STATISTICS

Road traffic: 2020

Information on volume of traffic by type of vehicle and class of road for 2020.

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Contents

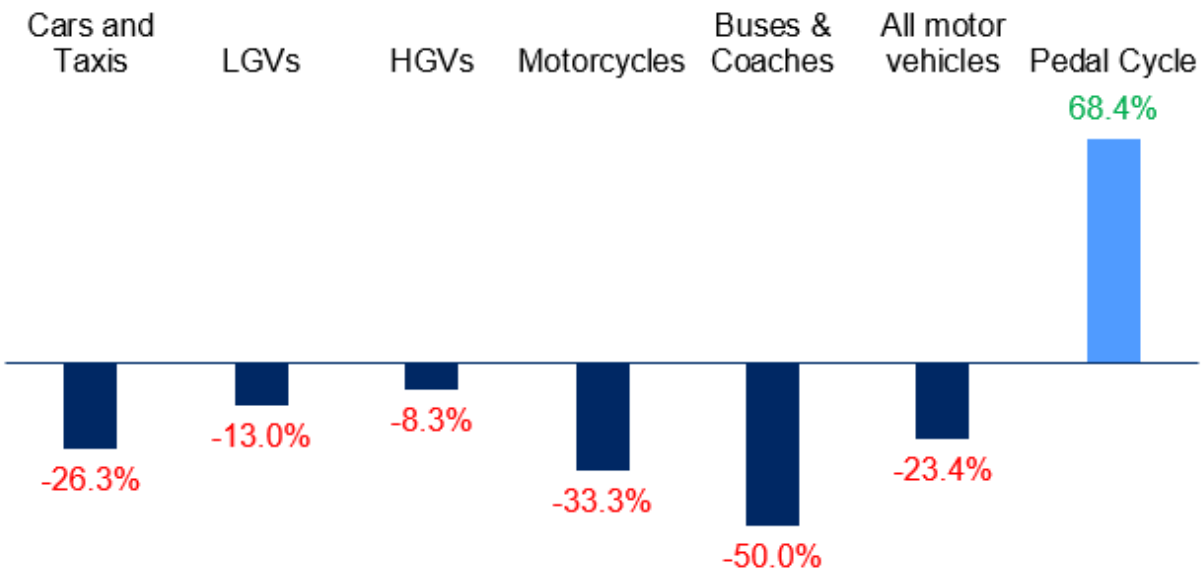
Main points

- The coronavirus (COVID-19) pandemic had a significant impact on road traffic in Wales in 2020 as people were restricted on how, where and why they could travel.
- Road traffic volume in Wales decreased by 23.4% in 2020.
- In 2020, the total volume of motorised traffic in Wales was 24.6 billion vehicle kilometers (bvk). This is equivalent to 7,760 vehicles kilometers (4,823 miles) per person.
- Most of the traffic (58.0%) was on major roads (motorways or A roads). The remaining 42.0% of traffic was on minor roads, i.e. B, C and unclassified roads.

Impact of COVID-19 on traffic volume

Traffic volume decreased considerably during year 2020 in light of the COVID-19 pandemic (a decrease of 23.4% compared to 2019). The bus and coaches category registered the highest decrease in traffic volume, down by 50% compared to 2019 followed by motorcycles, Chart 1. However, pedal cycle volume increased in 2020 by 68.4%, the largest increase since records began in Wales.

Chart 1: Change in traffic volume by vehicle type, 2019 and 2020



Source: Welsh Government analysis of Road traffic Volume, Department for Transport

How do we measure traffic volume

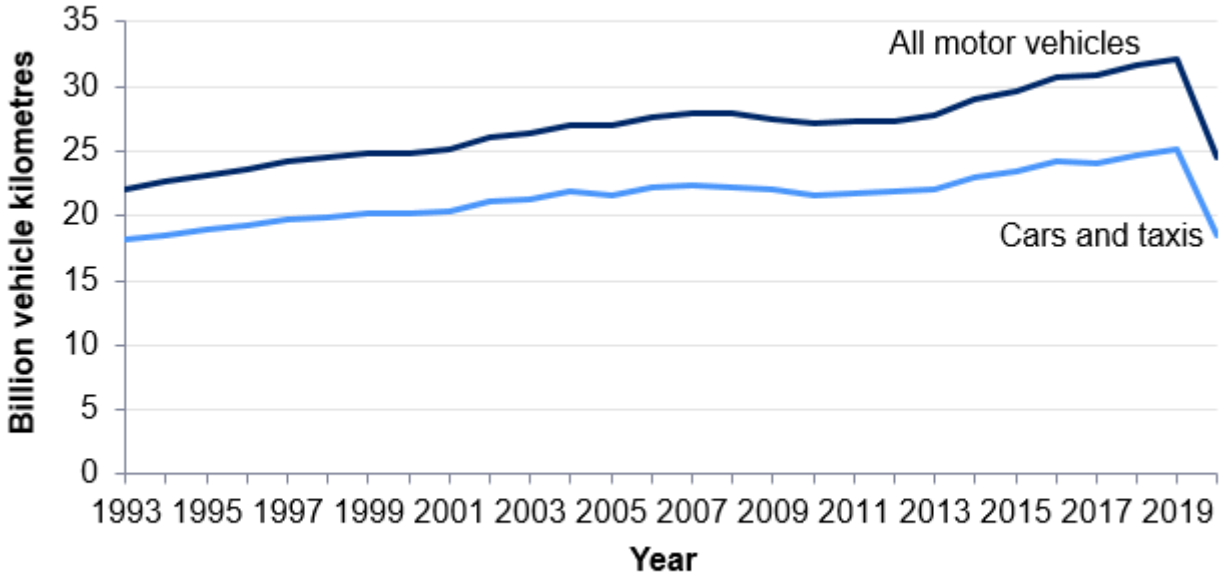
Traffic volume is estimated using traffic counts data collected by the Department for Transport (DfT). Data from manual traffic counts are combined with data from automatic traffic counters to calculate annual average daily flows (AADF). These daily flows are combined with road lengths to calculate the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

More detailed information is provided in the **DfT's road traffic estimates methodology note** (https://www.gov.uk/government/publications/road-traffic-statistics-guidance).

