Department for Environment Food & Rural Affairs

Government Statistical Service

Statistical Digest of Rural England:

5 – Connectivity and Accessibility

April 2026

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Any enquiries regarding this publication should be sent to us at

rural.statistics@defra.gov.uk

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Cover photos

		Ward 2021	Rural-Urban Classification
TL	Helmsley marketplace	Helmsley and Sinnington	Larger rural: Further from a major town or city
TC	Horton-in-Ribblesdale train station with Penyghent behind	Settle and Penyghent	Smaller rural: Further from a major town or city
TR	St Giles Church, Skelton	Rural West York	Larger rural: Nearer to a major town or city
CL	Fishing Boat, Marske-by-the-Sea with Hunt cliff in the distance	St Germain's	Larger rural: Nearer to a major town or city
CR	Thornton Force Waterfall, Ingleton Waterfalls Trail	Bentham and Ingleton	Smaller rural: Further from a major town or city
BL	Farmer working the fields in Knapton	Rural West York	Smaller rural: Nearer to a major town or city
BC	Remote pub at Ribblehead viaduct	Bentham and Ingleton	Smaller rural: Further from a major town or city
BR	Glamping pod in the North York Moors	Pickering	Larger rural: Further from a major town or city

All cover photos provided by Martin Fowell.

Table of Contents

About the Statistical Digest of Rural England

The Statistical Digest of Rural England (hereafter the Digest) is a collection of statistics on a range of social and economic topics and provides broad comparisons between rural and urban areas by settlement type.

The Digest consists of the following thematic reports:

1. Population
2. Housing
3. Health and Wellbeing
4. Communities and Households
5. Connectivity and Accessibility
6. Education, Qualifications and Training
7. Rural Economic Bulletin
8. Energy

Appendix 1 shows the sub-themes within each of the 8 Digest reports. Thematic reports will be updated individually and not every report with be updated every month. The most recent updates for this theme are shown in Table 1.

In April 2026, the following sections were updated to reflect new data: 'average travel patterns' (formerly known as 'travel behaviours'); 'access to vehicles and charging infrastructure' (formerly known as 'access to personal transport'); 'transport connectivity' (formerly known as 'access to services'); and 'home working'. The 'transport connectivity' section in particular has been redesigned to reflect findings from the Department for Transport's Connectivity Tool.

Table 1: Update monitor for Connectivity and Accessibility subsections
where "✓" indicates the topic has been updated, "✕" indicates the topic has not been updated, and "New" indicates a new topic with analysis not previously included within the Digest.

Section	Aug 2023	Jan 2025	Apr 2025	Oct 2025	Apr 2026
Broadband	✓	✕	✕	New	✕
Mobile coverage				New	✕
Average travel patterns	New	✕	✕	✕	✓
Access to vehicles and charging infrastructure	New	✕	✓	✕	✓
Transport connectivity	✕	✕	✕	✕	✓
Home working	✓	✓	✕	✕	✓

Official Statistics

These statistics have been produced to the high professional standards set out in the Code of Practice for Official Statistics, which sets out eight principles including meeting user needs, impartiality and objectivity, integrity, sound methods and assured quality, frankness and accessibility.

More information on the Official Statistics Code of Practice can be found at: Code of Practice for Statistics.

This publication has been compiled by the Rural Statistics Team within the Adaptation and Rural Communities Team in Defra:

Stephen Hall
Sarah Harriss
Bethany Ricks
Martin Fowell
rural.statistics@defra.gov.uk

The 2021 Rural-Urban Classification was released on 6 March 2025. Details of the 2021 Rural Urban Classification can be found at: https://www.gov.uk/government/collections/rural-urban-classification. It will take some time for the Digest to be updated throughout using the new classification; however, all sections within the Connectivity and Accessibility report use the 2021 rural-urban classification. Table 2 identifies the geography used for each section.

