



Llywodraeth Cymru
Welsh Government

STATISTICS, DOCUMENT

Road traffic: 2022

Information on volume of traffic by type of vehicle and class of road for 2022.

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Main points

- Road traffic volume in Wales increased by 10.2% compared to the previous year, to 29.2bvk, but remained around 5% below pre-pandemic levels (30.7 billion vehicle kilometers (bvk) in 2019).
- In 2022, the total volume of motorised traffic in Wales was 29.2 billion vehicle kilometers. This is equivalent to 9,403 vehicle kilometers (5,755 miles) per person.
- Most of the traffic (63%) was on major roads (motorways or A roads). The remaining 37% 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 (bvk).

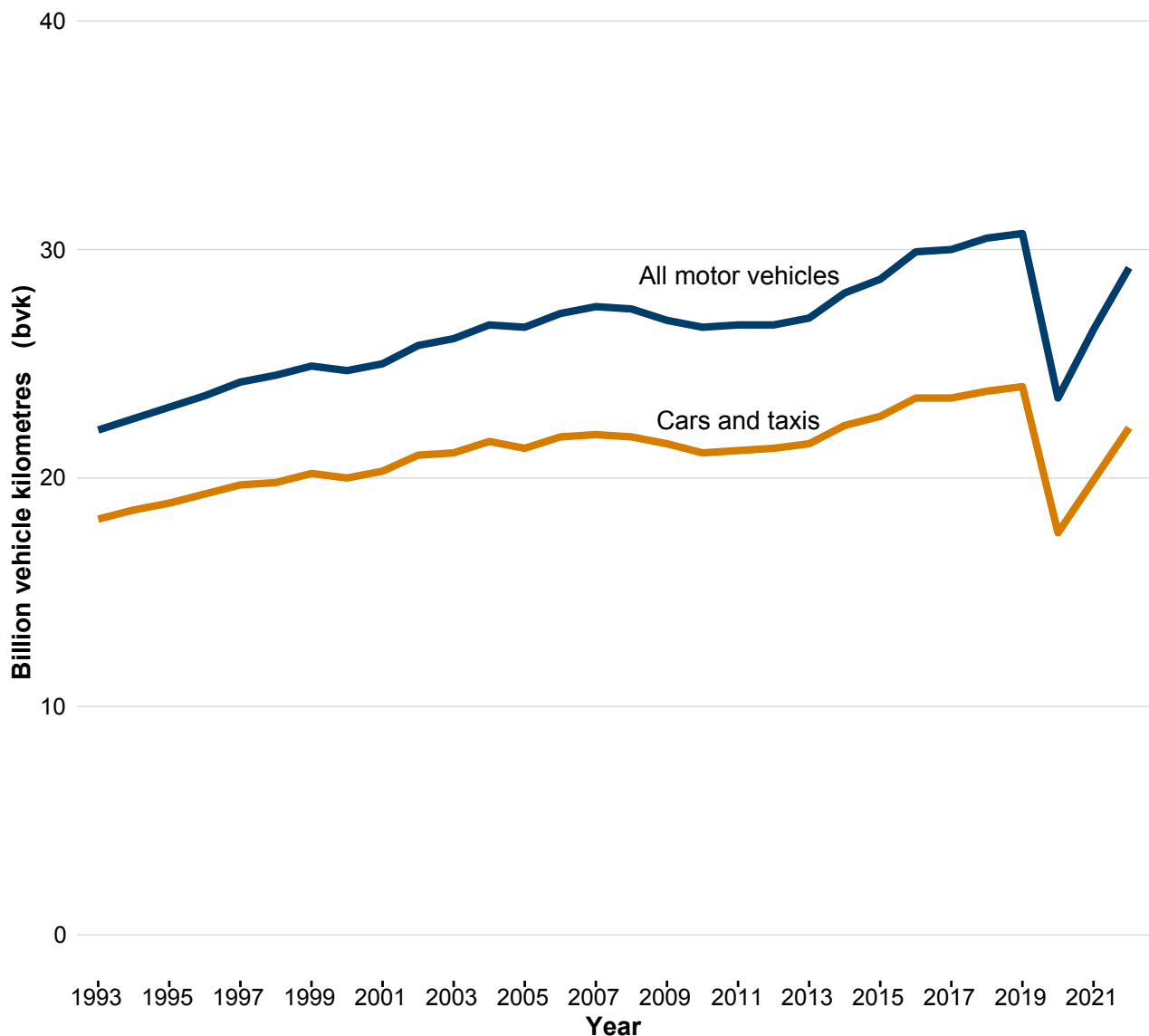
More detailed information is provided in the [DfT's road traffic estimates methodology note](#).

Trends in road traffic in Wales

Figure 1 shows the long-term trend in traffic volume from 1993 to 2022. Between 1993 and 2019, total traffic volume increased by 38.9% reaching a peak of

30.7bvk in 2019. Traffic volume gradually increased up to 2007, and then fell slightly during the 2008-09 economic downturn. Since 2012 traffic volume began increasing again before a significant fall in 2020 as result of the coronavirus (COVID-19) pandemic travel restrictions. In 2022, traffic volume increased by 10.2% compared to the previous year, to 29.2bvk.

Figure 1: Volume of traffic in Wales, 1993 to 2022



Description of Figure 1: A line chart showing the trend in volume of traffic in Wales overtime. In 2022, the total volume of motorised traffic in Wales was 29.2 billion vehicle kilometres (bvk). This is equivalent to 9,403 vehicle kilometres

(5,755 miles) per person.

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

Volume of road traffic by type of vehicle and year (StatsWales)