Trends in road traffic in Wales

Chart 2 shows the long term trend in traffic volume from 1993 to 2020. Between 1993 and 2019, traffic volume increased by 45% reaching a peak of 32.1bvk in 2019. Traffic volume gradually increased up to 2007, and then fell during the 2008-09 economic downturn. Since 2012 traffic volume has turned upwards once again before a significant fall in 2020 as result of COVID-19 travel restrictions.

Chart 2: Volume of traffic, 1993 to 2020



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
(https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/volumeofroadtraffic-by-roadclassification-year)

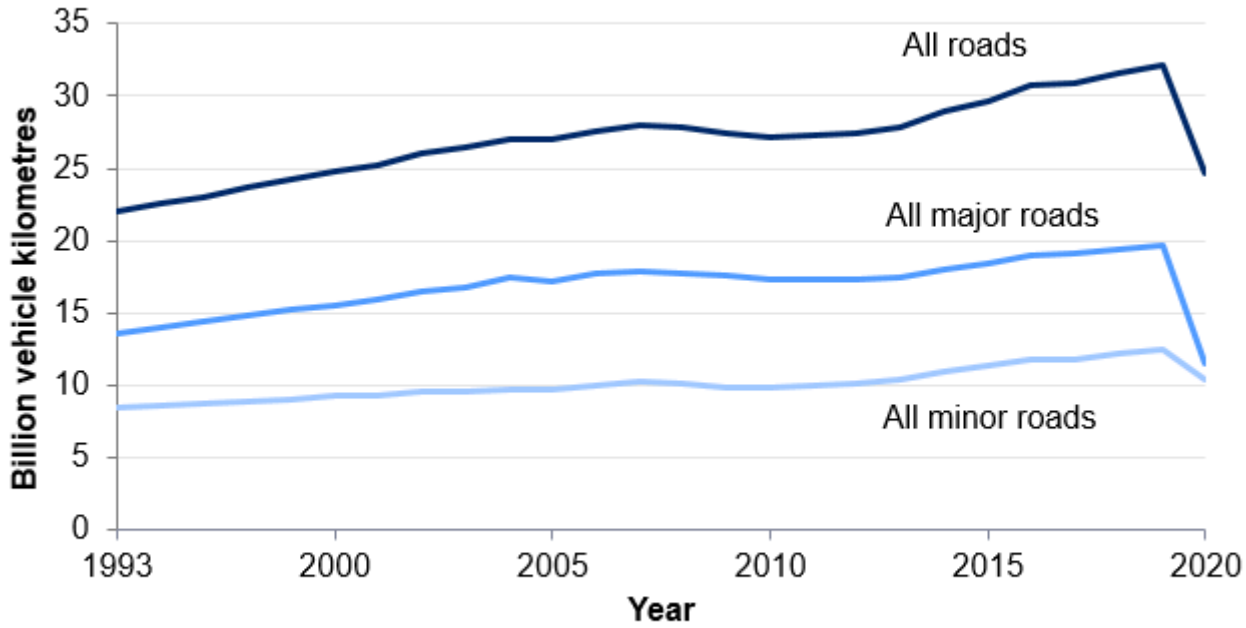
While 2020 saw a significant decrease as a result of widespread travel restrictions, there are a variety of other factors that have the potential to influence traffic volume. For example, labour market changes (employment/ unemployment, working remotely or from home) can reduce commuting traffic; increases 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 58% of total traffic volume in Wales in 2020, and minor roads accounted for 42%. The proportion share has broadly been the case for the last 26 years, though there has been a larger increase in volume on minor roads (up 47% since 1993) compared with major roads (up 44%) as of 2019. Chart 3.

Traffic volume on major roads in 2020 fell further than traffic on minor roads compared with 2019 (41% and 17% respectively).

