Road Traffic Statistics

Statistical Release

February 2012

RESPONSIBLE STATISTICIAN

Iain Ritchie

FURTHER INFORMATION

Media Enquiries:
020 7944 3066

Public Enquiries:
020 7944 3095
roadtraff.stats@dft.gsi.gov.uk

Department for Transport

Annual Road Traffic Estimates 2010

This Statistical Release presents revised road traffic estimates for Great Britain in 2010. These estimates have been revised as part of a planned benchmarking exercise.

Annual estimates are mainly based on around 10,000 manual counts where trained enumerators count traffic by vehicle type over a 12 hour period. Traffic data are also collected continuously from a national network of around 180 Automatic Traffic Counters (ATCs). In addition to counting traffic, the ATCs record some of the physical properties of passing vehicles which are used to classify traffic by type.

These two data sources are combined with road lengths statistics to produce the number of vehicle miles travelled each year by vehicle type, road category and region.

Key results :

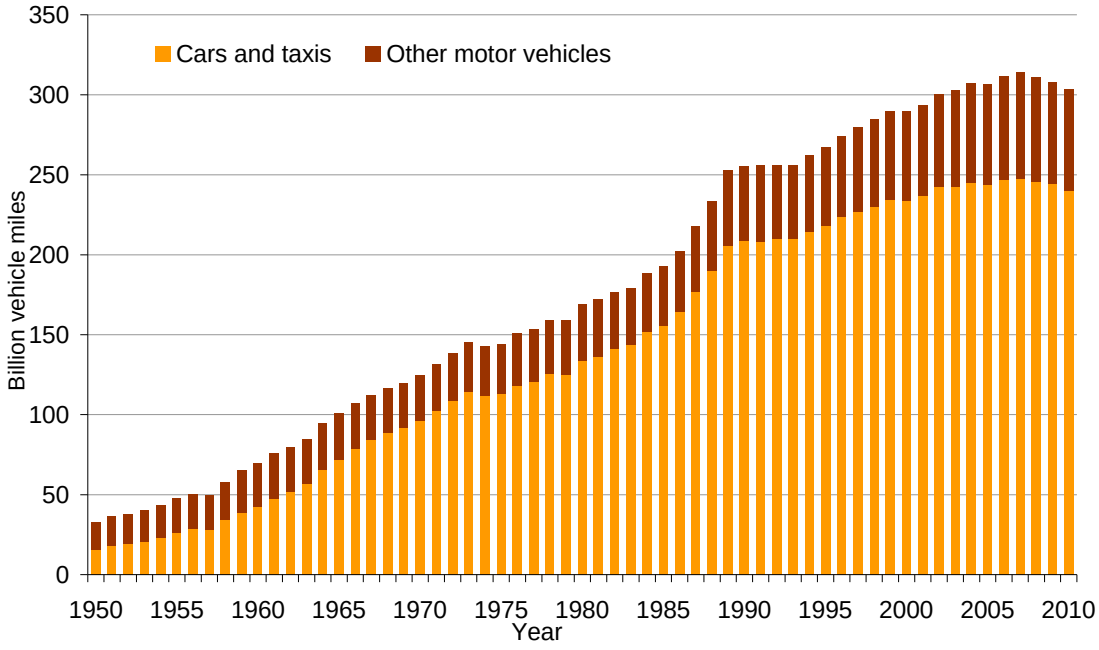
- In 2010 the overall motor vehicle traffic volume in Great Britain was 303.2 billion vehicle miles, down by 4.9 billion vehicle miles from 2009.
- Car traffic was 239.8 billion vehicle miles in 2010, accounting for 79.1 per cent of all motor vehicle traffic. Car traffic has accounted for about 80 per cent of all motor vehicle traffic since 1980. In 2010 car traffic was 2.0 per cent lower than in 2009, but 2.6 per cent higher than 2000.
- Light van traffic increased by 0.9 per cent between 2009 and 2010 to 41.0 billion vehicle miles. This was 26.5 per cent higher than 2000. Light van traffic showed the greatest increase in traffic volume in 2010.
- In 2010 heavy goods vehicle traffic was 16.4 billion vehicle miles. This represents a 0.3 per cent increase from 2009; although heavy goods vehicle traffic levels remain 6.7 per cent lower than 2000.
- In 2010 20 per cent of traffic was on motorways, 28.7 per cent on rural ‘A’ roads, 16.3 per cent on urban ‘A’ roads, 14.0 per cent on rural minor roads and 20.9 per cent on urban minor roads.

