



Llywodraeth Cymru
Welsh Government

STATISTICS

Road lengths and conditions: April 2020 to March 2021

A report showing information by road class for April 2020 to March 2021.

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Contents

Main points

Impact of COVID-19

Welsh Government managed roads

Skidding resistance of motorways and A trunk roads

Quality information

Contact details

Main points

- The total road length in Wales in 2020-21 was approximately 35,020 km, an increase of 0.4% on the previous financial year (2019-20). Total road lengths in Wales change relatively little from year to year.
- Powys contains the largest road network of the Welsh local authorities. It has the highest proportion of all trunk roads (27.3%), B and C roads (21.1%) and minor surfaced roads (12.0%) and accounts for 15.7% of the total road length of Wales.
- In 2020-21, 6.4% of the motorway network and 2.9% of the trunk road network required close monitoring of structural condition. This compares to 6.2% and 2.7% respectively in 2019-20.

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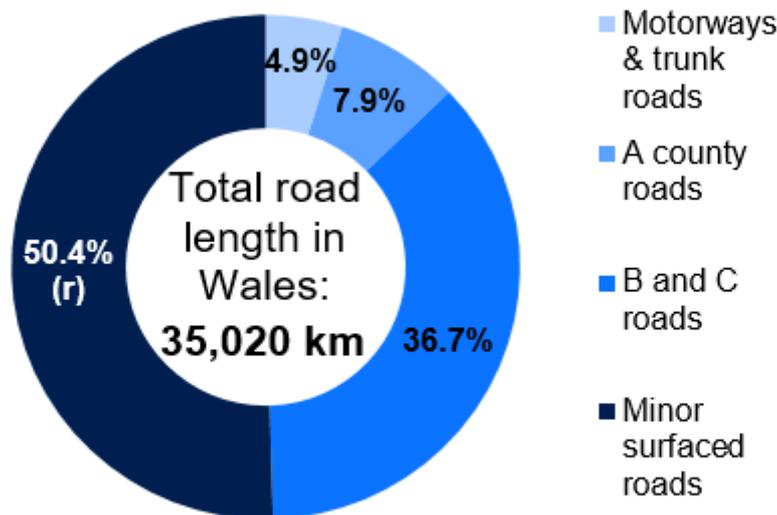
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Impact of COVID-19

This release has been scaled back from our usual publication as some surveys that feeds into the report were not conducted (e.g. local authority managed roads 'road conditions survey' by Data Cymru, SCANNER survey) as a result of the coronavirus pandemic.

Chart 1: Total road length in Wales by road classification, 2020-21



Source: Welsh Government

(r) Revised on 8 March 2022

There are six classifications for surfaced roads in Wales: motorways, A trunk roads, A county roads, B roads, C roads and minor surfaced roads. The Welsh Government is the highway authority for motorways and trunk roads, while A county, B, C and minor surfaced roads are the responsibility of local authorities.

Newport has the longest stretch of motorway (26 km), which accounts for 19.2% of the total motorway in Wales.

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Powys has the longest road network with 5,508 km of road, followed by Carmarthenshire with 3,637 km(r). The bulk of the networks in these two authorities are minor roads (categories B, C and minor surfaced).

(r) Revised on 8 March 2022

Welsh Government managed roads

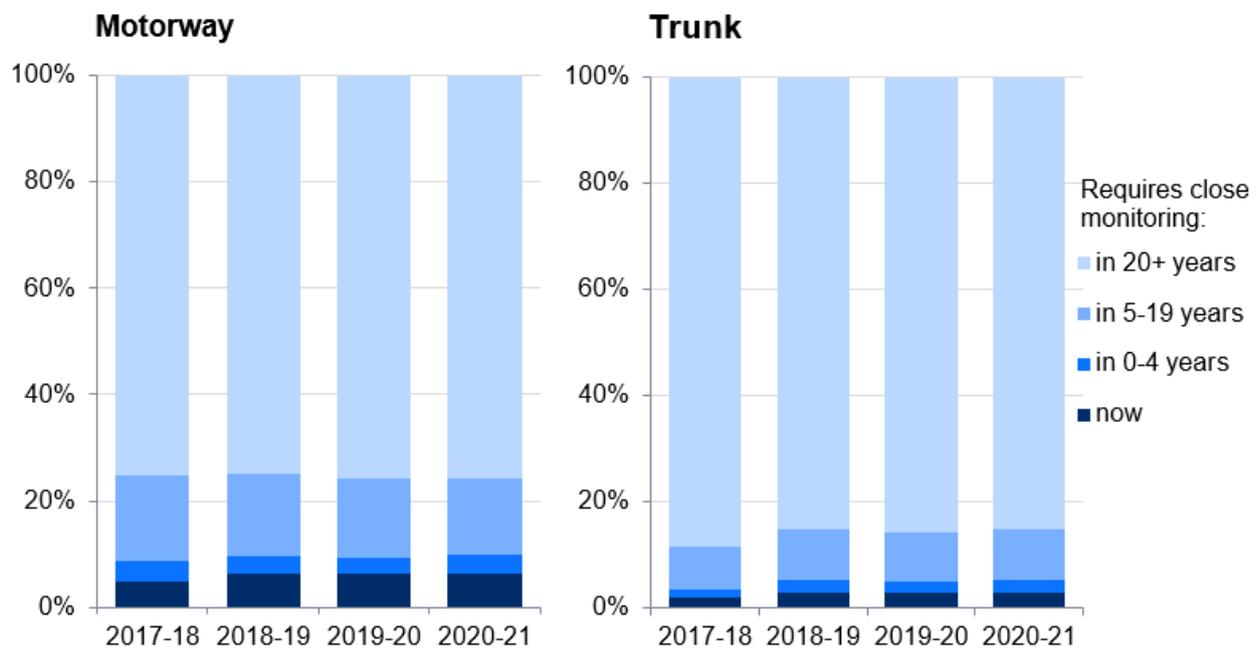
Structural condition of motorways and A trunk roads

As of end March 2021, results from Deflectograph surveys (see notes) suggest that the majority of the network was considered to be in good condition and it is estimated that 76% of the motorway and 85% of trunk roads will not be in need of close monitoring for at least 20 years.