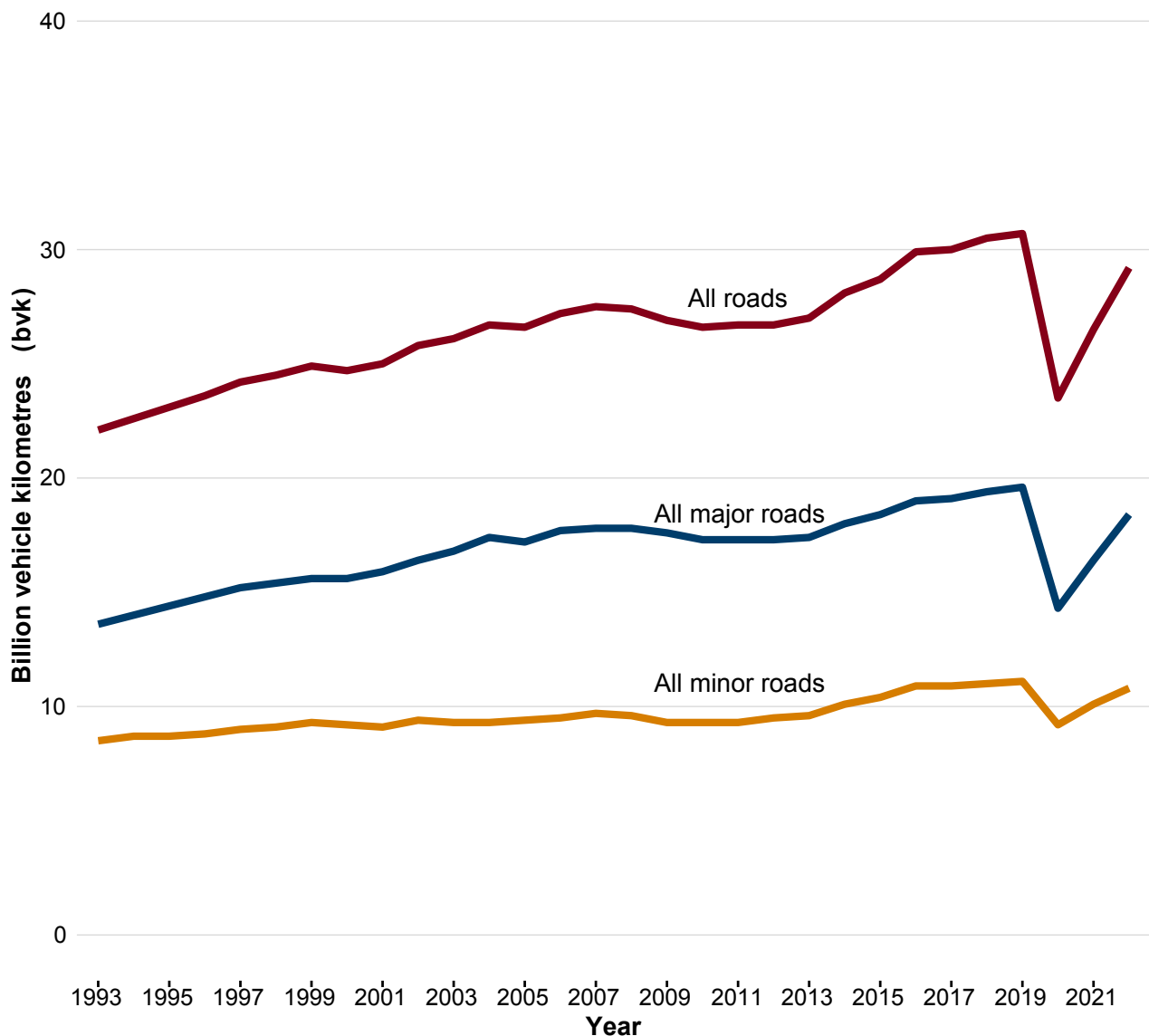
There are a variety of factors that have the potential to influence road traffic volume in Wales. For example, labour market changes (employment/unemployment, working remotely or from home) can reduce commuting traffic; increases in fuel prices might cause motorists to consider shifting to other modes 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 volume decreased considerably during 2020 in light of the COVID-19 pandemic. COVID-19 restrictions continued to impact travel in 2021, though to a lesser extent.

Traffic by road class

Major roads accounted for 63% of total traffic volume in Wales in 2022, and minor roads accounted for 37%. The proportion share has broadly been similar over time. Since 1993, traffic volume on major roads has increased by 35.3% and traffic volume on minor roads has increased by 27.1% Figure 2.

In 2022, traffic volume increased by 12.2% on major roads and increased by 6.9% on minor roads, compared with the previous year.

Figure 2: Volume of traffic by main road, Wales 1993 to 2022



Description of Figure 2: A line chart showing the trend in volume of traffic by main road overtime. In 2022 63% of total traffic volume in Wales was accounted

by major roads.

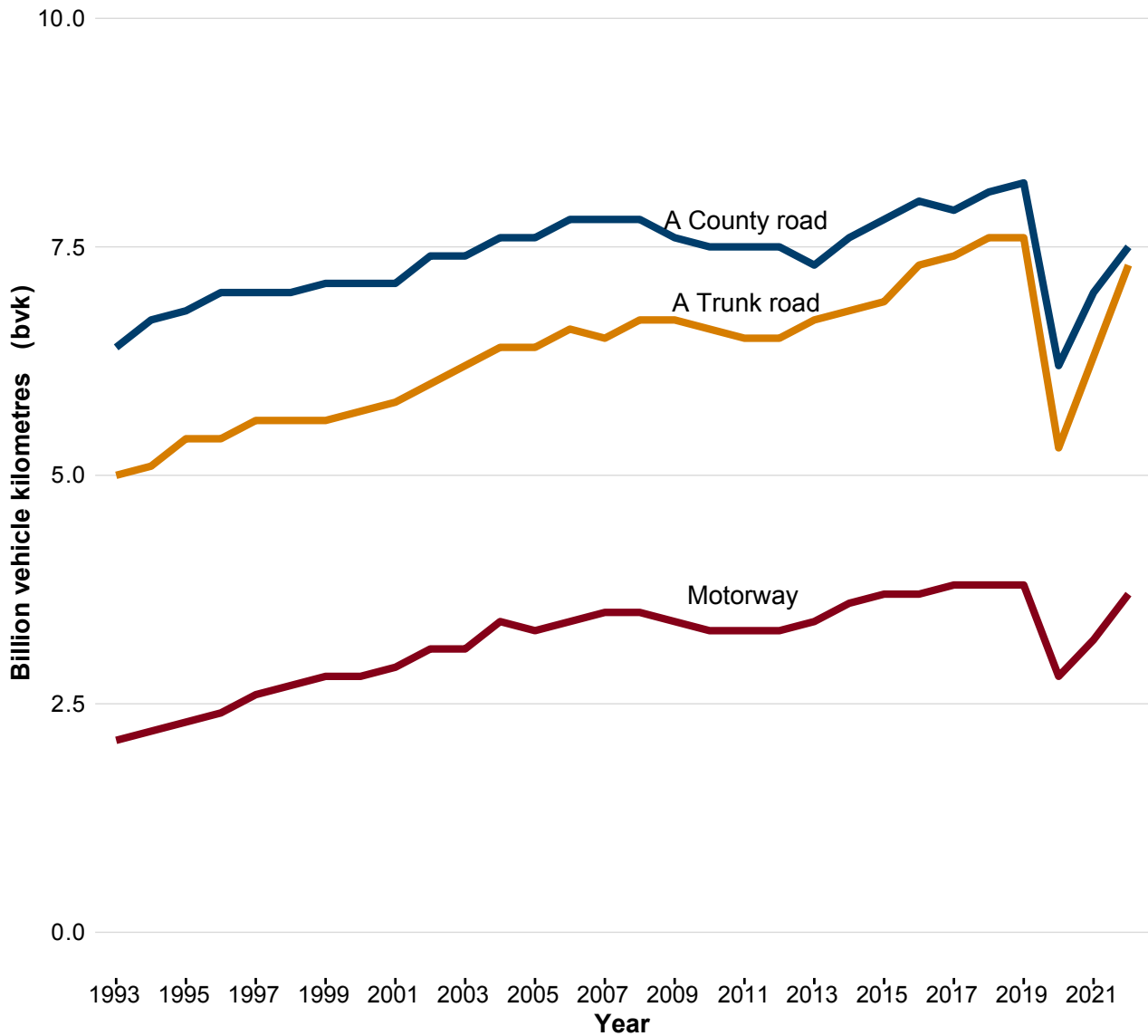
Source: Welsh Government analysis of annual average daily flows (AADF) data

Volume of road traffic by road classification and year (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). Figure 3 shows the trend 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 in recent years.

