharp bends, at locations where traffic is likely to be free flowing. Thus, in principle, they provide information on the speeds at which drivers choose to travel when their behaviour is not constrained by congestion or other road conditions. Any sites affected by long term road works are excluded. Of course incidents or congested conditions may arise at any site, and when this happens it will reduce speeds below those in free flowing conditions. This is not believed to have a significant effect on the figures published in this bulletin.

In this bulletin the term 'built-up' is used to describe roads to which a 30 mph or 40 mph limit applies; the term 'non-built-up' describes other roads.

This year – 2002 – the sub-set of sites from which data is analysed to produce vehicle speed statistics has been extended slightly. Data from three additional dual carriageway sites was analysed; there are now 7 such sites. The number of non-built-up single carriageway sites was 28, 4 more than in 2001. All of the individual vehicle records recorded at each site have been processed (excluding a few very slow-moving vehicles indicating that conditions at the site were congested). In previous years only a sample of records were analysed. The total number of vehicle records which were processed to produce 2002 statistics was about 725 million.

A description of the survey including measurement errors is given at Annex A.

SUMMARY OF THE KEY POINTS FROM THE ANALYSIS OF 2002 SPEED SURVEY

All the results in this bulletin relate, broadly, to the speeds at which drivers, on roads in Great Britain, travel when not constrained by congestion or other road conditions.

NON-BUILT-UP ROADS - 2002 ESTIMATES (Chart 1 and Section 1: Tables 1 - 3)

- More than half of all cars observed at the survey sites on motorways exceeded the speed limit and 18 per cent were travelling at more than 80 mph. 27 per cent of motorcycles travelled at more than 80 mph, compared with 18 per cent in 2001
- Nearly half of all cars on dual carriageways exceeded the speed limit; 14 per cent were travelling faster than 80 mph. 26 per cent of motorcycles travelled at more than 80 mph, compared with 13 per cent in 2001.
- On non-built-up single carriageway roads, 8 per cent of cars exceeded the 60 mph limit, 1 per cent travelling at 70 mph or over.
- There was a very high incidence of speeding by heavy goods vehicles (HGVs) on non-built-up dual and single carriageway roads. On dual carriageways 88 per cent of articulated HGVs surveyed exceeded their 50 mph limit, the same as in 2001. On single carriageways 68 per cent of articulated HGVs exceeded their 40 mph limit, down from 76 per cent in 2001; 15 per cent were travelling faster than 50 mph compared with 28 per cent in 2001.
- The average speeds of vehicles hardly changed from those observed in previous years. The average speed of cars on motorways (70 mph) and the proportion exceeding the speed limit (54 per cent) has remained unchanged since 1997.

BUILT-UP ROADS - 2002 ESTIMATES (Chart 2 and Section 2: Tables 5 - 8)

- The percentage of vehicles exceeding the speed limit at 30 mph sites fell significantly in 2002. The proportion of motorcycles exceeding the speed limit fell from 59 per cent in 2001 to 47 per cent in 2002; for cars the fall was from 65 per cent to 59 per cent. This is also reflected in the proportion of vehicles travelling at more than 35 mph: for motorcycles this fell from 35 per cent in 2001 to 24 per cent in 2002 and for cars the fall was from 32 per cent to 25 per cent.
- On built-up 30 mph roads, 55 per cent of rigid HGVs exceeded the speed limit (the same as in 2001), 23 per cent by more than 5 mph (slightly more than the 20 per cent observed in 2001)
- On 40 mph roads, 27 per cent of cars and 41 per cent of motorcycles exceeded the speed limit, slightly more than in 2001. The proportions of cars and motorcycles exceeding 45 mph were 27 per cent and 41 per cent, respectively, again, slightly more than in 2001