Chart 3: Volume of traffic by main road, 1993 to 2020



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

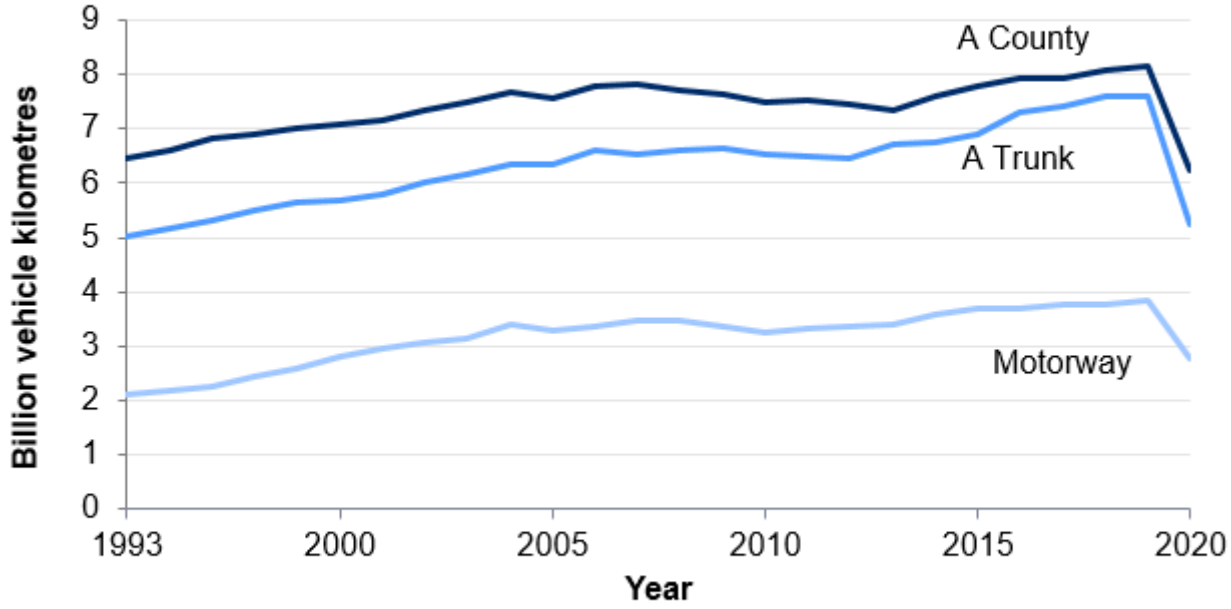
Volume of road traffic by road classification and year on StatsWales
(https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/volumeofroadtraffic-by-roadclassification-year)

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 4 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 2020 had decreased on all roads when compared to previous

year. Traffic on A trunk roads decreased the most compared to 2019 (31%), followed by motorways (28%), and then A county roads (24%).

Chart 4: Volume of traffic by categories of major road, 1993 to 2020

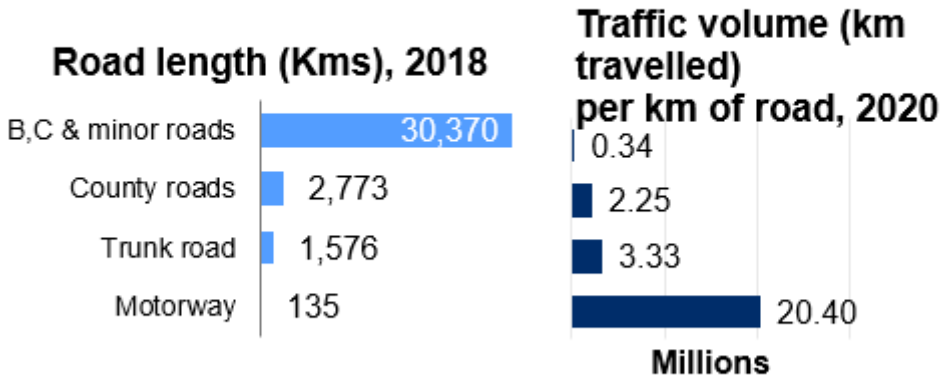


Source: Welsh Government analysis of annual average daily flows (AADF) data
Note: Data for periods 2010 to 2018 have been revised.

Volume of road traffic by road classification and year on StatsWales
(https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/volumeofroadtraffic-by-roadclassification-year)

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 5 highlights that traffic per km of road is far higher on motorways when compared with the other classes of roads (Chart 4).

Chart 5: Road length and motorised road traffic volume by class of road



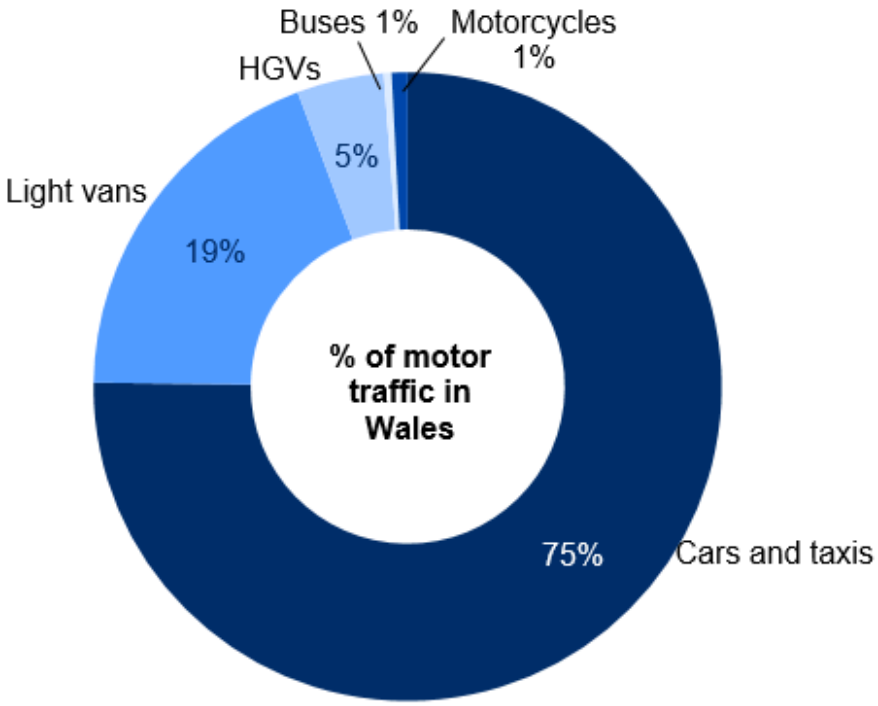
Source: Welsh Government analysis of AADF data

Volume of road traffic by road classification and year on StatsWales (https://gov.wales/road-traffic-2018-htmlhttps:/statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/volumeofroadtraffic-by-roadclassification-year)

Traffic by vehicle type and road class

Proportions of traffic flow by type of vehicle are shown in Chart 6a and Chart 6b**.** 75% of all motor vehicle traffic volume in 2020 was accounted for by cars and taxis (18.5 bvk) and vans (4.7 bvk).

