



Llywodraeth Cymru
Welsh Government

STATISTICS

Road traffic: 2019

A report presenting information on volume of traffic by type of vehicle and class of road for 2019.

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Revision note

Historic road traffic data for 2010 to 2018 (Sections 1 to 6 of this release) have been revised. This is due to a minor road traffic benchmarking exercise undertaken by the UK Department for Transport (DfT) every ten years. See [benchmarking guidance](#).

For further information please see the [Quality information](#) section.

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Main points

- Road traffic volume in Wales increased by 1.5% in 2019.
- In 2019 the total volume of motorised traffic in Wales was 32.1 billion vehicle kilometers (bvk), the highest figure on record. This is equivalent to 10,186 vehicles kilometers (6,329 miles) per person.
- Most of the traffic (61.0%) was on major roads (motorways or A roads). The remaining 39.0% of traffic was on minor roads, i.e. B, C and unclassified roads.

How do we measure traffic volume

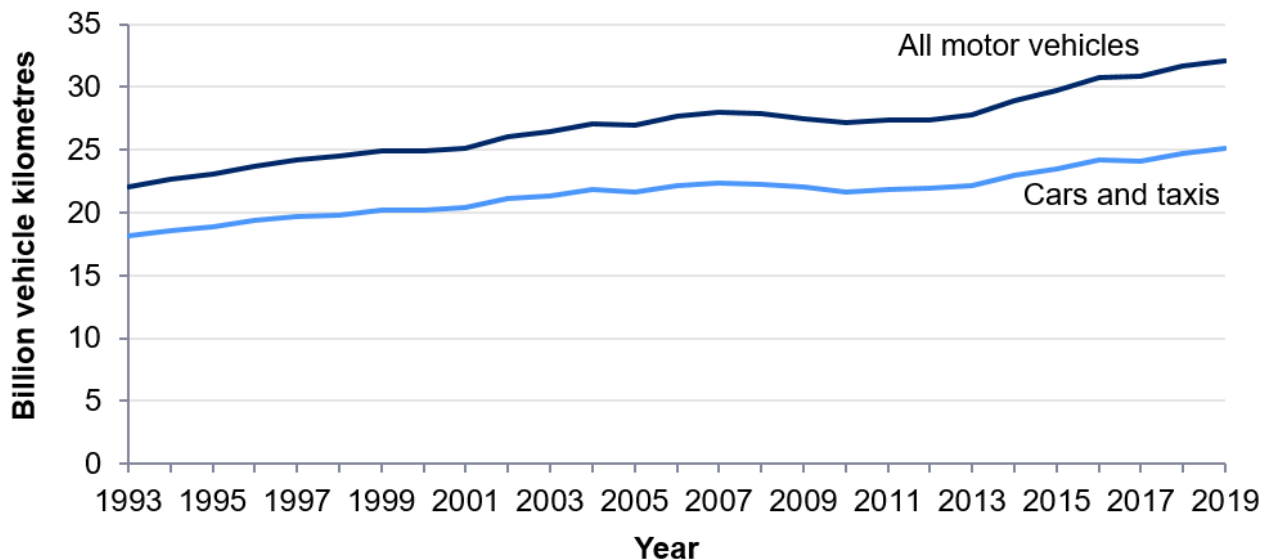
Traffic volume is estimated using traffic counts data collected by the Department for Transport (DfT). Data from manual traffic counts are combined with data from automatic traffic counters to calculate annual average daily flows (AADF). These daily flows are combined with road lengths to calculate the number of vehicle miles travelled each year by vehicle type, road category and region. In this release estimates are presented as billion vehicle kilometres.

More detailed information is provided in the [DfT's road traffic estimates methodology note](#).

Trends in road traffic in Wales

Chart 1 shows the long term trend in traffic volume from 1993 to 2019. Over this period traffic volume increased by 45.4%, reaching a peak of 32.1 bvk in 2019. Traffic volume gradually increased up to 2007, and then fell during the economic downturn. Since 2012 traffic volume has turned upwards once again.

Chart 1: Volume of traffic, 1993 to 2019



Source: Welsh Government analysis of annual average daily flows (AADF) data

Note: Data for periods 2010 to 2018 have been revised.

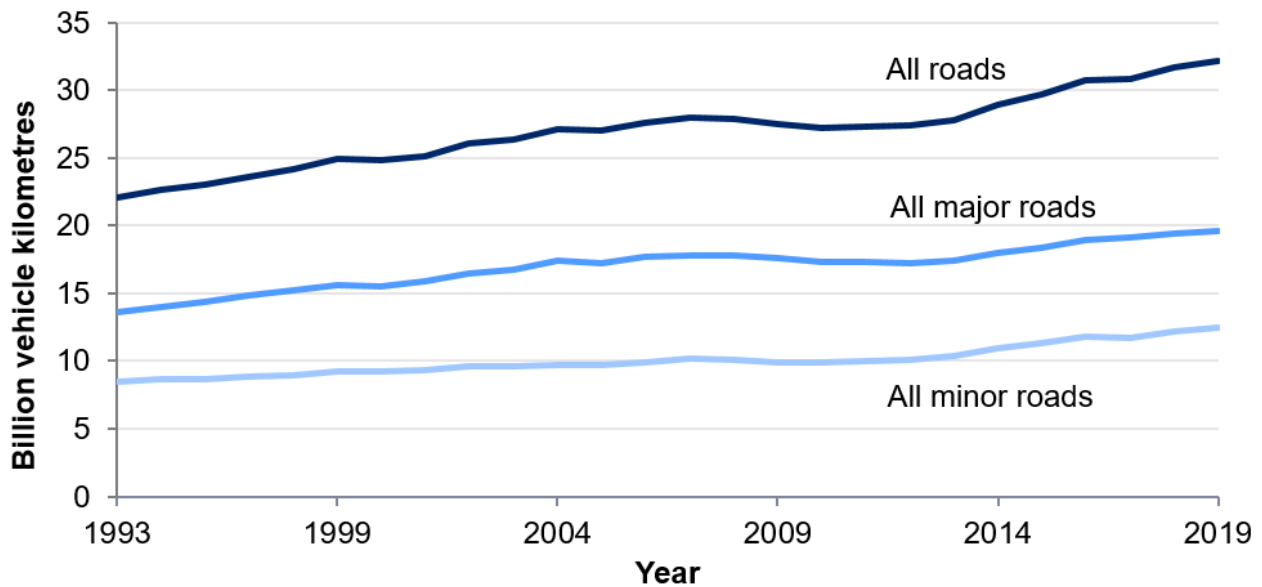
Volume of road traffic by road classification and year on StatsWales

There are a variety of factors that have the potential to influence traffic volume. For example, falls in employment levels can reduce commuting traffic; increases in fuel prices might cause motorists to consider shifting to other modes of travel or cutting non-essential trips; increases or decreases in people holidaying within the British Isles, related to the strength or weakness of the pound, can have corresponding impacts on traffic.