In 2022 traffic on trunk roads saw the largest increase (15.9%) compared to 2021, followed by motorway (15.6%), and then county roads (7.1%).

Figure 3: Volume of traffic by categories of major road, Wales 1993 to 2022



Description of Figure 3: A line chart showing the trend in volume of traffic by categories of major roads overtime. In 2022 trunk roads saw the largest increase

(15.9%) compared to 2021.

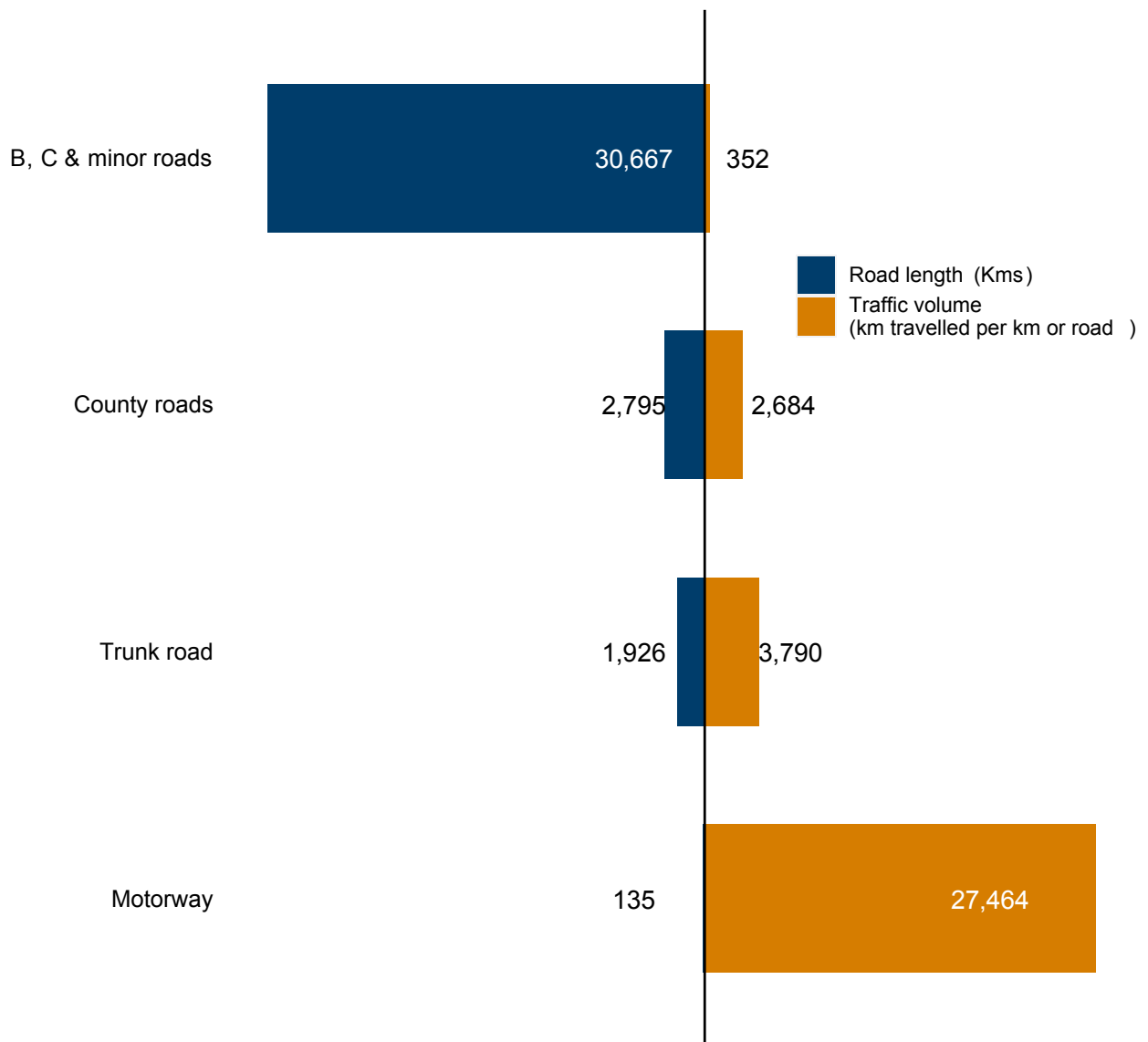
Source: Welsh Government analysis of annual average daily flows (AADF) data

Volume of road traffic by road classification and year (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 1,926 km, county roads are 2,795 km in length and B, C and minor roads total 30,667 km.

Figure 4 highlights that although B, C and minor roads account for the most road length (km) in Wales, motorways account for the highest traffic volume (km travelled) per km of road.

Figure 4: Road length and motorised road traffic volume by class of road, Wales, 2022



Description of Figure 4: Figure 4 shows that, in 2022 taking into account different road lengths and traffic levels, the level of traffic per kilometre of road is much

higher on motorways compared to the other road classifications.

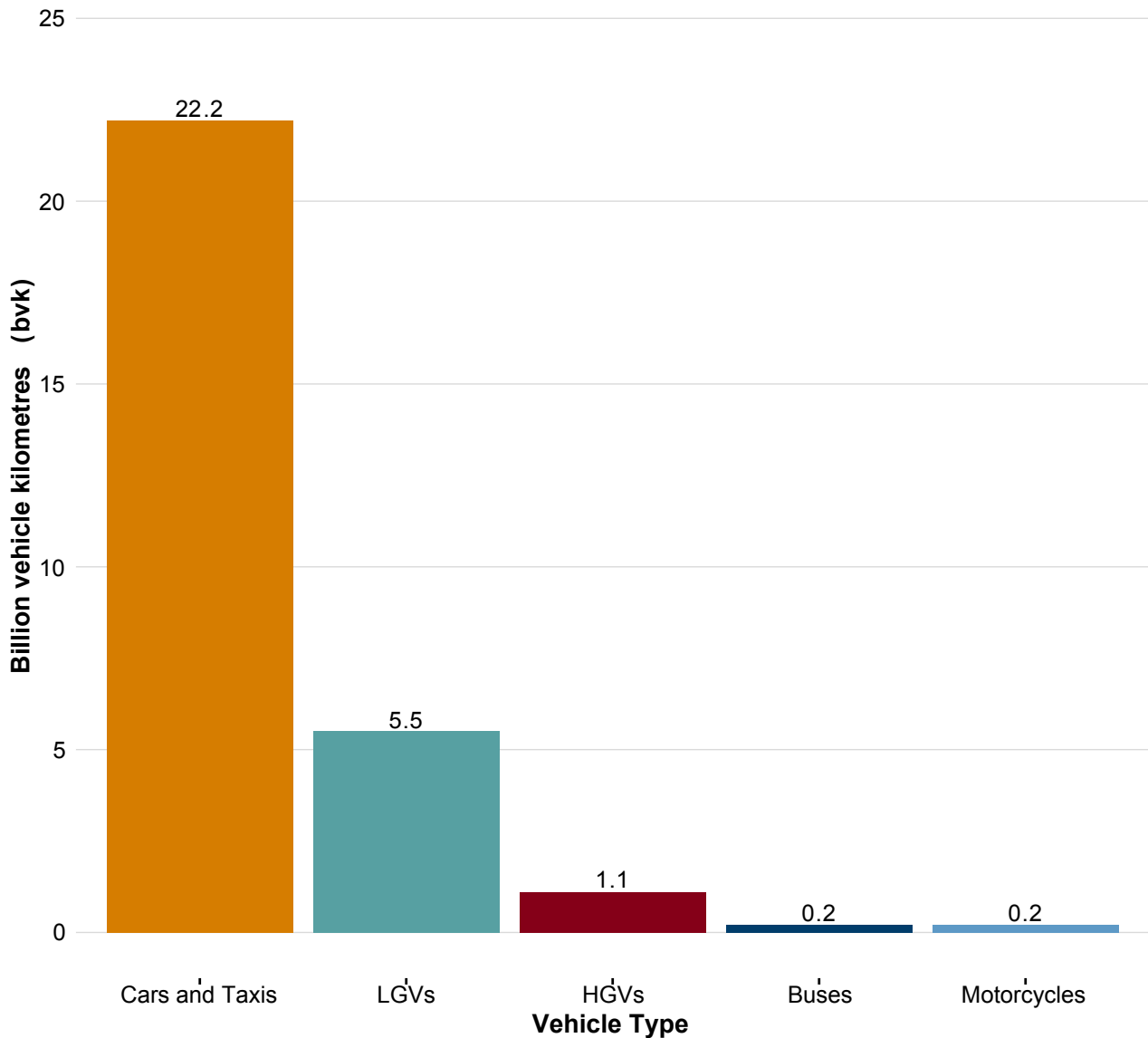
Source: Welsh Government analysis of annual average daily flows (AADF) data