Chart 1. Percentage exceeding speed limits on non-built-up roads: 2002

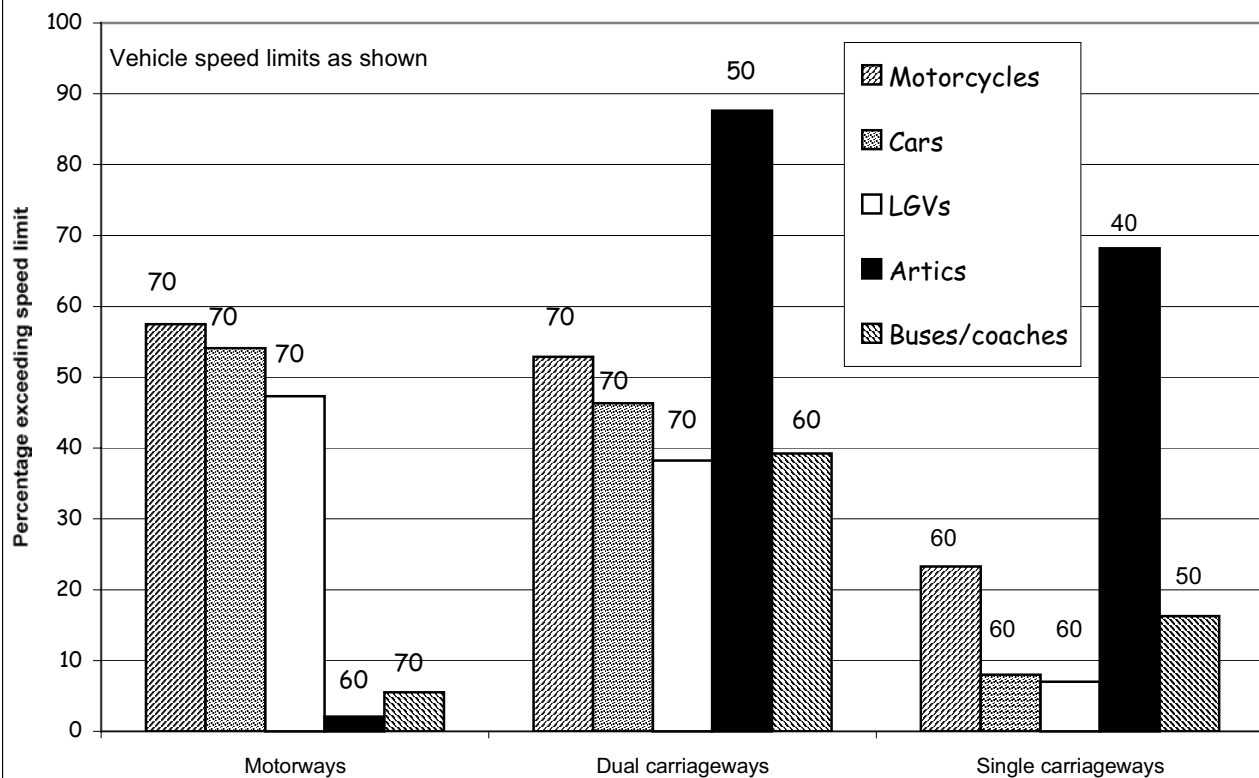
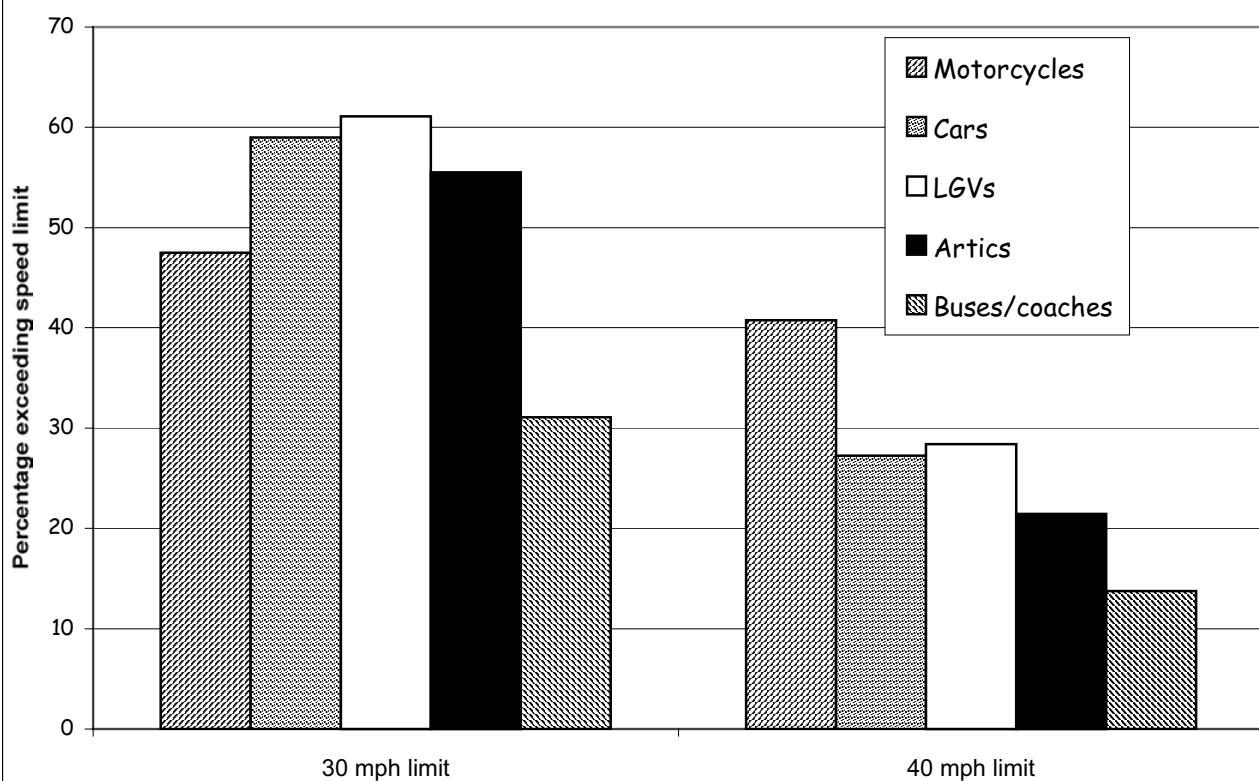


