Statistical Release

Department

for Transport

19 May 2016



Road Traffic Estimates: Great Britain 2015

316.7 billion miles were driven on Great Britain's roads in 2015, nearly 1% more than the previous high in 2007.

About this release

This release presents the latest annual estimates of traffic on Great Britain's roads. It looks at recent and long term trends in traffic, in the context of related statistics. Traffic is presented in units of **vehicle miles**, which combines the number of vehicles on the road and how far they drive.

Annual traffic statistics are compiled using data from around 8,000 roadside 12-hour manual counts, continuous data from around 300 automatic traffic counters, and data on road lengths.

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Vehicle miles travelled by selected vehicle types in Great Britain, 2005-2015



In 2015:

- ► Car traffic grew by 1.1% from 2014, to 247.7 billion vehicle miles. This is a new record, being slightly higher than the previous peak in 2007 (page <u>8</u>).
- ► Van traffic continued to grow more quickly than any other vehicle type, rising 4.2% from 2014 levels (page <u>10</u>).
- ► Lorry traffic saw the largest year-on-year increase since the 1980s, growing by 3.7% from 2014 (page <u>12</u>).
- ► Motorways carried 66.5 billion vehicle miles of traffic, 2.6% more than in 2014 and 10% more than 10 years ago (page <u>20</u>).
- The Strategic Road Network carried 89.7 billion vehicle miles of traffic; one-third of all motorised traffic in England (page <u>24</u>).
- ► Rural roads saw a 2% rise in traffic from 2014, with traffic on both 'A' roads and minor roads reaching record levels (page <u>21</u>).
- ► Urban roads saw little change in traffic from 2014 (page <u>22</u>).

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Quick reference

The summary table below shows patterns in vehicle traffic across a range of years.

		Percentage change from:							
	Vehicle Miles	Last Year		5 Years Ago		10 Years Ago		20 Years Ago	
2015		2014		2010		2005		1995	
All Motor Vehicle Traffic	316.7 billion	0	1.6%	0	4.5%	0	3.2%	0	18.6%
Cars and Taxis	247.7 billion	0	1.1%	0	3.3%	0	1.5%	0	13.5%
Light Goods Vehicles (LGV)	46.9 billion	0	4.2%	0	14.3%	0	22.1%	0	69.6%
Heavy Goods Vehicles (HGV)	16.7 billion	0	3.7%	0	1.9%	0	-7.3%	0	5.4%
Buses	2.7 billion	U	-4.6%	U	-14.7%	U	-15.3%	0	-12.1%
Motorcycles	2.8 billion		0.0%	U	-2.9%	U	-16.5%	0	19.0%
Motorways	66.5 billion	0	2.6%	0	9.0%	0	10.3%	0	44.8%
Rural 'A' Roads	91.3 billion	0	2.4%	0	5.1%	0	4.0%	0	22.9%
Urban 'A' Roads	49.7 billion	0	0.7%		0.3%	0	-2.2%		-0.1%
Rural Minor Roads	44.5 billion	0	2.0%	0	5.1%	0	9.1%	0	23.8%
Urban Minor Roads	64.8 billion		0.0%	0	2.1%	0	-3.6%	0	5.9%
Strategic Road Network (SRN)	89.7 billion	0	2.7%	0	7.5%	0	8.1%		

HGV 0.7

Breakdown of traffic in Great Britain in 2015, by vehicle type and road type



Key definitions:

Traffic

Traffic refers to the total distance travelled by all vehicles over the year, measured in **vehicle miles.** This combines the number of vehicles on the road, and how far they drive.

Flow

Flow refers to the average number of vehicles travelling along a given stretch of the road network per day (24 hours).

Billion

In this release 1 billion = $1000 \text{ million} (10^9).$

Introduction to Road Traffic

This section provides an introduction to roads and road traffic.

Overview

Road transport continues to be the main transport mode for individuals and businesses.



According to the 2014 National Travel Survey...



84% of people in England travel by car at least once or twice a week

(2014) Road

73% of freight goods

are moved by road

In 2014, within the UK road freight sector...

Other



Long term traffic trends

Since the 1950s the long term trend in traffic has been one of growth: vehicle miles travelled in 2015 are over ten times higher than in 1949.

However, over the last 20 years there has been a decline in the rate of traffic growth.

Between 2007 and 2010, after the recent recession, motor vehicle traffic fell for three consecutive years. This was followed by a period of stability until 2013.

Since 2013, traffic has grown steadily to the 2015 record level of 316.7 billion vehicle miles.



Further information

An overview of the statistics on roads, and how they are used, can be found in the DfT report 'Road use statistics'.

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Factors affecting road traffic

This section provides an overview of some of the key factors that can affect the levels of road traffic. More detail about specific trends is provided in the later sections of this publication.



Year-on-year growth in traffic in Great Britain, 1950 onwards

-5% High growth in car ownership

Population growth and density

There has been a steady growth in population over the last 20 years. Since car is the main mode of transport for most people, with almost 90% of passenger mileage on roads, as well as almost 75% of the goods that people use being transported by road, population increases affect traffic levels.

The geographic pattern of population growth is a key factor in how traffic is affected. The more rurally people live, the further they travel; those living in rural hamlets and villages travel 86% further than those in urban conurbations.

Incomes, the economy, and employment

Fluctuations in road traffic levels tend to coincide with events such as changes in the economy (including GDP, see the chart to the right) and peoples' disposable incomes, which influence car ownership and the trip behaviour of car owners.

Over the long term, the cost of purchasing a motor vehicle has decreased, and this, along with population increases contributed



Five year rolling average of growth in traffic and GDP 12%



to increases in car ownership. There still appears to be some scope for further growth in ownership; according to the National Travel Survey 2014, 47% of those households in the lowest income quintile are without access to a car.