Volume of road traffic by road classification and year (StatsWales)

Traffic by vehicle type and road class

Proportions of traffic flow by type of vehicle are shown in Figure 5a and Figure 5b. 76% of all motor vehicle traffic volume in 2022 was accounted for by cars and taxis (22.2bvk) and Light goods vehicles (LGVs) (5.5bvk).

Figure 5a: Volume of road traffic, by type of vehicle, Wales, 2022



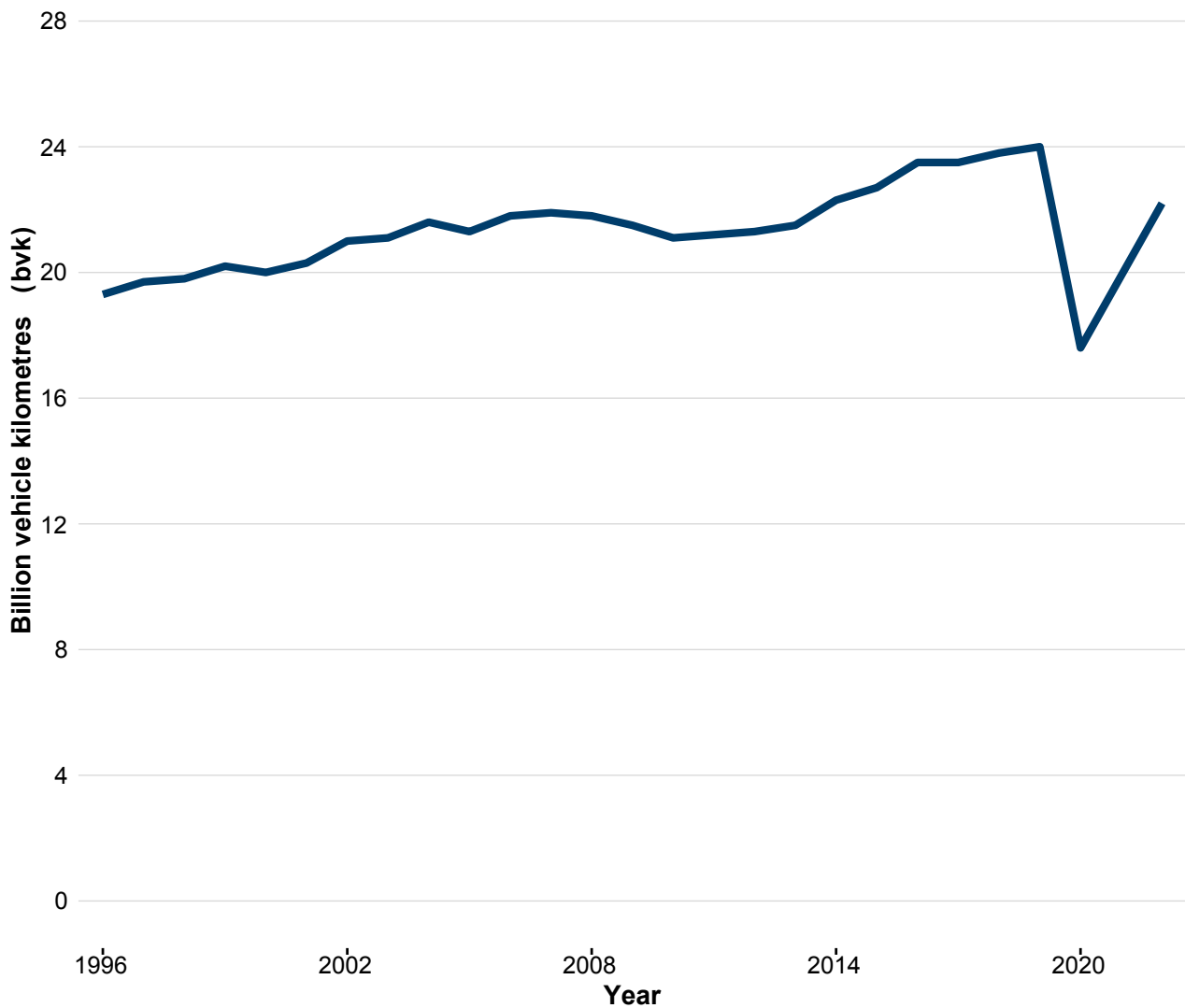
Description of Figure 5a: A column chart showing the volume of road traffic, by type of vehicle in 2022. Cars and taxis accounted for the largest share, 76%.

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

Volume of road traffic by type of vehicle and year (StatsWales)

Cars and taxis were the dominant category on all classes of road traffic in 2022, accounting for 22.2bvk (76% of motor vehicle traffic) followed by LGVs at 5.5bvk (18.8%) and HGVs at 1.1bvk (3.8%).

Figure 5b: Volume of cars and taxis, Wales, 1996 to 2022



Description of Figure 5b: Line Figures showing trends in road traffic by Cars and taxis vehicles overtime. In 2022 'Cars and taxis' increased by 11.6% compared to 2021.

