

Free Flow Vehicle Speeds in Great Britain 2011

This Statistical Release presents the speed of traffic in free flowing conditions on roads in Great Britain during 2011.

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.

These estimates are based on traffic speed data collected from a sample of 96 Automatic Traffic Counters (ATCs) from a national network of around 180 ATCs. This sample was deliberately chosen to include ATCs located where external factors which might restrict driver behaviour (including junctions, hills, sharp bends and speed enforcement cameras) are not present.



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Key results from Free Flow Vehicle Speeds 2011 include:

- Compared to 2001, the percentage of vehicles exceeding the 30 mph speed limit on built-up roads has fallen for every vehicle type. Between 2010 and 2011, the percentage of cars and motorcycles exceeding the 30 mph speed limit increased to 47 and 50 per cent respectively.
- On motorways, 49 per cent of cars exceeded the 70 mph speed limit in 2011, unchanged from 2010. Thirteen per cent of cars in 2011 were recorded as travelling at 80 mph or faster, continuing the downward trend seen in recent years.
- Around 83 per cent of articulated heavy goods vehicles exceeded the 50 mph speed limit on dual carriageway and 71 per cent exceeded the 40 mph limit on single carriageway non-built-up roads.
- In 2011, motorcycles had the highest average free flow speeds across all road types except motorways. In addition 20 per cent of motorcycles were travelling 10 mph or more above the speed limit on motorways and 21 per cent on dual carriageways, the highest proportion of any vehicle for these road types.

RESPONSIBLE STATISTICIAN
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FURTHER INFORMATION

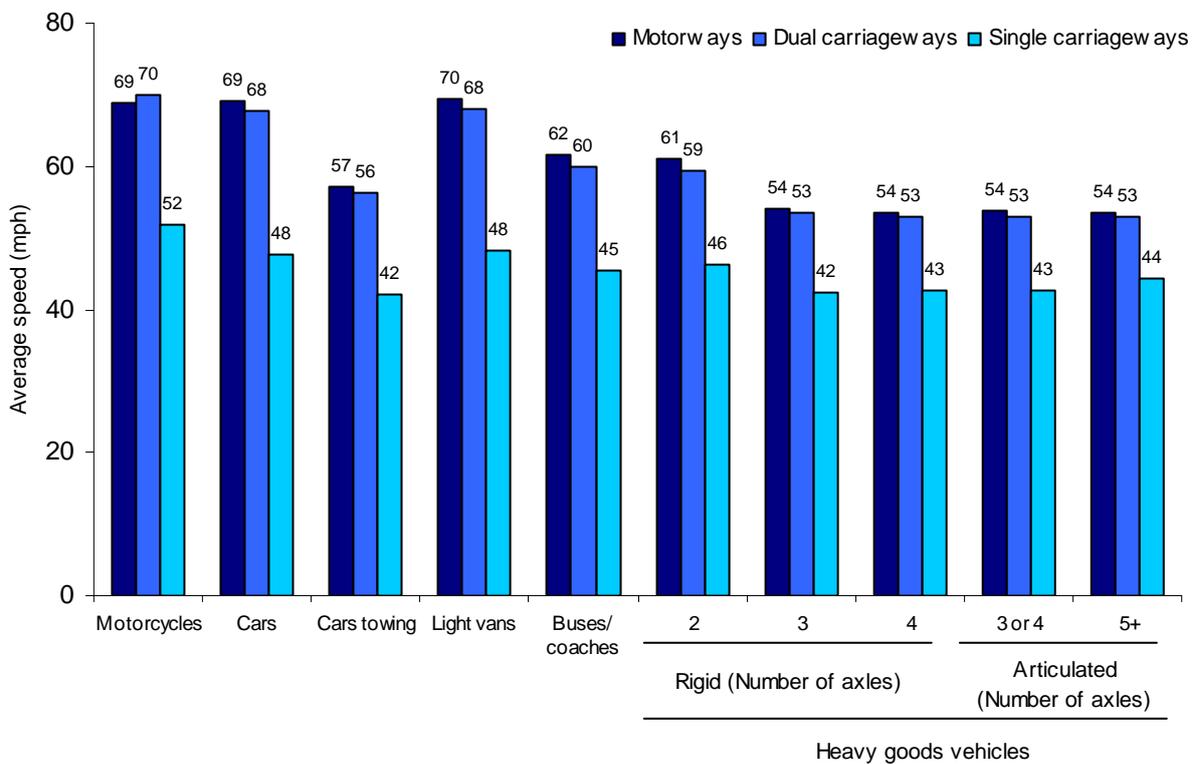
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1. Free flow vehicle speeds on non-built up roads