Car use is influenced by the costs of fuel, as well as associated changes in the cost of alternative modes of transport (i.e. buses and trains).



Demography

The demography of the driving population has changed over time, in particular, females and older age groups are more likely to hold a licence now. The proportion of young adults (aged 17-20) with a full driving licence has decreased since the 1990s when it was highest for this age group.



Wider Impacts of Road Traffic

Whilst traffic levels can act as a barometer of trends in the economy and society, traffic itself also has a variety of impacts on human life and the environment.

Road Accidents

Increases in traffic lead to a greater numbers of vehicles on the road network, greater numbers of interactions of vehicles and pedestrians and, therefore, increases the likelihood of accidents occurring. All else being equal, a rise in traffic is likely to increase the total number of accidents. However, per mile travelled, the risk of being killed or seriously injured in a road accident has



fallen almost every year from a peak of 165 deaths per billion vehicle miles (bvm) in 1949 to the lowest level of 5.6 deaths per bvm in 2013 and 5.7 deaths per bvm in 2014.

There are a range of reasons for the fall in fatality rates, including: improvements in education and training; improvements in vehicle technology and highway engineering; the introduction of road safety policies, such as speed limits; enforcement of legislation; and behavioural change.

Journey times and reliability

It might be expected that an increase in traffic would result in worse congestion, and a decrease in traffic result in lighter congestion. However, the relationship is not that simple. The effect of an increase in traffic on congestion will depend on where and when the extra vehicle miles occur.

For example, on many roads, congestion is most severe during the morning and evening rush-hour on weekdays. An increase in traffic at these peak times could have a large effect on congestion levels, but at other times of day may have little effect.

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Environmental impacts

Road transport accounted for 21% of the UK's CO_2 emissions in 2014. The UK is on track to meet it's second carbon budget for 2013-2017 as part of the target to reduce emissions by at least 80% from the 1990 levels by 2050.

Fuel efficiency has been improving, and sales of ultra-low emissions vehicles have taken off in recent Greenhouse gas (CO₂) emissions from road transport (tonnes), UK



years. The number newly registered ultra-low emissions vehicles in 2015 was 29,963 compared to 4,313 in 2013, so the impact of each additional mile driven has reduced.

Road condition

Road vehicles cause damage to the roads they drive along, with heavier vehicles having a disproportionately large impact.

In recent years, road conditions have been fairly stable. In 2014/15, 4% of the principal 'A' road network in England should have been considered for maintenance. This was the level as in the previous year.

Maintenance expenditure by road class, England 2014/15

£769m	Minor road routine and other				
£1,352m	Minor road structural				
£602m	Motorway and 'A' road routine and other				
£1,591m	Motorway and 'A' road structural				

Source: DfT road condition statistics

Sources

The data sources used in this section include:

Transport Statistics Great Britain - www.gov.uk/government/collections/transport-statistics-great-britain

The National Travel Survey - www.gov.uk/government/collections/national-travel-survey-statistics

- Annual Business Survey <u>www.ons.gov.uk/businessindustryandtrade/business/businessservices/bulletins/</u> <u>uknonfinancialbusinesseconomy/previousReleases</u>
- Office for National Statistics GDP data www.ons.gov.uk/economy/grossdomesticproductgdp
- Office for National Statistics RPI data www.ons.gov.uk/economy/inflationandpriceindices
- DfT road accident statistics www.gov.uk/government/collections/road-accidents-and-safety-statistics
- DfT environment statistics www.gov.uk/government/collections/energy-and-environment-statistics
- DfT road condition statistics www.gov.uk/government/collections/road-network-size-and-condition

Further information on factors affecting traffic can be found in the <u>Understanding the Drivers of Road Travel report</u>, a review of the evidence on road demand.

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Road Traffic by Vehicle Type

This section breaks down the latest traffic statistics and longer term trends in traffic by vehicle type.

Overview

Since the 1980s, cars have accounted for around four-fifths of all motor vehicle traffic and continue to be the main contributor to changes in overall motor vehicle traffic.

However, light goods vehicles (vans) have become more important over the last decade, accounting for 15% of all motor 198 vehicle traffic in 2015 compared to 9% in 1985.





Between 2014 and 2015, **van** traffic showed the fastest growth (in percentage terms) of any vehicle type, rising by 4.2% to reach a record high of 46.9 billion vehicle miles in 2015.

Distance travelled by **cars and taxis** and by **heavy goods vehicles** (lorries) also increased between 2014 and 2015, by 1.1% and 3.7% respectively. The 247.7 billion car and taxi miles travelled in 2015 is a new high, being slightly (0.2%) above the previous peak in 2007 before the recent financial crisis. Despite rising over the last two years to 16.7 billion vehicle miles, lorry traffic in 2015 remained 9% below the peak level seen in 2007.

By contrast, **bus and coach traffic** fell by 4.6% compared with 2014 to 2.7 billion miles, continuing an overall decline seen since 2007.

The following pages take a closer look at traffic trends for individual vehicle types.



Cars & taxis

Compared with 2014, car and taxi traffic in Great Britain increased by 1.1%, to 247.7 billion vehicle miles in 2015. This is a new high, being slightly above (0.2%) the previous peak recorded before the recent recession.



The fastest growth in car traffic (in percentage terms) over the last 10 years has occurred on rural minor roads, whereas there has been an overall fall in car traffic on urban roads.

Over the longer term car traffic has shown the most marked increase on motorways, rising by 52% between 1993 and 2015, and showing only a small and brief dip during the recent recession.

The different trends by road type are set out in the chapter on traffic trends by road type.