Traffic by road class

Major roads accounted for 61% of total traffic volume in Wales in 2019, and minor roads accounted for 39%. This has broadly been the case for the last 26 years, though there has been a larger increase in volume on minor roads (up 47.0% since 1993) compared with major roads (up 44.2%).

Chart 2: Volume of traffic by main road, 1993 to 2019



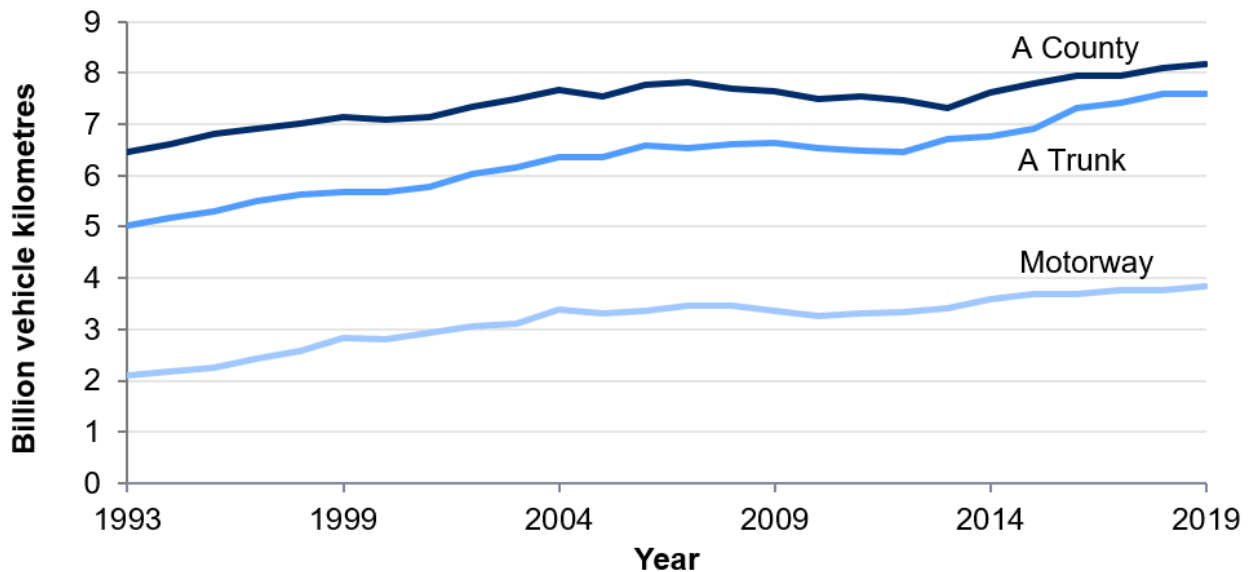
Source: Welsh Government analysis of annual average daily flows (AADF) data

Note: Data for periods 2010 to 2018 have been revised.

Volume of road traffic by road classification and year on StatsWales

Major roads are comprised of motorways and A roads (roads intended to provide large-scale transport links within or between areas). 'A' roads are further sub-categorised as 'A Trunk' roads (part of the strategic road network owned by and operated on behalf of government) and 'A county' roads (all other A roads). Chart 3 shows trends in traffic volume for the three categories of major roads. A county roads account for more traffic volume than A trunk roads and motorways, though traffic on trunk roads has increased more in recent years. Traffic volume in 2019 had remained the same compared to previous year on A trunk roads, increased by 1.0% on A county roads and increased by 2.0% on motorways.

Chart 3: Volume of traffic by categories of major road, 1993 to 2019

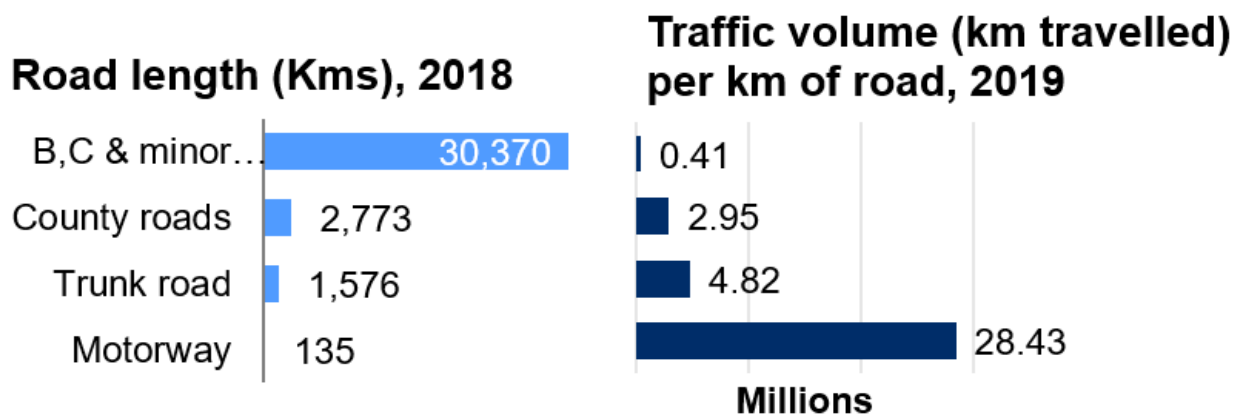


Source: Welsh Government analysis of annual average daily flows (AADF) data
 Note: Data for periods 2010 to 2018 have been revised.

Volume of road traffic by road classification and year on StatsWales

To help provide context for these figures, the length of the motorway in Wales is 135 km, the length of the trunk road network is 1,576 km, county roads are 2,773 km in length and B, C and minor roads total 30,370 km. Chart 4 highlights that traffic per km of road is far higher on motorways when compared with the other classes of roads.