Chart 6a: Volume of road traffic by type of vehicle, 2020



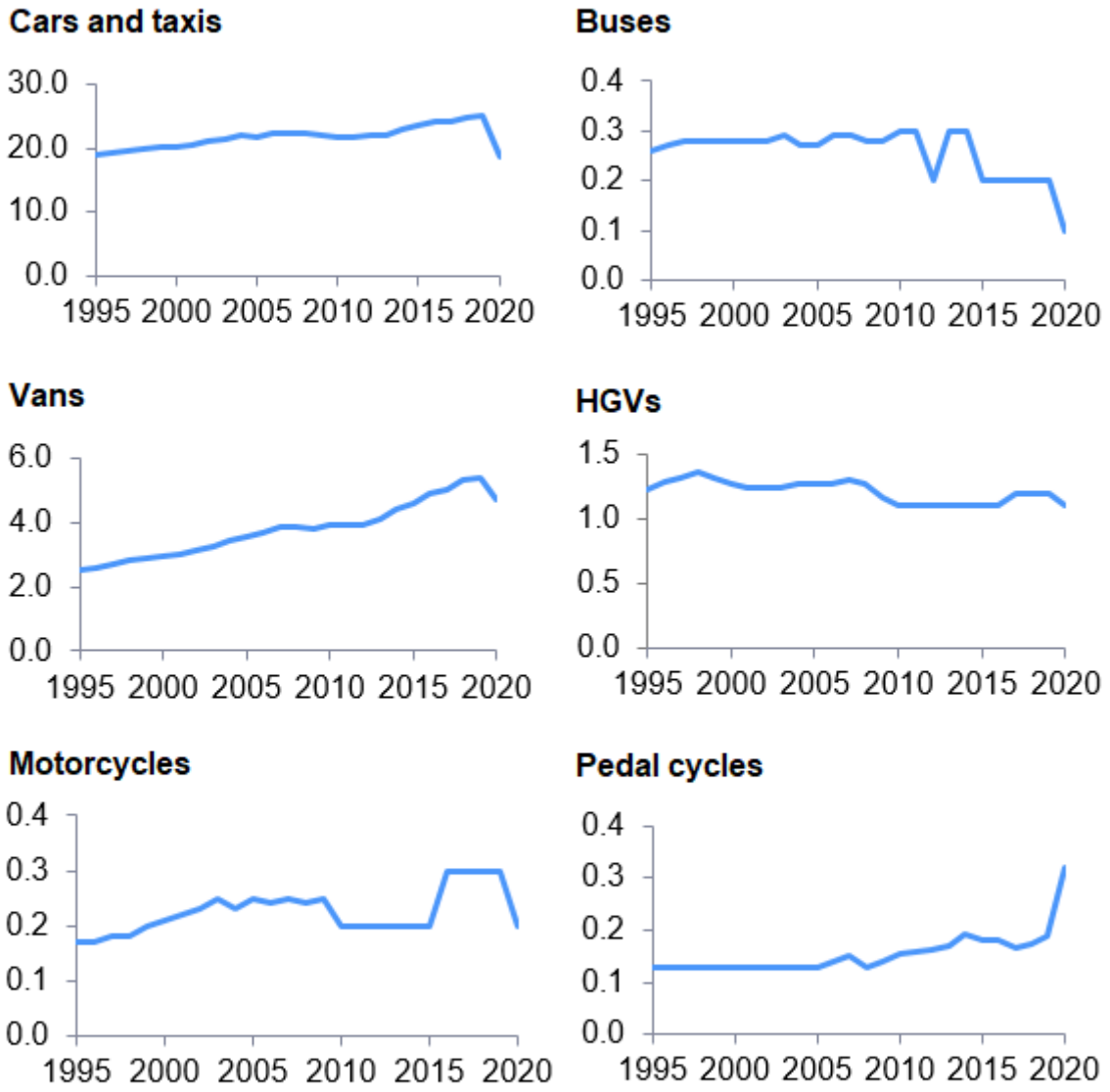
Source: Welsh Government analysis of annual average daily flows (AADF) data

Volume of road traffic by road classification and type of vehicle on StatsWales (https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/volumeofroadtraffic-by-roadclassification-typeofvehicle)

Trends in traffic volume since 1995 by vehicle type are shown in Chart 6b. Pedal cycle traffic increased significantly in 2020 (68%) as a result of people turning to cycling as a form of both transportation and exercise throughout the pandemic. All other vehicle types saw a decrease in traffic volume Chart 1 and Chart 6b.

Chart 6b: Volume of road traffic by type of vehicle, 1995 to 2020 (a)(b)

Billion vehicle kilometres



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.