Chart 2. Percentage exceeding speed limits on built-up roads: 2002



SECTION 1: DRIVER SPEEDS ON NON-BUILT-UP ROADS

Vehicle speeds by road type and vehicle type (Table 1)

Motorways

- 1.1. At the 27 motorway sites surveyed, 54 per cent of cars exceeded the 70 mph limit and 18 per cent were travelling at over 80 mph. The sites included in the survey are typically ones where the traffic is likely to be free flowing (see the Introduction, page 2, for a fuller explanation.) The speed distribution for light goods vehicles (LGVs) indicates slightly lower speeds than for cars: 47 per cent of LGVs exceeded 70 mph and 15 per cent exceeded 80 mph. Comparisons with earlier years are given on page 10.
- 1.2. The percentage of motorcycles exceeding the motorway speed limit was higher than for cars; 57 percent were travelling faster than 70 mph, and 27 per cent exceeded the limit by more than 10 mph.

Dual carriageways

- 1.3. The speed distributions at the seven sites on dual carriageways were similar to those on motorways for all vehicle types; average speeds were about the same. Since HGVs, buses and coaches have lower speed limits on non-motorway dual carriageways, many more were exceeding the relevant speed limit. For example, 88 per cent of articulated HGVs were travelling at more than their 50 mph limit and 3 per cent were going faster than 60 mph. The speed limit for buses and coaches on dual carriageways is 60 mph; 39 per cent of those monitored in the survey were exceeding this limit.
- 1.4. The proportion of cars exceeding the 70 mph limit on dual carriageways was 46 per cent, and 14 per cent exceeded 80 mph. 38 per cent of LGVs exceeded their 70 mph limit.

Single carriageways

- 1.5. Average speeds were lower at the 28 sites and the proportion of vehicles exceeding the speed limit is generally lower on these roads than on dual carriageways. About 8 per cent of the cars surveyed at these sites exceeded the 60 mph national speed limit for single carriageway roads. However 23 per cent of motorcycles exceeded 60 mph and a high proportion of HGVs, in particular the largest goods vehicles, were exceeding their speed limit of 40 mph. For example, 68 per cent of articulated HGVs were exceeding their 40 mph limit, 15 per cent travelling at more than 50 mph.

Table 1 Vehicle speeds on non-built-up roads by road type and vehicle type: Great Britain: 2002

(a) Motorways ¹						miles per hour/ <i>per cent</i> /number of vehicles				
	Motor-cycles	Cars	Cars towing	Light goods ⁴	Buses/coaches	Heavy goods vehicles ⁵				
						Rigid			Articulated	
						2 axle ⁶	3 axle	4 axle	4 axles	5+ axles
Under 50 mph	6	4	17	5	6	8	13	16	9	8
50-60 mph	16	12	53	16	45	48	81	82	89	90
60-65 mph	9	12	18	14	37	15	5	2	2	2
65-70 mph	12	17	8	17	7	13	1	0	0	0
70-75 mph	16	20	3	18	3	8	0	0	0	0
75-80 mph	15	16	1	14	1	4	0	0	0	0
80-90 mph	19	15	0	13	1	3	0	0	0	0
90 mph and over	8	3	0	3	1	1	0	0	0	0
Speed limit	70	70	60	70	70	n/a	60	60	60	60
% more than 10 mph over the limit	27	18	5	15	2	n/a	1	0	0	0
Average speed	71	70	57	69	60	60	54	53	54	54
Number observed ('000s)	2,468	409,120	3,127	45,846	3,388	23,556	2,210	1,615	8,447	35,044
(b) Dual carriageways ²										
Under 30 mph	0	0	1	0	0	0	0	0	1	0
30-40 mph	1	0	1	0	1	1	2	2	1	0
40-50 mph	6	4	19	6	11	12	21	23	16	10
50-60 mph	19	17	51	22	49	52	73	74	79	86
60-65 mph	9	15	16	16	32	14	3	2	2	2
65-70 mph	11	18	8	17	5	10	0	0	1	1
70-80 mph	27	33	4	27	2	9	0	0	0	0
80 mph and over	26	14	0	11	0	2	0	0	0	0
Speed limit	70	70	60	70	60	n/a	50	50	50	50
% more than 10 mph over the limit	26	14	5	11	2	n/a	3	2	3	3
Average speed	70	69	56	66	57	58	52	52	53	54
Number observed ('000s)	260	31,935	317	2,616	189	1,367	173	130	399	1,528
(c) Single carriageways ³										
Under 20 mph	4	1	2	1	1	1	2	1	1	0
20-30 mph	12	3	6	3	5	4	6	7	6	2
30-40 mph	17	20	23	22	29	27	29	38	29	28
40-50 mph	24	43	52	43	49	46	50	44	50	54
50-60 mph	20	26	16	24	15	19	13	10	13	15
60-65 mph	7	5	1	4	1	2	0	0	0	0
65-70 mph	5	2	0	2	0	1	0	0	0	0
70 mph and over	11	1	0	1	0	0	0	0	0	0
Speed limit	60	60	50	60	50	n/a	40	40	40	40
% more than 10 mph over the limit	11	1	1	1	2	n/a	14	10	14	16
Average speed	48	47	42	46	43	44	42	41	42	44
Number observed ('000s)	421	36,964	415	3,741	259	1,667	266	182	460	1,758