This section deals with the condition of the road network, which is surveyed each year to ascertain its state of repair in terms of its structural condition. The survey showed that 6% of the motorway and 3% of the trunk road network is currently in need of close monitoring. The survey also showed that in the next 4 years, 3% of the motorway and 2.1% of trunk roads will be in need of close monitoring.

One factor that affects the condition of roads is the volume of traffic. In 2020, the traffic volume was 2.8 billion vehicle kilometres on the motorway, and 5.2 billion vehicle kilometres on trunk. Traffic per length of road is far higher on motorways when compared with trunk roads, county roads and minor roads (**road traffic**).

Chart 2: Proportion of motorway and trunk roads in Wales requiring close monitoring of structural condition, 2017-18 to 2020-21 (a)



Source: Welsh Government

(a) Based on results of Deflectograph surveys (see methodology section for more information). The structural condition of a section of road is in need of close monitoring when it has a negative residual life. Excludes concrete pavements and elevated carriageways.

Skidding resistance of motorways and A trunk roads

Skidding resistance relates to wet or damp road surfaces. It reflects the condition of the road surface by measuring resistance between vehicles' tyres and the road when accelerating, breaking or cornering. Testing takes place on wet surfaces as road surfaces exhibit least friction and skid resistance when wet. 100% of motorway surfaces and 95% of A Trunk road surfaces were surveyed in 2020-21.

The skidding resistance of the M4 is of a high standard, with no surveyed surface found below investigatory level in 2020-21. For the trunk road network,

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9.5% of the surveyed surface was found to be at or below investigatory level in 2020-21, up from 8.3% in the previous year.

Note: Based on results of SCRIM survey (see [methodology section](#) for more information). 'At or below investigatory level' does not mean the roads are unsafe; it indicates a need for further investigation to determine the need for maintenance of that section of road.

Quality information

Relevance

The statistics are used both within and outside the Welsh Government to monitor trends road lengths and conditions and in Standard Spending Assessment (SSA) calculations, which are used to distribute funding to local authorities.

Timeliness and punctuality

The statistics on road lengths and conditions relate to data obtained for the financial year 2020-21. Statistics on local authority road conditions relate to data for the financial year 2019-20, 2020-21.

Accessibility and clarity

This statistical bulletin is pre-announced and then published on the [Statistics for Wales website](#) and is accompanied by tables on our [StatsWales](#) website.

Comparability and Coherence

Motorway lengths

There were no real changes to motorway lengths in 2018-19 but the estimate changed slightly because of improved methodology. The majority of local authorities have only had minor changes to the motorway lengths (plus or minus a maximum of 0.2 km) resulting in a combined increase of 0.3 km overall.

The two exceptions are the increases in Monmouthshire and Newport (0.8 km and 0.7 km respectively). These are due to the inclusion of sections of road previously interpreted as slip road; where the M48 joins the M4 in Monmouthshire and where the A48(M) joins the M4 in Newport. These joining lengths are regarded as motorway not slip road because vehicles do not exit one road to join the other, they simply merge together.

Local authority road conditions

In previous publications, the road condition for each local authority has been reported as a single figure relating to the percentage of the whole local authority managed road network in poor condition. The data are now reported separated by road class to give a more accurate representation of the performance of each local authority. This is because C roads are generally in poorer condition than A or B roads, therefore local authorities containing a higher proportion of C roads had a much higher proportion of roads in poor condition.

Deflectograph surveys

In past years there have been two main methods of processing Deflectograph data. The Welsh Government made use of the Deflec method for all of surveys up to 2014-15. Since 2015-16, the Welsh Government has used the Pandef method of processing.

This results in a discontinuity in the data between 2014-15 and 2015-16. However, this change in software aligns the Welsh Government with the methods used by the rest of the UK, including Highways England and Transport Scotland.

SCRIM surveys

As a result of this variation in the skidding properties, until 2005, SCRIM surveys of the trunk road network were carried out on one third of the network each year, with each length surveyed three times in the year (at the start, middle and end of the SCRIM survey season).

However, there was a change in approach to the surveying of trunk roads from 2005, such that skidding resistance measurements are now undertaken each year under a single annual survey regime. The surveys are scheduled such that, over a three year period, the network is surveyed early, middle and late in the test season in successive years, i.e. a length that was surveyed early in the first year will be surveyed in the middle of the season in the second year and then late in the season in the third year.

Highways England (formerly the Highways Agency) has implemented an annual correlation trial for SCRIM survey vehicles, which are currently carried out by TRL. All SCRIM vehicles undertaking surveys on trunk roads are required to pass the trial in order to undertake surveys on the trunk road network. Other SCRIM survey operators are also able to attend the trials, although it is not compulsory. However, local authorities commissioning SCRIM surveys typically expect that the SCRIM vehicles used on their network will have passed the trials, and therefore in practice it has been found that all SCRIM vehicles operating in the UK attend the trials. In the trials the SCRIM vehicles are required to undertake surveys on a number of sites having different levels of skid resistance and the data is compared to identify outliers. The trials therefore aim to ensure consistency across the fleet of vehicles operating in the UK.

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.

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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 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 [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 be used by public services boards in relation to their local well-being assessments and local well-being plans.

Next update

August 2022 (provisional).

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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