

Speed Limits on Great Britain's Rural Roads

Analysis of data on rural single-carriageway roads in 2026

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1 Executive summary

This report examines how Great Britain's Highway Authorities set speed limits on their rural single carriageway roads. Using the Insight Warehouse SpeedMap database of all GB roads, it compares the length of rural single carriageway road left at the National Speed Limit (NSL) with the length signed at 40 mph or 50 mph, for A roads, B roads and unclassified roads in each of the 207 Highway Authorities in Great Britain.

National speed limits for non-built-up areas are shown by the Department for Transport on their website[1]. Highway Authorities can apply different limits to roads they think should be lower than the NSL by putting in place a Traffic Regulation Order (TRO). We wanted to examine how common these lower limits were.

Limits change according to the class of vehicle but for the vast majority of road users this equates to 60mph. Great Britain's rural road network is very complex and analysing it is quite difficult. We have put in a place a repeatable methodology that attempts to identify what's happening across Great Britain.

The national picture differs significantly by road class. Of the rural single carriageway network signed at 40, 50 or 60 mph, **72.3% of A road length is at the National Speed Limit**, rising to 80.7% of B road length and 95.0% of unclassified road length. Almost all of the changes from NSL are therefore concentrated on the classified network, and most of it on A roads.

This makes sense in several ways, but not in others. A lower limit requires extensive signing, which would be undesirable on many unclassified roads. However, those unclassified roads are often narrower and have fewer safety features than the classified roads so they should, in theory, have a lower limit. This is the opposite of what we found.

> Across the 108 authorities with a substantial rural A road network, the share at the National Speed Limit ranges from 10.5% to 99.0%, a significant difference in approach between authorities operating under the same guidance. Surrey are the authority that have most frequently reduced speed limits on their A roads, only 10.5% remain at the NSL. Dumfries and Galloway are at the opposite end with only 1% of roads being subject to a lower limit.

The factors that explain the variation will be down to historic local policy setting rather than national policy. We did find a relationship between how rural the authority is and the percentage of roads that are subject to lower limits. Using our own measure of the share of an authority's entire road network that is rural we saw that, generally, the more rural the

[1] https://www.gov.uk/speed-limits

authority, the more of its rural network stays at NSL (correlation of 0.52 on A roads, and 0.51 among English authorities alone).

That correlation still leaves roughly half of the variation between authorities unexplained by geography. Surrey (52.7% rural, 10.5% of rural A road at NSL) and Derbyshire (74.2% rural, 16.8%) are far below what comparable authorities show, while Northumberland and the rural Scottish authorities are way above this for NSL percentages. The rest of the answer lies in those local policy decisions, road safety strategies and engineering judgement. In the recent Road Safety Strategy[2] the DfT has committed to reviewing the current guidance for local authorities on setting local speed limits[3] which are largely based on work published 13 years ago. We believe that this report would be beneficial to this review.

2 Introduction

The national speed limit on a single carriageway road outside a built-up area is 60 mph for cars and motorcycles. Highway Authorities may set a lower limit where they judge it appropriate, and the extent to which they do so on rural roads varies widely. This report quantifies that variation across Great Britain and offers a consistent basis for comparing one authority with another.

2.1 Background

Rural single carriageway roads carry a disproportionate share of fatal and serious injury collisions, and speed limit setting on them is one of the few cost-effective solutions available to a Highway Authority that applies across a whole network rather than a single site. Despite this, there is no published national picture of how much of each authority's rural network is left at the National Speed Limit. This analysis sets out to provide just that, using a single consistent data source across all three GB nations.

The analysis does not assess safety records and is designed to answer three questions:

- How much rural single carriageway road length in each Highway Authority is set at the National Speed Limit, and how much at 40 mph or 50 mph?
- How much does this vary between authorities, and between A roads, B roads and unclassified roads?
- How much of that variation is explained by how rural an authority is?

