



Annual Road Traffic Estimates: Great Britain 2013

Main findings:

In 2013, overall motor vehicle traffic in Great Britain was 303.7 billion vehicle miles, a slight increase (0.4%) on 2012.

Vehicle miles travelled by cars and taxis were broadly similar when comparing 2013 to 2012. LGV traffic reached a new peak in 2013, of 42.6 billion vehicle miles, a 3.2 per cent increase on 2012 levels. HGVs, and buses and coaches also showed increases (0.9% and 2.9%, respectively).

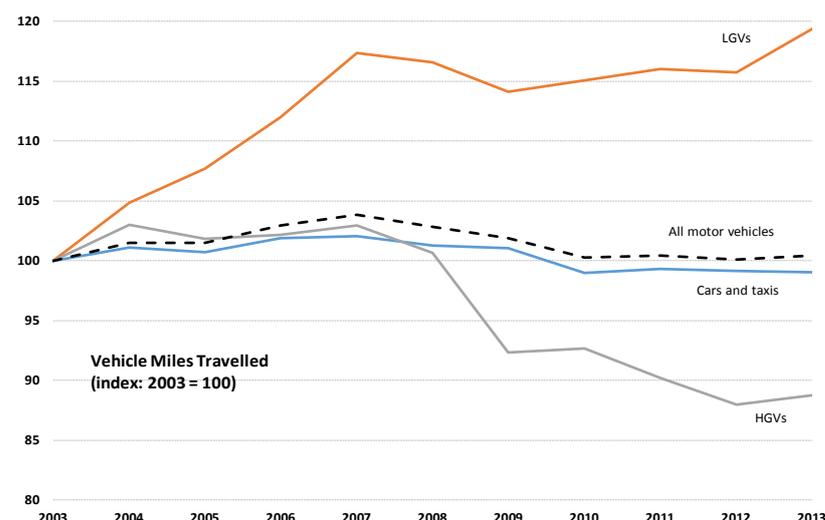
Compared to ten years ago, traffic for all vehicle types is slightly higher (0.4%). This has been driven by LGV traffic, which has increased by almost a fifth (19.4%) over the ten year period, as shown in the chart. All other vehicle types have shown overall decreases (for example, cars and taxis: -1.0%; HGVs: -11.2%) whilst peaking at different points over this time period.

Traffic on motorways increased by 1.5 per cent in the last year, to 63.3 billion vehicle miles travelled, the highest ever level. 'A' road traffic has remained stable at 135.8 billion vehicle miles.

In 2013, the Strategic Road Network (SRN: motorways and 'A' roads managed by the Highways Agency) made up 2.4 per cent of the road network in England, but carried 32.9 per cent of all motor vehicle traffic and 65.6 per cent of all HGV traffic. Traffic on the SRN has increased by 0.8 per cent in the last year.

Traffic on rural minor roads ('B', 'C' and Unclassified roads) has increased by 2.7 per cent, when compared with last year. However, traffic on urban minor roads decreased by 1.5 per cent.

Vehicle miles travelled by selected vehicle types in Great Britain, 2003 - 2013



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About this release

This Statistical Release presents road traffic estimates for Great Britain in 2013. Annual estimates are mainly based on around 8,000 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 200 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.

The [traffic counts website](#) provides street-level traffic data for every junction-to-junction link on the 'A' road and motorway network in Great Britain. This is the detailed dataset that underlies this publication, and the website also gives links to download the raw traffic count data.

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Summary figures for 2013

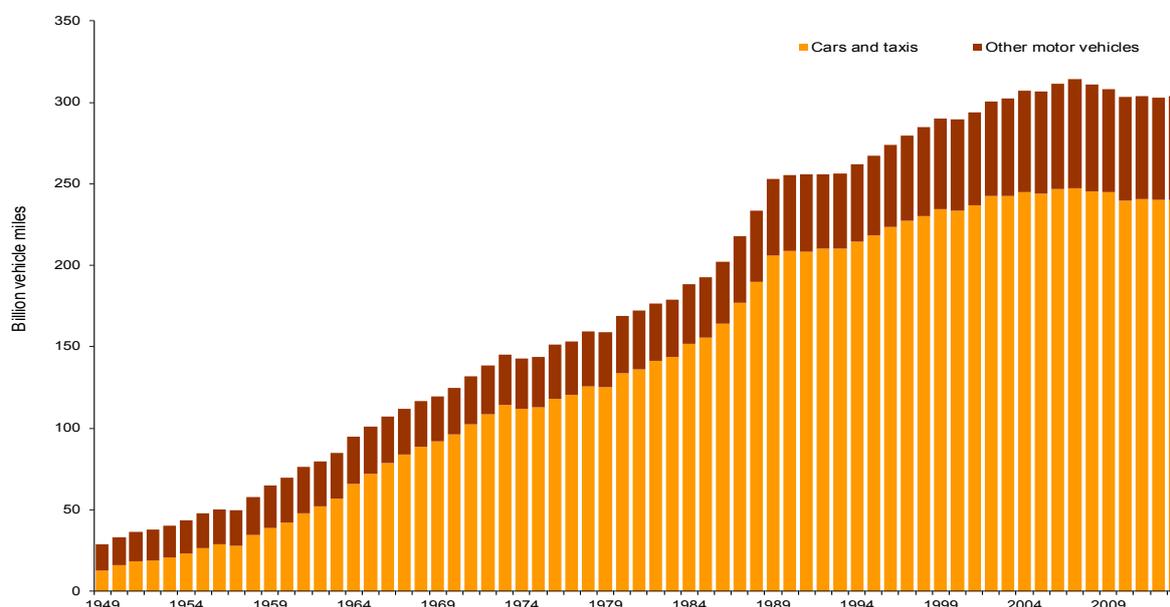
The summary table below shows the patterns in vehicle traffic compared to 2012 and previous annual figures across a range of years. More information on our annual estimates can be found online [here](#).