- In 2011, the average free flow speed of cars travelling on non-built-up roads was 69 mph on motorways and 68 mph on dual carriageways, unchanged from 2010.
- Light goods vehicles had the highest average free flow speed of all vehicles on motorways at 70mph.
- Motorcycles had an average free flow speed of 69 mph on motorways, the same as the average free flow speed of cars on motorways. However motorcycles had a higher average free flow speed than cars on dual carriageways (70 mph) and at 52 mph, were 4 mph faster than cars on single carriageway roads.
- The average free flow speed of rigid heavy goods vehicles (HGV-Rs) was 60 mph on motorways and 59 mph on dual carriageways. Articulated HGVs (HGV-As) had an average free flow speed of 54 mph on motorways and 53 mph on dual carriageways.

Average free flow speeds on non-built-up roads in Great Britain, 2011



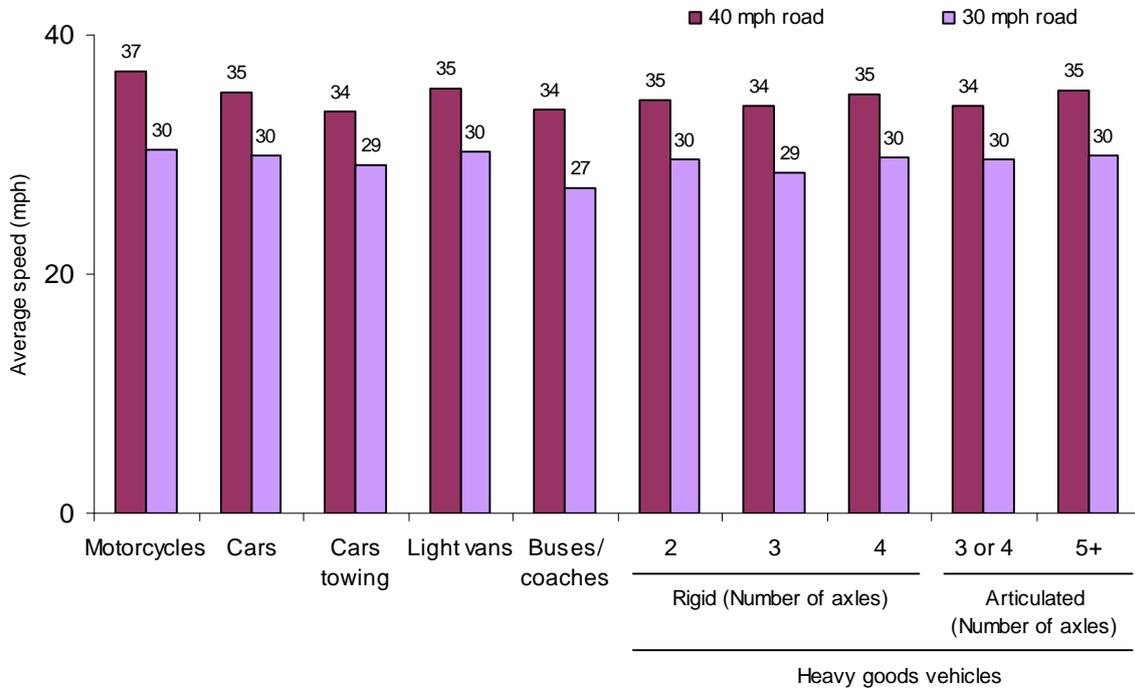
2. Free flow vehicle speeds on built-up roads

- In 2011, the average free flow speed of cars on roads with a 40 mph speed limit was 35 mph and on roads with a 30 mph limit was 30 mph.
- The average free flow speed for buses and coaches was 3 mph lower than the 30 mph speed limit. All other vehicle types' speeds averaged at the 30 mph speed limit and all vehicle types averaged the same speed in 2011 as they did in 2010 with the exception of motorcycles where speeds increased for the first time in 3 years, from 29 mph to 30mph.
- On roads with a 40 mph speed limit, cars, motorcycles, and buses & coaches' average free flow

speed was unchanged from 2010 to 2011. However, HGVs average free flow speed increased from 34 mph to 35 mph over the last year.