[2] https://www.gov.uk/government/publications/road-safety-strategy
[3] https://www.gov.uk/government/publications/setting-local-speed-limits/setting-local-speed-limits

2.2 Data sources

Speed limits are taken from the Insight Warehouse SpeedMap database of all GB roads by speed limit, as at August 2026. This database is provided to customers of Insight Warehouse for a variety of use-cases including asset tracking, navigation systems, and for use by road authorities and police forces. Details on how people can access our data are included on the www.speedmap.co.uk website.

Area names and the rural or urban status of each road are derived from small area statistics, including populations, published by the Office for National Statistics for England and Wales and by the Scottish Government (2024). Authority identifiers use the ONS 2024 upper-tier local authority codes (UTLA24CD) and are then translated to a user-friendly name. Recent changes in authority boundaries may not be fully-captured in this analysis. We will look to update this research in the next year to include the proposed new authority boundaries according to published Local Government Reorganisation plans in England.

The database records a speed limit for every road, including some roads that are not public rights of way. Total road lengths reported here may therefore differ from official road length statistics, and the figures in this report are best read as shares of the network. Excluding private drives and access roads removes the largest single source of that difference. We have chosen to report on road lengths in kilometres as this is the international standard for recording and analysis.

2.3 Method

2.3.1 Defining the rural single carriageway network

The analysis is restricted to roads recorded as rural and as single carriageway. Motorway-class roads, dual carriageways, roundabouts, slip roads, laybys, tracks and all other forms of way are excluded, as is the entire urban network, based on our definition. Roads are classed as rural where the "small area" they fall in has a population below a threshold of 10,000. This means that towns and cities, and the roads that pass through them are definitely excluded, but some larger villages will be classed as being in a rural area.

Within the rural single carriageway network, the analysis covers only lengths signed at 40, 50 or 60 mph. Limits set at 20 or 30mph are excluded. These are overwhelmingly village and settlement lengths that fall inside a rural classification, and including them would measure the presence of villages rather than the treatment of the roads connecting them. Every percentage in this report is therefore a share of the 40/50/60 mph rural single carriageway network, and should be quoted that way. To put it more simply, we were trying to understand what speed limits are for roads that connect communities, not pass through them.

2.3.2 Measuring how rural an authority is

Comparing a shire county with an inner London borough is not helpful, so our analysis needed to take account of how rural each authority is. We calculated this as the share of the authority's **entire** road network that is rural (bringing back in those motorways, every form of way and every speed limit; basically removing all of the analysis filters applied). It therefore describes the authority as a whole rather than the subset of network under examination, and it is available on the same basis for all 207 GB authorities once we combined the different data sources.

Great Britain's roads, according to this classification, is 63.9% rural by road length. This does not take into account traffic however, which is something we could review in the future using data partners. The distribution across authorities is heavily weighted towards the urban end. There are 52 authorities under 10% rural and 22 are over 90% rural, with the fewest authorities occurring between 50% and 60%. For reporting we group authorities into five bands. These are our own descriptive groupings and not an official classification.

Rurality band	% of road length rural	Authorities
Predominantly urban	0–20%	76
Urban with rural fringe	20–50%	44
Mixed urban and rural	50–75%	38
Predominantly rural	75–95%	37
Very rural	95–100%	12

Table 1: Rurality bands

Because the measure is based on road length rather than population, it treats several authorities usually thought of as urban as holding a substantial rural network. Leeds for example is 28.6% rural by road length, which amounts to 986 km of rural road; Windsor and Maidenhead is 48.3% rural, Thurrock 42.0% and Bracknell Forest 30.2%. Please bear in mind our earlier statement on official road lengths.