Vehicle Miles	This Year 2013	Percentage change over time			
		Last Year 2012	Five Years Ago 2008	Ten Years Ago 2003	Twenty Years Ago 1993
All Motor Vehicle Traffic	303.7 billion	↑ 0.4%	↓ 2.4%	↑ 0.4%	↑ 18.5%
Cars	240.0 billion	↓ 0.1%	↓ 2.2%	↓ 1.0%	↑ 14.2%
LGVs	42.6 billion	↑ 3.2%	↑ 2.4%	↑ 19.4%	↑ 64.8%
HGVs	15.7 billion	↑ 0.9%	↓ 11.8%	↓ 11.2%	↑ 4.0%
Buses	2.8 billion	↑ 2.9%	↓ 10.7%	↓ 15.4%	↓ 2.4%
Motorcycles	2.7 billion	↓ 4.9%	↓ 14.0%	↓ 22.0%	↑ 14.9%
Motorways	63.3 billion	↑ 1.5%	↑ 1.8%	↑ 9.6%	↑ 49.5%
Rural A-Roads	87.3 billion	↑ 0.1%	↓ 1.6%	↑ 0.9%	↑ 24.0%
Urban A-Roads	48.5 billion	↓ 0.1%	↓ 2.5%	↓ 4.5%	↑ 1.0%
Rural Minor Roads	41.2 billion	↑ 2.7%	↓ 5.6%	↑ 4.3%	↑ 18.4%
Urban Minor Roads	63.3 billion	↓ 1.5%	↓ 5.1%	↓ 6.5%	↑ 4.5%
Strategic Road Network	85.5 billion	↑ 0.8%	↑ 0.6%	↑ 1.6%	↑ 18.2%

Road traffic in 2013

In 2013, overall motor vehicle traffic in Great Britain was 303.7 billion vehicle miles. This is broadly similar to traffic level estimates in 2012 (302.6 billion vehicle miles) and 2011 (303.8 billion vehicle miles).

Road traffic in Great Britain, from 1949 (Table [TRA0101](#))



Since the 1950s the long term trend in road traffic has been one of growth. In 2013, the overall motor vehicle traffic volume of 303.7 billion vehicle miles was over 10 times higher than in 1949 (28.9 billion vehicle miles). However, over the last 20 years there has been a decline in the rate of traffic growth. Motor vehicle traffic grew by 50 per cent during the 1980s, by 14 per cent during the 1990s and by six per cent between 2000 and 2009. Motor vehicle traffic peaked at 314.1 billion vehicle miles in 2007 after which it fell for three consecutive years; the first consecutive annual falls since traffic records began. Since 2010 traffic levels have been broadly stable, and in 2013 traffic is similar to levels seen in 2003.

Factors affecting traffic trends

Road transport continues to be the main transport mode for individuals and businesses. Changes in the volume of road traffic can be related to a number of factors including:

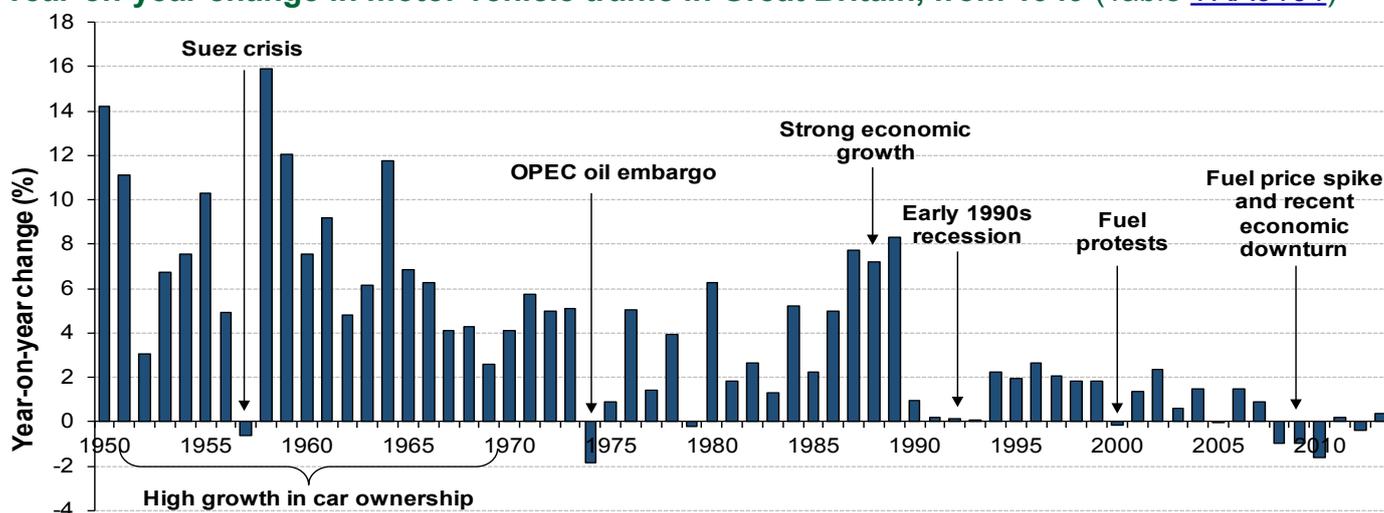
- Population and demography;
- Incomes and the economy;
- Cost of motoring (e.g. fuel prices, fuel efficiency, insurance, etc); and
- Forms of transport that can be used in conjunction with road traffic, and those that can be used instead of.