The distribution of car miles travelled in 2015 across the different road types was relatively even compared to motorcycles, buses and heavy goods vehicles (see other pages in this section). This reflects the car's versatility, being used for both short and long journeys and for a variety of journey purposes.

Percentage of trips by trip length in England, 2014 (NTS0308)



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Trends in car use

Between 2002 and 2013, there was a fairly steady decline in car miles driven per person and per licensed car. However, from 2013 to 2015 car traffic grew more quickly than population and almost as quickly as car stocks, suggesting a slowing or reversal of the previous downward trends.

Long term trends

Between 2002 and 2013, changes in car traffic in England reflected a balance between a rising English population and a falling average personal car/van driver distance, as reported by the National Travel Survey (NTS).

Over the same period, the number of licensed cars in Great Britain rose rapidly; more quickly than car traffic. In England, household car/van ownership rates showed little change, but the number of households grew by 10%, driving the growth in vehicle numbers.

Taken together, this suggests that personal access to cars remained similar between 2002 and 2013, but people chose to drive their car fewer miles. Dividing car traffic by the number of cars suggests that annual mileage per car fell from around 9,400 miles to 8,200 over this period.

See pages <u>4-5</u> and further information for possible drivers of these trends.

Recent trends

Between 2013 and 2014, growth in car traffic in England outstripped population growth, indicating an increase in average car driver distance. Whether or not this continued into 2015 will be seen when population and NTS statistics for 2015 are published later in 2016.

Between 2013 and 2015, car traffic and car stock in Great Britain grew at similar rates, suggesting a stabilising of average mileage per car. This period saw a marked fall in fuel retail prices (of 23 and 26 pence per litre for petrol and diesel respectively), which may have influenced how often or how far car owners travelled by car.

Sources and further information

Personal car travel in England, 2002-2014



Car stock and car traffic in Great Britain, 2002-2015



Car ownership rates in England (NTS0703)



Figures on car stocks are sourced from <u>Vehicles Statistics</u>, personal travel from the <u>National Travel Survey</u>, population from the <u>Office for National Statistics</u>, fuel price data from the <u>Department for Energy and Climate Change</u> and household numbers from the <u>Department for Communities and Local Government</u>. Further discussion of factors influencing trends in travel can be found in the DfT reports <u>Understanding the drivers of road travel</u> and <u>Road use statistics</u>.

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Compared with 2014, van traffic grew faster than any other vehicle type, rising 4.2% to reach a record high of 46.9 billion vehicle miles.

Total van mileage in 2015 was 70% higher than 20 years ago.



Van traffic increased on all road types between 2014 and 2015, with motorways and rural 'A' roads seeing the largest proportional increases in van traffic. Together, van traffic on these road types makes up half of the total van mileage in Great Britain.

The rapid rise in van traffic over the last 20 years means that van traffic now makes up around 15% of total traffic, compared to 9% in 1985.

Who uses vans?

In 2008, almost three-quarters of vans were commercially owned. Commercially owned vehicles travelled twice as far as privately owned vans, and accounted for over 80% of the distance travelled by vans. Over half of van mileage in 2008 was to carry equipment.



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Why is van traffic rising so quickly?

Alongside the 70% increase in van miles between 1995 and 2015, the number of licensed vans rose 71% over the same period, from 2.1 to 3.6 million.

In contrast to the trend seen in average car mileage, the average annual mileage per van in Great Britain (estimated from van vehicle miles divided by van stock) has remained stable over the last 20 years, at around 13,000 miles per year.

Over the last 20 years, trends in van traffic have followed changes in the economy closely. This is perhaps to be expected given the mainly commercial use of vans, and the variety of uses to which they are put, as recorded by the 2008 van survey. As businesses were established or expanded, the van fleet grew at the same rate.

Gross domestic product (GDP) resumed growth after the recent recession, but van traffic grew even faster than GDP between 2012 and 2015. This additional growth may be linked to a shift in the way consumers and businesses operate.

Indices of Gross Domestic Product (GDP) and van traffic, 1995-2015





Vehicle Definition

Light Goods Vehicle





Possible drivers of van growth may include:

- the growth in internet shopping and home deliveries, which could be increasing van deliveries and/or shifting some car shopping trips to van deliveries;
- changes to taxation rules for vans and cars making vans a more attractive option for some people;
- costs and regulation for vans tending to be less than for HGVs, encouraging businesses to substitute vans for HGVs.

Sources and further information

2008 van baseline survey: In 2008, DfT undertook a postal survey of UK registered vans, to find out who owns vans, what they are used for, and how far they are driven. The DfT report can be found <u>here</u>.

Gross Domestic Product data is sourced from the Office for National Statistics.

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The 16.7 billion vehicle miles travelled by lorries in 2015 is 3.7% more than in 2014; the fastest year-on-year growth in lorry miles since the 1980s.



Despite rising each year between 2012 and 2015, lorry traffic in 2015 remained below the peak level of 18.2 billion vehicle miles seen in 2007.

The changes in lorry traffic between 2014 and 2015 were not equal among different road types. Motorways saw the fastest growth between 2014 and 2015, at 5.2%, and in 2015 carried almost half (46%) of all lorry traffic.

By contrast, on urban minor roads lorry traffic fell by 4.5% over the same period.

Factors affecting trends in HGV traffic

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In recent years, lorry traffic appears to be closely correlated with changes in the economy.

This can be seen in general terms by comparing the index of Gross Domestic Product (GDP) with lorry traffic (right). Both GDP and lorry traffic fell sharply during the recent recession, and have grown sharply since 2012.



Longer term trends

A key factor in understanding trends in lorry traffic over the longer term is that lorries comprise of a wide range of differently sized vehicles, able to carry differing quantities of goods.