2.3.3 Why we did not use the ONS Rural-Urban Classification

We considered using the ONS Rural-Urban Classification (both the six-fold and three-fold versions) as the measure of rurality, and adopted the ONS 2024 authority codes but not its rurality classification. The Rural-Urban Classification itself, however, cannot be applied consistently to Highway Authorities across Great Britain for three reasons:

1. It is published for England only, so all 32 Scottish councils and all 22 Welsh authorities have no value at all.
2. It is published at lower-tier district level, so the 20 English county Highway Authorities that hold the largest rural A road networks carry between two and five conflicting district classes. Surrey, for example, spans Largely Rural, Urban with Significant Rural, Urban with City and Town and Urban with Major Conurbation across its eleven districts.
3. It is published on the pre-reorganisation district geography, leaving a further nine English authorities (including Buckinghamshire, Dorset, North Yorkshire, Somerset and Cumberland) with no value.

The two measures also answer different questions. The ONS classification describes where people live and our measure describes how much of an authority's road network runs through rural areas. Where both exist they agree at the rural end. No authority classed Mainly Rural or Largely Rural is below 60% rural on our measure. However, they differ a lot at the urban end where four authorities classed Urban with Major Conurbation are between 37.7% and 48.9% rural by road length: Calderdale (48.9%), Thurrock (42.0%), Kirklees (40.6%) and Solihull (37.7%). This means that for an analysis of rural road speed limits, the length-based measure is the appropriate denominator because it counts the network being examined. A better classification of individual roads has also been promised by the DfT in the Road Safety Strategy.

2.3.4 Minimum length rule

An authority is included in that analysis for each road class only when there is at least 25 km of qualifying rural single carriageway. This means that percentages are covering reasonably substantial lengths. This gives us 108 authorities for A roads, 89 for B roads and 133 for unclassified roads. In the accompanying dashboard the threshold can be varied between 10 km and 100 km should viewers want to adjust the thresholds themselves.

3 Findings

3.1 The national picture

Across Great Britain, 72.3% of rural single carriageway A road length in the analysed authorities is set at the National Speed Limit, with 14.1% at 50 mph and 13.6% at 40 mph. B roads are less often changed (80.7% at NSL) and unclassified roads very rarely subject to a TRO (95.0%).

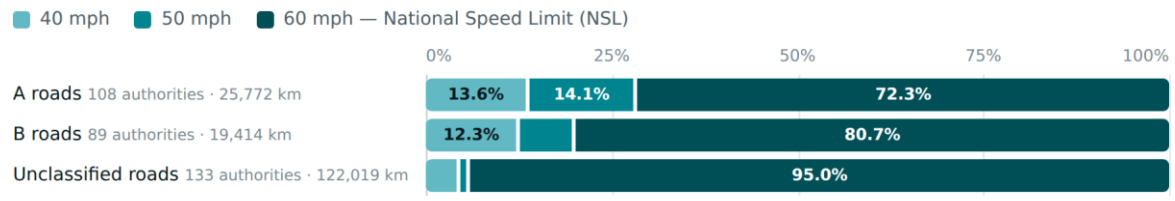


Figure 1: Rural single carriageway speed limit setting by road class, Great Britain.

Road class	Authorities	Length (km)	% at 40	% at 50	% at NSL
A roads	108	25,775	13.6%	14.1%	72.3%
B roads	89	19,415	12.3%	7.0%	80.7%
Unclassified	133	122,019	4.1%	0.8%	95.0%

Table 2: National summary. Authorities with at least 25 km of qualifying rural single carriageway in the class.

The unclassified network is rarely changed with 90 of the 133 authorities analysed have more than 90% of it at the National Speed Limit. There are some exceptions with Bromley (6.1%), Solihull (18.0%), Thurrock (25.2%) and Sefton (36.5%) showing meaningful changes. These rare exceptions are not considered significant, and the report largely focusses on a discussion about the classified network.

3.2 Variation between Highway Authorities

On rural A roads the spread between authorities is very wide. The share at the National Speed Limit goes from 10.5% (Surrey) to 99.0% (Dumfries and Galloway), and 28 of the 108 authorities analysed have less than half of their rural A road length at NSL. The median authority sits at 67.7% which is below the length-weighted national figure of 72.3%. This indicates that the larger authorities tend to leave more of their network at NSL than the typical authority does.