There has been a steady growth in population over the last 20 years resulting in a larger number of people choosing to travel for economic and personal needs as well as a greater production of goods which need to be transported. However, changes in the demographics of the driving population have also been observed. According to the National Travel Survey (NTS) 2012, those aged 17 to 29 were less likely to hold a valid driving licence in 2012 than they were 15-20 years previously (for example, 74 per cent of 21-29 held a driving licence in the 1995/97 NTS compared to 65 per cent in 2012). Young people choosing to delay obtaining a driving licence, or choosing not to get one at all, may also be reducing the number of drivers on the roads.

The long term trend of growth in traffic has mainly been a result of growth in car ownership. Growth in people's incomes, especially those on lower incomes, makes car ownership more affordable. There may be a saturation point in car ownership in the future. However, there currently appears to still be some scope for further growth in ownership in some sections of the population, particularly for those households where the choice of not owning a car is as a result of constrained income. According to the National Travel Survey 2012, there are around a quarter of households without access to a car, down from 30 per cent in 1995/97, and a larger proportion of lower income households without access to a car.

Fluctuations in road traffic volume tend to coincide with events such as changes in the economy and fuel prices, which influence car ownership and the trip behaviour of car owners.

Year-on-year change in motor vehicle traffic in Great Britain, from 1949 (Table [TRA0101](#))



Increases to the cost of motoring could be expected to have a negative effect on changes in the volume of car traffic. However car use is also influenced by associated changes in the cost of alternative modes of transport (i.e. buses and trains). Additionally, there is evidence that motorists are continuing to move towards cars with lower running costs and greater fuel efficiency. The proportion of diesel, small engine and low CO₂-emitting cars are increasing, especially in the new vehicle market.

The recent recession may also have influenced people's perception of the value of time which, in turn, may have influenced how much time people spend travelling and which mode they take. For example, more people may be willing to sacrifice the extra time it takes to cycle to their destination as it is a cheaper option than driving their car.

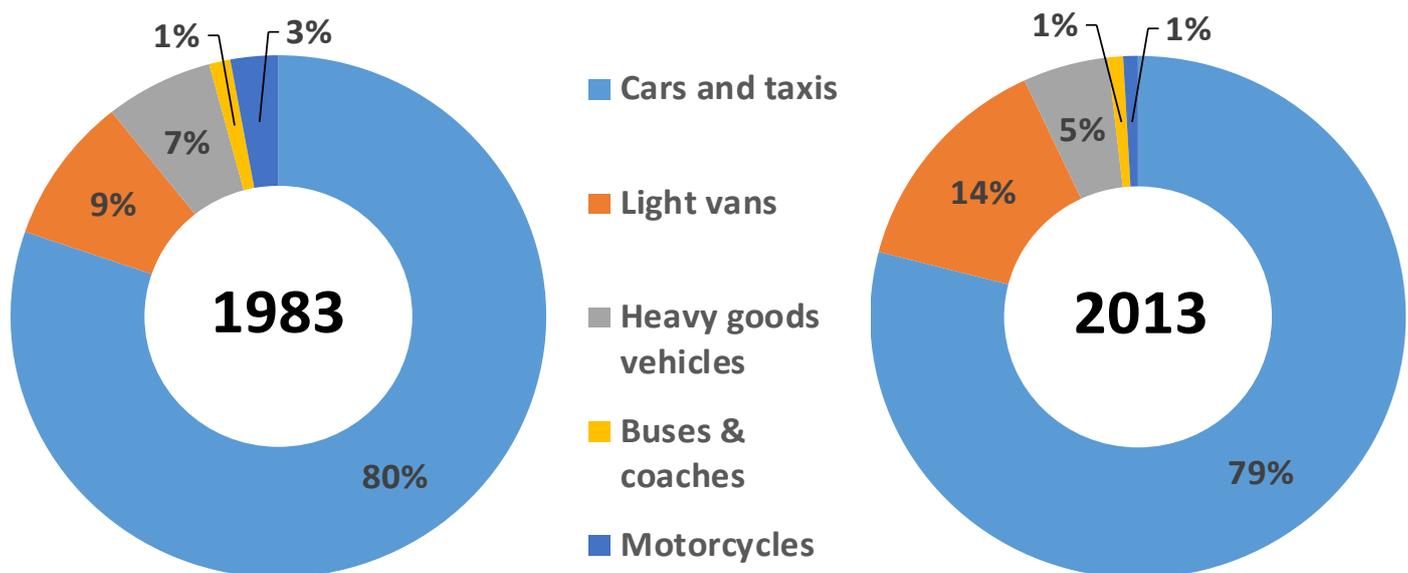
Road traffic by vehicle type

Since the 1980s, cars have accounted for around 80 per cent of all motor vehicle traffic and continue to be the main contributor to changes in the volume of overall motor vehicle traffic.

Compared to 30 years ago, LGVs have become more influential on overall traffic growth. LGVs now account for 14 per cent of all motor vehicle traffic compared to 9 per cent in 1983 as illustrated in the charts below. This increase in LGV traffic may be as a result of changes in shopping habits towards more internet-based and home delivery retail over this time period.

Car traffic was broadly similar at 240.0 billion vehicle miles in 2013 compared to 240.3 billion vehicle miles in 2012 and 240.7 billion vehicle miles in 2011. Car traffic peaked in 2007 at 247.3 billion vehicle miles.

Road traffic by vehicle type in Great Britain: 1983 and 2013



In 2013, LGV traffic was 42.6 billion vehicle miles, the highest level ever. This is 3.2 per cent higher than the 2012 figure (41.3 billion vehicle miles). LGV traffic increased by 19.4 per cent between 2003 and 2013.

