



Department
for Transport

Free Flow Vehicle Speed Statistics: Great Britain 2014

About this release

This Statistical Release presents estimates of the speed of traffic in free flowing conditions on roads in Great Britain, updated for 2014.

These statistics provide insight into the speeds at which drivers choose to travel and their compliance with speed limits, but should not be taken as estimates of actual average speed across the road network, which are available separately for Local Authority managed A roads (see Background Information on [page 7](#)).

The estimates are currently based on traffic speed data collected from a sample of 93 Automatic Traffic Counters (ATCs) operated by DfT. The sample has been chosen to exclude ATC locations where external factors might restrict driver behaviour (e.g. junctions, hills, sharp bends and speed enforcement cameras).

More information is available in the [free flow vehicle speeds statistical series](#).

In this publication

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- ▶ Vehicles exceeding the speed limit ([Page 4](#))
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Removal of statistics on Light Goods Vehicles (LGVs) exceeding the speed limit - 2002 to 2014

Statistics on Light Goods Vehicles' (LGVs) speed limit compliance on single carriageways and dual carriageways have been withdrawn from this publication and accompanying web tables. The withdrawal of these LGV statistics does not affect statistics published for any other vehicle type. The issue affects compliance statistics for LGVs in all previous Free Flow Vehicle Speeds Statistics publications. Please see the Background Information on [page 8](#) for details.

Since 2002, average free flow speeds for all vehicle types across each road type have remained broadly stable. The percentage exceeding the speed limit for each type of vehicle has declined on all road types except single carriageways, where HGV speed limit compliance has fallen since 2002.

Table 1: Percentage of vehicles exceeding the speed limit by road type in Great Britain, 2002 and 2014 (Tables [SPE0103](#) & [SPE0104](#))

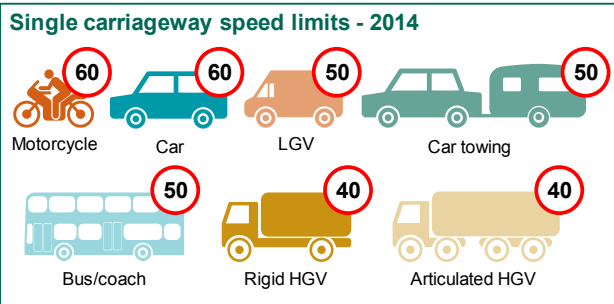
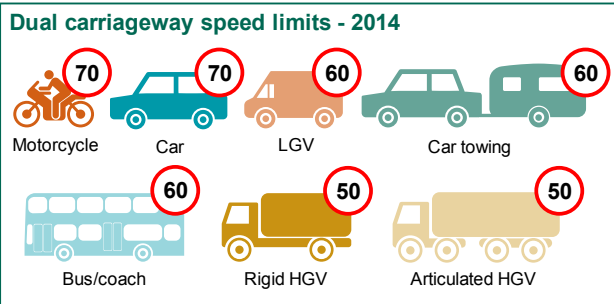
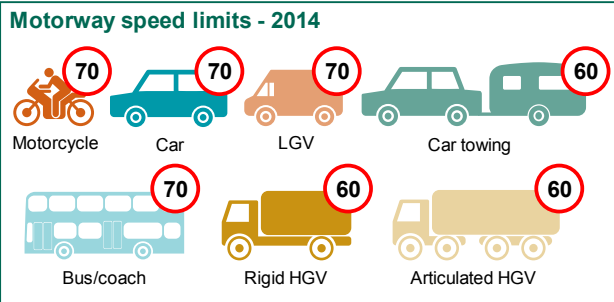
	<i>percentage</i>								
	Cars (and car-derived vans)		Motorcycles (and mopeds)		Heavy Goods Vehicles (HGVs) ¹				
	2002	2014	2002	2014	2002	2014			
Non built-up roads									
Motorways	54	46	↓	57	46	↓	2	1	↓
Dual carriageways	46	37	↓	53	43	↓	88	82	↓
Single carriageways	8	7	↓	23	20	↓	68	75	↑
Built-up roads									
30 mph roads	59	45	↓	47	47	↔	55	44	↓
40 mph roads	27	21	↓	41	30	↓	21	20	↓