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

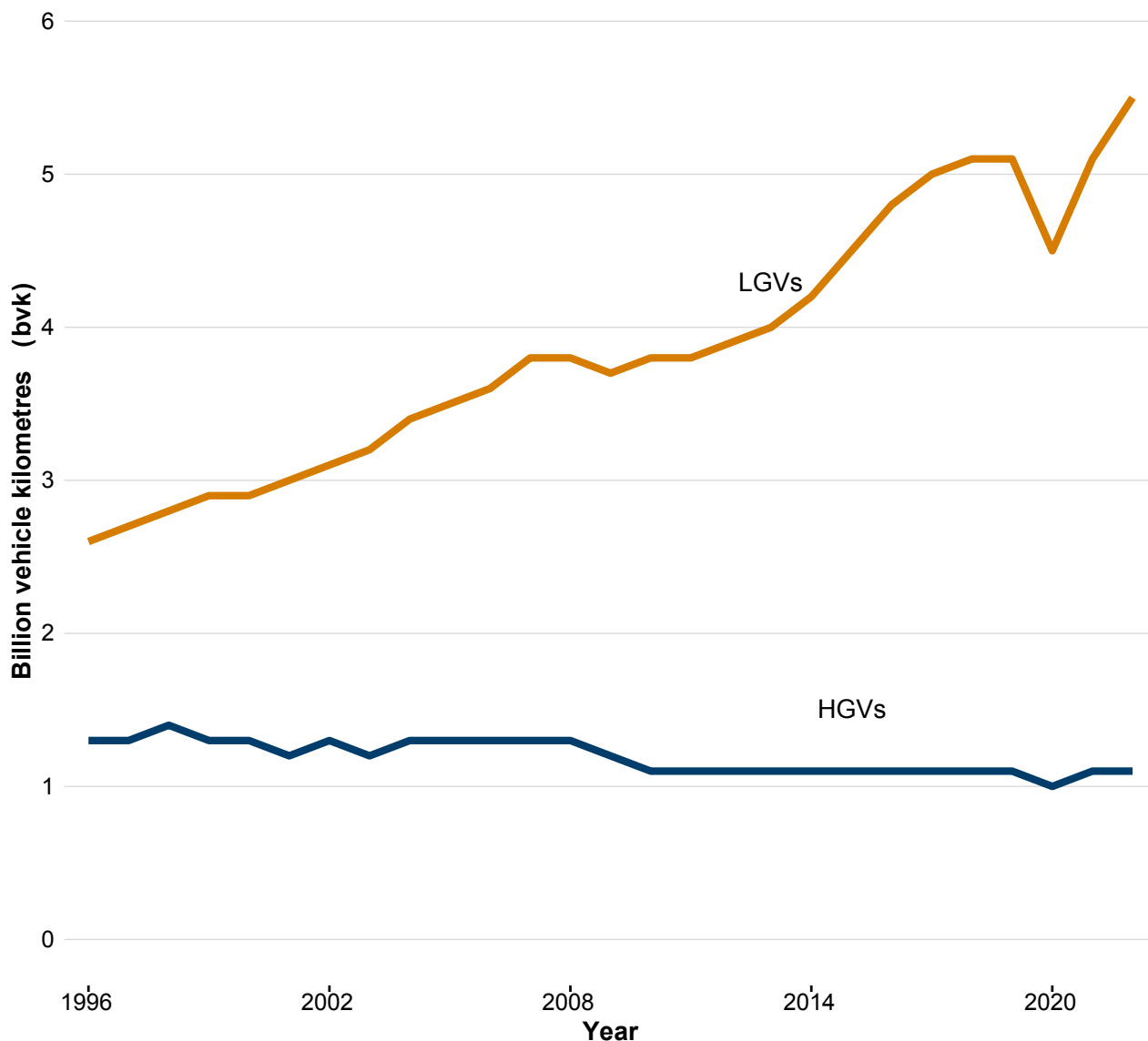
Volume of road traffic by type of vehicle and year (StatsWales)

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Figure 5c: Volume of HGVs and LGVs, Wales, 1996 to 2022



Description of Figure 5c: Line Figures showing trends in road traffic by HGVs and LGVs vehicles overtime. In 2022 LGVs increased by 7.8% whilst there was

no change in HGVs compared to 2021.

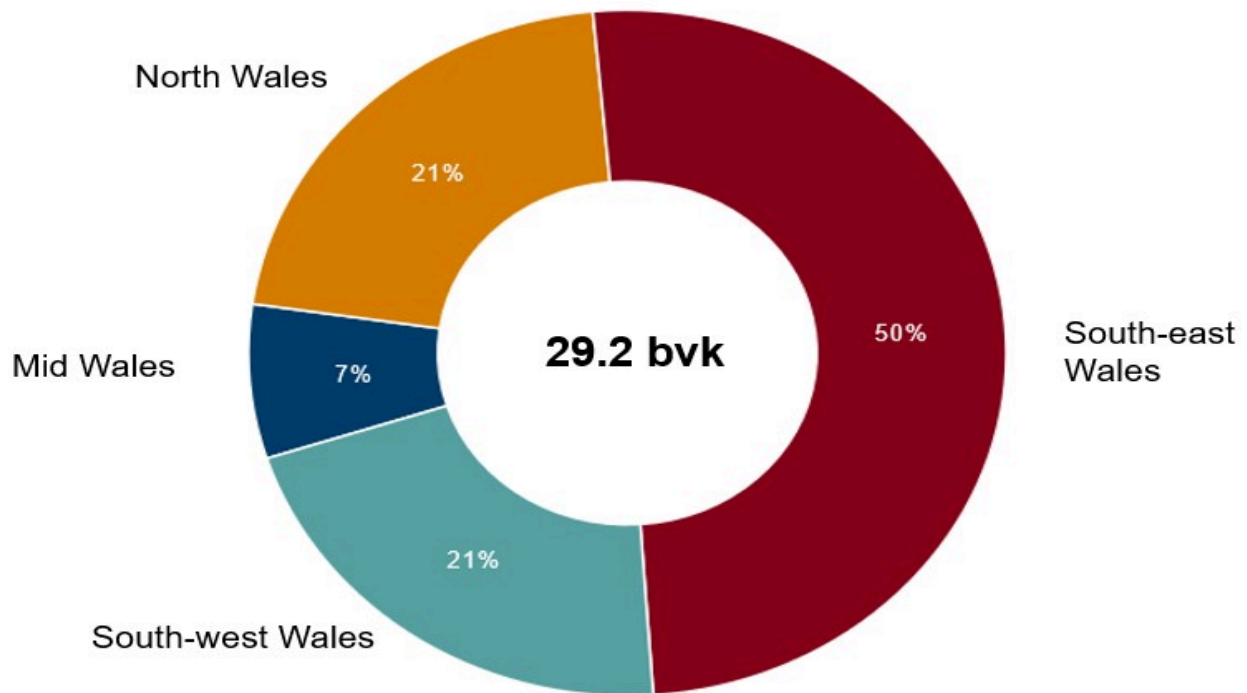
Source: Welsh Government analysis of annual average daily flows (AADF) data

Volume of road traffic by type of vehicle and year (StatsWales)

Traffic by economic region and local authorities

Excluding trunk roads (roads that form part of the strategic road network owned by and operated on behalf of the Welsh Government), South-east Wales accounted for the highest proportion of total traffic volume in Wales (50.4%), with Mid Wales accounting for the lowest (7.3%) (Figure 6). This distribution is consistent over time and broadly reflects where the population of Wales lives and works.