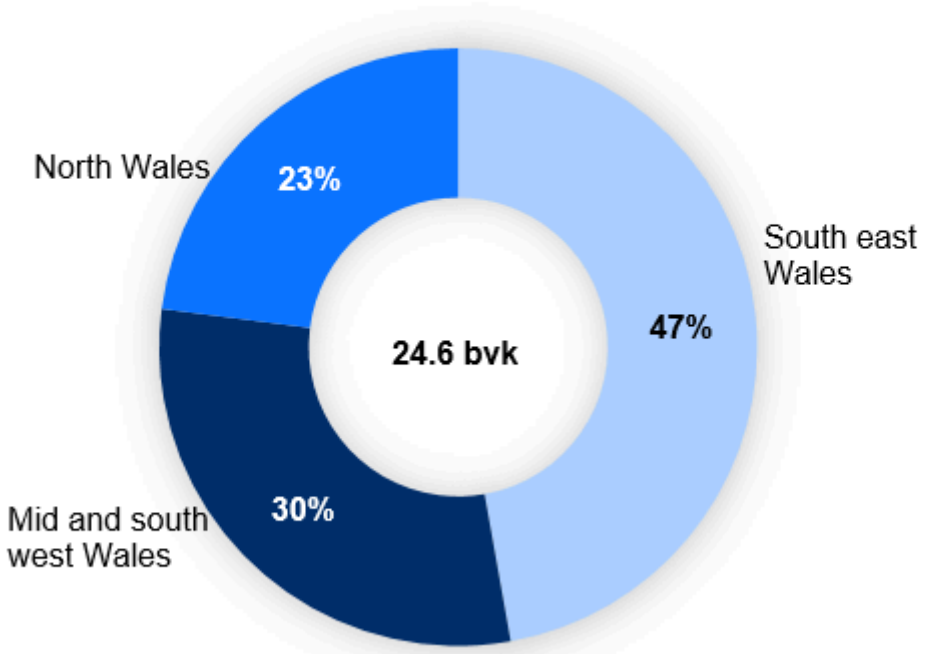
Volume of road traffic by type of vehicle on StatsWales
(https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/volumeofroadtraffic-by-typeofvehicle-year)

Cars and taxis were the dominant category on all classes of road in 2020, accounting for 18.5 bvk (75% of motor vehicle traffic), followed by light vans at 4.7 bvk (19%) and HGVs at 1.1bvk (5%).

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%) (Chart 7). This distribution is consistent over time and broadly reflects where the population of Wales lives and works.

Chart 7: Volume of motor vehicle traffic by economic region, 2020



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

Volume of road traffic by local authority and year on StatsWales
(https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/volumeofroadtraffic-by-localauthority-year)

Chart 8 shows estimated traffic volume for the 22 Welsh local authorities in 2020 compared to 2019 levels.

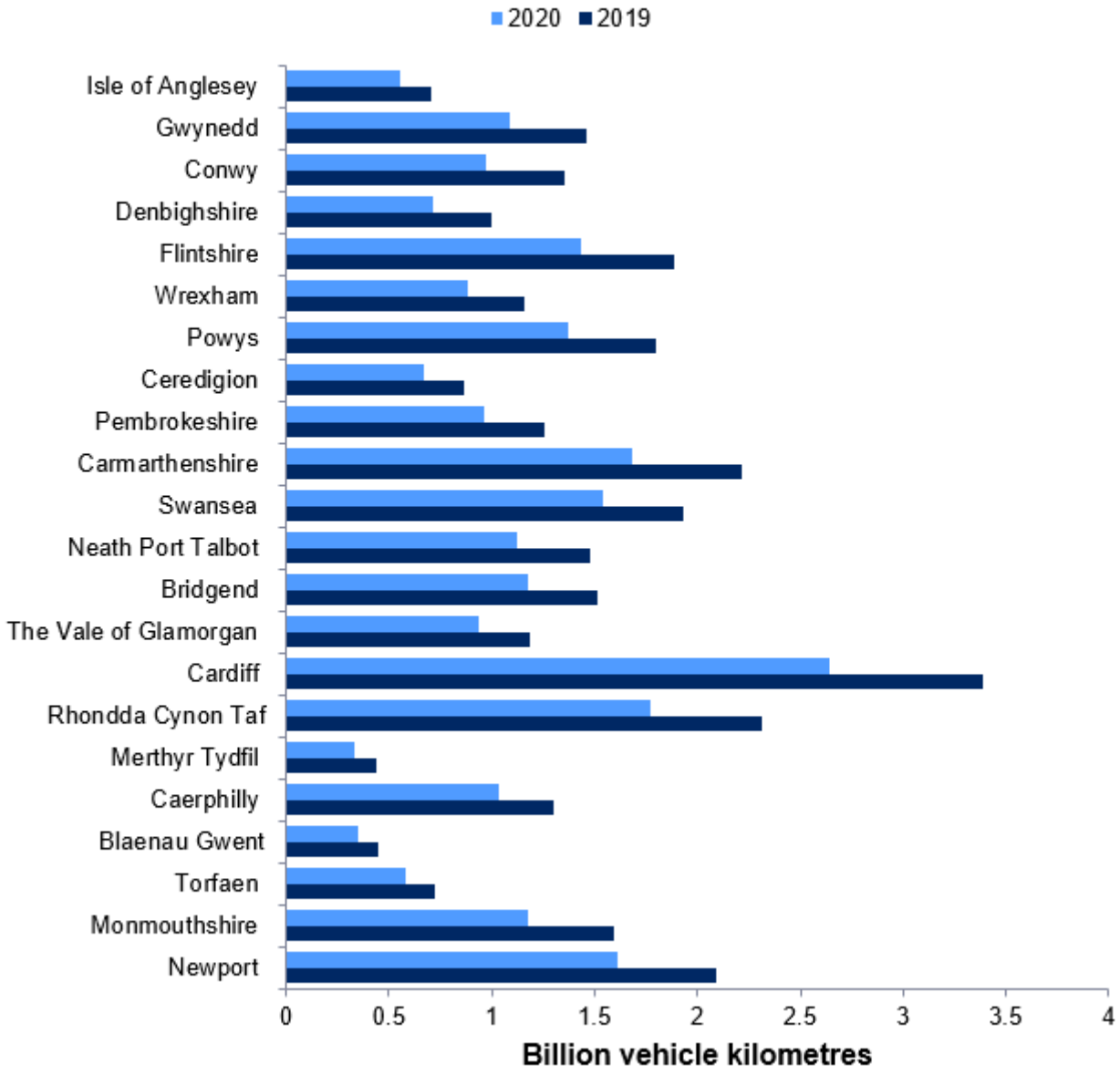
Cardiff, Rhondda Cynon Taf, Carmarthenshire and Newport had the highest volumes of motor vehicle traffic. Their combined volume represented 31% of total traffic in Wales.