¹ Articulated HGVs for non built-up roads, Rigid 2-axle HGVs for built-up roads

- ▶ 45 per cent of cars exceeded the speed limit on 30 mph roads in 2014. This is a fall from 59 per cent in 2002. (Table [SPE0104](#))
- ▶ For motorways, 11 per cent of cars and 17 per cent of motorcycles exceeded the speed limit (70 mph) by more than 10 mph in 2014. This compares to 18 per cent and 27 per cent respectively in 2002. (Table [SPE0103](#))
- ▶ 21 per cent of articulated HGVs exceeded the speed limit by more than 10 mph on single carriageways, but only 1 per cent on dual carriageways. (Table [SPE0101](#))

Free flow vehicle speeds

Speed Limits



Typical Speed Limits

Speed limits differ by vehicle type and road type. Although there are some exceptions, the most typical applicable speed limits are summarised in the graphics shown here. More information on detailed speed limits can be found in the Background Information, on [page 7](#).

Definitions

The vehicle category “Car” includes cars, car-derived vans and dual-purpose vehicles (definition of these vehicles can be found at <https://www.gov.uk/government/publications/car-derived-vans-and-dual-purpose-vehicles>).

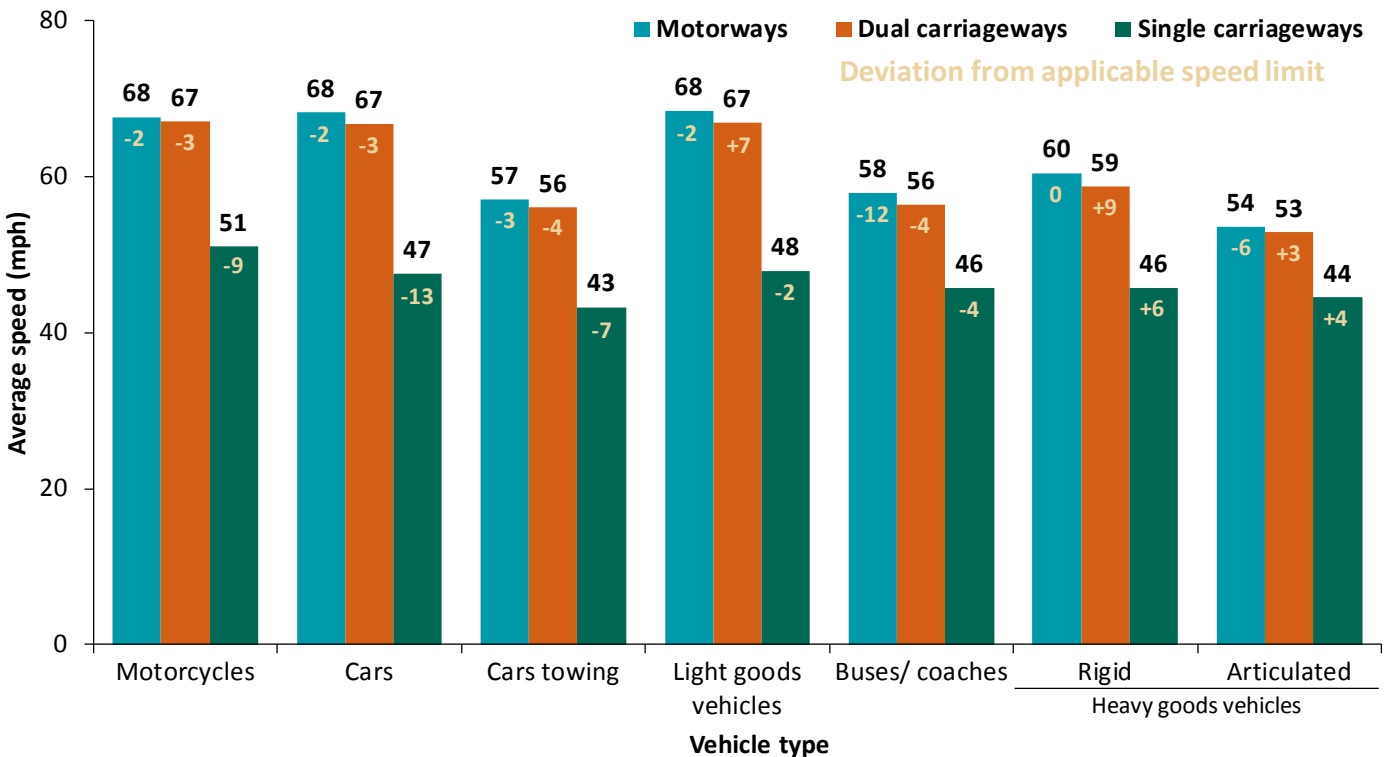
The vehicle category “Motorcycle” includes motorcycles, scooters, mopeds and all motorcycle or scooter combinations. Mopeds are speed limited by definition. More details about speed limiters can be found on [page 3](#).