Figure 6: Proportion of motor vehicle traffic by economic region, in Wales, excluding trunk roads, 2022 [Note 1]



Description of Figure 6: Doughnut chart showing share of motor vehicle traffic by economic regions in 2022. South-east Wales accounted for the highest proportion of the total traffic volume in Wales (50.4%).

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

[Note 1]: Total may not add up to 100% due to rounding.

Figure 7 shows estimated traffic volume for the 22 Welsh local authorities in 2022 compared to 2021 levels excluding trunk roads.

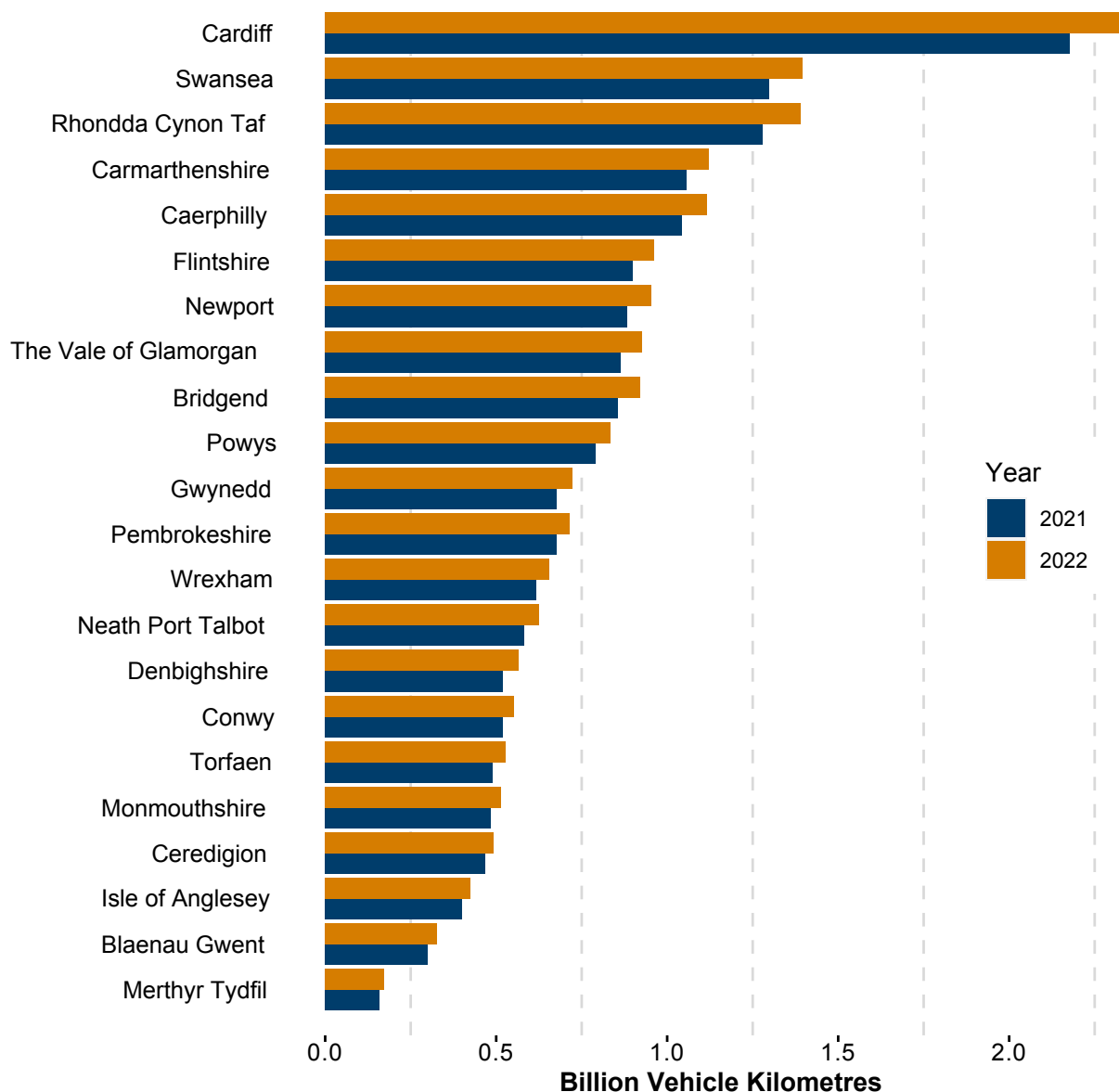
- Cardiff, Swansea, Rhondda Cynon Taf, Carmarthenshire and Caerphilly had

the highest volumes of motor vehicle traffic. Their combined volume represented 40.4% of total traffic in Wales.

- Ceredigion, Isle of Anglesey, Blaenau Gwent and Merthyr Tydfil had the lowest volumes of motor vehicle traffic and their combined volume represented just 7.7% of total traffic in Wales.

Out of the 22 local authorities, Cardiff registered the highest volume of traffic in 2022 at 2.3bvk. In general, these figures reflect where people live and work in Wales.

Figure 7: Volume of motor vehicle traffic by local authority, in Wales 2021 and 2022, excluding trunk roads



Description of figure 7: A bar chart showing volume of motor vehicle traffic by local authority in 2022 covering all 22 local authorities. Cardiff was the highest

local authority with 2.3 billion vehicle kilometres.