Heavy Goods Vehicle (HGV) traffic increased by 0.9 per cent between 2012 and 2013 to 15.7 billion vehicle miles. HGV traffic has fallen by 11.2 per cent since 2003 and by 13.8 per cent since the peak of 18.2 billion vehicle miles in 2007. Many HGV trips relate to activities such as retail, construction and industry. These activities are closely tied to the general economic situation of the country. Additionally, according to HGV licensing figures, newly licensed HGVs are heavier now than they were ten years ago, with the average weight of a vehicle increasing from 22.4 tonnes in 2001 to 27.0 tonnes in 2013. This could be an indicator of companies choosing to use fewer but larger vehicles to move goods around, resulting in a fall in HGV traffic. However, according to the road freight survey, between 2002 and 2010 goods moved, as measured in tonne kilometres, decreased by a similar amount (-8.0%) compared to HGV traffic (-7.0%).

Bus and coach traffic saw an increase of 2.9 per cent between 2012 and 2013, to 2.8 billion vehicle miles. However, bus and coach traffic has decreased by 15.4 per cent since 2003 and 16.5 per cent since its peak in 2007 (3.4 billion vehicle miles).

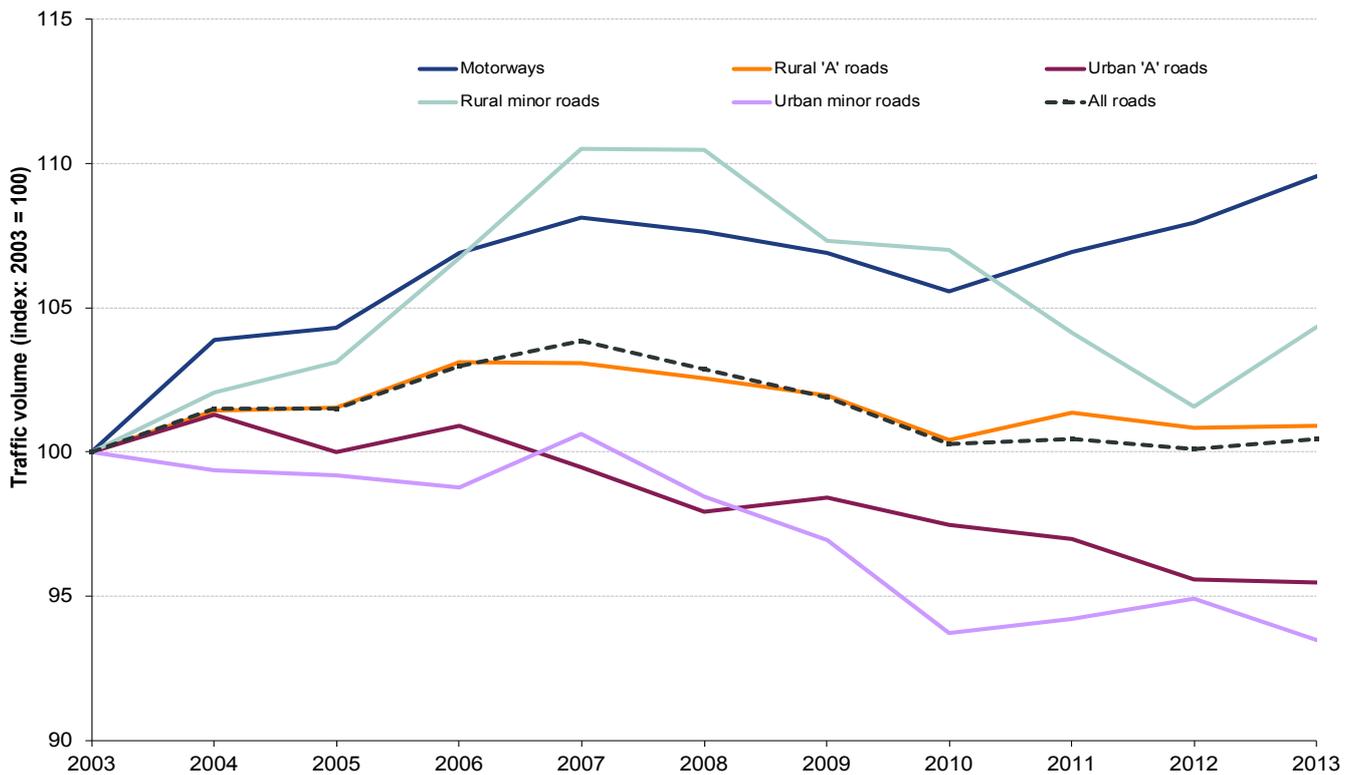
Motorcycle traffic has decreased 22.0 per cent between 2003 (3.5 billion vehicle miles) and 2013, travelling 2.7 billion vehicle miles.

Road traffic by road class

The 2013 figures show that major roads (Motorways and 'A' roads) carried the majority of the traffic (65.6%), as has been the case over the past ten years.

- Traffic on motorways increased by 1.5 per cent between 2012 and 2013, to a new peak of 63.3 billion vehicle miles. Over the past 10 years, the volume of traffic on motorways has grown by 9.6 per cent.
- Traffic volumes are not proportionate to road lengths: for example, motorways account for around one per cent of the road network in length, but carried 20.9 per cent of traffic in 2012.