Chart 4: Road length and motorised road traffic volume by class of road



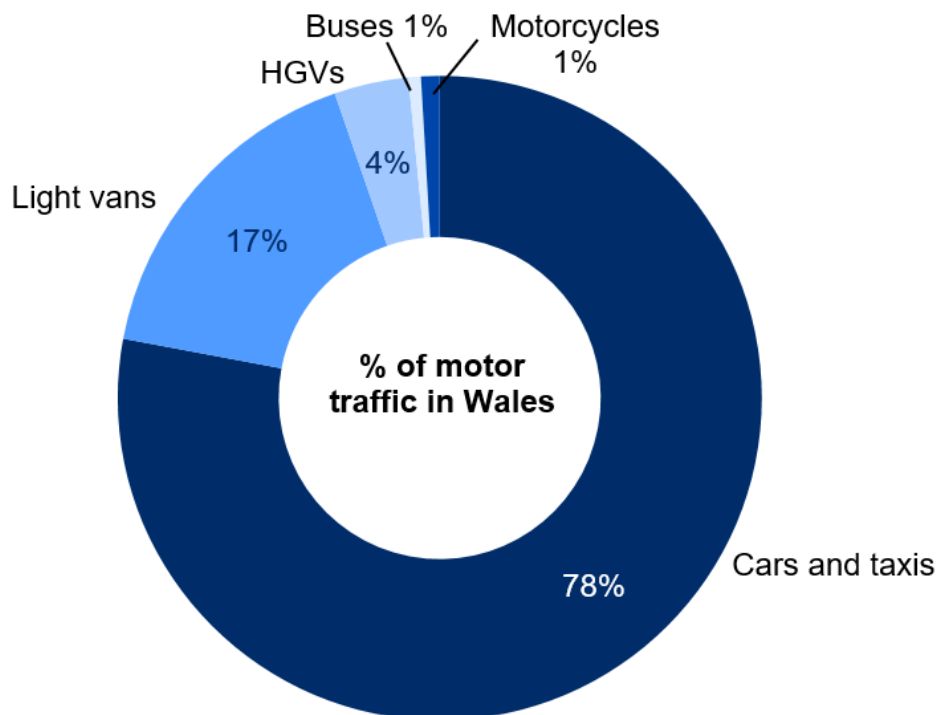
Source: Welsh Government analysis of AADF data

[Volume of road traffic by road classification and year on StatsWales](#)

Traffic by vehicle type and road class

Proportions of traffic flow by type of vehicle are shown in Chart 5a and Chart 5b. 78% of all motor vehicle traffic volume in 2019 was accounted for by cars and taxis (24.9 bvk) and vans (5.4 bvk). This proportion has been stable for at least the last 20 years.