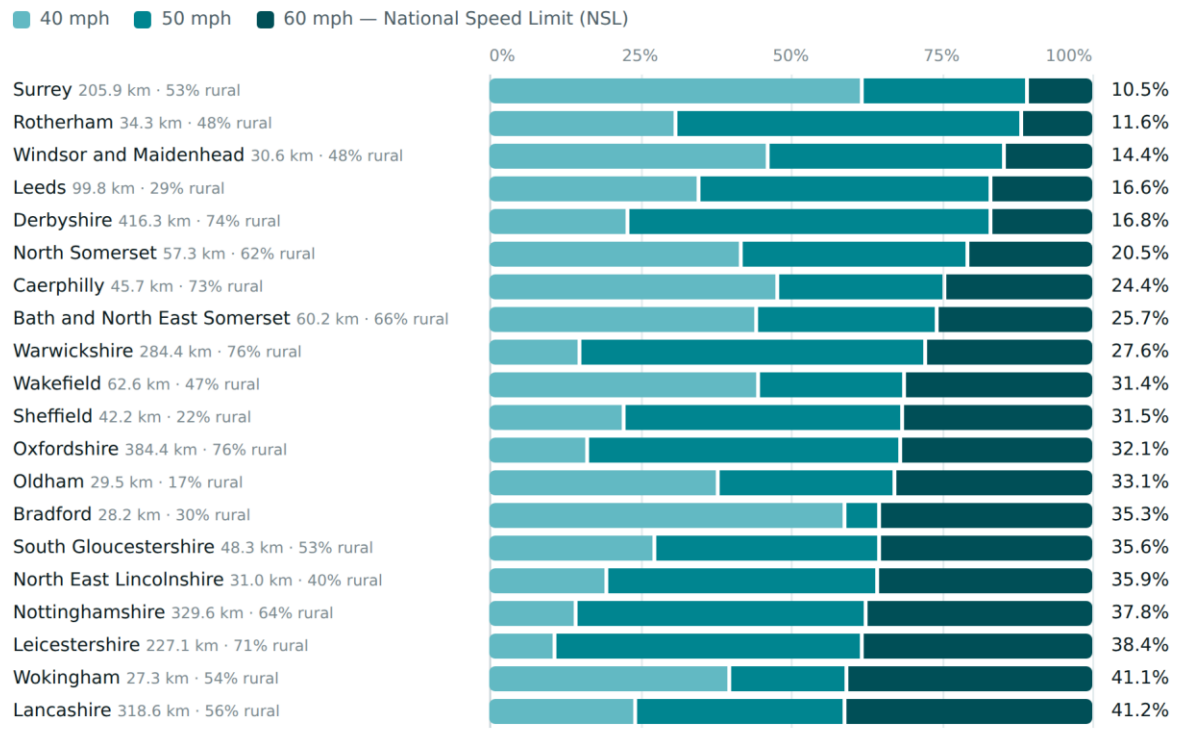


Figure 2: Top 20 authorities with the smallest share of rural single carriageway A road at the National Speed Limit. Supporting text provides the qualifying length and how rural the authority is overall.

We have pulled out some differences in the specific limits set in authorities where there is a significant change from the NSL. Surrey and Windsor and Maidenhead have larger lengths of 40 mph road (62.1% and 46.6% of their rural A road length respectively), whereas Derbyshire and Warwickshire have more 50 mph limits (60.4% and 57.6%). This could be indicating the use of 40mph limits on roads that are slightly more urban in nature and again shows the need for a better classification of roads to understand their rurality.

The authorities with the highest shares are almost entirely Scottish: Dumfries and Galloway (99.0%), Moray (96.4%), East Ayrshire (96.2%), Scottish Borders (94.9%) and Aberdeenshire (94.8%), with Northumberland (92.9%) the highest-placed English authority. We also found authorities that reduce speeds on A roads tend to do the same on their B roads too. The correlation between the two is 0.82 across the 88 authorities that meet the minimum length rule in all three classes.