Table 2: Geographies used within subsections of the Connectivity and Accessibility report
For the specified geography, the 'boundary year' has been presented in brackets. Shorthand has been used in this table: 'OA' represents Output Areas; 'LSOA' represents Lower-layer Super Output Areas; 'WPCon' represents Westminster Parliamentary Constituencies; 'LA' represents Local Authorities.

Section	Geography
Broadband	OA (2021); WPCon (2025)
Mobile coverage	WPCon (2025)
Average travel patterns	LSOA (2021)
Access to vehicles and charging infrastructure	LSOA (2021); LA (2025)
Transport connectivity	OA (2021)
Home working	OA (2021)

Connectivity and Accessibility

The part of the Statistical Digest of Rural England focuses on Connectivity and Accessibility, and covers the following:

- broadband (Section A).
- mobile coverage (Section B).
- rural accessibility in terms of average travel patterns (Section C).
- accessibility to vehicles and electric vehicle charging infrastructure (Section D).
- transport connectivity (e.g. access to education, employment, healthcare) (Section E).
- home working (Section F).

A. Broadband

Availability of a decent, superfast, or gigabit-capable broadband service in the most rural areas is behind that of the rest of England.

Broadband – key findings

Almost all premises can get decent broadband speeds in rural areas

- In January 2025, the proportion of premises unable to access decent (at least 10Mbit/s download speed) broadband was 3% in rural areas and less than 1% in urban areas.
- The proportion of premises unable to access decent broadband was greatest in smaller rural settlements (5%).

Fewer premises can get gigabit-capable broadband in rural areas

- In January 2025, the proportion of premises with access to gigabit-capable broadband was 62% in rural areas and 90% in urban areas.
- The proportion of premises with access to gigabit-capable broadband was lowest in the smaller rural settlements (51%).

Summary

This section presents analysis of rural broadband services using the official statistics rural-urban classification. The analysis may differ from what is reported by Ofcom in its Connected Nations reports, which uses a different ‘Locale’ classification.

In January 2025, rural premises were not far behind urban areas in terms of decent broadband availability; 97% of rural premises had access to a decent broadband service, compared to just under 100% of premises in urban areas. However, in the smaller rural settlements, around 5% of premises did not have access to a decent broadband service. Since at least January 2020, the gap in decent broadband availability between smaller rural settlements and the rest of England has been decreasing.

92% of rural premises had access to a superfast broadband service in January 2025. However, 87% of premises in smaller rural settlements had access to a superfast broadband service in January 2025, compared to around 98% elsewhere in England. In other words, around 13% of premises in smaller rural settlements could not access a superfast broadband service. Since at least January 2020, the gap in superfast broadband availability between smaller rural settlements and the rest of England has been decreasing.

In January 2025, 62% of rural premises had access to a gigabit-capable broadband service, compared to 90% of premises in urban areas. In smaller rural settlements, just half of all premises had access to gigabit-capable broadband. However, since January 2020, the gap in gigabit-capable broadband availability between smaller rural settlements and the rest of England has been decreasing.

Background information

Data used within this section comes from the Ofcom 'Connected Nations update: Spring 2025' publication which reports on fixed broadband and mobile networks. Ofcom use a 'Locale classification for defining rural and urban areas. This defines rural areas as settlements with populations of less than 2,000 and results in proportionally fewer premises having access to the higher download speeds than if using the official statistics classification which includes settlements with populations up to 10,000 as rural.

Using Ofcom's 'Locale' classification to define rural and urban, the proportions of premises able to access varying broadband speeds, as of January 2025, are given in Table A-1. The majority of premises in England (both commercial and residential) have access to decent or even superfast broadband, regardless of rurality. More than half of rural premises have access to gigabit-capable broadband, compared to around 90% of premises in urban areas. Similarly, more than half of all rural premises had access to full fibre broadband, compared to three quarters of premises in urban areas.

Table A-1: Proportion of premises able to achieve fixed broadband network coverage from at least one operator, by category and Ofcom Locale classification, January 2025
Shorthand has been used in this table; '[z]' indicates where the specified broadband category is not applicable to the column. In this case, 'full fibre' is not a speed category and therefore does not relate to a specific download speed threshold. Proportions have been rounded to the nearest 1%; '[high]' indicates where proportions round to 100% but are not actually 100%.