Between 1995 and 2015, total lorry vehicle mileage grew more slowly than UK GDP, but trends in lorry traffic differed markedly between different vehicle sizes. Traffic of lorries with four or more axles was 50% higher in 2015 than in 1995, whereas for lorries with less than four axles it had fallen by 23%.

The statistics from DfT's annual freight survey show a similar trend, presenting freight transport by gross vehicle weight.



Over the long term, total lorry traffic has not followed changes in GDP, because distance driven does not equate to the quantity of goods

moved when there are gradual changes in the sizes of lorries being used.

The percentage change in goods moved has been consistently above the index of vehicle miles since 1990, and the gap has been widening.

The increase in large HGV traffic and decrease in smaller

HGV traffic could also partly explain the different trends in HGV traffic by road types. Freight is likely moved more efficiently by larger HGVs on major roads than on narrow or busy minor and urban roads. It is also likely that vans are being used to perform work previously carried out by smaller HGVs.



1990 1994 1998 2002 2006 2010 2014

Indices of Gross Domestic Product (GDP) and lorry traffic, 1995-2015



Between 1990 and 2014, heavier HGVs moved an increasing proportion of goods by road. As a result, road freight in HGVs is now more concentrated in heavier lorries than in the past. This results in fewer vehicle miles being driven to transport the same weight of goods.

Vehicle Definition

Heavy Goods Vehicle (HGV; a.k.a. lorry) Goods vehicles over 3.5 tonnes gross vehicle weight, including both articulated and rigid body types.



Data Source

The figures for HGV activity on this page come from DfT's <u>Continuing Survey</u> of Road Goods <u>Transport</u> (CSRGT) for British

registered HGVs.It provides information on weight of goods lifted and moved by vehicle type and commodity type.

Goods lifted and goods moved

Goods lifted refers to the total weight of freight transported in a load, measured in **tonnes**.

Goods moved is defined as the weight of goods in each load multiplied by the distance the load is transported, measured in **tonne miles** or **tonne kilometres**.

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Motorcycles & scooters

In 2015, motorcycles and scooters travelled 2.8 billion vehicle miles, a similar figure to the previous year. Motorcycle traffic has declined over the last 10 years, from a peak in the mid-2000s.





Between 2014 and 2015, changes in motorcycle traffic have not been uniform across road types. Traffic growth occurred on motorways and urban minor roads, alongside falls on rural minor and urban 'A' roads.

Results from the National Travel Survey (NTS) indicate that average distance per motorcyclist in England (average distance ridden per motorcycle rider per week) has not had a downward trend over the last decade, although it has had year-to-year variability.



However, there was a downward trend in the proportion of households having access to a motorbike over the period, dropping from 3% in 2002 to 2.4% in 2014.

In other words, the distance ridden by those who ride has changed little, but it appears that fewer people are riding motorbikes.



Bus and coach traffic fell by 4.6% between 2014 and 2015 - the only vehicle type to see a decrease. Over the last decade, bus and coach traffic has fallen by over 15%.



The majority (61%) of bus and coach miles in Great Britain are driven on urban roads, near to densely populated areas.

Bus traffic has fallen most sharply on minor roads over the last decade, by 34% and 28% in rural and urban areas respectively. In contrast, bus traffic on urban and rural 'A' roads has risen over the same period.

The fall observed in bus and coach mileage over the last decade, and the contrasting patterns on 'A' roads and minor roads, may partly be explained by the trends in local bus service mileage.

The <u>2014/15 annual bus statistics</u> showed that local bus mileage in Great Britain fell 4% in the 10 years since 2004/05. This was due to a decrease of 21% in local authority supported bus services in Great Britain outside London over the same period.

Increases in commercial bus mileage have partially offset the decline in supported mileage, and these services may be more likely to use 'A' roads.

Supported and commercial bus mileage, Great Britain excluding London 2004/5 - 2014/15



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Local bus activity makes up around three-fifths of bus and coach traffic

DfT's annual bus statistics publication reported a total mileage for local bus services of 1.6 billion vehicle miles in 2014/15. This compares to bus and coach miles estimated from road traffic surveys of 2.8 billion and 2.7 billion vehicle miles in 2014 and 2015, respectively.

Although differences in coverage and methodology make comparisons between bus statistics and road traffic statistics inexact, the difference in the figures above gives an indication that the proportion of bus and coach mileage comprising of local bus services is around 60%. The remainder will include long distance coach services, private hire work, and closed contracts, which are not captured in the annual bus statistics, but are in the road traffic statistics.

While bus mileage has been falling, passenger miles have grown

Between 2004/5 and 2014/15, mileage of local bus services in Great Britain fell by around 4%, while passenger miles rose by 13% over the same period, from 16.0 billion passenger miles in 2004/5 to 18.1 billion passenger miles in 2014/15.

This indicates an increase in the average number of passengers travelling on each bus, from 9.9 passengers per bus in 2004/5 to 11.6 passengers per bus in 2014/15.

The large number of passengers per bus (in comparison to occupancy of cars, motorcycles and pedal cycles) means that, although bus and coach vehicle mileage is similar in magnitude to motorcycle and pedal cycles miles, it accounts for an order of magnitude more trips by people.



Trends in bus traffic have varied between locations



Local bus services mileage trends over the last 10 years have not been consistent across the country. They decreased most markedly in Wales over the period, whilst mileage has increased slightly in London. Bus mileage in metropolitan areas of England has decreased, while it has remained relatively stable in non-metropolitan areas.

Vehicle definition

Buses and coaches are defined as vehicles designed to transport people, which have a van chassis or larger, but excluding minibuses.

DfT traffic statistics combine mileage of both public and private vehicles, because public and private vehicles cannot be distinguished in traffic surveys.

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Pedal cycles

Pedal cycles travelled 3.2 billion miles on roads in 2015, 6.1% fewer than in 2014, but 26% more than 20 years ago.