- Motorcycles had the fastest average free flow speed at 37 mph on roads with a 40 mph speed limit.

Average free flow speeds on built-up roads in Great Britain, 2011



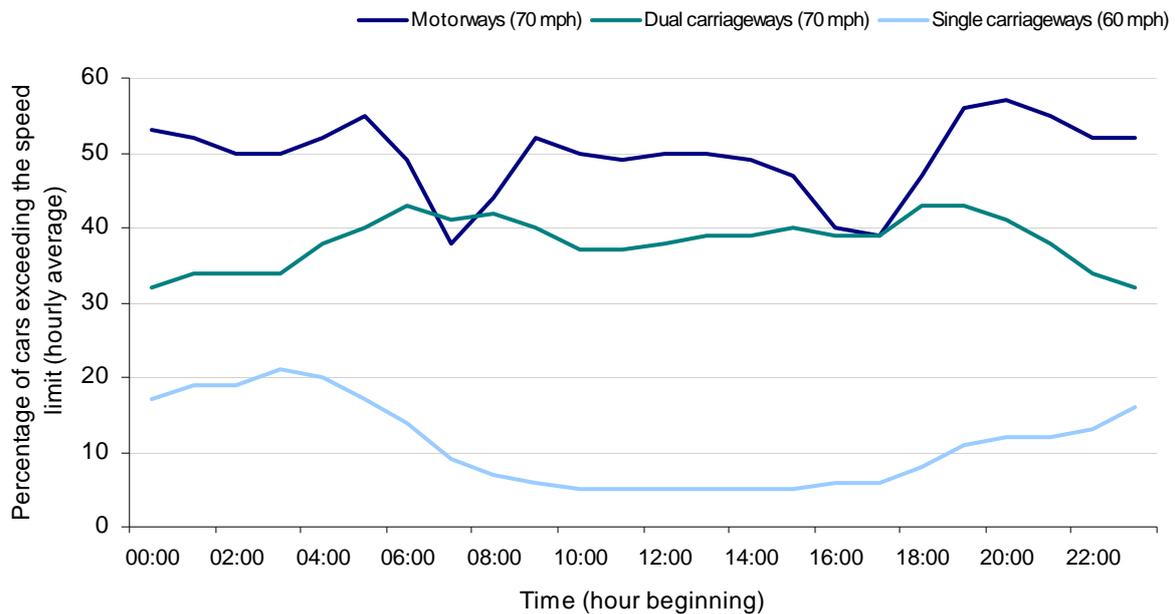
Detailed statistics (tables and charts) on Free Flow Vehicle Speeds on non-built up and built-up roads can be found in the Free Flow Vehicle Speeds Statistics web tables, [SPE0101](#), [SPE0102](#)

3. Vehicles exceeding the speed limit on non-built-up roads

- Forty nine per cent of cars on motorways were travelling at a speed that exceeded the 70 mph limit. Thirteen per cent of all cars were travelling 10 mph or more above the speed limit. The percentage of cars exceeding the speed limit was greatest between 8 pm and 9 pm at 57 per cent. The time periods with the lowest proportion of cars exceeding the speed limit were 7 am to 8 am at 38 per cent, and 5 pm to 6 pm at 39 per cent.
- On dual carriageways 41 per cent of cars exceeded the speed limit (70mph). The percentage of cars exceeding the speed limit on dual carriageways was greatest in the morning, between 6 am and 7 am, and in the evening, between 6 pm and 8 pm (all at 43 per cent) with much smaller falls in this percentage during the morning and evening peak periods than observed on motorways.
- On single carriageways 8 per cent of cars exceeded the limit (60 mph). The percentage of cars exceeding the speed limit on single carriageway roads was higher in the early hours of the morning than it was during the rest of the day. Between 3 am and 4 am, when it reaches its maximum, 21 per cent of cars exceed the limit. This compares to 5 per cent of cars between 10

am and 3 pm.