3.3 Differences between the three nations

Country is the strongest single split in the data. On rural single carriageway A roads, 91.7% of Scottish length is at the National Speed Limit, against 73.2% in Wales and 62.4% in England. The same pattern applies on B roads (95.4%, 90.0%, 71.5%). Unclassified roads are broadly the same.

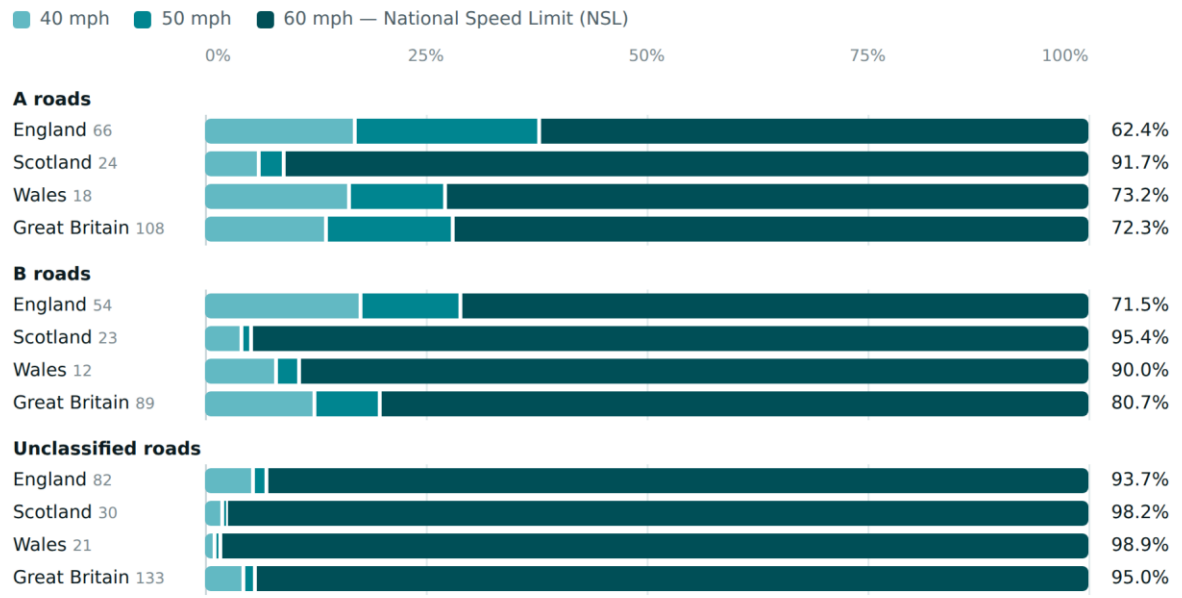


Figure 3: Speed limit setting by country and road class. Authority counts are shown next to the country.

Road class	England	Scotland	Wales	Great Britain
A roads	62.4%	91.7%	73.2%	72.3%
B roads	71.5%	95.4%	90.0%	80.7%
Unclassified	93.7%	98.2%	98.9%	95.0%

Table 4: Share of rural single carriageway length at the National Speed Limit, by country.

Part of this gap can be explained by the geography and land use. Scottish authorities are on average far more rural than English ones for example. It is not the whole explanation but the relationship between rurality and setting also works within England too, however, the English authorities that are as rural as the Scottish average still reduce speeds on more of their network than their Scottish counterparts do.

3.4 How rural is each Highway Authority?

The distribution of authorities by the share of their road network that is rural is heavily weighted towards the urban end, with the narrowest part of the distribution between 50% and 60%. When carrying out comparisons this means that a threshold set in that range separates the more urban authorities from those that are genuinely rural.