Road traffic by road class in Great Britain, from 2003 (Table [TRA0102](#))



With the exception of motorways, the only road types to experience growth in traffic volumes between 2012 and 2013 were rural minor roads:

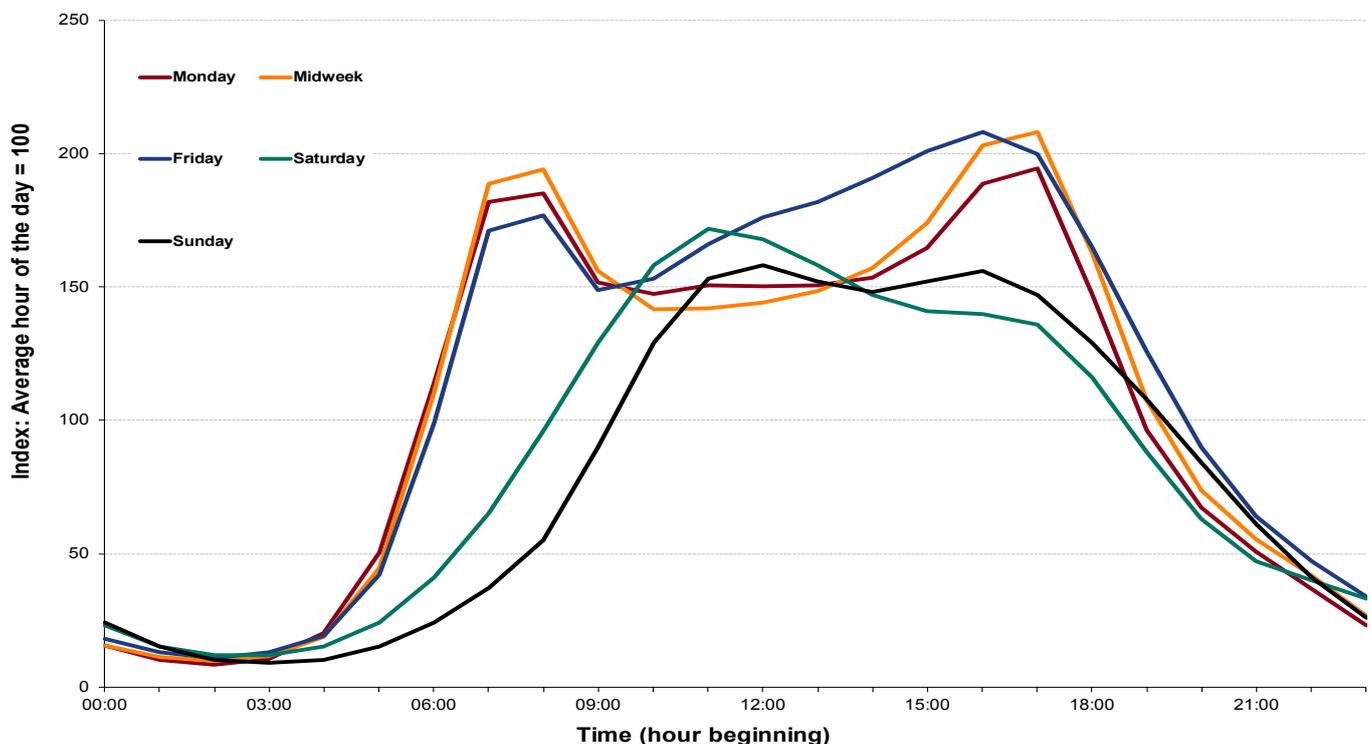
- Traffic on rural minor roads grew by 2.7 per cent between 2012 and 2013 while traffic on rural 'A' roads was broadly stable (0.1% increase), meaning traffic on all rural roads has increased by 0.9 per cent over the last year. This is the first increase in traffic on rural roads since 2007.
- Traffic on urban minor roads decreased by 1.5 per cent decrease in 2013. Urban 'A' roads traffic was broadly stable (0.1% decrease), meaning that urban roads (both 'A' road and minor) have fallen by 0.9 per cent.
- Traffic on all 'A' roads (both urban and rural) has remained stable at 135.8 billion vehicle miles between 2012 and 2013.

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

- Motorways continue to have the highest average traffic flow, with 76,700 vehicles for each mile of motorway per day in 2013, 1.2 per cent higher than 2012. On average, motorways in Great Britain had around six times the flow of 'A' roads and major roads had over 13 times the flow of minor roads in 2013.
- Out of all major sections of motorway, the western half of the M25 had the highest average traffic flow in 2013 with 156,000 vehicles per mile per day. This figure is around double the average for all motorways.
- The five year average daily traffic flow on all roads, between 2009 and 2013, showed that August had the highest average daily car traffic flow while January had the lowest. This is consistent with previous years.
- On weekdays, traffic peaks between 7 am and 9 am in the morning and between 4 pm and 6 pm in the afternoon. At these times traffic was approximately double the average level due to commuting and trips to/from 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.
- 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. In particular, Saturday has no evening peak.

Distribution of traffic flows by time of day and day of the week in Great Britain, 2013

(Table [TRA0307](#))



Highways Agency managed roads

The trunk road network, consisting of most of the motorways and some 'A' roads in England, is called the Strategic Roads Network (SRN) and unlike the rest of the road network is managed at the national level by the Highways Agency; an executive agency of the Department for Transport. In the Annex is a map of the SRN and which roads are included in it.