1. Road Traffic in 2010

The annual estimates show that:

- In 2010, the overall motor vehicle traffic volume in Great Britain was 1.6 per cent lower than in 2009, at 303.2 billion vehicle miles.
- This follows a 0.9 per cent year on year fall between 2008 and 2009, and a 1.0 per cent fall between 2007 and 2008. Motor vehicle traffic has fallen for three consecutive years for the first time since records began in 1949. However, traffic levels in 2010 were 4.7 per cent higher than in 2000.

Road traffic in Great Britain, 1950-2010



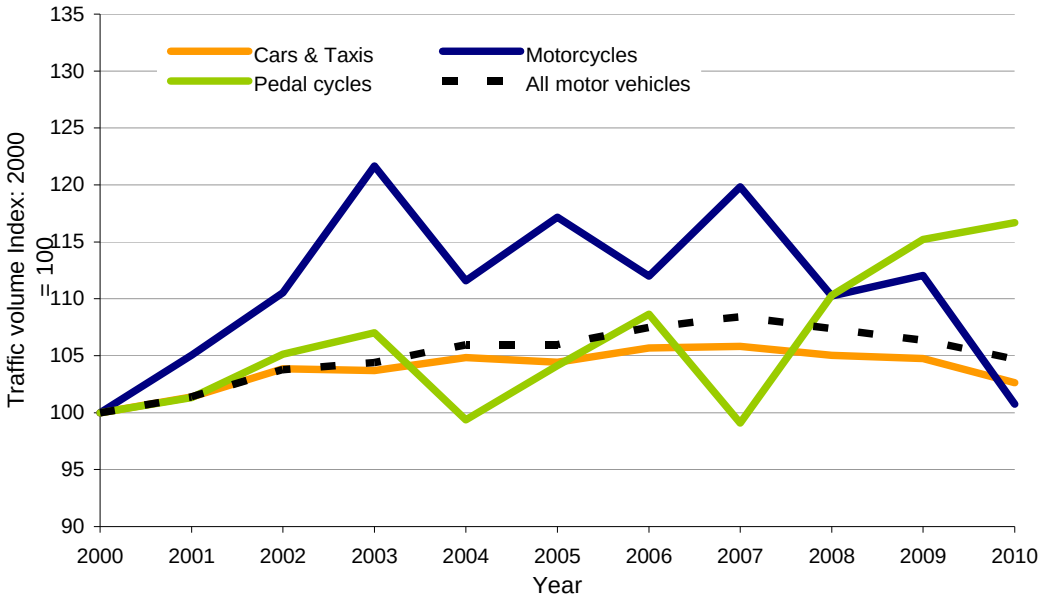
2. Road traffic by vehicle type

The annual estimates show that:

- Car traffic fell by 2.0 per cent from 2009 to 239.8 billion vehicle miles in 2010. The decline in car traffic accounts for the majority of the fall in overall traffic in 2010.
- In 2010, light van traffic was 41.0 billion vehicle miles, a 0.7 per cent increase from 2009. Light van traffic increased by 26.5 per cent between 2000 and 2010.
- Heavy goods vehicle traffic had a small increase between 2009 and 2010 of 0.3 per cent, to 16.4 billion vehicle miles.
- 2010 is the first year there has been an increase in heavy goods vehicle traffic and light van traffic since 2007.
- Two-wheeled motor vehicle traffic saw a decrease of 10.1 per cent from 3.2 billion vehicle miles in 2009 to 2.9 billion vehicle miles in 2010.
- Buses and coaches and pedal cycles also saw small increases in traffic levels between 2009 and 2010. Bus and coach vehicle traffic saw a small increase of 0.5 per cent, whilst pedal cycles saw a 1.3 per cent increase to 3.0 billion vehicle miles.