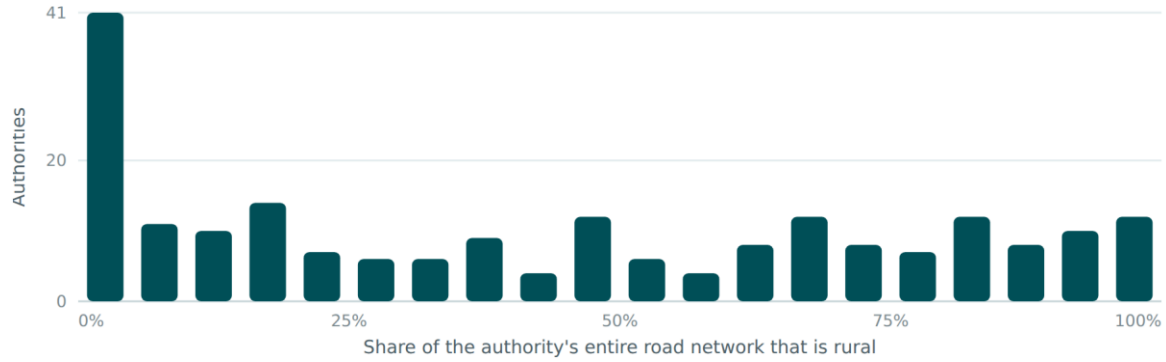


Figure 4: All 207 Highway Authorities by the share of their entire road network that is rural

3.5 Rurality and speed limit setting

Grouping authorities by rurality bands produces a consistent pattern on A roads and unclassified roads, with B roads the one exception where the mid-rurality band dips. The more rural the authority, the more of its rural single carriageway network is typically left at the National Speed Limit. On A roads the share rises from 52.0% among authorities that are 20–50% rural to 88.3% among those that are more than 95% rural.

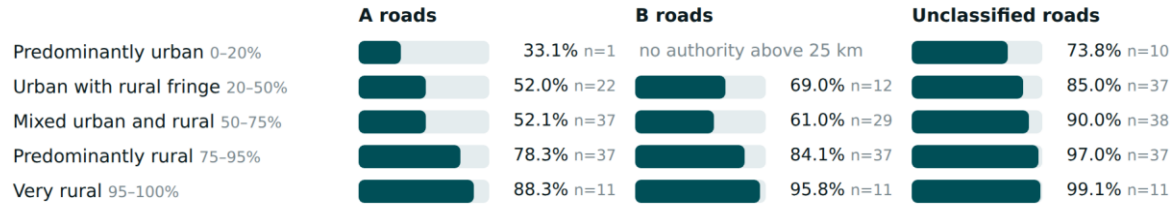


Figure 5: Share of rural single carriageway length at the National Speed Limit by rurality band. The figure n is the number of authorities meeting the 25 km minimum road length in that road class.

Measured as a correlation, an authorities rural share explains a moderate amount of the variation in its speed limit setting. This works out at 0.52 on A roads (Spearman 0.55), 0.52 on B roads and 0.50 on unclassified roads. Restricting the calculation to English authorities alone gives 0.51 on A roads which confirms that the relationship is not simply an artefact of Scottish authorities being both very rural and very likely to retain the National Speed Limit.