Percentage of cars exceeding the speed limit by time of day on non-built-up roads in Great Britain, 2011



- Light goods vehicles had the highest proportion of vehicles exceeding the 70mph speed limit on motorways at 50 per cent.
- Forty nine per cent of motorcycles exceeded the speed limit on motorways, with 53 per cent doing so on dual carriageways. Furthermore, 20 per cent of motorcycles were travelling 10 mph or more above the speed limit on motorways and 21 per cent on dual carriageways, the highest proportion of any vehicle for these road types.
- Very few rigid and articulated HGVs exceeded their speed limit of 60 mph on motorways (1 per cent), as they are fitted with speed limiters. However, 83 per cent¹ of them exceeded the 50 mph speed limit on dual carriageway non-built-up roads and 71 per cent exceeded the 40 mph limit on single carriageway non-built-up roads. Nineteen per cent exceeded the speed limit by 10 mph or more on single carriageway roads.

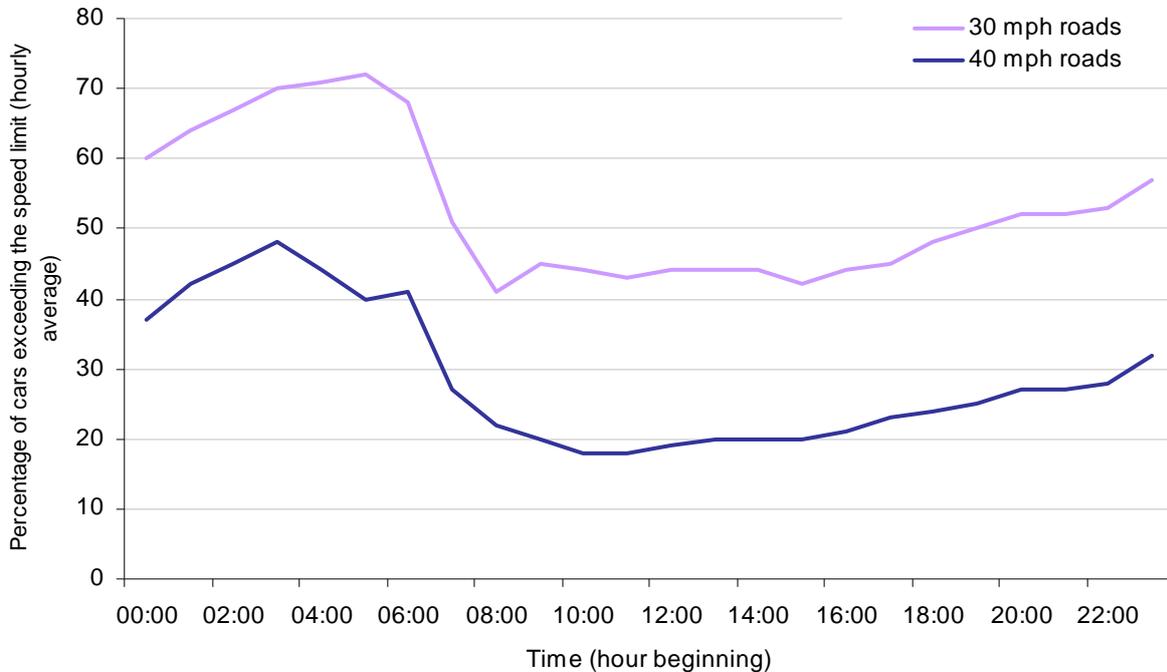
4. Vehicles exceeding the speed limit on built-up roads

- Forty seven per cent of cars exceeded the speed limit on 30 mph roads in 2011, with 16 per cent travelling at 35 mph or more. On 40 mph roads, 23 per cent of cars exceeded the speed limit and 8 per cent exceeded it by five mph or more.
- On both 30 mph and 40 mph built-up roads, the percentage of cars exceeding the speed limit was highest in the morning until around 8 am. The general daily pattern of speeds was similar throughout the day for both 40 mph and 30 mph roads.

¹ Average percentage of all heavy goods vehicles, excluding two-axle rigid heavy goods vehicles.

- On 30 mph roads, the percentage of cars exceeding the speed limit was greatest between 5 am and 6 am (72 per cent) and was lowest between 8 am and 9 am (41 per cent).
- On 40 mph roads, the percentage of cars exceeding the speed limit was greatest between 3 am and 4 am (48 per cent) and was lowest between 10 am and 12 noon (18 per cent).