Torfaen, Isle of Anglesey, Blaenau Gwent and Merthyr Tydfil had the lowest volumes of motor vehicle traffic and their combined volume represented just 7%

of total traffic in Wales.

Out of the 22 local authorities, Cardiff registered the highest volume of traffic in 2020 at 2.6 bvk which was 22% lower than 2019. In general, these figures reflect where people live and work in Wales.

Chart 8: Volume of motor vehicle traffic by local authority, in Wales 2019 and 2020



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

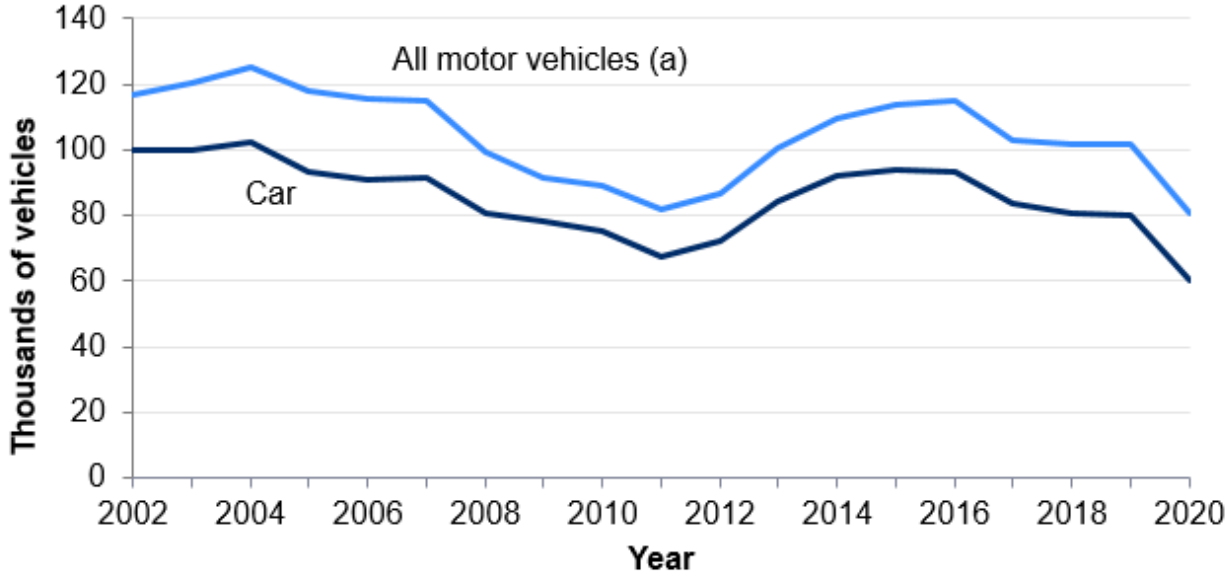
Volume of road traffic by local authority and road classification on StatsWales (https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/

volumeofroadtraffic-by-localauthority-roadclassification)

New registrations and licensed vehicles

Chart 9a shows new vehicle registrations in Wales since 2002. 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 2020 the number of new vehicle registrations decreased by 21% (21,000) compared to 2019 to 81,000.

Chart 9a: New motor vehicle registrations for cars and all vehicles, 2002 to 2020