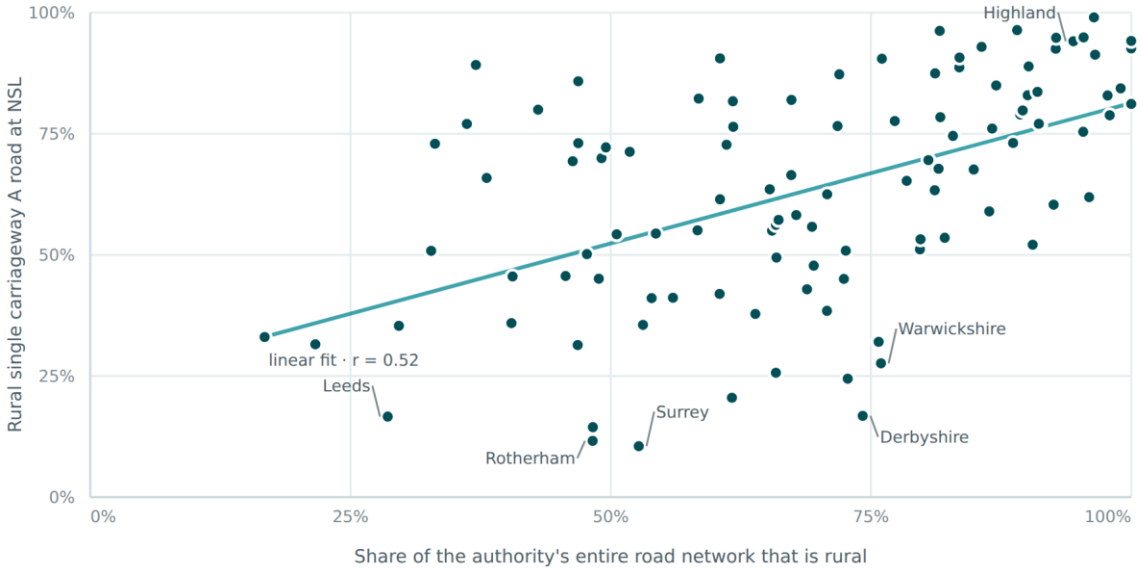


Figure 6: Rurality against share of rural single carriageway A road at the National Speed Limit. A linear fit has been included. Labels have been applied to some authorities mentioned in the analysis.

The authorities furthest below the fitted line are the most interesting for comparison, because their setting isn't explained by their geographic characteristics. Surrey, Derbyshire, Warwickshire and Rotherham all sign substantially below what their rurality would predict. Two of them, Surrey and Derbyshire, achieve this on a large network (207 km and 416 km respectively), so the effect is not confined to a small number of routes.

4 Discussion

We think there are three main conclusions from the analysis:

First, the unclassified rural network is signed almost uniformly at the National Speed Limit across Great Britain, so it offers very little contrast between authorities and little scope for comparison. This was largely expected based on our in-depth knowledge and experience in creating our national map of speed limits.

Second, the classified rural network and A roads in particular, is where authority policy is most visible. The differences are stark which is surprising given that authorities are operating under the same national guidance.

Third, is that the differences are only partly explained by how rural an authority is. Rurality and country together account for around half of the variation on A roads, which leaves a substantial residual attributable to local policy and practice. If an authority wants to benchmark itself against its peers, the useful comparison is not the national average but the average for authorities of a similar rurality. We have developed our dashboard to allow viewers to explore these nuances in some detail. We also allow users to download the

analysed data used in this report. Authorities wishing to look at specific roads can contact us for more information on access arrangements.

The analysis does not attempt to establish whether a lower limit is appropriate on any particular road. Speed limit setting is a complex judgement that depends on collision history, road geometry, the mix of road users, traffic levels and the practicality of enforcement. We also haven't reviewed actual traffic speeds on these roads. The DfT does publish speed compliance statistics[4] which indicates that, on the roads they sampled, only 11 percent of traffic is exceeding the limit. There isn't enough data to review other speed limits reliably. Understanding the level of compliance on roads set below the NSL would be a worthwhile study.

What the analysis does show is how differently decisions are being made across the county and the potential for future harmonisation and consistency.

5 Limitations

- Road lengths are derived from a database that records a speed limit for every road it holds, including some that are not public rights of way, so total lengths may differ from published official statistics. Shares of network are robust to this, and excluding access roads and private drives has removed the largest single source of that difference.
- Rural or urban status is determined by a 10,000 population threshold applied to small areas. Roads on the edge of settlements will be classified one way or the other by that threshold, and a different threshold would move some length between the two categories.
- Lengths signed at 30 mph and below are excluded. In authorities with many villages this removes a substantial length of roads in rural areas and we have made the assumption that all of these relate to the presence of dwelling clusters, and the reported percentages describe only the 40/50/60 mph network.
- The analysis is a snapshot as at August 2026 and does not capture recent or pending speed limit orders, nor any seasonal or time-of-day variable limits.
- Correlation is not causation. The relationship between rurality and speed limit setting describes an association across authorities and says nothing about any individual road.