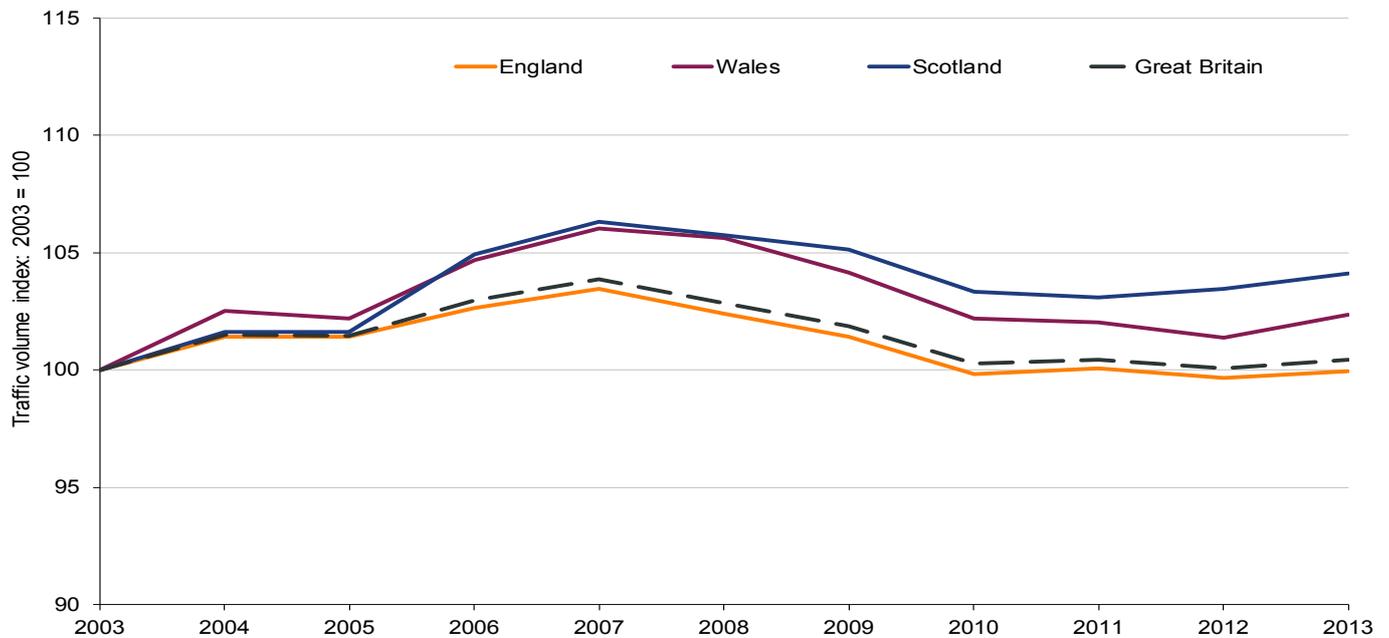
- Despite making up only 2.4 per cent of road network in England, the SRN carries 32.9 per cent of all motor vehicle traffic and 65.6 per cent of all HGV traffic.
- The SRN has an average flow of 52,800 vehicles a day per mile of road which is around four times the size of the average flow for Local Authority managed major roads at 13,300.
- In 2013, 85.5 billion miles were driven on the SRN. This is 0.8 per cent higher than the level in 2012.
- Traffic volumes on the SRN in 2012 were 1.6 per cent higher than they were ten years ago; however, this does not reflect the reduction in the amount of road managed by the Highways Agency. The road length reduced by 12.6 per cent which was mostly as a result of the detrunking programme, in which the management of parts of the SRN was transferred from the Highways Agency (HA) to the relevant Local Authorities. This caused the amount of road under the management of the Highways Agency to fall significantly from 1999 onwards.

Road traffic and road length by road class in England, 2013 (Table [TRA4105](#))



- To enable easier comparisons over time, tables [TRA42](#) contain figures based on a road network similar to that in 2013 for all years. This is achieved by keeping the management status of the network constant throughout the time series, meaning changes to the road network are only caused by the construction of new roads. According to these figures, traffic volumes grew by 7 per cent between 2013 and 2003 compared to a 3 per cent fall experienced by Local Authority managed roads over the same period. However, these figures should be interpreted with caution due to their experimental nature and therefore may not be robust.

Road traffic by the countries of Great Britain, from 2003 (Table [TRA8901](#))



Variations in road traffic can be found between the three nations that make up Great Britain, with trends for England being similar to that of Great Britain as a result of its relative size:

- In 2013, 86 per cent of traffic in Great Britain was in England. Scotland had nine per cent of the traffic and Wales five per cent. Similar traffic proportions have been seen across the three nations since 1993 when this level of data first became available.
- Compared to the 2012 figures, the 2013 figures show that traffic in all three nations increased slightly, with Wales showing the highest growth (1.0%) while Scotland and England traffic level increased less (0.6% and 0.3% respectively).
- Between 2003 and 2013, the volume of traffic has grown by more in Scotland and Wales (4.1% and 2.4% respectively) than in England which was broadly stable. The volumes of traffic for all three nations peaked in 2007 and have followed similar trends since.

Additionally, variations in road traffic within England can be found:

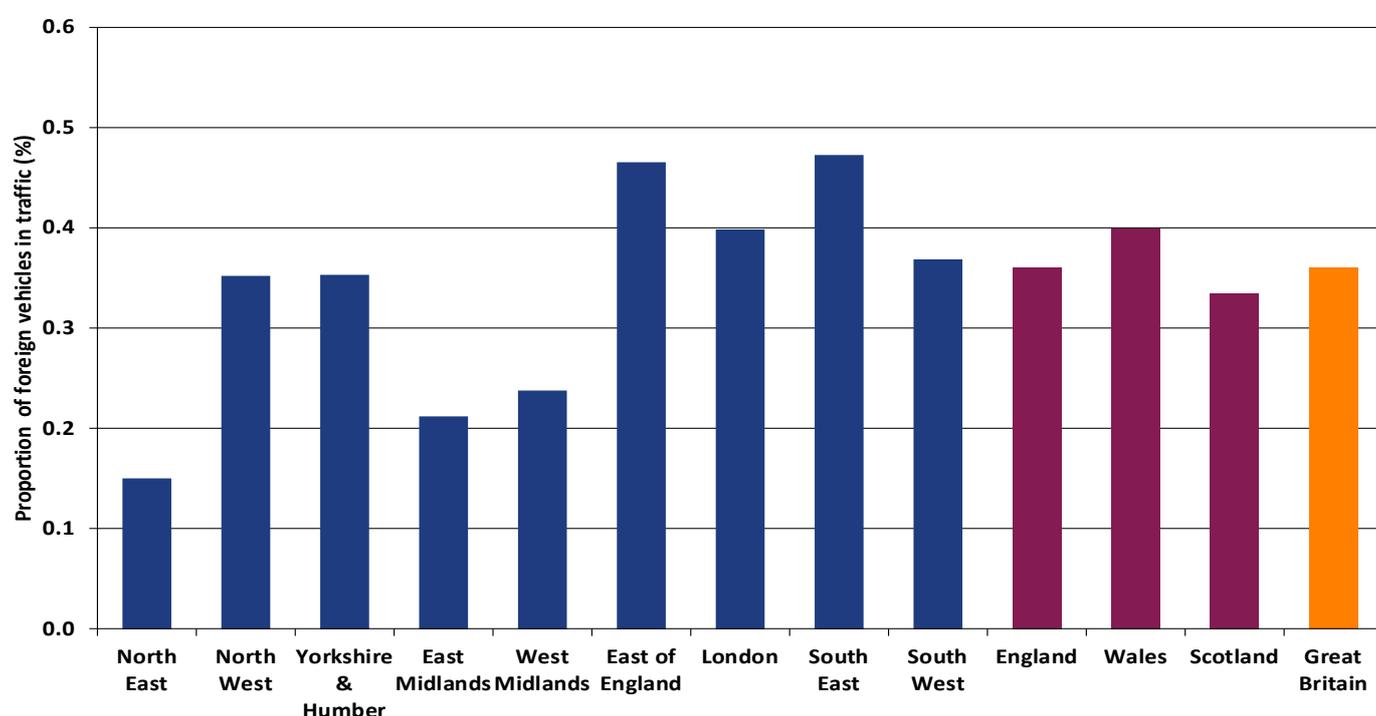
- In 2013, the largest proportion of traffic in England was in the South East, accounting for 20 per cent of traffic in England, while the smallest proportion of traffic, at four per cent, was in the North East.
- Between 2012 and 2013, English regions experienced small changes in traffic levels – from 1.0 per cent increase in East of England to a 0.3 per cent decrease in London.
- Over the last 10 years, around half of the regions in England have experienced increases in road traffic (for example, South West: 3.8%; East of England: 2.9%). Greater London experienced the largest decrease (-9.8%) over the same time period.

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 2013, 0.4 per cent of traffic on British roads was estimated to be foreign registered. This is a small decrease from the rate in 2011.
- The proportion of HGV traffic that is made up by foreign registered vehicles is higher than for other vehicle types. In 2013, 3.3 per cent of HGV vehicle miles were driven by a foreign registered vehicle. This has decreased from 3.6 per cent in 2011 and 4.0 per cent in 2009.
- The South East region had the highest proportion of foreign registered vehicles out of any region within Great Britain reflecting that the South East is the region of arrival for many motor vehicles coming from Europe via ports and the channel tunnel.

Proportion of foreign registered vehicles in traffic by regions of England and country in Great Britain, 2013 (Table [TRA3201b](#))



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.

- Headway figures have shown a broadly similar trend over the last five years. In 2013, 56 per cent of HGVs left at least the recommended four second gap between themselves and the vehicle in front, compared to 57 per cent of HGVs in 2012.
- Fifteen per cent of HGVs left less than a two second gap in 2013. This proportion has remained stable since 2010.

Please note that headway statistics are not classed as National Statistics as estimates are based on data collected from a small sample of ATC sites. As such, headway statistics should be treated with caution.

Strengths and weaknesses of the data

Annual estimates make use of data from around eight thousand manual traffic counts in addition to continuous data from a national network of around 200 automatic traffic counters. These data sources produce accurate estimates on traffic levels in Great Britain by vehicle type and by road type.

Whilst road traffic data is accurate at a high level of aggregation, it should be noted that:

- Although we produce traffic breakdowns by local authorities, traffic at this level is not robust, due to the sample size of the minor road data and must be treated with caution.
- Estimates for pedal cycle traffic only include cycling on roads and do not include estimates of cycling on other routes such as canal paths. Therefore, they may not give a complete representation of cycling.
- The Road traffic statistics series consistently reports higher levels of vehicle kilometres for HGVs than the Road freight statistics series. This can mainly be attributed to difference in data collection. A methodology note on this issue has been published and can be found in our statistical guidance notes online here:

<https://www.gov.uk/government/publications/road-traffic-speeds-and-congestion-statistics-guidance>

- Headway data (in table [TRA3107](#)) is collected from a sample of automatic traffic counter (ATC) sites and are based on traffic in lane 1 only. These figures are classed as official statistics but not as National Statistics and should be treated with caution as the sample size is small.
- During June, every other year, a roadside survey is carried out collecting information about vehicles travelling on the road which identifies vehicles with registration marks originating outside United Kingdom. This information has been used to produce estimates of the rate of foreign registered vehicles on Britain's roads, which are presented in tables [TRA32](#). These figures are designated as official statistics but not as National Statistics and should be treated with caution as the sample size is relatively small (3,969 observations of foreign registered vehicles out of 1,008,803 total observations). Particular attention should be paid to the confidence interval associated with each statistic and in some cases statistics have not been produced as the sample size is too small. This survey is next due to be carried out in 2015 and therefore the next estimates of foreign vehicle traffic will be published in 2016.
- Following user feedback over the last year, we have not published tables TRA3105 and TRA3106. These tables presented information on HGV traffic by axle configuration, and on the percentage of HGVs weighing 10 percent over the legal maximum weight, respectively. Further information is available in our note of the user feedback [here](#) and any comments are welcomed via roadtraff.stats@dft.gsi.gov.uk.