Change in speed limits for HGVs over 7.5 tonnes on non built-up roads

On 6th April 2015, the national speed limit in England and Wales for HGVs over 7.5 tonnes rose from 50 mph to 60 mph on dual carriageways, and from 40 mph to 50 mph on single carriageways. The effect of these changes will not be reflected until next year’s publication.

Roads in non built-up areas

Figure 1: Average free flow speeds on non built-up roads in Great Britain, 2014 (Table [SPE0101](#))



Speed Limiters

Speed limiters are required by law, across the EU by European legislation (2002/85/EC), to be fitted to:

- ▶ passenger carrying vehicles with more than 8 passenger seats (buses/coaches)
- ▶ goods vehicles over 3.5 tonnes (all HGVs)

Limiters restrict maximum powered speed to 62 mph (100 kph) for passenger carrying vehicles and, 56 mph (90 kph) for all HGVs.

Operators/drivers can choose to install speed limiters on their vehicles even if not required to by law.

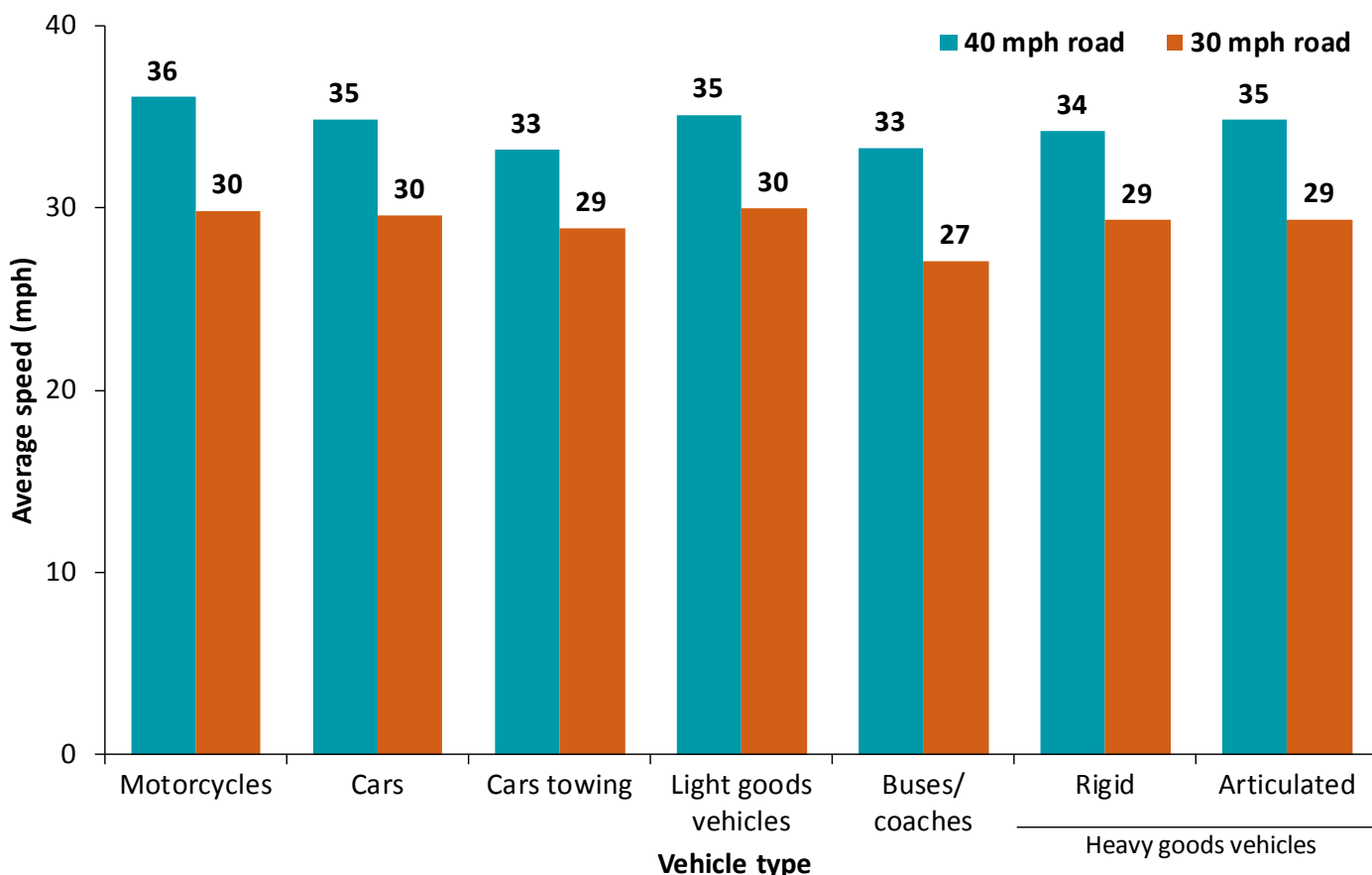
The main reason for introducing speed limiters to these vehicle types was because the consequences of accidents involving heavier vehicles tend to be so severe; they are generally less manoeuvrable and less able to take evasive action to avoid an accident.