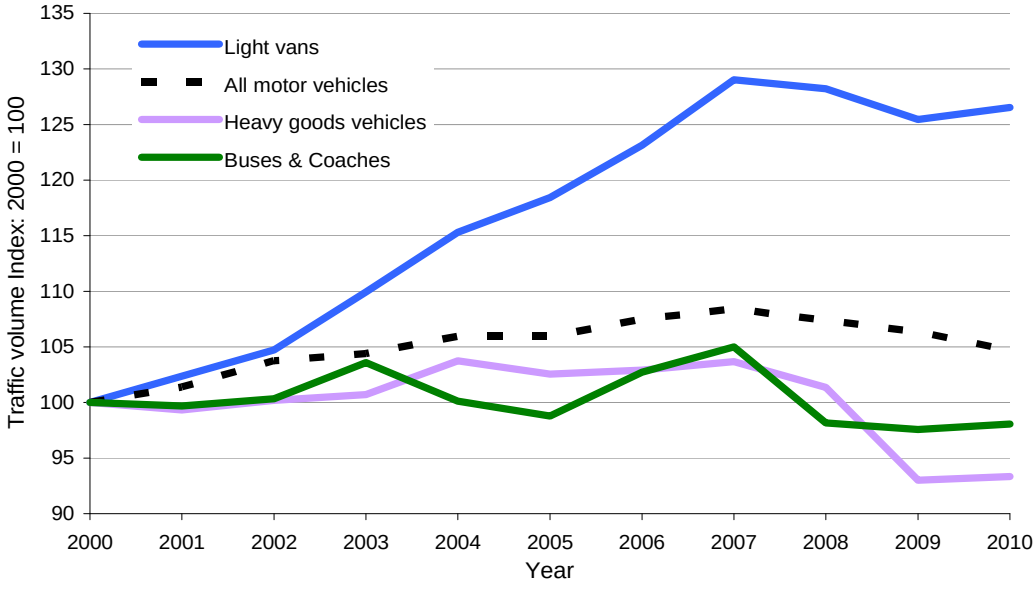
- Car traffic accounted for 79.1 per cent of all traffic in 2010, with light van and heavy goods vehicle traffic accounting for 13.5 and 5.4 per cent respectively. This is very similar to the distribution seen in 2009.
- Over the last ten years, traffic from all types of private vehicles has increased. In particular pedal cycle traffic was a sixth higher in 2010 than in 2000.

Road traffic by vehicle type (private vehicles) in Great Britain, 2000-2010



- In contrast, heavy goods vehicle traffic was lower in 2010 than in 2000. This is as a result of the decline in HGV traffic from 2007 onwards.
- Over the last 10 years, light van traffic grew consistently faster than all other vehicle types, peaking in 2007 at 29 per cent higher than in 2000.

Road traffic by vehicle type (Commercial and public service vehicles) in Great Britain, 2000-2010