Percentage of cars exceeding the speed limit by time of day on built-up roads in Great Britain, 2011



- Motorcycles (50 per cent) and cars (47 per cent) were the vehicle types that most frequently exceeded the speed limit on 30 mph limit roads. The percentage of motorcycles which exceeded the speed limit in 2011 is 5 percentage points more than in 2010.
- Buses and coaches were least likely to exceed the speed limit on built-up roads, with 25 per cent exceeding the limit on 30 mph limit roads, and 13 per cent exceeding the limit on 40 mph limit roads.
- 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.

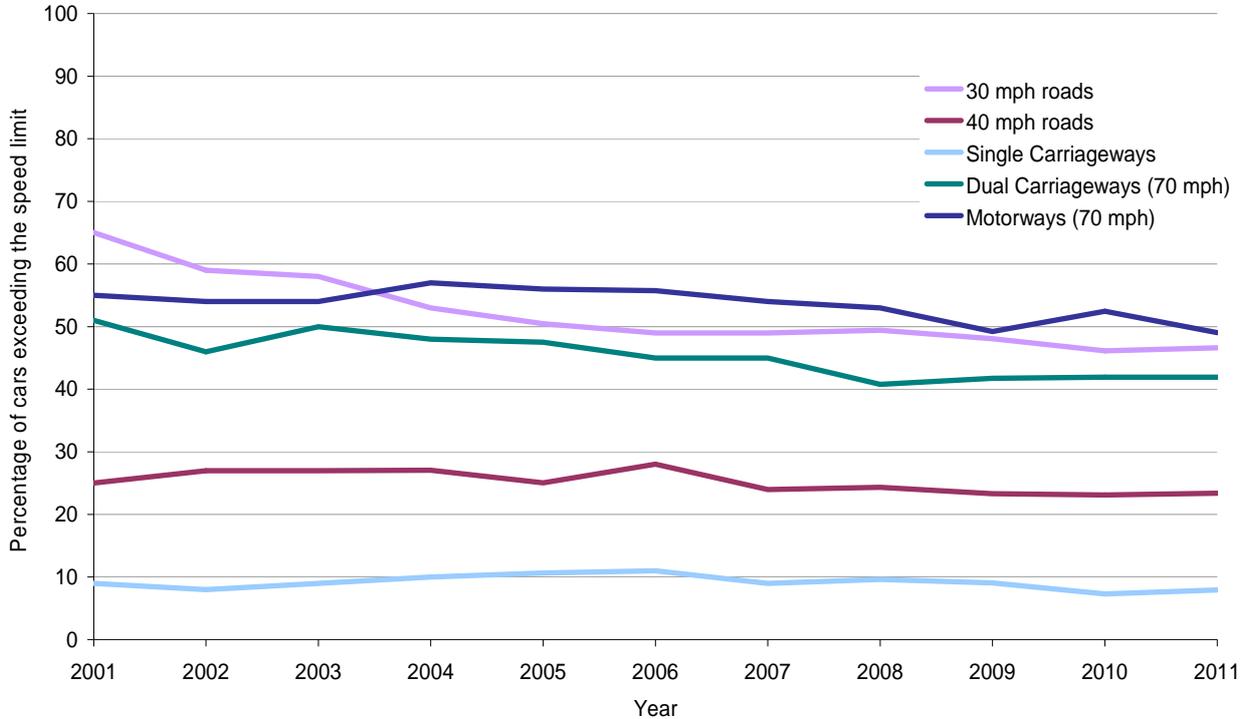
Detailed statistics tables on vehicles exceeding the speed limit can be found in the Free Flow Vehicle Speeds Statistics web tables, [SPE0103](#), [SPE0104](#)

5. Trends in driver behaviour in relation to the speed limit

- The percentage of cars exceeding the speed limit has fallen on every road type in the 10 years since 2001.
- The number of cars exceeding the speed limit on 30 mph limit roads has dropped by 19 percentage points from 65 per cent in 2001, to 47 per cent in 2011.