Chart 5a: Volume of road traffic by type of vehicle, 2019

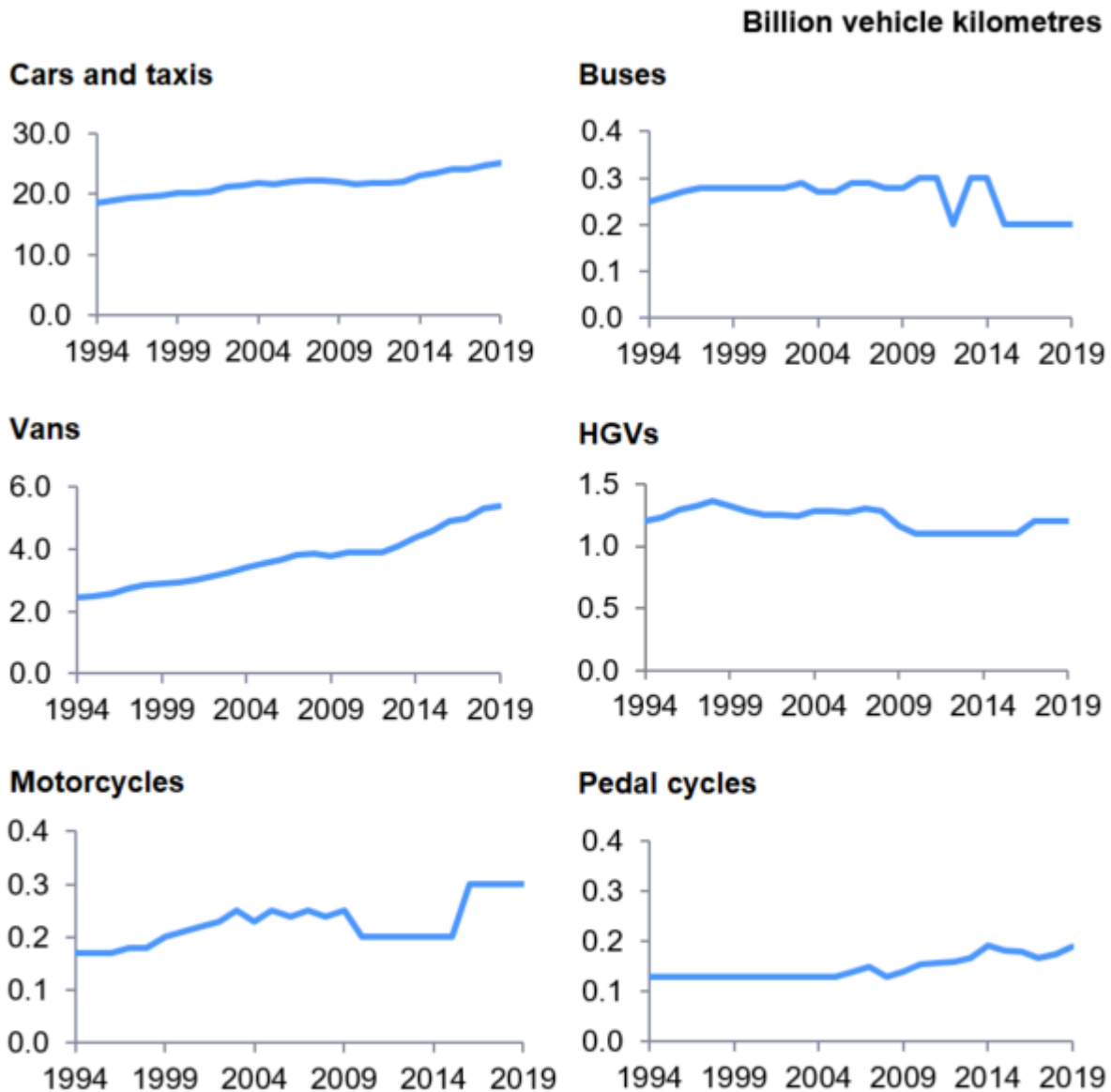


Source: Welsh Government analysis of annual average daily flows (AADF) data

Volume of road traffic by road classification and type of vehicle on StatsWales

Trends in traffic volume since 1993 by vehicle type are shown in Chart 5b. Overall, traffic volume has increased for cars and taxis, vans, motorcycles and pedal cycles, though at different rates. Bus and HGV traffic has fallen over the last decade. Volume of traffic for cars and taxis, vans all slightly increased in 2019 whilst there were no changes in HGVs, buses and motorcycle. Pedal cycles had increased by 8.6% compared to 2018.

Chart 5b: Volume of road traffic by type of vehicle, 1994 to 2019 (a)(b)



Source: Welsh Government analysis of annual average daily flows (AADF) data

(a) For further information on vehicle classifications see Notes section.

(b) Vans refers to light vans and buses includes coaches

Note: Data for periods 2010 to 2018 have been revised.

Volume of road traffic by road classification and type of vehicle on StatsWales

Table 1 shows the volume of traffic by the class of road and type of vehicle for 2019. Cars and taxis are the dominant category on all classes of road,

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accounting for 24.9 bvk (77.6% of motor vehicle traffic), followed by light vans at 5.4 bvk (16.9%) and HGVs at 1.2bvk (3.6%).

Table 1: Volume of road traffic by class of road and type of vehicle, 2019 (a)(b)

Billion vehicle kilometres							
Class of road	Cars and taxis	Vans (c)	HGVs	Buses (c)	Motorcycles	All motor vehicles	Pedal cycles
Motorway	2.9	0.6	0.3	0.0	0.0	3.8	0.0
A Trunk:							
Urban	0.6	0.1	0.0	0.0	0.0	0.8	0.0
Rural	5.2	1.1	0.4	0.0	0.0	6.8	0.0
A County:							
Urban	2.2	0.3	0.1	0.0	0.0	2.7	0.0
Rural	4.4	0.8	0.2	0.0	0.0	5.5	0.0
All major roads	15.4	3.0	1.0	0.1	0.1	19.6	0.0
Minor roads	9.5	2.4	0.2	0.1	0.2	12.4	0.2
All roads	24.9	5.4	1.2	0.2	0.3	32.1	0.2

Source: Welsh Government analysis of annual average daily flows (AADF) data

(a) For further information on road and vehicle classifications see definition section.

(b) All data rounded to 0.1 bvk.

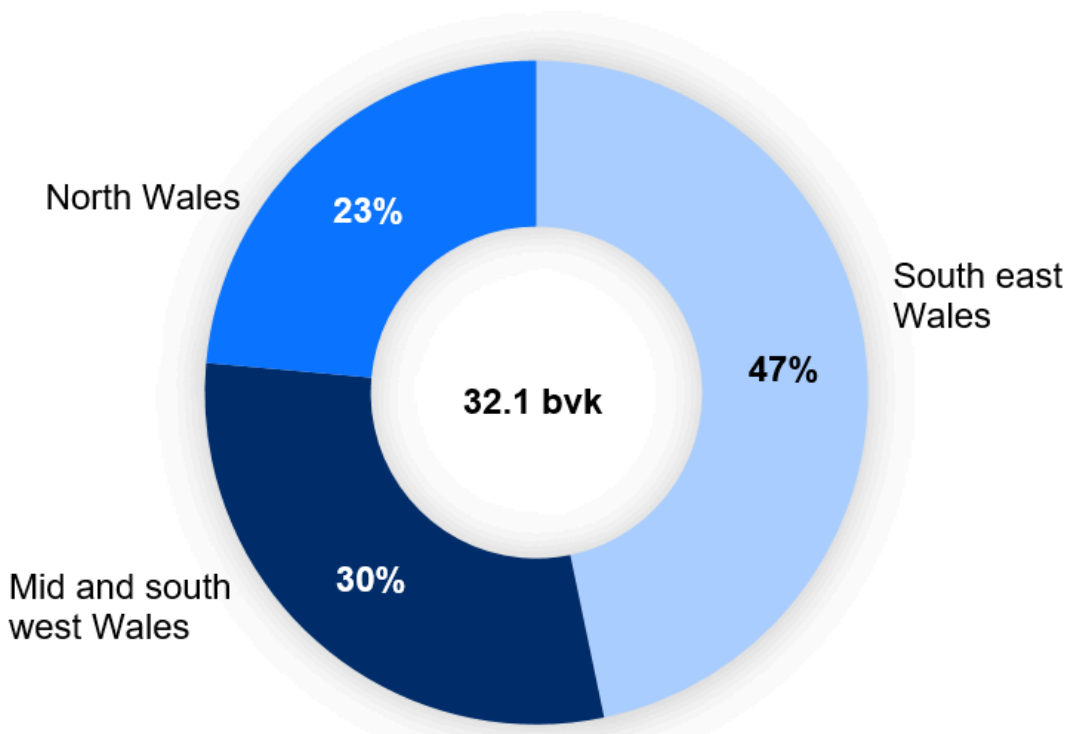
(c) Vans refers to light vans and buses includes coaches.

Volume of road traffic by road classification and type of vehicle on StatsWales

Traffic by economic region and local authorities

South East Wales accounts for the highest proportion of the total traffic volume in Wales (47%), with North Wales accounting for the lowest (23%). This distribution is consistent over time and broadly reflects where the population of Wales lives and works.