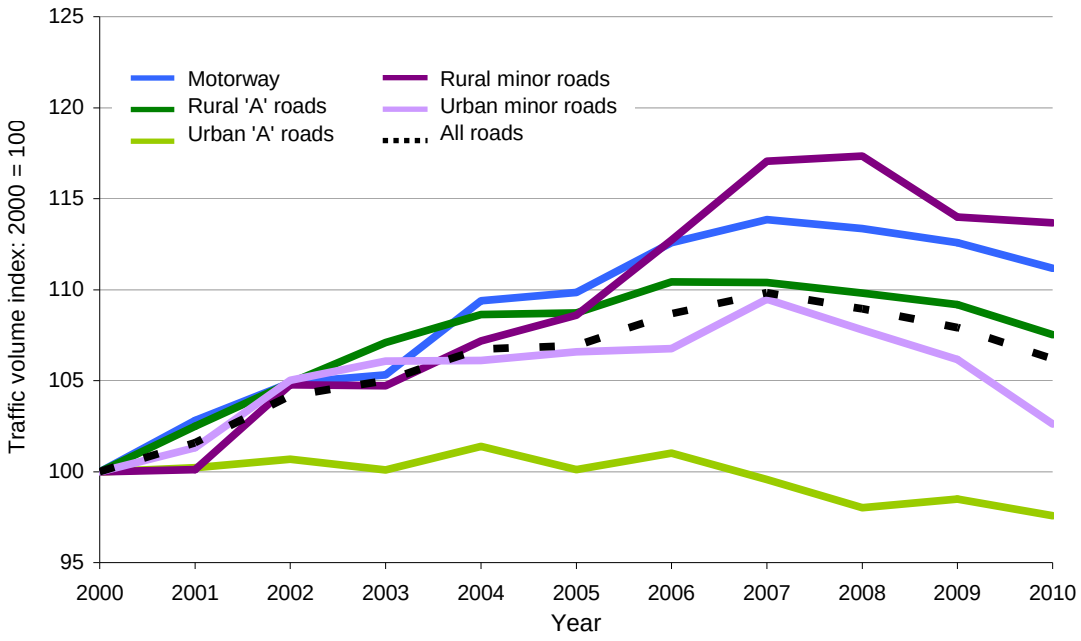


Detailed statistics (tables and charts) on “Annual road traffic by vehicle type” can be found in the Annual Road Traffic Statistics web tables, TRA0101, TRA0104, TRA0201, and TRA0204

3. Road traffic by road class

- In 2010 20.1 per cent of traffic was on motorways, 28.7 per cent on rural 'A' roads, 16.3 per cent on urban 'A' roads, 14.0 per cent on rural minor roads and 20.9 per cent on urban minor roads, these proportions are similar to 2009.
- Overall, major roads showed a 1.3 per cent decrease in traffic, and minor roads saw a 2.1 per cent decrease in traffic between 2009 and 2010.
- Traffic on motorways decreased by 1.3 per cent between 2009 and 2010; traffic on urban 'A' roads decreased by 0.9 per cent and traffic on rural 'A' roads decreased by 1.5 per cent.
- Between 2009 and 2010 traffic on urban minor roads showed the largest decrease of all road types at 3.3 per cent. Traffic on rural minor roads decreased the least of all road types at 0.3 per cent.
- Traffic on urban 'A' roads and minor roads are at a lower level in 2010 than they were in 2000. Traffic on all other road types has increased in the ten years since 2000, with traffic on rural minor roads showing the greatest increase of 11.0 per cent.

Road traffic by road class in Great Britain, 2000-2010



- The distribution of traffic across road types varies considerably between vehicle types. At one extreme more than four-fifths of pedal cycle traffic is on minor roads, while nearly 90 per cent of heavy goods vehicle traffic is on major roads.
- Motorcycle and bus & coach traffic is spread evenly between minor roads and major roads, while around 60 per cent of car and light van traffic is on major roads.