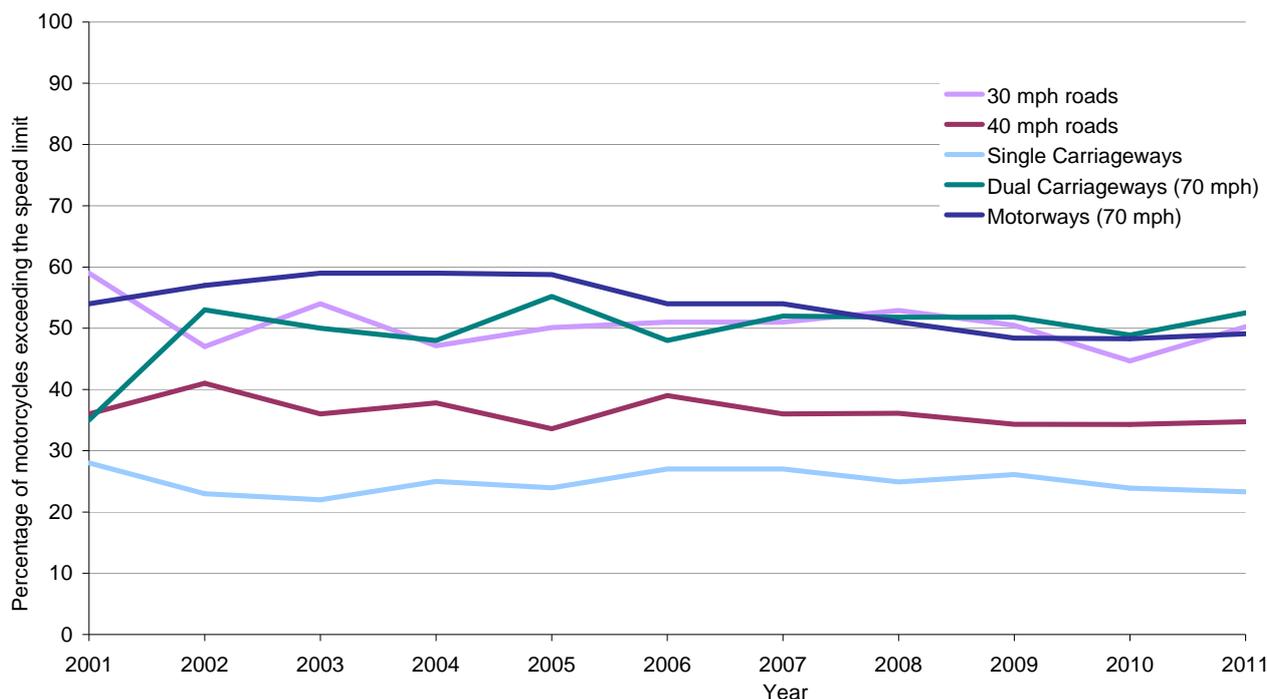
- The proportion of cars exceeding the speed limit on motorways is at its lowest in the last 10 years at 49 per cent.
- Other roads such as single carriageways have seen very little change in the proportion of cars exceeding the speed limit (9 per cent in 2001 compared to 8 per cent in 2011).

Percentage of cars exceeding the speed limit by road category in Great Britain, 2001 – 2011