- ▶ In 2014, the average free flow speed of motorcycles, cars and LGVs travelling on roads in non built-up areas was 68 mph on motorways and 67 mph on dual carriageways. (Table [SPE0101](#))
- ▶ Rigid and articulated HGVs had an average speed greater than the speed limit on dual and single carriageways. The average speed for rigid and articulated HGVs was 59 mph and 53 mph respectively on dual carriageways, where their speed limit is 50 mph, whereas on single carriageways it was 46 mph and 44 mph, where their speed limit is 40 mph. It is worth noting that the speed limits for all HGVs over 7.5 tonnes for these two road types in England and Wales were increased to 60mph on dual carriageways and 50mph on single carriageways on 6th April 2015. (Table [SPE0101](#))

Roads in built-up areas

- ▶ For all vehicle categories in built-up areas, the observed average free flow speed was at, or below, the applicable speed limit. (Table [SPE0102](#))
- ▶ The differences in average free flow speeds between vehicle types are small. These range from 27 to 30 mph on 30 mph roads and from 33 to 36 mph on 40 mph roads. (Table [SPE0102](#))

Figure 2: Average free flow speeds on built-up roads in Great Britain, 2014 (Table [SPE0102](#))



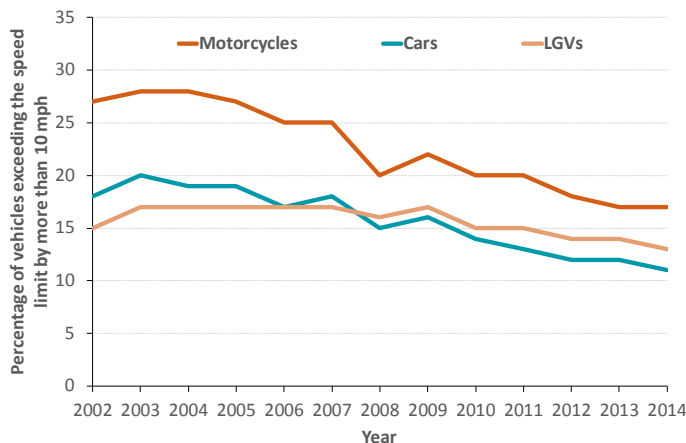
Vehicles exceeding the speed limit

Roads in non built-up areas

- ▶ In 2014, cars exceeded the speed limit on motorways the most (46 per cent), followed by dual carriageways (37 per cent). The lowest levels of exceeding the speed limit on non built-up roads was on single carriageways (7 per cent). (Table [SPE0101](#))
- ▶ The percentage of vehicles of all types exceeding the speed limit has generally declined in non built-up areas since 2002. However, for single carriageways, percentage increases were observed for articulated HGVs (from 68 to 75 per cent) and for buses & coaches (from 16 to 28 per cent) between 2002 and 2014. (Table [SPE0103](#))
- ▶ Motorcycles (17 per cent) had the highest proportion of vehicles exceeding their 70 mph speed limit on motorways by more than 10 mph, followed by cars (11 per cent). (Table [SPE0101](#))
- ▶ One per cent of articulated HGVs exceeded their speed limit of 60 mph on motorways. Additionally, 1 per cent of articulated HGVs exceeded their 50 mph speed limit on dual carriageways by more than 10 mph, and 21 per cent exceeded their 40 mph limit by more than 10 mph on single carriageways. (Table [SPE0101](#))