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

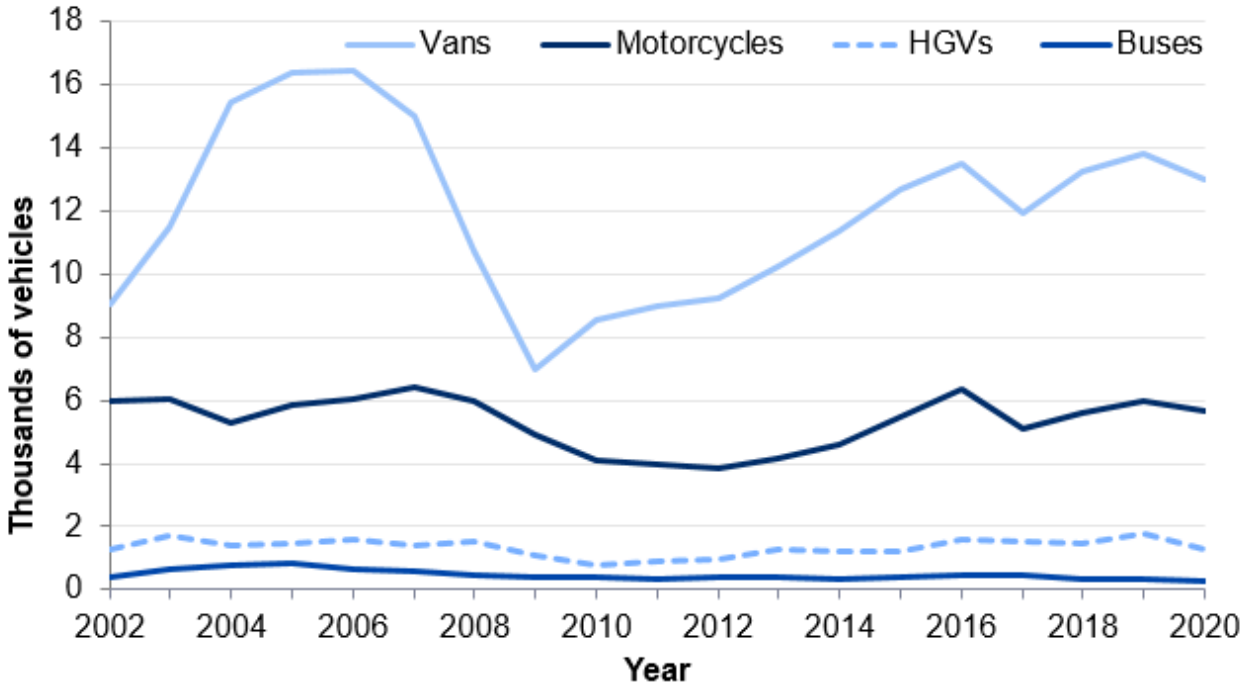
New motor vehicle registration by type of vehicle and year on StatsWales
(https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/

newmotorvehicleregistrations-by-typeofvehicle-year)

There was a decrease in vehicle registrations in 2020 by 21%. Cars decreased the most by 25%, followed by HGVs (-28%), buses (-20%), motorcycles (-5%) and vans (-6%).

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.

Chart 9b: New motor vehicle registrations by body type, 2002 to 2020 (excluding cars)

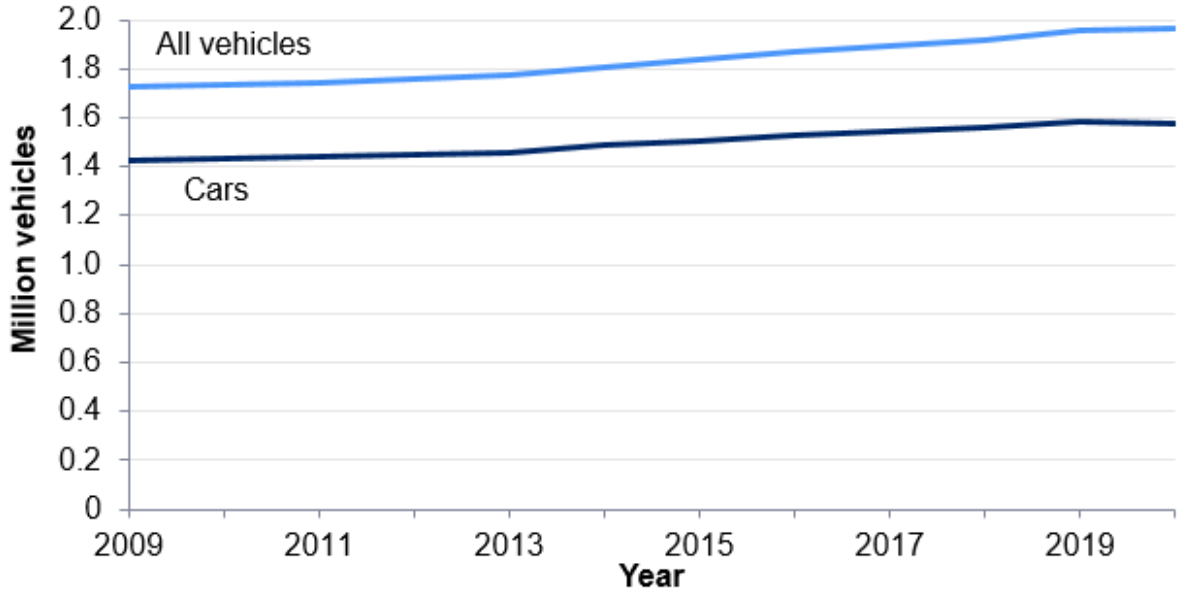


Source: Welsh Government analysis of DVLA/DfT vehicle licensing data

New motor vehicle registration by type of vehicle and year on StatsWales (https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/newmotorvehicleregistrations-by-typeofvehicle-year)

Chart 9c shows the number of cars and all vehicles licensed in Wales since 2010. The trend for cars and all vehicles is similar over time. In 2020 number of licenced cars fell by 0.3% to 1.6 million while all vehicles increased by 0.3% to 2.0 million.