¹ Average vehicle speeds from 27 motorway sites.² Average vehicle speeds from 7 dual carriageway sites³ Average traffic speeds from 28 single carriageway sites⁴ Goods vehicles under 3.5 tonnes gross weight⁵ Goods vehicles up to 3.5 tonnes gross weight⁶ Goods vehicles over 3.5 tonnes gross weight⁶ Speed limit depends on loading which cannot be determined

Percentage of cars exceeding the speed limit, by time of day (Table 2)

- 1.6. On motorways and single carriageway roads, the percentage exceeding the speed limit was highest at night and lowest during the peak periods.

Weekday and weekend comparisons (Table 3)

- 1.7. There is evidence that speeds increase slightly at the weekend when traffic flows are lower and the proportion of heavy vehicles is much smaller. The proportion of vehicles exceeding the speed limit also generally shows an increase at weekends. For cars and LGVs this was most marked on motorways.

Table 2 Percentage of cars exceeding the speed limit: by time of day: Great Britain 2002

Time of day	miles per hour		
	Motorways	Dual carriageway	Single carriageway
0000-0400	60	37	18
0400-0600	63	46	16
0600-0700	57	50	14
0700-0800	44	47	10
0800-0900	48	48	7
0900-1000	56	45	7
1000-1100	56	42	5
1100-1600	54	44	6
1600-1700	45	44	6
1700-1800	43	45	6
1800-1900	50	48	8
1900-2200	61	47	11
2200-2400	60	39	14
0000-2400	54	46	8

Table 3 Weekday and weekend comparisons: Great Britain: 2002

Vehicle type	Road type	miles per hour/percent			
		Weekday		Weekend	
		% exceeding limit	Average speed	% exceeding limit	Average speed
Cars	Motorway	51	70	58	72
	Dual carriageway	45	69	45	69
	Single carriageway	7	47	8	48
LGVs	Motorway	44	68	55	71
	Dual carriageway	36	66	42	68
	Single carriageway	6	46	9	48
Buses/coaches	Motorway	5	59	4	61
	Dual carriageway	33	57	42	58
	Single carriageway	16	43	20	44
Rigid 3/4 axle	Motorway	4	53	13	55
	Dual carriageway	76	52	78	53
	Single carriageway	59	41	63	42
Articulated	Motorway	2	54	3	54
	Dual carriageway	88	53	86	53
	Single carriageway	67	43	73	44

Comparisons with earlier speed surveys (Table 4)

- 1.8. Table 4 summarises key results for 2002 compared with earlier years. The average speed of cars on motorways and the percentage exceeding the limit have remained about the same since 1997. Motorcycle speeds on motorways increased in 2002; the percentage travelling faster than 80 mph rose from 18 per cent in 2001 to 27 per cent in 2002.
- 1.9. The same trends were apparent for vehicles travelling on dual carriageways; car speeds remained about the same but motorcycle speeds increased significantly. The proportion of motorcyclists exceeding 80 mph doubled, from 13 per cent in 2001 to 26 per cent in 2002. The speed of articulated vehicles was unchanged on previous years
- 1.10. On single carriageway roads, the average car speed increased slightly from 45 mph in 2000 and 45 mph in 2001, to 47 mph. In contrast to the trend on motorways and dual carriageways, motorcycle speeds on single carriageway roads fell significantly in 2002; their average speed was 48 mph in 2002 compared with 55 mph in 2001 and the percentage exceeding the speed limit also fell from 28 per cent in 2001 to 23 per cent.