Over four-fifths of the road cycle miles ridden in 2015 were on minor roads.

Between 2007 and 2014, pedal cycle traffic on rural minor roads almost doubled, rising from 20% to 31% of all pedal cycle traffic. Between 2014 and 2015, trends in cycle traffic differed amongst road types, with growth seen on 'A' roads alongside falls on minor roads.

Long-term trends in cycle traffic

Despite the recent growth in cycle traffic, cyclists in 2015 travelled only around one quarter of the 14.7 billion miles ridden in 1949. Cycle traffic fell most quickly during the 1950s and 1960s, coinciding with a large rise in car ownership. The lowest annual cycle mileage on Great Britain's roads was seen in 1973, at 2.3 billion miles.



Cycling on roads

DfT road traffic statistics report activity of cyclists on public highways, and on cycle paths and footpaths adjacent to them. Cycle activity

elsewhere (for example on canal towpaths, byways or bridleways) is not included in road traffic statistics.

Statistics from the <u>National Travel Survey</u> (NTS) and <u>Active</u> <u>Lives Survey</u> also provide information on cycling.

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Understanding trends in cycle traffic

Information on cycling from other sources such as the National Travel Survey (NTS) provides context for the trends in the estimates of cycle traffic from the road traffic statistics.

Between 2002 and 2014, average cycle mileage per person per year (including both people who cycle and those who do not) in England rose by 50%.

When only considering respondents who cycled at least once during the survey week, the average distance cycled during the week has grown at a similar rate to the whole England average. This suggests that people who cycle have been cycling further, but that the proportion of the population who cycle has not changed substantially.

Average cycle miles per capita and per active cyclist in England, 2002-2014 (NTS)



This picture is broadly supported by NTS figures on cycling frequency (below), which show that the proportion of people cycling at least once per week only rose 1 percentage point between 2003 and 2014, from 14% to 15%.

In general, cycling activity is quite unevenly distributed within the population, with 65% of people rarely or never cycling, but almost half of those cycling doing so more than once per week.



Both road traffic estimates and NTS statistics show that cycle traffic has been growing over the last decade, but the NTS figures suggest higher levels of growth than the road traffic estimates.

Some of this difference could be due to off-road cycling, which is not covered in the traffic statistics data collection. In 2014, over one-fifth of NTS respondents reported mainly cycling off-road.

Main cycling location in the last 12 months, England 2014 (NTS0315)



Note on National Travel Survey figures

The number of actively cycling respondents in the National Travel Survey is relatively low, so figures on average cycling miles per capita and per rider are expected to fluctuate from year to year as a result of sampling error.

As such, interpretation should focus on long-term trends rather than year-to-year changes.

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Traffic by Road Type

This section breaks down the traffic statistics by road type. Figures are presented broken down by the classification of the road (Motorway, 'A', 'B', 'C', unclassified), by the urban/rural setting of the road, and by the body which manages the road.

Overview

Vehicle activity is very unevenly distributed across Great Britain's road network.

In 2015, 66% of the motor vehicle miles travelled were on motorways and 'A' roads, despite comprising only 13% of the road network by length.

On an average day in 2015, 87 times more vehicles travelled along a typical stretch of motorway than a typical stretch of rural minor road ('B' roads, 'C' roads, and unclassified roads).



Latest trends

Between 2014 and 2015, motor vehicle traffic increased on all road types, except for urban minor roads where it remained stable.

Traffic on motorways, rural 'A' roads and rural minor roads grew by 2.6%, 2.4% and 2.0%, respectively, to reach new all time highs.





Definitions: Rural and Urban

DfT defines 'urban' roads to be those within a settlement of 10,000 people or more, following the 2001 Census definition of urban settlements. All other roads are defined as 'rural'. More information is available in the guide <u>here</u>.

Minor and Major

Major roads include motorways and 'A' roads. Minor roads comprise 'B' roads, 'C' roads, and unclassified roads.

The following pages take a closer look at traffic trends for individual road types.

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In 2015, 66.5 billion vehicle miles were travelled on Great Britain's motorways, 2.6% more than in 2014 and 10% more than 10 years ago.



The overall increase in motorway traffic over the last decade comprises of differing trends by vehicle type. Van traffic has grown by over one-third, whilst motorcycle and bus and coach traffic have both fallen.

Motorways are vital for the movement of freight, carrying almost half (45.6%) of all lorry traffic in 2015, compared to one-fifth of car traffic.



Motor vehicle traffic by road type, 1960 to 2015 (TRA0102)

The proportion of total vehicle miles driven on motorways has been increasing over time, from 0.6% in 1960 to 21% in 2015. This has resulted from motorways increasing in length from 95 miles in 1960 to 2,270 miles in 2015, as well as an increase in average vehicle flow over the same period from 11,500 to 80,200 vehicles per day.

Traffic on motorways appears to have been less severely affected by the recent recession than traffic on other road types.

Trends in motorway traffic are discussed further in the SRN Section on pages 24-26.

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Compared with 2014, traffic increased by 2% on rural 'A' and rural minor roads in 2015, with traffic reaching new record levels on both types of road.



In 2015, rural 'A' and rural minor roads carried over 40% of all motor vehicle traffic between them, slightly more than the vehicle miles travelled on urban roads. However, the average daily flow on rural roads (11,300 vehicles on rural 'A' roads; 900 vehicles on rural minor roads) was far below that on urban roads (19,700 on urban 'A' roads; 2,200 on urban minor roads).

Over the last decade, traffic on rural roads has risen substantially, by 4% and 9% on 'A' roads and minor roads, respectively. This rapid growth in rural traffic in recent years contrasts with a relatively flat trend in urban traffic.