Figures 3a to 3c: Percentage of vehicles exceeding the speed limit by more than 10 mph on non built-up roads in Great Britain, 2014 (Table [SPE0103](#))

Figure 3a: Motorways



Notes for Figures 3a to 3e

- ▶ Overlapping trend lines have been dashed to allow both series to be seen.
- ▶ No articulated HGVs (0 per cent) exceeded their speed limit by more than 10 mph on motorways from 2002 to 2014.
- ▶ There was a misclassification between Buses/Coaches and HGVs between 2007 to 2013. This has now been corrected for 2014. Some trend lines have been removed as the 2014 figures are not directly comparable with the period 2007 to 2013.

Figure 3b: Dual carriageways

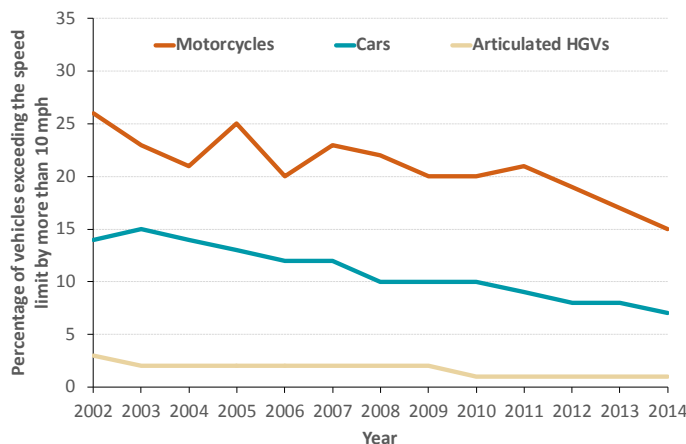
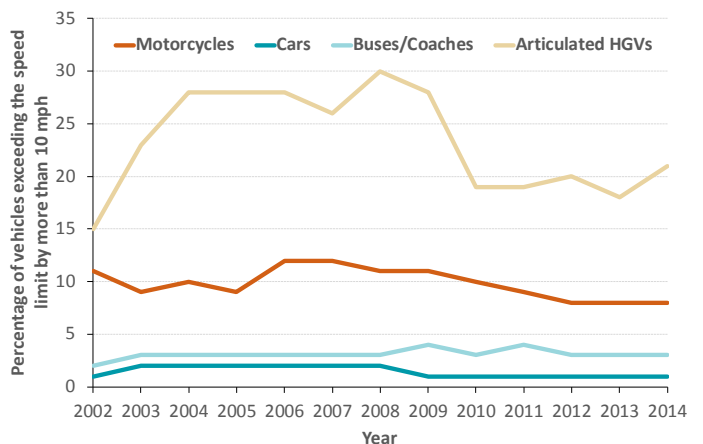


Figure 3c: Single carriageways



Roads in built-up areas

- ▶ Across all vehicle types in built-up areas, the percentage of vehicles exceeding the speed limit has declined or stayed at the same level since 2002. (Table [SPE0104](#))
- ▶ For all vehicle types, more vehicles exceeded the speed limit on 30 mph roads than on 40 mph roads; this pattern has been observed for many years. (Table [SPE0104](#))
- ▶ On 30 mph roads, 45 per cent of cars exceeded the speed limit in 2014 (a drop of 14 percentage points compared with 2002) and 15 per cent of cars exceeded the speed limit by five mph or more. (Table [SPE0104](#))
- ▶ For 40 mph roads in 2014, 21 per cent of cars exceeded the speed limit and 7 per cent of cars exceeded the speed limit by five mph or more. (Table [SPE0102](#))
- ▶ Motorcycles had the largest percentage of vehicles that exceeded the speed limit on 30 mph roads by more than 5 mph (21 per cent), followed by LGVs (18 per cent). (Table [SPE0102](#))
- ▶ Many Local Authorities have introduced 20 mph speed limits in recent years. In response to this, new monitoring sites have been introduced to the ATC network which will provide data for 20 mph roads in the next publication.