Table 4 Vehicle speeds on non-built-up roads: Great Britain: 1997-2002

		number/ miles per hour/per cent					
		1997	1998	1999	2000	2001	2002
Motorways	Sites	25	25	26	26	26	27
	Observations (thousands)	65,444	72,414	80,129	54,686	104,119	534,820
	Average car speed	70	69	70	70	70	70
	% exceeding limit	54	55	56	55	54	54
	% exceeding limit by more than 10 mph	19	19	19	17	18	18
	Average motorcycle speed	N/A ¹	71	70	70	70	71
	% exceeding limit	N/A ¹	62	53	54	54	57
	% exceeding limit by more than 10 mph	N/A ¹	23	18	18	18	27
	Average artic ² speed	55	55	55	55	54	54
	Percent exceeding limit	8	7	6	6	5	2
	% exceeding limit by more than 10 mph	0	0	0	0	0	0
	Average bus/coach speed	61	60	61	60	60	60
	Percent exceeding limit	3	3	4	4	4	6
	% exceeding limit by more than 10 mph	0	0	1	1	1	2
Dual carriageways	Sites	5	4	4	4	4	7
	Observations (thousands)	7,840	8,409	8,916	6,933	9,167	38,913
	Average car speed	70	70	70	70	70	69
	Percent exceeding limit	53	54	53	52	51	46
	% exceeding limit by more than 10 mph	13	14	14	13	13	14
	Average motorcycle speed	N/A ¹	N/A ¹	N/A ¹	67	68	70
	Percent exceeding limit	N/A ¹	N/A ¹	N/A ¹	38	35	53
	% exceeding limit by more than 10 mph	N/A ¹	N/A ¹	N/A ¹	15	13	26
	Average artic ² speed	55	55	54	54	54	53
	Percent exceeding limit	91	91	90	90	88	88
	% exceeding limit by more than 10 mph	7	6	5	4	4	3
	Average bus/coach speed	59	59	59	59	59	57
	Percent exceeding limit	53	49	50	49	49	39
	% exceeding limit by more than 10 mph	2	3	2	2	1	2
Single carriageways	Sites	24	24	24	24	24	28
	Observations (thousands)	9,756	9,751	12,847	8,304	14,043	46,133
	Average car speed	46	46	47	45	45	47
	Percent exceeding limit	9	10	10	9	9	8
	% exceeding limit by more than 10 mph	1	2	2	2	2	1
	Average motorcycle speed	N/A	N/A	N/A	54	55	48
	Percent exceeding limit	N/A	N/A	N/A	27	28	23
	% exceeding limit by more than 10 mph	N/A	N/A	N/A	15	14	11
	Average artic ² speed	44	45	45	45	44	43
	Percent exceeding limit	70	72	76	76	76	68
	% exceeding limit by more than 10 mph	21	26	29	27	28	15
	Average bus/coach speed	42	42	43	41	41	43
	Percent exceeding limit	16	19	23	22	23	16
	% exceeding limit by more than 10 mph	1	2	2	2	2	2

¹Not collected

²artic = articulated heavy goods vehicles

SECTION 2: DRIVER SPEEDS ON BUILT-UP ROADS

Vehicle speeds by speed limit and vehicle type (Table 5)

2. 30 mph roads

- 2.1. Travelling above the speed limit on 30 mph roads was common among drivers of all types of vehicle at the 26 sites surveyed. The sites included in the survey are typically ones where the traffic is likely to be free flowing; (see the Introduction, page 2, for a fuller explanation.). This was particularly the case for drivers of cars and LGVs, 59 per cent and 61 per cent of whom respectively exceeded the speed limit. 25 per cent of cars were travelling at more than 5 mph above the limit.
- 2.2. 47 per cent of the motorcycles surveyed were exceeding the speed limit and 24 per cent were travelling over 35 mph.
- 2.3. Of heavy goods vehicles, 23 per cent of 2 axle rigid goods vehicles and 16 per cent of the rigid 3 and 4 axle goods vehicles exceeded the speed limit by more than 5 mph. 19 per cent of articulated goods vehicles travelled at over 35 mph.
- 2.4. The speed distribution for buses and coaches indicates lower average speeds than for other vehicles. Nevertheless, 31 per cent of buses and coaches exceeded the speed limit, and 9 per cent did so by more than 5 mph.