On rural 'A' roads, among motor vehicles, van traffic has grown most in percentage terms (33%) since 2005, whilst HGV and bus and coach traffic has decreased over the same period. See the section on 'Vans' on page <u>10</u> for discussion of trends in van traffic.

On minor roads car traffic rose most quickly (11%) of any motor vehicle between 2005 and 2015. There was also very strong growth in pedal cycle traffic, which rose by 83% over the same period, in particular between 2012 and 2014, possibly as a result of the exposure from the Olympics and Tour de France events. Pedal cycles in 2015 made up 2.1% of all traffic on rural minor roads, compared to 1.3% in 2005.

The differences between traffic on urban and rural roads are discussed further on page 23.



Urban roads

Compared with 2014, there was little change in traffic on urban roads in 2015, growing by 0.7% on urban 'A' roads and not changing on urban minor roads.



Urban traffic fell sharply during the recent recession, and remains below the levels seen in 2004. However, this pattern has varied amongst vehicle types, with van traffic on urban roads rising 14% from 10 years ago, compared to a fall of 24% in HGV traffic over the same period.

Traffic on urban roads has also shown varying trends geographically, with London showing larger drops in traffic than elsewhere in Great Britain. Urban roads carried almost 90% of the traffic in the Greater London region in 2015.

The 2% fall in urban 'A' road traffic between 2005 and 2015 comprised of a 9% drop on these roads in London, against a 0.4% fall outside London.

On urban minor roads traffic in London also fell 9%, compared to a 3% decrease in the rest of Great Britain.

Percentage change in traffic on urban roads in Great Britain (GB) within and outside of London, 2005-2015



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Why have trends in urban and rural traffic differed?

Trends in personal car use

Trends in car traffic in rural and urban areas are mirrored by those in personal car/van use. Average annual mileage per person has fallen most in urban conurbations and to a lesser extent in more rural locations in England.

Trends in travel behaviour

In urban areas, factors such as congestion on urban roads and better cycling and public transport links can make car travel a less attractive option than in rural areas. Compared Average personal car/van driver distance by area type, England 2002-2014 (table NTS9904)



with using a car, reaching key services using public transport takes over twice as long on average in rural areas, but only about 50% longer in urban areas.

It would not be surprising if this has caused a shift in people's travel behaviour away from using cars towards public transport and other modes.

However, since 2002/3 there has been a overall decline in the per person distance travelled by urban residents, rather than displacement to other modes (below right).

Average personal car/van driver distance among residents of urban conurbations dropped by 548 miles per year (20%) between 2002/3 and 2014/15, while distance travelled on other modes stayed quite stable, rising only 64 miles per year.

There are many factors influencing peoples' travel decisions which may have caused the reduction in distance travelled by urban residents. These include changes in demography, income, public transport provision, traffic policy, parking provision and other. For further information on this topic, see the DfT report 'Understanding the drivers of road travel'.

Average minimum travel time to key services by transport mode and area type, England 2014 (JTS0102)



Average distance travelled per year, English urban conurbation residents, 2002-3 and 2013-14 (NTS9904)



Journey time statistics

DfT produces journey time estimates of travel times by different modes of transport from every English Output Area (the smallest geographic unit in the census) to 8 key services. For more information, see <u>here</u>.

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The Strategic and Local Road Networks in England

Compared with 2014, traffic increased by 2.7% on England's Strategic Road Network and 1.1% on the Local Road Network in 2015.



is made up of the motorways and major trunk roads in England that are managed by <u>Highways England</u> (HE; previously the Highways Agency). These roads are depicted in the map to the right.

In 2015 the SRN comprised approximately 4,440 miles of road (2.4% of the English network).

The majority of other roads in England are maintained by one of the 152 local highways authorities (LA roads).

This section explores differences in traffic characteristics between the SRN and LA roads.



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Average daily vehicle flow by road type and management, England 2015



Over 55 thousand vehicles travel along a typical stretch of the strategic road network each day. This is about four times greater than the number for a typical stretch of locally managed major roads, at 13,700.

The difference in average vehicle flow between the SRN and LA roads was widened by the "detrunking" program of the last two decades, which transferred a subset of trunk roads (in general, those with lower flow) to local authority management.

Road length and vehicle miles in England, 2015



Despite making up only 2.4% of the road network by length in England, one third of all vehicle miles were driven on the SRN in 2015.

The SRN is particularly important for All motor freight, with one third of van miles and vehicle two thirds of lorry miles in England being miles driven on the SRN in 2015.



Road

length

miles

At least once per year, but less than once per month

At least once per month, but less than twice per

The large share of HGV miles on the SRN is reflected in a greater frequency of trips on the SRN for lorries compared to cars and vans. In 2011-12, 71% of lorries used the SRN more than once per week, compared to 62% of vans, and 43% of cars¹.

Footnotes

1. Trip information is derived from DfT in-vehicle GPS data, published in table TRADFT001 of the DfT report 'Use of the Strategic Road Network' - www.gov.uk/government/statistics/use-of-the-strategic-road-network

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Forward Home Back

Traffic on the SRN recovered quickly after period of stasis during the recent recession, increasing 7.5% between 2010 and 2015. In comparison, traffic fell more on LA roads during the recession and has not yet recovered to pre-recession levels.



Forecasts of traffic on the SRN and LA major and minor roads differ substantially. Across all forecast scenarios, demand on the SRN is forecast to grow by between 29% and 60% between 2010 and 2040, compared to between 13% and 51% for LA 'A' roads and between 10% and 54% on LA minor roads. See <u>here</u> for more information on DfT traffic forecasts.