Figures 3d to 3e: Percentage of vehicles exceeding the speed limit on built-up roads by more than 5 mph in Great Britain, 2014 (Table [SPE0104](#))

Figure 3d: 30 mph roads

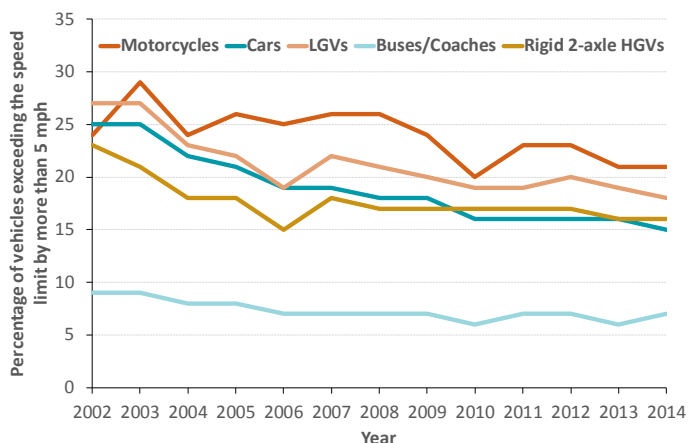
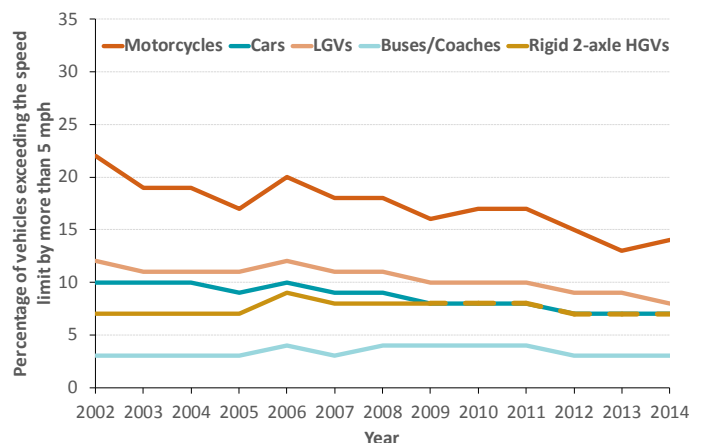


Figure 3e: 40 mph roads



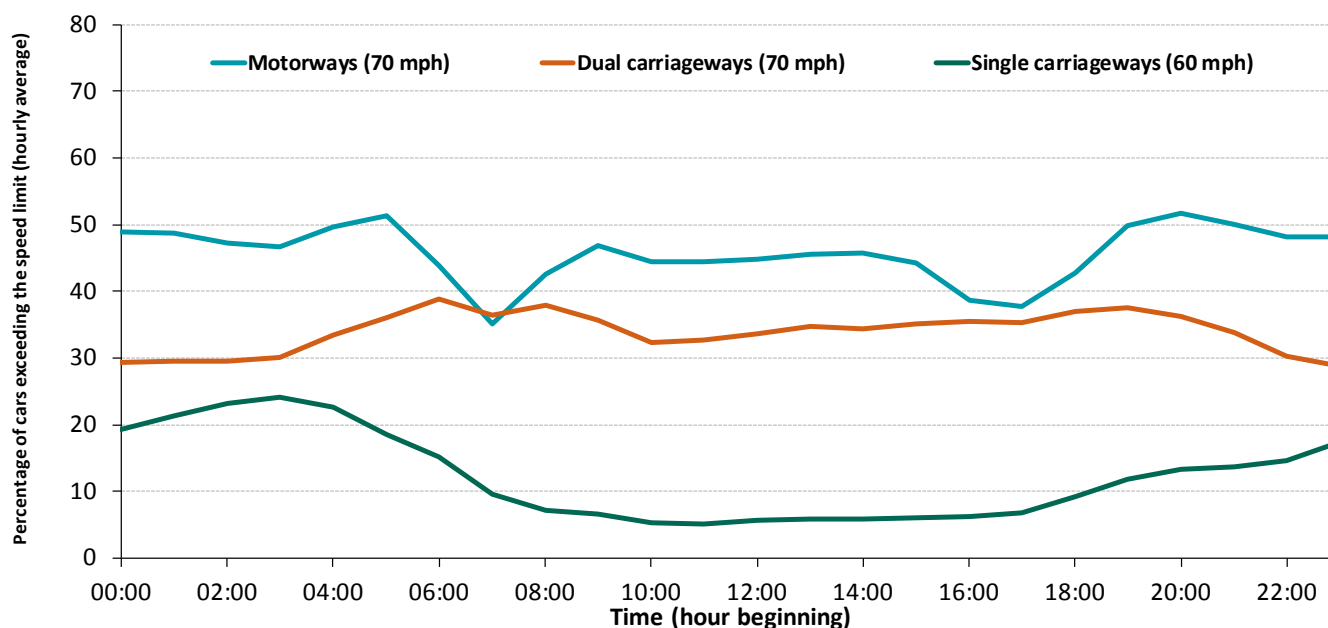
Cars exceeding the speed limit by time of day