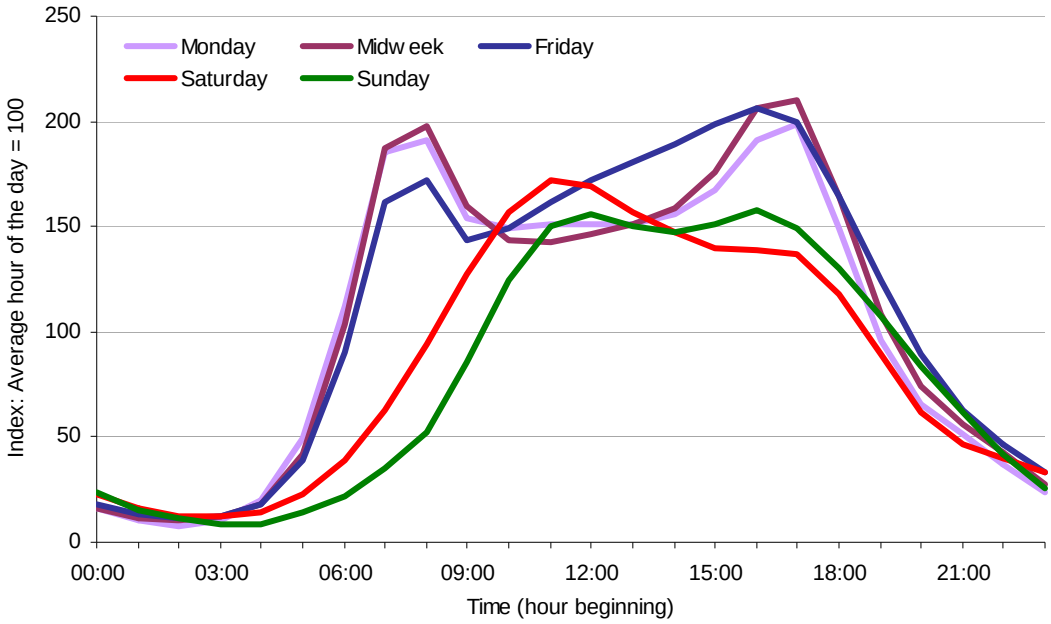
Detailed statistics (tables and charts) on "Annual road traffic by road class" can be found on the Annual Road Traffic Statistics web tables, TRA0102, TRA0104, TRA0202, and TRA0204

4. Motor vehicle flows

Motor vehicle flow statistics give an indication of how busy roads in Great Britain are rather than volume of miles travelled by traffic on the road network. Motor vehicle flow is presented as the average number of vehicles per day for each mile of road in 2010:

- Motorways had the highest average traffic flow in 2010 with 75.6 thousand vehicles for each mile of motorway per day.
- The average traffic flow on urban 'A' roads in 2010 was 19.6 thousand vehicles for each mile of urban 'A' road per day.
- Traffic flows on rural 'A' roads were 10.8 thousand vehicles for each mile of rural 'A' road per day, in 2010.
- In 2010, on average, major roads in Great Britain had 12 times the flow of minor roads.
- Minor road average traffic flow was 1.4 thousand vehicles per mile of minor road for each day in 2010.

Distribution of traffic flows by time of day and day of the week in Great Britain, 2010



- On weekdays traffic peaks between 8 am and 9 am in the morning and between 4 pm and 6 pm in the afternoon. At these times traffic is approximately double the average level due to commuting and trips to school.
- Friday differs from the other weekdays in that there is a lower peak in the morning and the build up to the evening peak accumulates steadily throughout the day, rising from 10 am.
- The distribution of traffic flows throughout the day for weekends differs from weekdays in that there is a peak between 11 am and 1 pm, which reflects the different types of journeys being carried out. Saturday in particular has no evening peak.

5. Regional traffic

- In 2010, 86 per cent of traffic in Great Britain was in England. Scotland had 9 per cent of the traffic and Wales 6 per cent.
- Seventeen per cent of traffic in Great Britain was in the South East of England, while only 4 per cent was in the North East of England.
- Traffic in every region of Great Britain decreased between 2009 and 2010, however between 2000 and 2010 all regions saw an increase in traffic except for the North East and London. Here overall traffic levels decreased by 0.4 per cent and 8.4 per cent respectively from 2000 to 2010.

Detailed statistics (tables) on Road Traffic by Regions and Local Authorities can be found on the Annual Road Traffic Statistics web tables, TRA8901, TRA8902 and TRA8903. The figures in the Local Authority tables are not classed as National Statistics and should be treated with caution.