Detrunking

Between 1999 and 2012, the length of the SRN reduced by 12.6%, mostly as a result of a "detrunking" programme. The management of parts of the SRN was transferred from Highways England (the then Highways Agency) to the relevant local authorities. This change in road length caused a shift in vehicle miles from the SRN to LA roads.

Note on the data tables

DfT produces two sets of tables broken down by management to facilitate interpretation of trends over time:

- TRA41 figures refer to the management status of a road on 1st April in each of the historic years;

- TRA42 figures refer to the management status of a road as of 1st April 2015.

The TRA42 set of tables are experimental, and should therefore be treated with caution.

Useful Links

Strategic Road Network Statistics - <u>www.gov.uk/government/statistics/strategic-road-network-statistics</u> DfT report 'Use of the Strategic Road Network' - <u>www.gov.uk/government/statistics/use-of-the-strategic-road-network</u> Highways England homepage - <u>www.gov.uk/government/organisations/highways-england</u> Forecasts from DfT's National Transport Model - <u>www.gov.uk/government/publications/road-traffic-forecasts-2015</u>

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Geographical Variation in Traffic

This section explores how levels and trends in traffic differ between different roads and areas of Great Britain.



2015

Road traffic trends by regions of Great Britain

2011

2009

95 2005

2007

The South East region had the highest traffic levels in 2015, with 54 billion vehicle miles driven on their roads. This was 17% of all traffic in 2015. The South East has 12% of road length in Great Britain.

2013

Of the five local authorities with the highest levels of traffic, three are in the South East region (Hampshire, Kent, Surrey) and the other two are in East of England region (Essex, Hertfordshire). These are all authorities with relatively large road networks, and they all contain some of the major motorways of Great Britain.

Compared to 2014, all regions saw an increase in their traffic levels in 2015 of either 1% or 2%, except Greater London, where traffic remained stable. Over the last ten years, the East of England region has seen the highest traffic growth (7%) and Greater London is the only region to have had a fall in traffic (-7%).

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+3%

+2%

Road-level traffic data for Great Britain

The DfT statistics produce an estimate of traffic flow (see definition on page $\underline{2}$), for an average day in a given year, for each junction-to-junction link on the motorway and 'A' road network in Great Britain. The 2015 average flows for these roads are represented on the map.



Average daily flows on motorways and 'A' roads in 2015 ranged from less than 5,000 vehicles to over 200,000.

Roads with the lowest flow levels tended to be rural 'A' roads (shown in blue on the map).

The busiest roads (shown in red on the map) were in general the motorways and 'A' roads that make up the Strategic Road Network in England, or equivalent trunk road networks in the devolved administrations.

The road links with the highest average daily traffic flows in 2015 were sections of the M25 and M1.

Top 5 busiest road sections

Vehicles per day

1. M25 J14-15	211,000
2. M25 J13-14	203,000
3. M25 J11-12	198,000
4. M1 J7-8	197,000
5. M25 J12-13	190,000

Road-level data

The street level traffic estimates for all junction-to-junction links of motorways and 'A' roads in Great Britain are available to view and download at the traffic counts website -

www.dft.gov.uk/traffic-counts

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Daily, weekly and seasonal traffic patterns

This section presents statistics on how traffic varies across the year.



On average between 2011 and 2015, motor vehicle flow was lowest in January on all road types. Flow was highest on motorways and rural roads in July. On urban roads, flow was highest on average in November. A dip in urban road traffic is evident in August, likely due to this being

the school holidays when traffic associated with the school run and commuting is reduced.

Most vehicle types (cars, vans, heavy goods vehicles, buses and coaches) followed these patterns by road type.

However, motorcycles and pedal cycles had much more seasonal travel patterns. The miles travelled by these vehicle types in the summer months were over 75% higher than in the winter months.





Daily car traffic trends on all roads



Daily van traffic trends on all roads

On average in 2015, vans had similar daily travel patterns to cars. The main differences between van and car daily patterns were:

- Weekday morning and afternoon peaks were a similar level for vans, whereas the afternoon peak is higher for cars. On an average Monday in 2015, the van traffic peaked between 7am and 8am. On all other days, it peaked between 4pm and 6pm.
- The proportion of vans on the road at weekends was generally lower than weekdays, even at the peak periods.

On an average weekday in 2015, car traffic was highest in the afternoon peak, between 4pm and 6pm.

This pattern was observed across the different road types (motorways, rural roads, urban roads).

On an average weekend in 2015, car traffic was highest in the middle of the day, between 11am and 1pm. The weekend peaks were at a similar level to the weekday morning peak. Motorways had a slightly different pattern on Sundays, where the peak traffic flow was on average between 5pm and 6pm.





Daily HGV traffic trends on all roads

HGV travel patterns, for an average weekday in 2015, showed a more constant level of traffic in the middle of the day than cars and vans. There were much lower numbers of HGVs on the roads at the weekends than on weekdays.

On motorways, HGV weekday peaks were in the early afternoon (1pm to 3pm), except on Friday when the highest HGV traffic was at 11am to 12pm.

On other types of road, the highest weekday levels of HGV traffic were in the morning (8am to 10am).



Foreign Registered Vehicles

The statistics presented elsewhere in this release include the activity of both British and foreignregistered vehicles in Great Britain. This section discusses the proportion of vehicles in traffic which are registered outside the UK.

In 2015, 0.4% of all traffic on British roads was estimated to be accounted for by foreign registered vehicles. HGV traffic has the highest proportion of foreign registered vehicles. In 2015, 4.8% of HGV traffic was estimated to be foreign registered, an increase of 1.5 percentage points compared to 2013, the largest increase of any vehicle type.



Data source

Estimates of the proportion of traffic from vehicles which are registered outside of the UK are published on the Department for Transport website every second year.