Roads in non built-up areas

- ▶ The percentage of cars exceeding the speed limit was greatest on motorways. The percentage of cars exceeding the speed limit on motorways in 2014 was greatest between 20:00 and 21:00 at 52 per cent. The time period with the lowest proportion of cars exceeding the speed limit was 07:00 to 08:00 at 35 per cent. (Chart [SPE0106a](#))
- ▶ There appears to be different patterns for motorways and dual carriageways. The overall level of cars exceeding the speed limit on dual carriageways in 2014 was lower than on motorways throughout the day except for between 07:00 to 08:00. Cars exceeding the speed limit on dual carriageways was broadly stable throughout the day, however there were small peaks during the morning and the late evening periods. (Chart [SPE0106a](#))

- ▶ The percentage of cars exceeding the speed limit on single carriageway roads in 2014 was highest in the early hours of the morning, being above 20 per cent between 01:00 and 05:00. Between 08:00 and 19:00, the percentage of cars exceeding the speed limit was below 10 per cent. (Chart [SPE0106a](#))

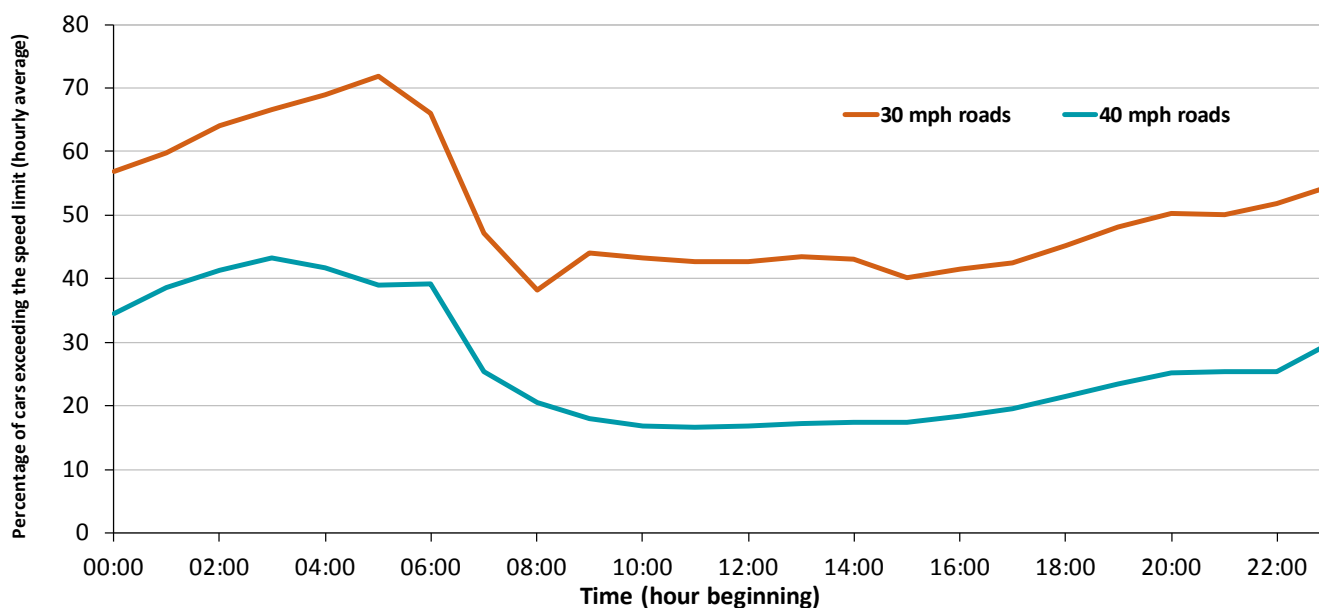
Figure 4: Percentage of cars exceeding the speed limit by time of day on non built-up roads in Great Britain, 2014 (Chart [SPE0106a](#))



Roads in built-up areas

- ▶ The percentage of cars exceeding the speed limit on 30 mph roads was higher than for 40 mph roads at all times of day in 2014. At its peak, 72 per cent of cars exceeded the speed limit on 30 mph roads (between 05:00 and 06:00) compared to 43 per cent of cars exceeding the speed limit on 40 mph roads (between 03:00 and 04:00). (Chart [SPE0106b](#))

Figure 5: Percentage of cars exceeding the speed limit by time of day on built-up roads in Great Britain, 2014 (Chart [SPE0106b](#))



Speed limits on different road types

More information on speed limits can be found online here: <https://www.gov.uk/speed-limits>

Notes & definitions

Free flow speed: speeds observed in locations where external factors which might restrict driver behaviour are not present (including junctions, hills, sharp bends and speed enforcement cameras).