6. Vehicle weights

Vehicle weight is measured by automatic weight-in-motion (WIM) classifiers; a conventional measure of vehicles exceeding the legal maximum weight is the count of those that are 10 per cent or more above the legal maximum limit.

- Articulated heavy goods vehicles with 6 or more axles have the highest proportion of any goods vehicle exceeding their maximum legal weight; one in fifteen articulated goods vehicle with 6 or more axles were more than 10 per cent over the 44 tonne legal maximum weight.
- 0.2 per cent of articulated HGVs with 4 axles and 2.0 per cent of articulated HGVs with 5 axles weighed 10 per cent over the legal maximum weight.
- 1.2 per cent of rigid HGVs were 10 per cent or more over their 35 tonnes legal maximum weight.
- The proportion of heavy goods vehicles exceeding their legal weight limit by 10 per cent or more was lower for all HGVs in 2010 than in 2009.

7. Heavy goods vehicles' headway

Headway is the measurement of time between two vehicles. The Highway Code (rule 126) recommends larger vehicles allow a four second gap in normal driving conditions.

- In 2010 approximately 15 per cent of all heavy goods vehicles were within two seconds of the vehicle in front, with a further 28 per cent being between two and four seconds behind.
- Twenty one percent of rigid HGVs were estimated to be within two seconds of the vehicle in front compared to twelve per cent of articulated HGVs.
- The majority of all heavy goods vehicles leave a gap of over four seconds from the vehicle in front (fifty eight per cent), and thirty eight per cent leave a gap of six seconds or more.

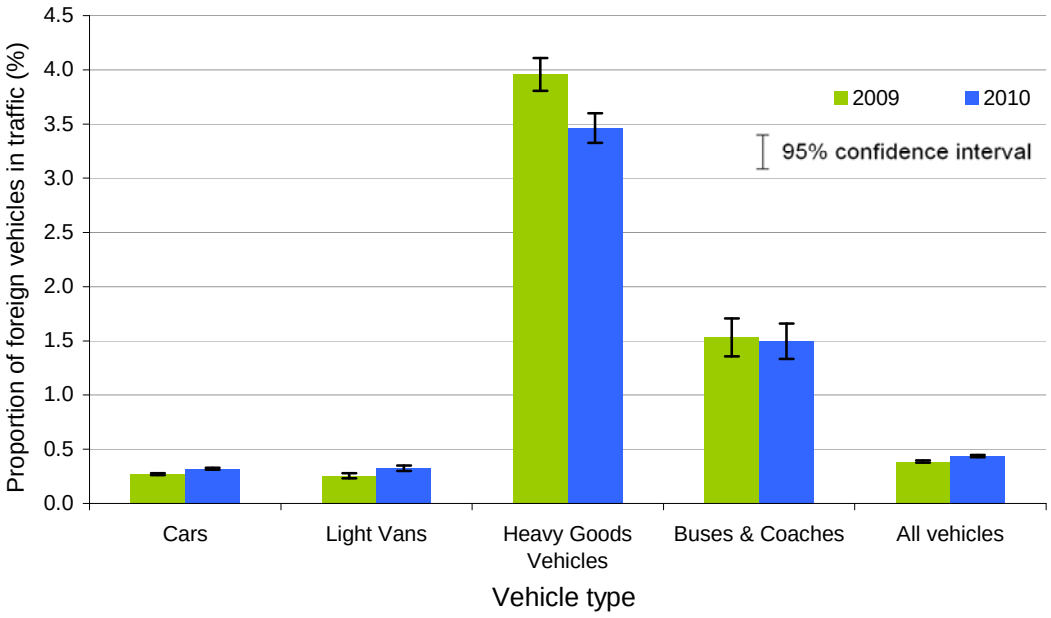
Detailed statistics (tables) on Vehicle weights and Headway can be found on the Annual Road Traffic Statistics web tables, TRA3106, TRA3107. The figures in these tables are not classed as National Statistics and should be treated with caution.