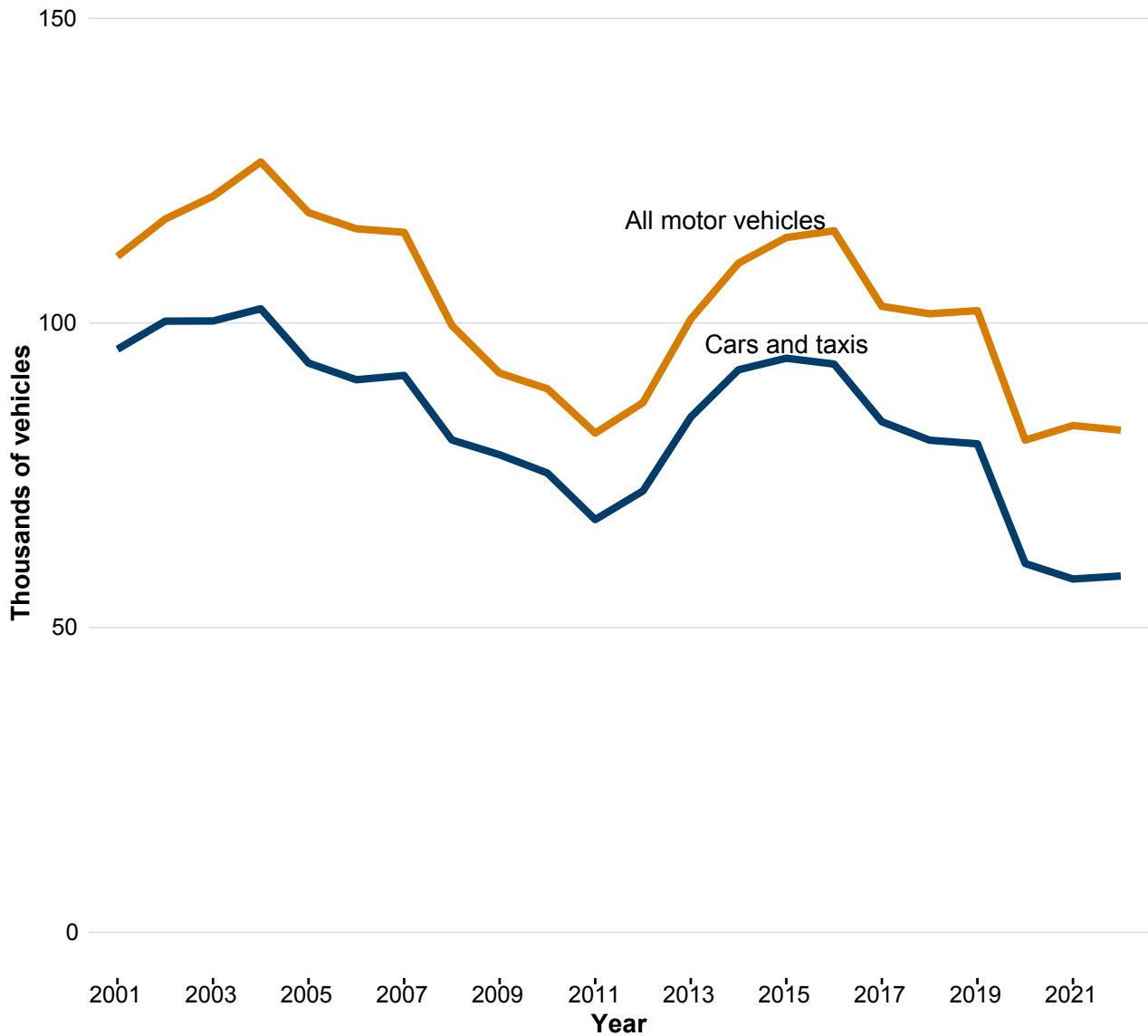
Source: Welsh Government analysis of annual average daily flows (AADF) data

Volume of road traffic by local authority and year excluding trunk roads (billion vehicle kilometres) (StatsWales)

New registrations and licensed vehicles

Figure 8a 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 2022 the number of new vehicle registrations was 82,000, a decrease of 0.9% (-760) compared to 2021.

Figure 8a: New motor vehicle registrations in Wales, 2002 to 2022 [Note 1] [Note 2]



Description of Figure 8a: A line chart showing the trend in new motor vehicle registrations in Wales overtime. In 2022 the number of new vehicle registrations

was 82,000, a decrease of 0.9%.

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

[Note 1]: This excludes 'Other vehicles' body type that includes Hackney Carriages, rear diggers, lift trucks, rollers, ambulances, three wheelers, tricycles and agricultural vehicles.

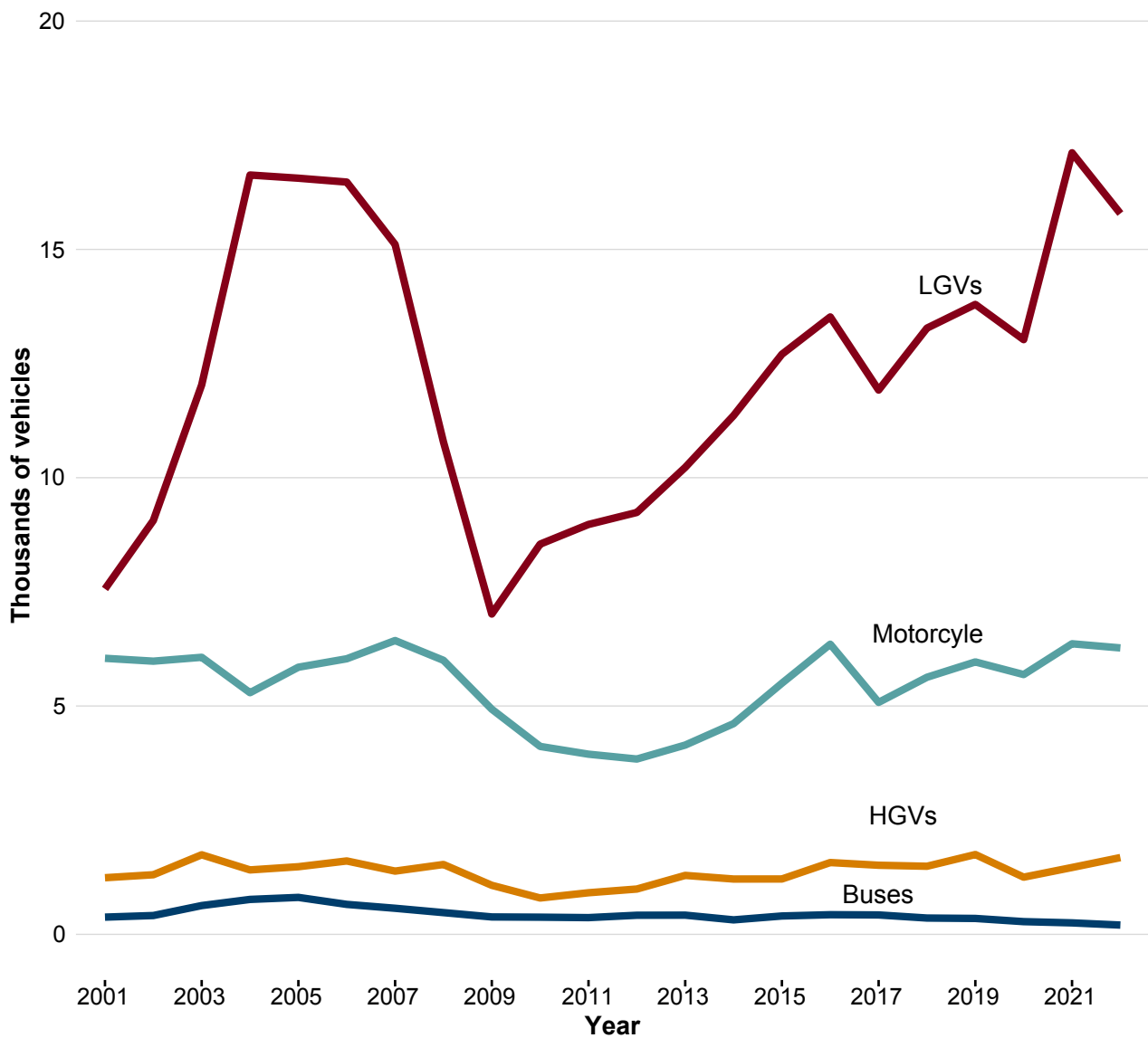
[Note 2] An error was identified in the 2021 release which showed an incorrect figure for new motor vehicle registrations. This has been revised.

New motor vehicle registration by type of vehicle and year (StatsWales)

Registrations of heavy goods vehicles increased the most (an increase of 14.8%), followed by cars (0.9%). Registration for LGVs and buses fell by 7.8% and 19.1% respectively in 2022 compared to the previous year.