Exceeding the speed limit: vehicles travelling at a speed higher than their applicable speed limit are defined as “exceeding the speed limit”.

Car: includes cars, car-derived vans and dual-purpose vehicles (definition of these vehicles can be found at <https://www.gov.uk/government/publications/car-derived-vans-and-dual-purpose-vehicles>).

Motorcycle: includes motorcycles, scooters, mopeds and all motorcycle or scooter combinations.

Sources, strengths and weaknesses of the data

- ▶ These estimates are based on traffic speed data collected from a current sample of 93 Automatic Traffic Counters (ATCs). The number of individual vehicles observed in the production of these statistics for 2014 was 778 million.
- ▶ The ATC technology used to collect this data can experience technical failures and produce output data which is incorrect and not representative of the traffic passing the counter. The methodology accounts for these occasions and removes any data produced by faulty counters.
- ▶ The ATCs classify vehicles using the number of axles, the axle spacing and the length of the vehicle. It is possible for vehicles with similar dimensions to have different purposes, e.g. cars and light goods vehicles.
- ▶ Free flow vehicle speeds data provide insight into the speeds at which drivers choose to travel. ATC sites for free flow speed monitoring are chosen to exclude locations where external factors might restrict driver behaviour (e.g. junctions, hills, sharp bends and speed enforcement cameras).
- ▶ Average speed statistics for Local Authority managed A roads are available online from the Road Congestion and Reliability Statistics series: <https://www.gov.uk/government/collections/road-congestion-and-reliability-statistics>.
- ▶ The sample provides a general picture for Great Britain but cannot be used to determine average free flow speeds for regions, local authorities or specific roads.
- ▶ Full guidance on the sources and methods used to compile these statistics, plus information on speed limits, can be found here: <https://www.gov.uk/government/publications/road-traffic-speeds-and-congestion-statistics-guidance>.

Next update

Free Flow Vehicle Speed Statistics for 2015 are due to be published in summer 2016. We are currently reviewing the methodology behind these statistics. In particular, a small number of sites on roads with 20 mph speed limits have been introduced into our monitoring network; statistical breakdowns for 20 mph roads will be available in the next publication.

We welcome feedback on this publication including content, timing, and format via email to roadtraff.stats@dft.gsi.gov.uk.

HGV and bus/coach free flow speeds - 2007 to 2013

There was a misclassification between Buses/Coaches and HGVs between 2007 to 2013. This shifted vehicles from Buses/Coaches to HGVs on motorways and some A roads. This has now been corrected for 2014; consequently, figures published in 2014 for these two vehicle categories are not directly comparable with the period 2007 to 2013.

Removal of statistics on LGVs exceeding the speed limit - 2002 to 2014

When we originally published on 21 May 2015, we included compliance with speed limit statistics relating to LGVs for single carriageways and dual carriageways.

The speed limits applicable to different types of van are complex and depend on the maximum laden weight of the vehicle which our Automatic Traffic Counters cannot clearly distinguish. DfT is currently reviewing how best these can be matched up with the classification data that we use from our Automatic Traffic Counters.

Consequently, as of 8 October 2015, we have decided to withdraw the compliance with speed limit statistics relating to LGVs for single carriageways and dual carriageways. This issue affects all previous publications also.

The associated tables and commentary for this statistical release have consequently been adjusted. This withdrawal does not affect any other statistics published here.

National Statistics

National Statistics are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure they meet customer needs.

Free Flow Vehicle Speed Statistics were assessed by the UK Statistics Authority against the Code of Practice and were confirmed as National Statistics in February 2013.

Details of Ministers and officials who receive pre-release access to these statistics up to 24 hours before release can be found here: <https://www.gov.uk/government/publications/pre-release-access-lists-for-road-traffic-speeds-and-congestion-series>.