Users and uses of road traffic estimates

We continuously review the content of these statistics to ensure they are meeting users' needs. We welcome feedback via email and the team can be contacted at roadtraff.stats@dft.gsi.gov.uk.

A summary of the feedback we have received from users in a previous consultation can be found in '[Meeting customers' needs: Users and uses of road traffic statistics and data](#)'. We continue to welcome any feedback on these statistics.

Road traffic data are a key source of management information on the country's infrastructure. Main uses of road traffic statistics include:

- Road traffic statistics are used to produce the National Atmospheric Emissions Inventory (NAEI), a legal requirement for EU Air Quality Directives, and for the UN Framework Convention on Climate Change.
- The Department for Transport's National Traffic Model uses most traffic and speeds outputs to make forecasts and to inform policy decisions on a broad range of issues.
- Local Authorities (including Transport for London) and devolved governments use the data for transport planning, road engineering and policy monitoring at a regional or local level.
- Road accident and safety statistics use annual and quarterly traffic estimates to produce road safety and accident rates, as required for the Strategic Framework on Road Safety.
- The Department for Communities and Local Government uses traffic data on major roads to contribute towards the funding settlement for local authorities.

National Statistics

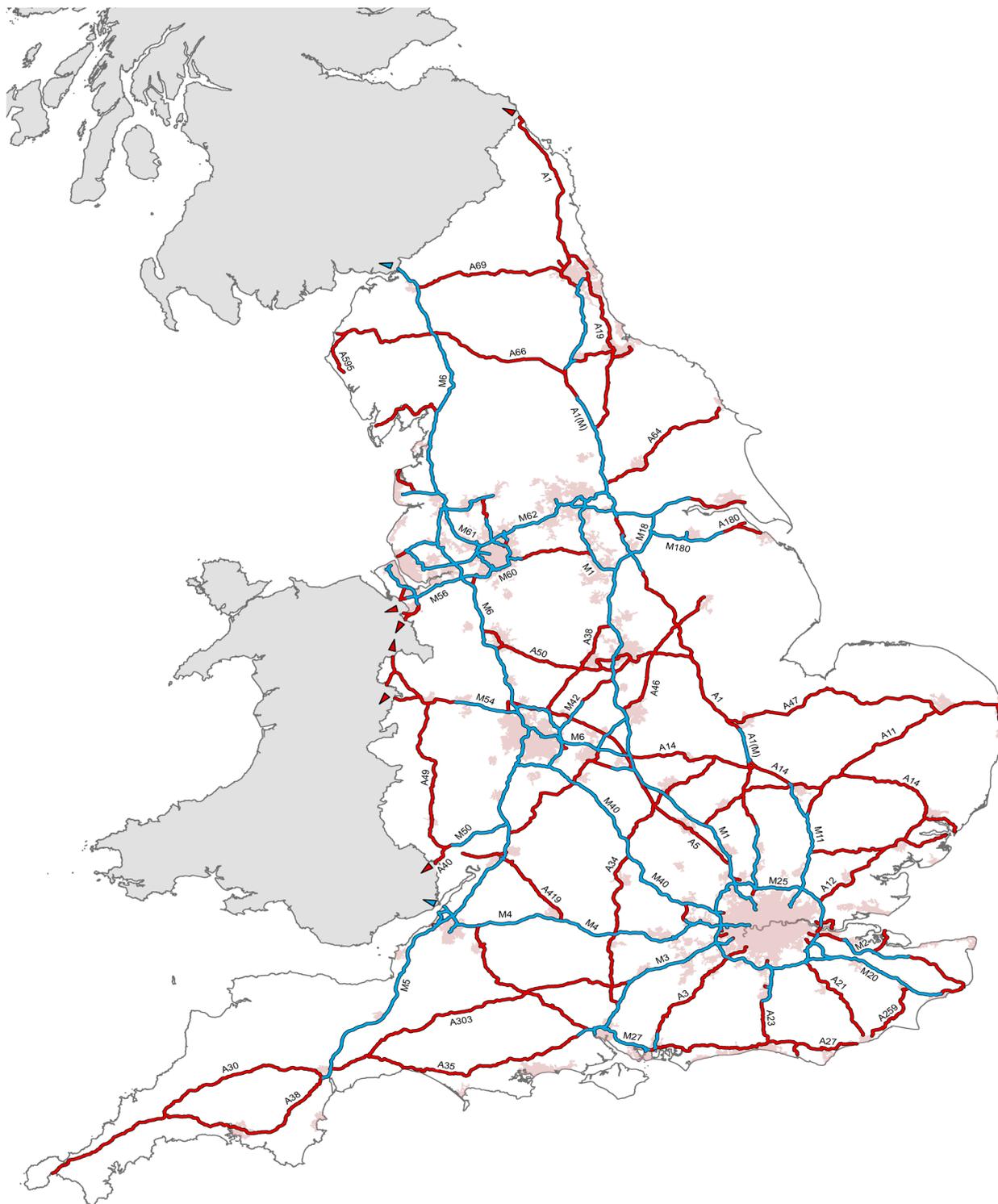
National Statistics are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure they meet customer needs. Free Flow Vehicle Speed Statistics were assessed by the UK Statistics Authority against the Code of Practice 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>.

Next update

The next annual road traffic estimates for Great Britain are scheduled to be published in summer 2015.

Strategic Roads Network in England (motorways and 'A' roads managed by the Highways Agency)



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