For vehicles excluding cars, the long-term picture is varied (Figure 8b). Between 2007 and 2009 there was a sharp fall in the number of new registrations for LGVs. Despite an overall increase since then, figures remain well below the peak.

Figure 8b: New motor vehicle registrations by body type in Wales, 2002 to 2022 (excluding cars)



Description of Figure 8b: A line chart showing the trend in new motor vehicle registrations by body type overtime. In 2022 there was a 14.8% increase in

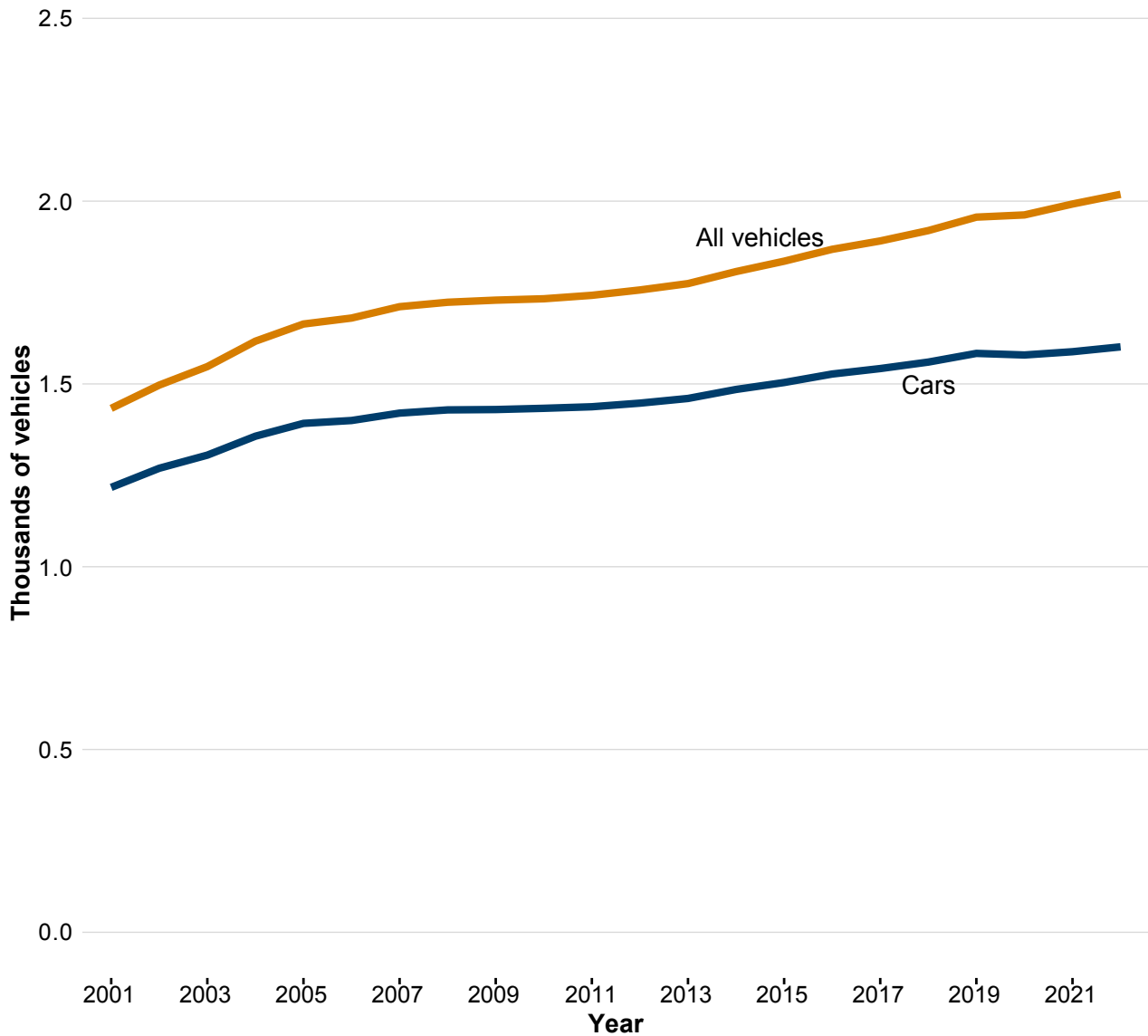
heavy goods vehicles registration.

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

New motor vehicle registration by type of vehicle and year (StatsWales)

Figure 8c 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 2022, the number of licenced cars increased by 0.8% to 1.6 million while all vehicles increased by 1.3% to 2 million.

Figure 8c: Cars and all vehicles licensed in Wales, 2009 to 2022



Description of Figure 8c: A line chart showing the trend in vehicle registrations overtime. In 2022 the number of licenced cars increased to 1.6 million while all

vehicles increased to 2 million.

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

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

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 are listed below:

- These data are used as a monitoring measure in the [Welsh Transport Strategy \(Transport for Wales\)](#). The indicator measures the change in traffic flows for Wales as a whole and for individual local authority areas.
- These data are used to calculate the casualty rate per volume of traffic.
- National and local CO2 emissions estimates, relating to transport, use these traffic flows estimates.

Accuracy

Road traffic estimates are based on the results of 12-hour manual counts taken between March and November, which are grossed up to estimates of annual average daily flows (AADFs) 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. Roads are grouped into 10 strata based on the type of road, the location, and the estimated AADF.

Major roads (motorways and 'A' roads) are represented by a series of links, which are unique sections of road which make up the entirety of the major roads network. A location on each of these links is used to count vehicles. The scale of the road network means it is not possible to count traffic on every stretch of road every year, therefore, a rolling Census approach is taken for major roads. Where a manual count has not taken place in the reference year, growth factors are applied to the previous year's AADF. Growth factors are calculated from the change between the reference year and the previous year from data from automatic traffic counters on similar roads. Once an AADF for the latest year has been calculated for all of the links of the major road network, the figures are combined with road lengths to produce estimates for the amount of vehicle kilometres driven in the year.

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. The sample of minor road sites that are counted each year are used to estimate the change in traffic levels between years. These figures are then applied to the previous year's minor road traffic figures, as well as the change in minor road length, to calculate the minor road traffic estimates for the latest year.

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 2022 on 7 September 2023. Our release uses this road traffic data in this publication and normally follows about three months later, although we plan to shorten this gap in future.

Revision

The Department for Transport (DfT) carries out a minor road traffic benchmarking exercise 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. A table detailing these revisions was published as part of our [2020 statistical release](#). For more information about the minor roads benchmarking exercise, please refer to the [documentation from the 2019 exercise \(Department for Transport\)](#).

Accessibility and clarity

This statistical bulletin is pre-announced and then published on the [Statistics & 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 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 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 Senedd Cymru. Under section 10(8) of the Well-being of Future Generations Act, where the Welsh Ministers revise the national indicators, they must as soon as reasonably practicable (a) publish the indicators as revised and (b) lay a copy of them before the Senedd. These national indicators were laid before the Senedd in 2021. The indicators laid on 14 December 2021 replace the set laid on 16 March 2016. This release does not include any of the 46 national indicators.

Information on the indicators, along with narratives for each of the wellbeing goals and associated technical information is available in the [Wellbeing 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 are 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

Contact details

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