40 mph roads

- 2.5. Average speeds on 40 mph limit roads were about 5 mph higher than on 30 mph roads for most vehicle types and a lower percentage of drivers exceeded the speed limit. Motorcyclists showed the greatest propensity to exceed the speed limit at the 10 sites surveyed, with 41 per cent travelling in excess of 40 mph and 22 per cent above 45 mph. More than a quarter of the cars surveyed exceeded the speed limit, with 10 per cent travelling at over 45 mph.
- 2.6. 21 per cent of 2 axle HGVs were travelling over the speed limit; 23 per cent of 3 and 4 axle rigid HGVs exceeded the speed limit, 5 per cent travelled at over 45 mph. 17 per cent of articulated HGVs exceeded the speed limit, 4 per cent by more than 5 mph.

Average car speeds by time of day (Table 6)

- 2.7. Although the automatic traffic detectors are generally located at places where the traffic is likely to be free flowing, some sites may have been affected by congestion during part of the day. In general, car speeds and the percentage exceeding the speed limit were slightly lower during the morning peak period when the traffic flow was heaviest, and highest in early morning or late evening when traffic was lightest. On 30 mph roads average car speeds varied at different times of the day between 30 mph and 35 mph and on 40 mph roads between 35 mph and 39 mph. At both speed limits the lowest average speeds occurred between 0800-0900.

Table 5: Vehicle speeds on built-up roads by speed limit and vehicle type: Great Britain: 2002

(a) 30 mph speed limit roads¹

						miles per hour/ <i>per cent</i> / number of vehicles				
						Heavy goods vehicles ⁵				
						Rigid			Articulated	
	Motorcycles ³	Cars	Cars towing	Light goods ⁴	Buses/coaches	2 axle	3 axle	4 axle	4 axles	5+ axles
Under 20 mph	16	4	5	5	7	6	6	3	5	3
20 - 30 mph	36	37	43	34	62	39	42	35	40	37
30 - 35 mph	23	34	35	34	22	33	38	43	37	40
35 - 40 mph	14	18	14	19	7	16	12	16	14	16
40 - 45 mph	6	5	3	6	1	5	2	2	2	3
45-50 mph	3	2	0	2	0	1	0	0	0	1
50 mph and over	2	0	0	1	1	1	0	0	0	0
Percent over 35 mph	24	25	17	27	9	23	14	18	17	20
Average speed	29	31	30	32	28	31	30	31	30	31
Number observed (thousands)	741	54,117	137	4,337	505	1,319	105	116	79	162

(b) 40 mph speed limit roads²

						miles per hour/ <i>per cent</i> / number of vehicles				
						Heavy goods vehicles ⁵				
						Rigid			Articulated	
	Motorcycles ³	Cars	Cars towing	Light goods ⁴	Buses/coaches	2 axle	3 axle	4 axle	4 axles	5+ axles
Under 20 mph	3	1	2	2	3	2	3	2	2	2
20 - 30 mph	11	14	20	16	24	21	18	17	25	30
30 - 35 mph	19	26	28	24	29	27	25	20	23	25
35 - 40 mph	26	31	32	30	31	30	35	35	30	27
40 - 45 mph	19	17	14	17	10	14	16	20	14	12
45 - 50 mph	11	7	4	8	2	5	4	6	4	3
50 - 60 mph	8	3	1	3	0	2	1	1	1	1
60 mph and over	3	0	0	1	0	1	0	0	0	0
Percent over 45 mph	22	10	5	12	3	7	4	7	6	4
Average speed	39	37	35	37	34	35	35	36	35	34
Number observed (thousands)	451	38,576	201	2,829	424	1,183	173	121	188	545

1 Speed measurements taken from 30 sites.

2 Speed measurements taken from 8 sites.

3 Motorcycles includes mopeds and other types of powered two wheeled vehicles.

4 Goods vehicles up to 3.5 tonnes gross weight.

5 Goods vehicles over 3.5 tonnes gross weight.

Table 6: Average car speeds by time of day: Great Britain: 2002

Time of day	miles per hour/ percent			
	30 mph limit		40 mph limit	
	% exceeding limit	Average speed	% exceeding limit	Average speed
0600-0700	79	35	41	39
0700-0800	67	33	31	37
0800-0900	52	30	23	35
0900-1000	57	31	25	36
1000-1100	56	31	23	36
1100-1200	55	31	23	36
1200-1300	57	31	24	36
1300-1400	58	31	24	36
1400-1500	58	31	24	36
1500-1600	54	31	24	36
1600-1700	55	31	24	36
1700-1800	56	31	25	36
1800-1900	60	32	29	37
1900-2000	61	32	31	38
2000-2100	65	32	32	38
2100-2200	65	33	32	38
2200-2300	67	33	33	38
2300-2400	69	33	38	39
0600-2400	59	31	26	37