[4] https://www.gov.uk/government/collections/speeds-statistics

6 The interactive dashboard

The findings in this report can be explored authority by authority on the accompanying dashboard. It allows the road class, country, minimum qualifying length and authority rurality threshold to be varied, and every chart, headline figure and table updates against the same selection. The full data table for any selection, including each authority's ONS code, can be downloaded as a CSV file.

The dashboard reports the same measures as this report and is generated from the same analysis, so figures quoted from either will agree.

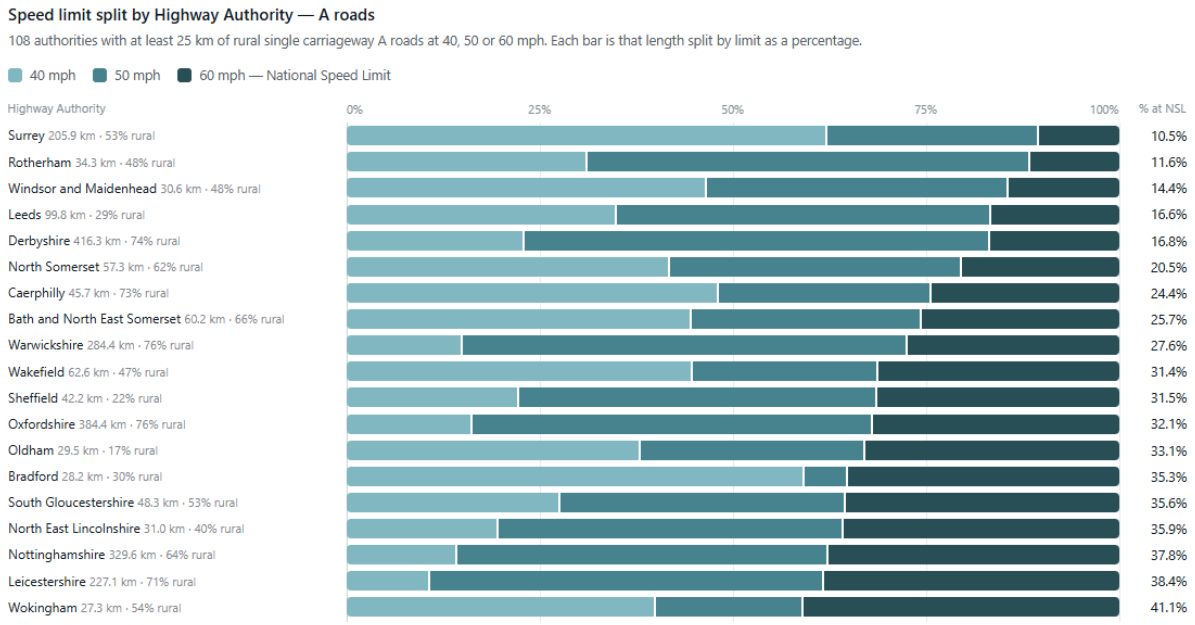


Figure 7: Screenshot from the online dashboard

Cover Image: View of A258 from Dover to Deal England. View of A258 from Dover to Deal with speed limit sign near Walmer Town,Kent,UK,July 2016 ID 216345763 © Anna Yordanova | Dreamstime.com

AI Statement: AI tools have been used in the creation of this report. This involved creating data analysis pipelines as well as the online dashboard. The report template was designed using AI tools but the analysis and text has been created by the author. No re-drafting other than basic spelling and grammar checks were undertaken by any AI system. The report and outputs we then manually subject to quality assurance by another human team member.

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