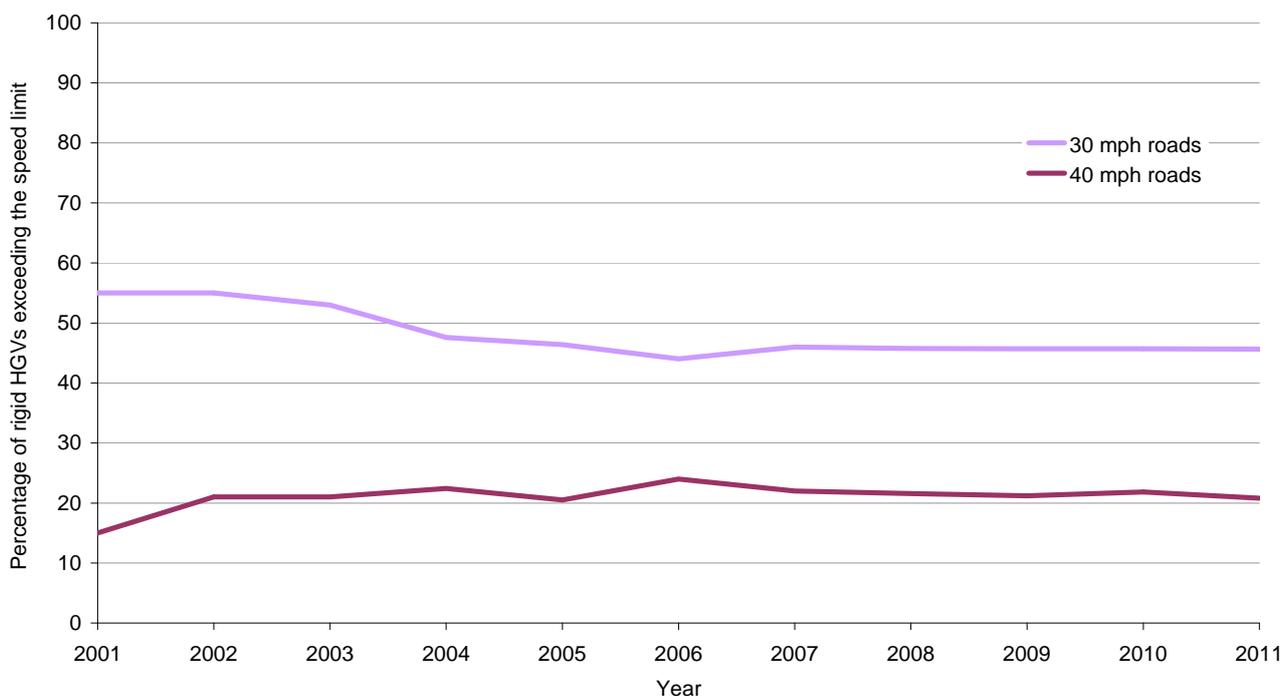
- Fifty per cent of motorcycles exceeded the speed limit on roads with a 30 mph limit in 2011, compared with 45 per cent in 2010. This increase follows two consecutive annual falls, however the figure remains below the percentage observed in 2008 prior to these falls (53 per cent) and the 59 per cent observed ten years ago in 2001.
- The percentage of motorcycles exceeding the speed limit on dual carriageways in 2011 was 59 per cent, this is a ten percentage point increase on 2010 (49 per cent) and 24 percentage points higher than ten years ago (35 per cent).

Percentage of motorcycles exceeding the speed limit by road category in Great Britain, 2001 – 2011



- The percentage of two-axle rigid HGVs exceeding the limit on roads with a 40 mph speed limit has increased in the last 10 years from 15 per cent in 2001 to 21 per cent in 2011.
- The proportion of two-axle rigid HGVs exceeding the limit on roads with a 30 mph speed limit has decreased 9 percentage points over the last 10 years to 46 per cent in 2011.

Percentage of two-axle rigid HGVs exceeding the speed limit by road category in Great Britain, 2001 – 2011



6. Strengths and weaknesses of the data

- Free flow vehicle speeds data provides insight into the speeds at which drivers choose to travel when not hindered by obstacles; these obstacles include congestion, roundabouts, hills, or traffic enforcement cameras. It also gives a picture of drivers' compliance with speed limits on roads in Great Britain.
- The data cannot be localised; we get a general picture of Great Britain but do not know the average speeds vehicles choose to travel in regions or local authorities. We do not know the speeds of vehicles on specific roads as the data comes from a sample of suitable roads.
- The automatic traffic counters are selected so they match the criteria that traffic measured is free flowing; this means our sample size is reduced. The number of individual vehicles observed in the production of these statistics was 755,169,050.

7. Background notes

1. The web tables give further detail of the key results presented in this statistical release and statistics on other related topics. They are available here:

http://www.dft.gov.uk/statistics?post_type=table&series=speeds-series

2. Full guidance on the methods used to compile these statistics can be found in 'Technical Information' here: <http://www.dft.gov.uk/statistics/series/speeds/>

3. National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They undergo regular quality assurance reviews to ensure they meet customer needs: <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

4. Details of ministers and officials who receive pre-release access to these statistics up to 24 hours before release can be found here: <http://assets.dft.gov.uk/statistics/releases/free-flow-vehicle-speeds-2010/free-flow-vehicle-speeds-2010-prerelease.pdf>

5. Free flow vehicle speeds in Great Britain 2012 will be published in the summer of 2013.