Table 7: Weekday and weekend comparisons: Great Britain: 2002

Vehicle type	Speed limit	miles per hour/ percent			
		Weekday		Weekend	
		% exceeding limit	Average speed	% exceeding limit	Average speed
Cars	30mph	58	31	63	32
	40mph	24	36	28	38
LGVs	30mph	60	32	66	33
	40mph	25	36	33	38
Motorcycle	30mph	46	29	52	30
	40mph	37	38	42	40
Rigid 2 axle	30mph	55	31	60	32
	40mph	18	35	25	37

Weekday and weekend comparisons (Table 7)

- 2.8. Average vehicle speeds were slightly higher at the weekend and a greater proportion of drivers exceeded the speed limit. This repeats the pattern shown by the results for non-built-up roads, reflecting the lower traffic volumes at the weekend.

Comparisons with earlier speed surveys (Table 8)

- 2.9. The first built-up speed survey was carried out in 1994 and the survey has been operating continuously since then. Detailed results are shown in earlier editions of this bulletin. With the exception of 2002, the survey method has not changed and the selection of sites has remained largely constant. In 2002 all the data collected at a site during the year was analysed (in previous years, only a sample was analysed) and the number of 30 mph sites was reduced by 4, from 30 to 26; the number of 40 mph sites increased from 8 to 10
- 2.10. Table 8 summarises the key results for 2002 and for earlier years. In 2002 on roads with a 30 mph speed limit, the proportion of cars and motorcycles exceeding the speed limit fell significantly. In 2002, 59 per cent of cars travelled faster than 30 mph compared with 65 per cent in 2001; 47 per cent of motorcycles exceeded the limit compared with 59 per cent in 2001. For 2-axle rigid HGVs the average speed and the proportion exceeding the speed limit remained the same as in 2001

Table 8 Built-up speed surveys: 1998 - 2002

		number/ miles per hour/per cent				
		1998	1999	2000	2001	2002
30 mph limit	Sites	30	30	30	30	26
	Observations (thousands)	2,109	2,218	1,877	2,191	61,619
	Average motorcycle speed	32	32	32	33	29
	Percent exceeding limit	60	63	60	59	47
	Percent exceeding limit by 5 mph	40	38	35	35	24
	Average car speed	33	32	32	32	31
	Percent exceeding limit	70	69	66	65	59
	Percent exceeding limit by 5 mph	33	31	32	32	25
	Rigid 2-axle HGV speed	31	31	30	31	31
	Percent exceeding limit	58	57	54	55	55
	Percent exceeding limit by 5 mph	21	20	19	20	23
	Average bus/coach speed	28	28	28	28	28
	Percent exceeding limit	39	41	38	37	31
	Percent exceeding limit by 5 mph	13	11	12	11	9
	Sites	8	8	8	8	10
	Observations (thousands)	1,121	921	811	989	44,692
	Average motorcycle speed	37	36	37	37	39
	Percent exceeding limit	38	35	36	36	41
	Percent exceeding limit by 5 mph	19	22	21	21	22
40 mph limit	Average car speed	36	36	37	36	37
	Percent exceeding limit	27	26	25	25	27
	Percent exceeding limit by 5 mph	8	8	7	8	10
	Rigid 2-axle HGV speed	35	34	35	34	35
	Percent exceeding limit	19	16	15	15	21
	Percent exceeding limit by 5 mph	5	4	3	4	7
	Average bus/coach speed	32	31	32	31	34
	Percent exceeding limit	7	7	6	6	14
	Percent exceeding limit by 5 mph	1	1	1	1	3

ANNEX A: SPEED DATA FROM AUTOMATIC TRAFFIC COUNTERS

This bulletin is based on information about vehicle speeds collected during 2002 from sites on both built-up and non-built-up roads. The non-built-up results in the bulletin are from 27 motorway sites, 7 dual carriageway sites and 28 single carriageway sites. For built-up roads, data were collected from 26 sites with a 30 mph speed limit and 10 sites with a 40 mph limit. The number of vehicle speeds measured daily at the sites varies widely from a few hundred at the least busy site to many thousands at the motorway sites.

The counting equipment uses the output from inductive loops and axle sensors to measure vehicle length, the number and spacing of axles and vehicle speed. The equipment is capable of classifying 21 different vehicle types. However, it cannot distinguish between vehicles with the same electronic ‘footprint’ such as cars and car-based vans (which have an identical chassis to that of a car). Data for every vehicle detected during the previous day is downloaded from each site during the early morning. Data for periods where it was known that the site was malfunctioning was discarded.

Motorcycle speeds have always been collected in the survey of **built-up** sites. Information on motorcycle speeds at **non-built-up** sites has been included since 2000.