Chart 6: Volume of motor vehicle traffic by economic region, 2019



Source: Welsh Government analysis of annual average daily flows (AADF) data

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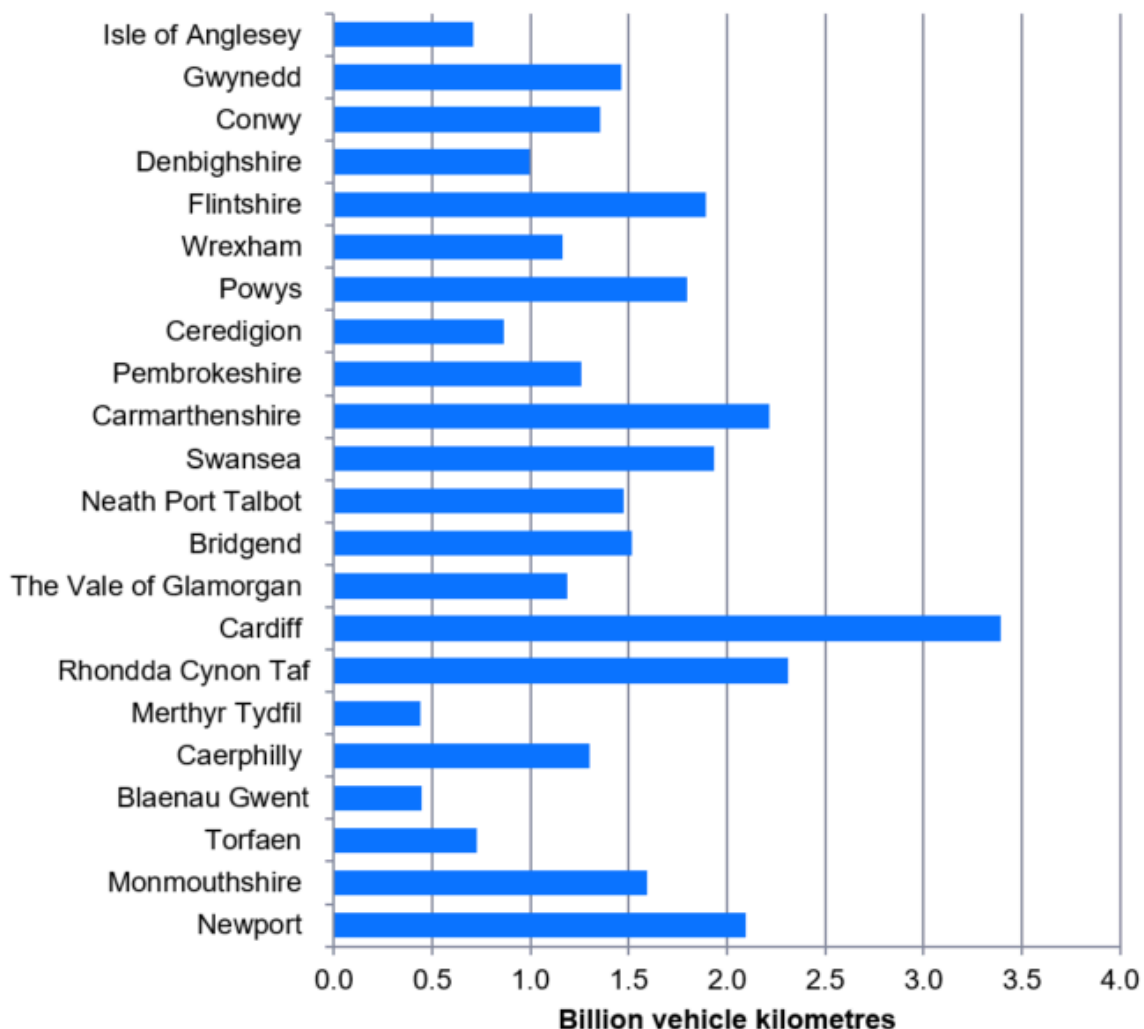
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Volume of road traffic by local authority and year on StatsWales

Chart 7 shows estimated traffic volume for the 22 Welsh local authorities in 2019. Cardiff, Rhondda Cynon Taff, Carmarthenshire and Newport had the highest volumes of motor vehicle traffic. Their combined volume represented 31.2% of total traffic in Wales. Torfaen, The Isle of Anglesey, Blaenau Gwent and Merthyr Tydfil had the lowest volumes of motor vehicle traffic and their combined volume represented just 7.2% of total traffic in Wales. Out of the 22 local authorities, Cardiff registered the highest 3.4 bvk. In general, these figures reflect where people live and work in Wales.

Chart 7: Volume of motor vehicle traffic by local authority, 2019



Source: Welsh Government analysis of annual average daily flows (AADF) data

Volume of road traffic by local authority and road classification on

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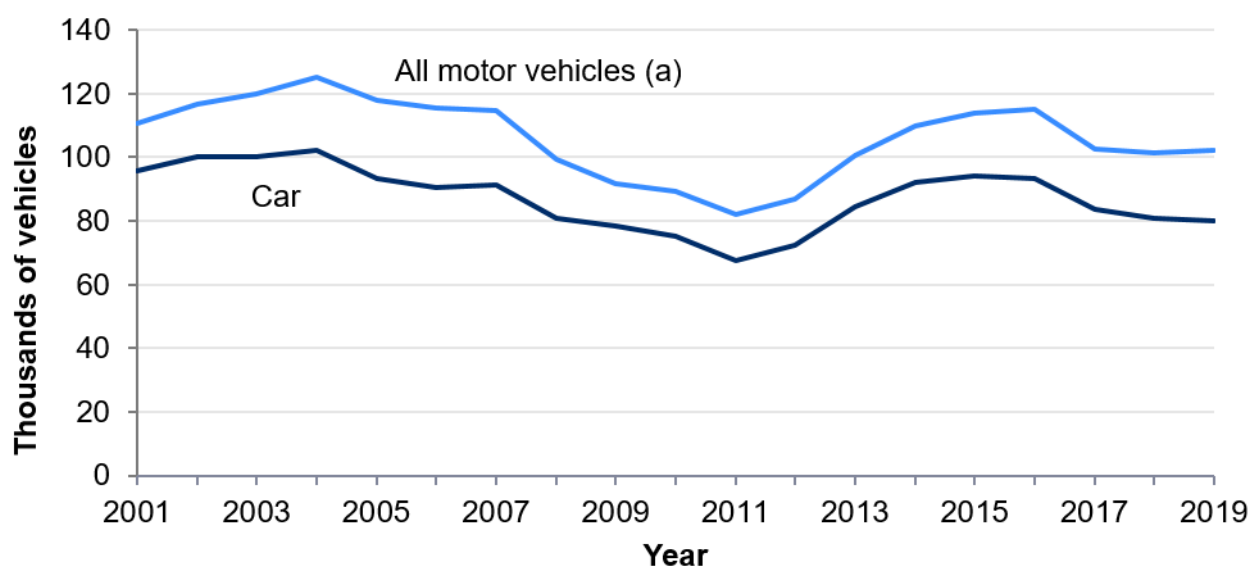
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New registrations and licensed vehicles