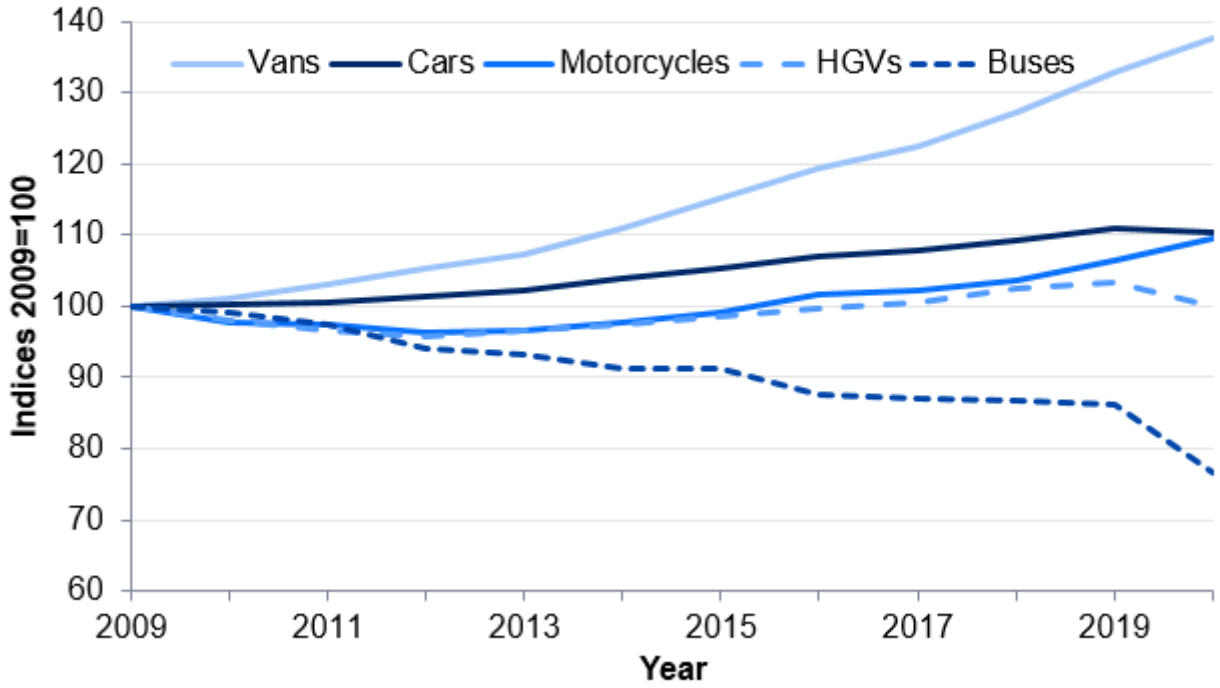
Chart 9c: Cars and all vehicles licensed, 2009 to 2020 (a)



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
(https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/newmotorvehicleregistrations-by-typeofvehicle-year)

Chart 9d: Change in licensed vehicles since 2009 by type of vehicle



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

New motor vehicle registration by type of vehicle and year on StatsWales (https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic/newmotorvehicleregistrations-by-typeofvehicle-year)

The change in licensed vehicles is not consistent for different types of vehicle (Chart 9d). 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 up to 2019. 2020 saw decreases in the registration of new vehicles across all vehicle types.

Notes

Context

The **Department for Transport (DfT) produces** (https://www.gov.uk/government/collections/road-traffic-statistics)**traffic statistics** (https://www.gov.uk/government/collections/road-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 (https://www.transport.gov.scot/publication/travel-and-transport-in-scotland-key-findings-2019/)**'Transport and Travel in Scotland'** (https://www.transport.gov.scot/publication/travel-and-transport-in-scotland-key-findings-2019/) which includes information on motor vehicles, traffic and driving.

Data source

Road traffic estimates (http://www.dft.gov.uk/traffic-counts/) for Wales are compiled by the DfT 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** (https://www.gov.uk/government/publications/road-traffic-statistics-guidance).

Traffic volume

Traffic volume is estimated using traffic counts data collected by the 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

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 CO_2 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** (https://www.gov.uk/government/statistics/road-traffic-estimates-in-great-britain-2020)**road traffic estimates** (https://www.gov.uk/government/statistics/road-traffic-estimates-in-great-britain-2020) for Great Britain in 2020 on 28 April 2021. 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** (https://www.gov.uk/government/publications/road-traffic-statistics-minor-road-benchmarking) approximately every 10 years, with the aim to improve the accuracy of traffic estimates for minor roads. This was undertaken in 2020 (included in our October 2020 publication) and included revisions to the minor road traffic estimates covering 2010 to 2018.

Table 1: Revisions made to road traffic data (Billion vehicle kilometres)

Year	Minor roads: original	Minor roads: revised	All roads: original	All roads: revised
2010	9.69	9.89	26.98	27.17
2011	9.59	9.98	26.93	27.33
2012	9.49	10.09	26.76	27.36
2013	9.55	10.35	27.02	27.80
2014	9.93	10.98	27.89	28.95
2015	10.01	11.30	28.40	29.69
2016	10.22	11.76	29.17	30.71

2017	9.96	11.72	29.08	30.84
2018	9.95	12.20	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 & Research** (http://wales.gov.uk/statistics-and-research/?lang=en) website. Road traffic data for Wales is published on **StatsWales** (https://statswales.gov.wales/Catalogue/Transport/Roads/Road-Traffic).

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** (https://www.statisticsauthority.gov.uk/) has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the **Code of Practice for Statistics** (https://code.statisticsauthority.gov.uk/).

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** (https://www.statisticsauthority.gov.uk/publication/statistics-on-transport-in-wales-welsh-assembly-government/).

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 wellbeing of Wales. The Act puts in place seven wellbeing 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 wellbeing 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 **Wellbeing of Wales report** (https://gov.wales/wellbeing-wales).

Further information on the **Well-being of Future Generations (Wales) Act 2015** (https://gov.wales/well-being-future-generations-wales-act-2015-guidance).

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 wellbeing assessments and local wellbeing 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** (mailto:stats.transport@gov.wales)

Contact details

Statistician: James Khonje
Telephone: 0300 025 0210
Email: **stats.transport@gov.wales** (mailto:stats.transport@gov.wales)

Media: 0300 025 8099

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