The accuracy of the measurement of speed given in the table below (kph=kilometres per hour):

Speeds between 40 and 80 kph (24.9 mph and 49.7 mph)	±1 kph (±0.6 mph)
Speeds between 81 and 160 kph (50.3 mph and 99.4 mph)	± 2.0 kph (±1.2 mph)
Speeds above 161 kph (100.0 mph)	±7.5 kph (±4.7 mph)

Therefore, where a large number of vehicles are travelling at the speed limit, some will be incorrectly recorded at speeds exceeding the speed limit. In table 1 the percentage of vehicles exceeding the speed limit by more than 10 mph is given and in table 5 the percentage exceeding the speed limit by more than 5 mph is shown.

Annex B: UK maximum speed limits on non built-up roads

		miles per hour		
Vehicle type		Motorway	Dual carriageway	Single carriageway
Cars/motorcycles ¹		70	70	60
Cars towing	1 trailer	60	60	50
	2 or more trailers	40	20	20
Buses/coaches	< 12 metres	70	60	50
	> 12 metres	60	60	50
Goods vehicle	<7.5 tonnes ²	70	60	50
	artic < 7.5 tonnes	60	60	50
	>7.5 tonnes ³	60	50	40
Goods vehicle towing 2 or more trailers		40	20	20

¹ Includes car-derived vans

² Maximum laden weight; not an artic, trailer puller

³ Maximum laden weight of cab and trailer

Annex C: Average vehicle speeds and their standard errors: 2001

miles per hour											
		Heavy goods vehicles ³									
		Motorcycles ¹	Cars	Cars towing	Light goods ²	Buses/ coaches	Rigid		Articulated ⁵	Rigid/articulate	
							2 axle	3/4 axle ⁴		4 axles	5+ axles
Non-built-up sites											
Motorways ⁶	Average speed	70.0	70.0	56.2	66.3	60.4	59.7	54.6	54.4	54.3	54.2
	Standard error	2.1	0.8	0.8	0.9	0.5	0.7	0.4	0.4	0.4	0.4
Dual carriageways ⁶	Average speed	69.8	70.1	56.7	66.4	59.1	59.6	53.5	53.8	53.7	54.6
	Standard error	5.1	2.1	1.8	2.2	1.5	1.8	0.9	1.4	1.0	1.5
Single carriageway	Average speed	54.6	45.4	45.9	45.5	40.9	44.2	42.6	44.4	43.0	45.4
	Standard error	2.7	1.7	1.2	1.7	1.7	1.4	1.3	1.7	1.2	1.4
Built-up sites											
30mph ⁶	Average speed	33.4	31.4	29.6	30.4	28.3	30.6	29.5	28.0	29.4	27.6
	Standard error	2.1	0.8	0.8	0.9	1.1	0.8	0.8	0.7	0.8	2.2
40mph ⁶	Average speed	37.4	36.3	34.4	36.1	31.4	34.4	33.7	32.8	33.4	31.9
	Standard error	2.7	1.3	1.0	1.2	1.2	1.0	1.1	0.9	1.0	1.5

¹ Motorcycles includes mopeds and other types of powered two wheeled vehicles

² Goods vehicles up to 3.5 tonnes gross weight

³ Goods vehicles over 3.5 tonnes gross weight

⁴ Does not include 4 axle types on urban roads

⁵ Includes 4 and 5+ axle types

⁶ Number of sites given in table 4 or table 8

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Transport Statistics Users Group

The Transport Statistics Users Group (TSUG) was set up in 1985 as a result of an initiative by the Statistics Users Council and the Chartered Institute of Transport (now known as The Institute of Logistics and Transport). From its inception it has had strong links with the Department for Transport. The aims of the Group are:

- to identify problems in the collection, provision, use and understanding of transport statistics, and to discuss solutions with the responsible authorities;
- to provide a forum for the exchange of views and information between users and providers of transport statistics;
- to encourage the proper use of statistics through publicity and education.

The Group holds regular seminars on topical subjects connected with the provision and/or use of transport statistics. Recent seminars have included:

- Transport Statistics on the internet
- Aviation Statistics
- Parking Statistics
- Transport and social exclusion
- National Travel Survey User Consultation
- Transport Information Needs of the North of England
- How did you get to the Millennium Dome?

A newsletter is sent to all members about four times a year. Corporate membership of the Group is £50, personal membership £22.50, and student membership £10. For further details please contact:

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The TSUG has contributed to the production of the *Transport Year Book 2001*. This contains information on sources from Governmental and non-governmental organisations, including some European sources. One copy is supplied free to TSUG members. Non-members can purchase a copy from The Stationery Office (TSO) for £40.

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