8. Foreign Vehicles

This section discusses the proportion of vehicles in traffic which are registered outside the UK; all other traffic estimates refer to all vehicles on the road, regardless of the national origin of the vehicle.

- In 2010, 0.4 per cent of traffic on British roads was estimated to be foreign registered. This is a small increase from the rate in 2009. This means that about 1 in every 229 miles driven in Great Britain was driven by a foreign registered vehicle.
- The proportion of heavy goods vehicle traffic that is made up by foreign registered vehicles is higher than for other vehicle types. About 1 in every 29 miles driven by an HGV, or 3.5 per cent of HGV vehicle miles, was driven by a foreign registered vehicle in 2010. This has decreased from 4.0 per cent in 2009.
- The proportion of traffic from foreign registered cars increased slightly from 2009 to 2010: in 2010 they accounted for 0.3 per cent of all car traffic, or 1 mile in every 312 miles driven.

Proportion of foreign registered vehicles in traffic by vehicle type in Great Britain 2009-2010



- The South East had the highest overall rate of foreign registered vehicles in traffic in England, estimated at 0.5 per cent in 2010. The lowest rate was the West Midlands at 0.3 per cent.
- The rate of foreign registered vehicles in traffic in Scotland has increased to 0.6 per cent in 2010, making it the country with the highest rate of foreign registered vehicles in Great Britain.
- In 2010, the highest rate by region and vehicle type was for heavy goods vehicles in the South East of England, at 5.9 per cent. The region with the highest rate of foreign registered cars in traffic was Scotland, with 0.5 per cent.

Detailed statistics (tables and charts) on foreign registered vehicle traffic can be found on the Annual Road Traffic Statistics web tables, TRA3201, TRA3202, and TRA3203. The figures in these tables are not classed as National Statistics and should be treated with caution.

9. Strengths and weaknesses of the data

- Annual estimates make use of data from around ten thousand manual traffic counts in addition to continuous data from a national network of around 180 automatic traffic counters and can produce accurate estimates on traffic levels in Great Britain by vehicle type and by road type.
- Road traffic data is accurate at a high level of aggregation, and whilst we produce traffic breakdowns by local authorities, traffic at this level is not robust and must be treated with caution.
- Vehicle weight is measured by automatic weight-in-motion (WIM) classifiers located at a small sample of ATCs: 5 motorway sites and 1 'A' road site. WIM Classifiers are able to record vehicle weight. A conventional measure of the proportion of vehicles exceeding the legal maximum weight is the count of those that are 10 per cent or more above the legal maximum limit: this allows for any potential measurement error by the WIM classifier. These figures are not classed as National Statistics and should be treated with caution as the sample size is small.
- Headway data is collected from the same ATC sites used in the WIM analysis, but are based on traffic in lane 1 only. These figures are not classed as National Statistics and should be treated with caution as the sample size is small.
- During June each year a roadside survey is carried out collecting information about vehicles travelling on the road: vehicles with registration marks originating outside United Kingdom have been identified and this information has been used to produce estimates of the rate of foreign registered vehicles on Britain's roads. These figures are not designated National Statistics and should be treated with caution as the sample size is relatively small (7,140 observations of foreign registered vehicles)

10. Background notes

1. Minor road traffic estimates from 2000 to 2010 have been revised as a result of a planned benchmarking exercise. Further information on this exercise can be found here: http://assets.dft.gov.uk/statistics/releases/traffic-estimates-2010-revised/minor-road-benchmarking-frequently-asked-questions.pdf

2. 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=traffic-tag)

3. Full guidance on the methods used to compile these statistics can be found here: (http://assets.dft.gov.uk/statistics/releases/traffic-estimates-2010/traffic-estimates-2010-methodology.pdf)

4. 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: (http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html)

5. 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.s3.amazonaws.com/statistics/releases/traffic-estimates-2010/traffic-estimates-2010-prerelease.pdf)

6. Final annual estimates for 2011 are due to be published in summer 2012.