Chart 8a shows new vehicle registrations in Wales since 2001. Registrations peaked in 2004 and a subsequent downward trend lasted until 2011. The trend then turned upwards, reaching over 115,000 in 2016 before falling once again. In 2019 the number of new vehicle registrations increased by 0.5% to 102,027.

Chart 8a: New motor vehicle registrations for cars and all vehicles, 2001 to 2018

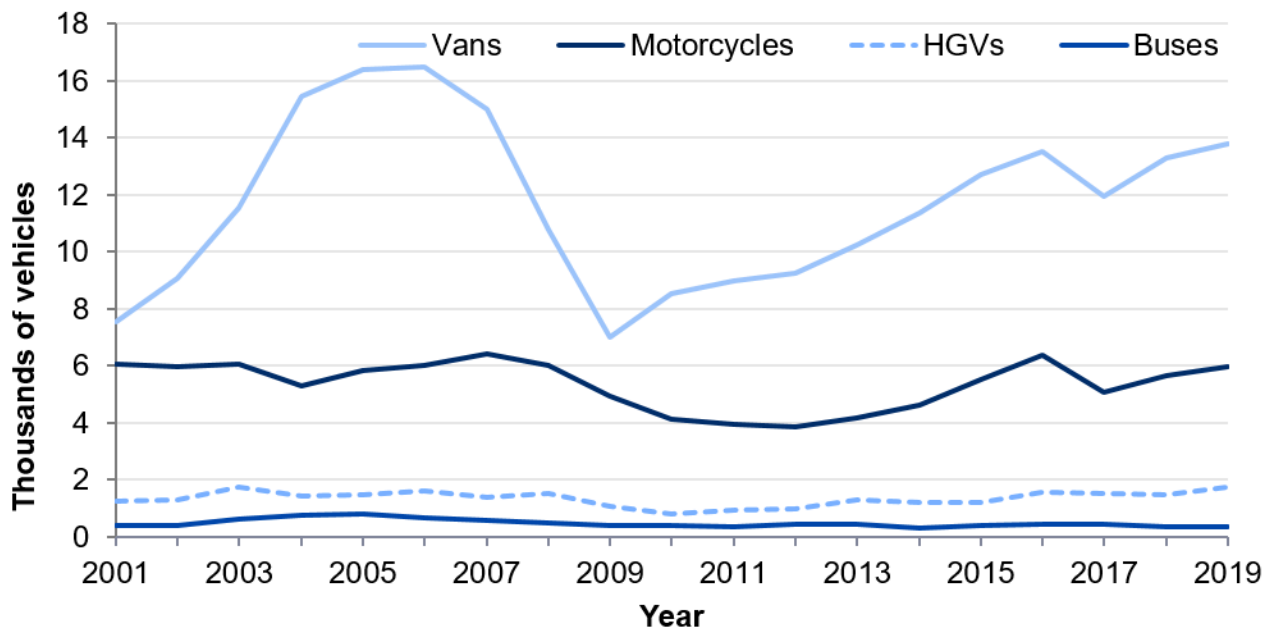


Source: Welsh Government analysis of DVLA/DfT vehicle licensing data
(a) 'All motor vehicles' excludes other and agricultural vehicles.

New motor vehicle registration by type of vehicle and year on StatsWales

For vehicles excluding cars the long term picture is varied. Between 2007 and 2009 there was a sharp fall in the number of new registrations for vans. Despite turning back upwards since then, figures remain well below the peak. There was an increase in registrations in 2019 for HGVs (17.2%), motorcycles (6.0%) and vans (3.9%). There were decreases in registrations of buses (-2.5%), cars (-0.7%).

Chart 8b: New motor vehicle registrations by body type, 2001 to 2019 (excluding cars)

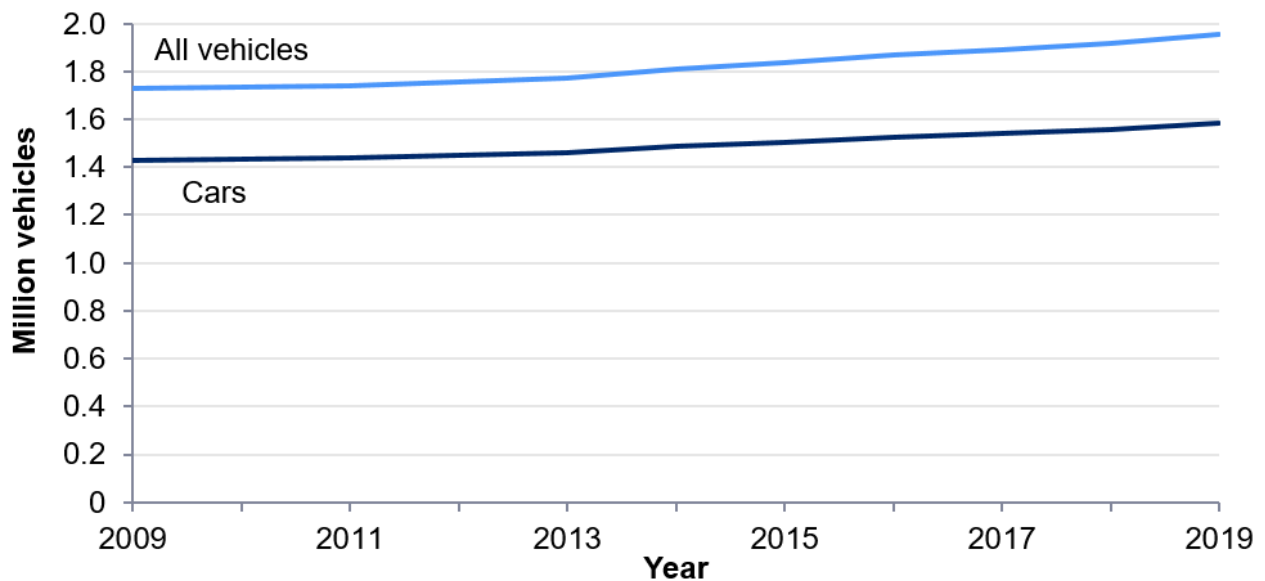


Source: Welsh Government analysis of DVLA/DfT vehicle licensing data

New motor vehicle registration by type of vehicle and year on StatsWales

Chart 8c shows the number of cars and all vehicles licensed in Wales since 2009. The trend for cars and all vehicles is similar over time. In 2019 number of licenced cars rose by 1.5% to 1.6 million while all vehicles increased by 1.9% to 12.0 million.