Every other June, a roadside survey using Automatic Number Plate Recognition cameras captures registration marks of over a million vehicles. Registration marks originating outside the UK, the Isle of Man and the Channel Islands are identified and used to estimate the rate of foreign registered vehicles on Britain's roads.

The South East region had the highest proportion of foreign registered vehicles of any region within Great Britain. This likely reflects that the South East is the region of arrival and departure for many motor vehicles coming from Europe through ports and the channel tunnel.



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Further Information

Online traffic data

The complete series of data tables associated with this release, including tables mentioned in the text, can be found on the following pages:

- **TRA01**: Traffic volume (miles) <u>www.gov.uk/government/statistical-data-sets/tra01-traffic-by-road-class-and-region-miles</u>
- TRA02: Traffic volume (kilometres) www.gov.uk/government/statistical-data-sets/tra02-traffic-by-road-class-and-region-kms
- TRA03: Average annual daily flow and temporal traffic distributions www.gov.uk/government/statistical-data-sets/tra03-motor-vehicle-flow
- ► TRA04: Pedal cycle traffic <u>www.gov.uk/government/statistical-data-sets/tra04-pedal-cycle-traffic</u>
- ► TRA31: Heavy goods vehicle traffic <u>www.gov.uk/government/statistical-data-sets/tra31-heavy-goods-vehicle-traffic</u>
- TRA32: Foreign registered vehicles in GB traffic www.gov.uk/government/statistical-data-sets/tra32-foreign-registered-vehicles-in-traffic
- ► TRA41: Strategic Road Network traffic <u>www.gov.uk/government/statistical-data-sets/tra41-strategic-road-network-traffic</u>
- TRA42: Strategic Road Network traffic based on a static road management status www.gov.uk/government/statistical-data-sets/tra42-traffic-based-on-a-static-road-management-status
- TRA89: Road traffic by region and local authority www.gov.uk/government/statistical-data-sets/tra89-traffic-by-local-authority

Quarterly traffic data

► TRA25: All quarterly traffic estimates - www.gov.uk/government/statistical-data-sets/tra25-quarterly-estimates

Traffic counts website

► This website provides street-level traffic data for every junction-to-junction link on the 'A' road and motorway network in Great Britain, free for the general public - <u>www.dft.gov.uk/traffic-counts/</u>

Related data

- ► DfT Road traffic forecasts www.gov.uk/government/publications/road-traffic-forecasts-2015
- DfT Road congestion and reliability statistics www.gov.uk/government/collections/road-congestion-and-reliability-statistics
- ► DfT National Travel Survey Statistics <u>www.gov.uk/government/collections/national-travel-survey-statistics</u>
- DfT Road accidents and safety statistics www.gov.uk/government/collections/road-accidents-and-safety-statistics
- DfT Vehicles statistics <u>www.gov.uk/government/collections/vehicles-statistics</u>
- ► DfT report 'Use of the Strategic Road Network' www.gov.uk/government/statistics/use-of-the-strategic-road-network
- DfT report 'Understanding the drivers of road travel' www.gov.uk/government/publications/understanding-the-drivers-of-road-travel-current-trends-in-and-factors-behind-roads-use
- DfT Road use statistics 2016 report www.gov.uk/government/statistics/road-use-statistics-2016
- Transport Statistics Great Britain 2015 www.gov.uk/government/statistics/transport-statistics-great-britain-2015

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Background information

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 <u>roadtraff.stats@dft.gsi.gov.uk</u>.

A summary of the feedback we have received from users in a previous consultation can be found in <u>'Meeting customers' needs: Users and uses</u> 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:

► National Atmospheric Emissions Inventory (NAEI)

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.

► Transport Modelling

The Department for Transport's National Transport Model uses most traffic and speeds outputs to make forecasts and to inform policy decisions on a broad range of issues.

Local transport planning

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

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

This department uses traffic data on major roads to contribute towards the funding settlement for local authorities.

Public Users

The Department for Transport receives around 200,000 visits to the traffic counts website (<u>www.dft.gov.uk/traffic-counts/</u>) and its underlying datasets, which provide street-level traffic data for every junction-to-junction link on the 'A' road and motorway network in Great Britain.

Next release

The next annual traffic statistics release will be in May 2017, reporting 2016 traffic figures.

The Jan-Mar 2016 figures were released at the same time as this document, in May 2016. The next quarterly release will be in August 2016, reporting Apr-Jun 2016 figures.

Feedback

We welcome further feedback on any aspects of the Department's road traffic statistics including content, timing, and format via email to <u>roadtraff.stats@dft.gsi.</u> gov.uk

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.

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

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Strengths and weaknesses of the data

Annual estimates make use of data from around 8,000 manual traffic counts in addition to continuous data from a national network of around 300 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, or paths directly adjacent to the road, and do not include estimates of cycling on other routes such as canal paths. Therefore, they may not give a complete representation of cycling.
- ► During June, every second 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 <u>TRA32</u>. 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 (over 7,000 observations of foreign registered vehicles out of 1.1 million 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 2017 and therefore the next estimates of foreign vehicle traffic will be published in 2018.
- ► Following user feedback over the last two years, we have not published table TRA3106 for the second year running. This table presented information on the percentage of HGVs weighing 10 percent over the legal maximum weight. Further information is available in our note of the user feedback <u>here</u> and any comments are welcomed via <u>roadtraff.stats@dft.gsi.gov.uk</u>.
- ► From this release onwards, table TRA3107 reporting time gaps between lorries and other vehicles is no longer published as part of annual road traffic statistics. Instead, it will be published as part of the DfT <u>free-flow speeds publication</u>. The 2015 free-flow speeds statistics are due to be published on 30th June 2016.
- ► 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:

www.gov.uk/government/publications/road-traffic-speeds-and-congestion-statistics-guidance

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