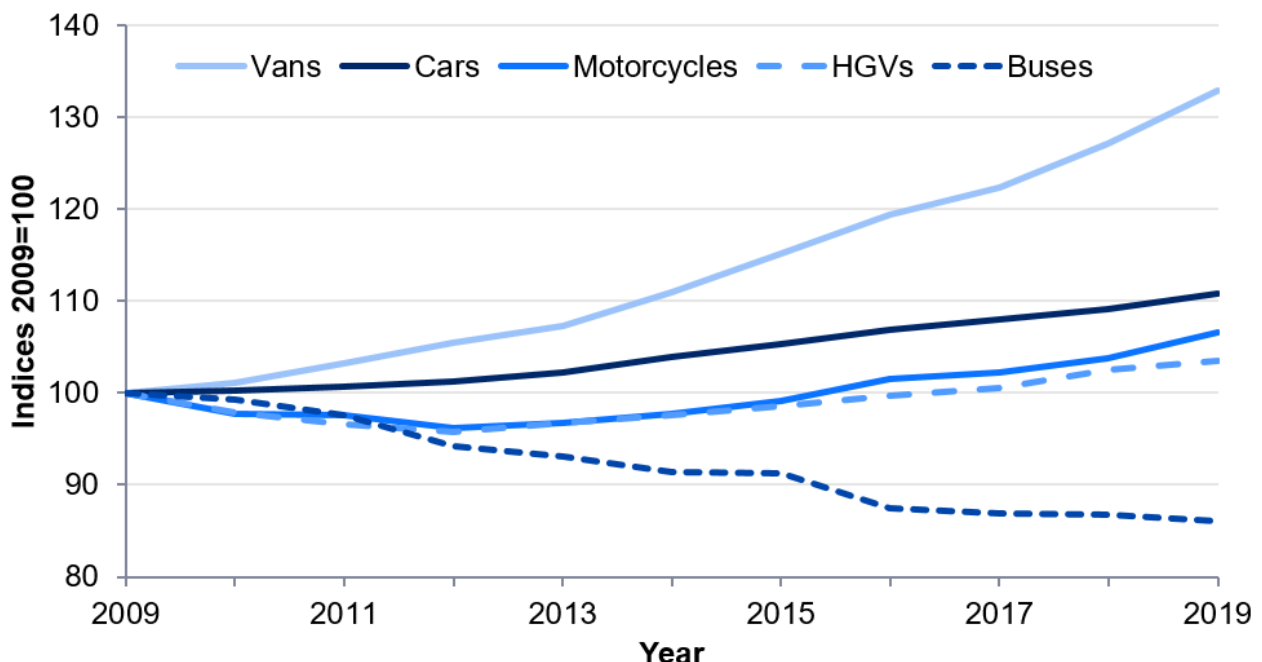
Chart 8c: Cars and all vehicles licensed, 2010 to 2018 (a)



Source: Welsh Government analysis of annual average daily flows (AADF) data
 (a) 'All vehicles' excludes other and agricultural vehicles.

[New motor vehicle registration by type of vehicle and year on StatsWales](#)

Chart 8d: Change in licensed vehicles by type of vehicle, 2009 to 2019



Source: Welsh Government analysis of annual average daily flows (AADF) data

[New motor vehicle registration by type of vehicle and year on StatsWales](#)

The change in licensed vehicles is not consistent for different types of vehicle. For example, the index for buses (including coaches) has fallen consecutively each year since 2010. In contrast, cars and light vans have increased every year and motorcycles and HGVs have increased since 2012.

Notes

Context

The Department for Transport (DfT) produces [traffic statistics](#) which provide estimates of the vehicle miles travelled each year in Great Britain, by vehicle type, road category and region.

Transport Scotland produces an annual publication titled '[Transport and Travel in Scotland](#)' which includes information on motor vehicles, traffic and driving.

Data source

[Road traffic estimates](#) for Wales are compiled by the Department for Transport on behalf of the Welsh Government. These estimates are based on the annual roadside manual road traffic counts carried out across Wales during the year and the automatic traffic count (ATC) data, which are combined with road lengths figures to produce overall traffic estimates.

Definitions

Coverage

Traffic estimates for major roads are based on a census of all such roads whereas traffic estimates for minor roads are estimated by calculating growth rates from a fixed sample of count points on the minor road network. [Further details of the methodology are available from DfT.](#)

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Traffic volume

Traffic volume is estimated using traffic counts data collected by the Department for Transport (DfT). Data from manual traffic counts are combined with data from automatic traffic counters to calculate annual average daily flows (AADF). These daily flows are combined with road lengths to calculate the number of vehicle miles travelled each year by vehicle type, road category and region. In this release estimates are presented as billion vehicle kilometres.

Vehicle type

- Pedal cycles: Includes all non-motorised cycles.
- Motorcycles: Two-wheeled motor vehicles, including mopeds, motor scooters and motorcycle combinations.
- Cars and taxis: Includes estate cars, all light vans with windows to the rear of the driver's seat, passenger vehicles with 9 seats or fewer, three-wheeled cars, motorised-invalid carriages, Land Rovers, Range Rovers and Jeeps. Cars towing caravans or trailers are counted as one vehicle
- Buses and coaches: Includes all public service vehicles and works buses other than vehicles with less than 10 seats.
- Light vans: All goods vehicles up to 3,500kg gross vehicle weight. This includes all car-based vans and those of the next larger carrying-capacity, such as transit vans. Also included are ambulances, pick-ups, milk floats and pedestrian-controlled motor vehicles. Most of this group are delivery vans of one type or another.
- Goods vehicles (HGVs): All goods vehicles over 3,500kg gross vehicle weight. Includes tractors (without trailers), road-rollers, box vans and similar large vans. A two-axle motor tractor unit without trailer is also included.
- All motor vehicles: All vehicles except pedal cycles.

Road class

All surfaced roads are included in the estimates.

Major roads

- Motorways: dual carriageways designed for fast traffic with access limited to motor vehicles, and with relatively few places for joining or leaving. The only motorway in Wales is the M4.
- A Trunk roads: part of the strategic road network owned by and operated on behalf of Government
- A County roads: all other A roads.

Estimates for A roads are also available with sub-categories for urban and rural roads on StatsWales. Urban roads are those within the boundaries of settlements with a population of 10,000 or more, and rural roads are all other non-motorway major roads.

Minor roads

- B roads: roads intended to connect different areas, and to feed traffic between A roads and smaller roads on the network.
- Classified unnumbered: smaller roads intended to connect together unclassified roads with A and B roads, and often linking a housing estate or a village to the rest of the network. Similar to 'minor roads' on an Ordnance Survey map and sometimes known unofficially as C roads.
- Unclassified: local roads intended for local traffic. The vast majority of roads fall within this category.

Quality information

This section provides a summary of information on this output against five dimensions of quality: Relevance, Accuracy, Timeliness and Punctuality, Accessibility and Clarity, and Comparability.

Relevance

These statistics are used to inform government, businesses, media and society and are used internally for policy formulation and monitoring. There are no other comprehensive data sources to enable the production of statistics about traffic for Wales and Great Britain. Some specific uses include: Welsh National Transport Plan monitoring indicators include these traffic flow data. The indicator measures the change in traffic flows for Wales as a whole and for individual local authority areas.

- These data will also be used as part of the calculations to meet any requests for the casualty rate per volume of traffic over individual road links.
- The national and local CO₂ emissions, relating to transport, use these traffic flows estimates.

Accuracy

Road traffic estimates are based on the results of 12-hour manual counts taken throughout the year which are grossed up to estimates of annual average daily flows using expansion factors based on data from automatic traffic counters on similar roads. These averages are needed so that traffic in off-peak times, at weekends and in the summer and winter months (when only special counts are undertaken) can be taken into account when assessing the traffic at each site. DfT now sort roads into 22 groupings (previously there were only 7). This allows a better match of manual count sites with automatic count sites. These groupings were based on detailed analyses of the results from all the individual automatic count sites and take into account regional groupings, road category (i.e. both the urban/rural classification of the road and the road class), and traffic flow levels.

Minor road estimates are calculated differently to major roads. Due to the large number of minor roads it is not possible to count them all, instead a representative sample of minor roads are counted each year. This means that the accuracy of estimates for minor roads is likely to be of a lower quality than

for major roads.

Data on motor vehicle registrations are collected by the Driver and Vehicle Licensing Agency (DVLA) and published by DfT. The DVLA database is regarded as being virtually complete in terms of the number of licensed vehicles.

Timeliness and punctuality

The Department for Transport published [road traffic estimates](#) for Great Britain in 2019 on 10 September 2020. Our release uses data in this publication and normally follows about three months later.

Revision

The road traffic statistics team (DfT) carry out a minor road traffic benchmarking exercise approximately every 10 years, with the aim to improve the accuracy of traffic estimates for minor roads. The results of the 2018 to 2019 exercise have been published in [Road traffic estimates in Great Britain: 2019 report](#). This includes revisions to the minor road traffic estimates covering 2010 to 2018. For more information about the minor roads benchmarking exercise, please refer to the [documentation from the 2019 exercise](#).

Table 2: Revisions made to road traffic data

Year	Billion vehicle kilometres			
	Minor roads		All road	
	Original	Revised	Original	Revised
2010	9.69	9.89	26.98	27.17
2011	9.59	9.98	26.93	27.33

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	Billion vehicle kilometres			
2012	9.49	10.09	26.76	27.36
2013	9.55	10.35	27.02	27.8
2014	9.93	10.98	27.89	28.95
2015	10.01	11.3	28.4	29.69
2016	10.22	11.76	29.17	30.71
2017	9.96	11.72	29.08	30.84
2018	9.95	12.2	29.39	31.64

Source: Welsh Government analysis of annual average daily flows (AADF) data

Accessibility and clarity

This statistical bulletin is pre-announced and then published on the [Statistics and Research website](#). Road traffic data for Wales is published on [StatsWales](#).

Comparability and coherence

The statistics presented here are from the DfT data collection and are fully comparable and coherent with the estimates for Great Britain.

National Statistics status

The [United Kingdom Statistics Authority](#) has designated these statistics as

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National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the **Code of Practice for Statistics**.

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Statistics. They are awarded National Statistics status following an assessment by the UK Statistics Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate. The designation of these statistics as National Statistics was confirmed in February 2011 **following a full assessment against the Code of Practice**.

Since the latest review by the Office for Statistics Regulation, we have continued to comply with the Code of Practice for Statistics, and have made the following improvements:

- Added to and refined information about dimensions of quality and described links to policy.
- Improved our understanding of the various data sources and the methodology behind them, including their strengths and limitations.
- Added new relevant data sources to provide a broader view of the topic.
- Improved visuals by de-cluttering and standardising charts and tables.

It is Welsh Government's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural well-being of Wales. The Act puts in place

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seven well-being goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators (“national indicators”) that must be applied for the purpose of measuring progress towards the achievement of the Well-being goals, and (b) lay a copy of the national indicators before the National Assembly. The 46 national indicators were laid in March 2016.

Information on the indicators, along with narratives for each of the well-being goals and associated technical information is available in the [Well-being of Wales report](#).

Further information on the [Well-being of Future Generations \(Wales\) Act 2015](#).

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local well-being assessments and local well-being plans.

We want your feedback

We welcome any feedback on any aspect of these statistics which can be provided by email to stats.transport@gov.wales

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Media: 0300 025 8099



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