Broadband category	Download speed	Rural	Urban	England
Decent	at least 10 Mbit/s	96%	[high]	**99%**
Superfast	at least 30 Mbit/s	89%	99%	**97%**
Gigabit-capable	at least 1 Gbit/s	56%	90%	**85%**
Full fibre	[z]	55%	76%	**74%**

Within this publication, broadband speeds refer to the rate of download available within an area. Higher speeds result in shorter download times, meaning a user has a better experience with things like streaming television programmes or films. Upload speeds – which are typically much slower than download speeds – are not covered within this publication.

The following analysis presents data on the provision of broadband services that are made available across England. It should be noted that actual take-up of these services is lower than provision. Data are at Output Area-level as released by Ofcom within their Connected Nations report, and are for England only. Output Areas (OAs) are the smallest geography for which data are typically made available, with the latest version created for the 2021 Census. Each OA generally covers around 125 households; in urban areas, OAs are usually small clusters of streets, whilst in rural areas they may cover a wider geographic area to achieve a similar population size. OAs have been used so that the 2021 rural-urban classification (RUC21) can be applied. For this reason, estimates presented within this section may not match those presented within the Connected Nations report.

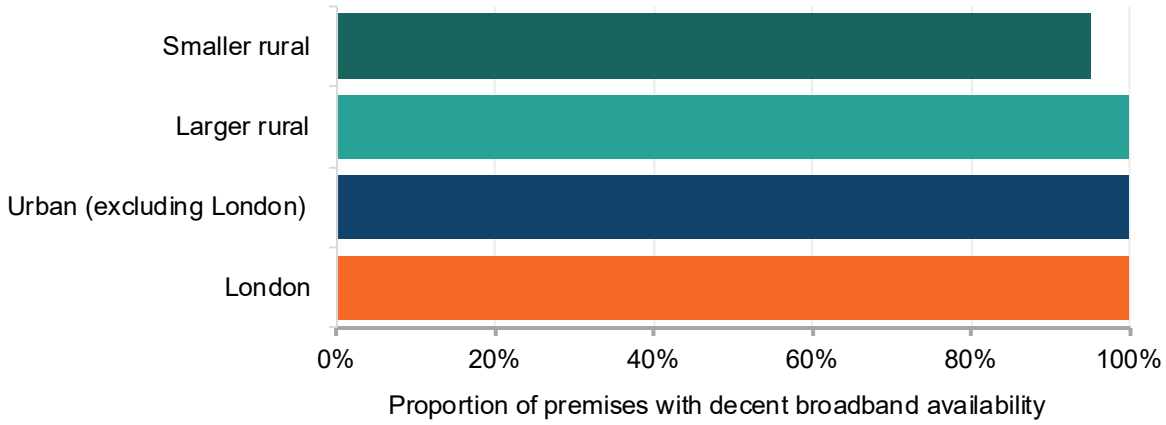
Decent broadband

Within the Connected Nations reports, 'decent broadband' is defined as a fixed broadband service that can provide download speeds of at least 10 Mbit/s; this can be delivered by ADSL, FTTC, HFC cable, or full fibre (Note A-3). Decent broadband provides sufficient speeds for making a high-definition video call. Over minimum decent broadband, downloading a one-hour HD TV episode (1 GB) would take almost 15 minutes (Connected Nations 2024). Data are taken from each interim spring update as at January of the reference year, with the latest being January 2025.

Latest estimates using the official statistics rural-urban classification

In January 2025, 97% of rural premises had access to a decent broadband service. The bar chart in Figure A-1 shows the proportion of premises with decent broadband availability, by 2021 rural-urban classification of output areas in England.

Figure A-1: Bar chart showing the proportion of all premises with decent broadband availability, by 2021 rural-urban classification of output areas in England, January 2025

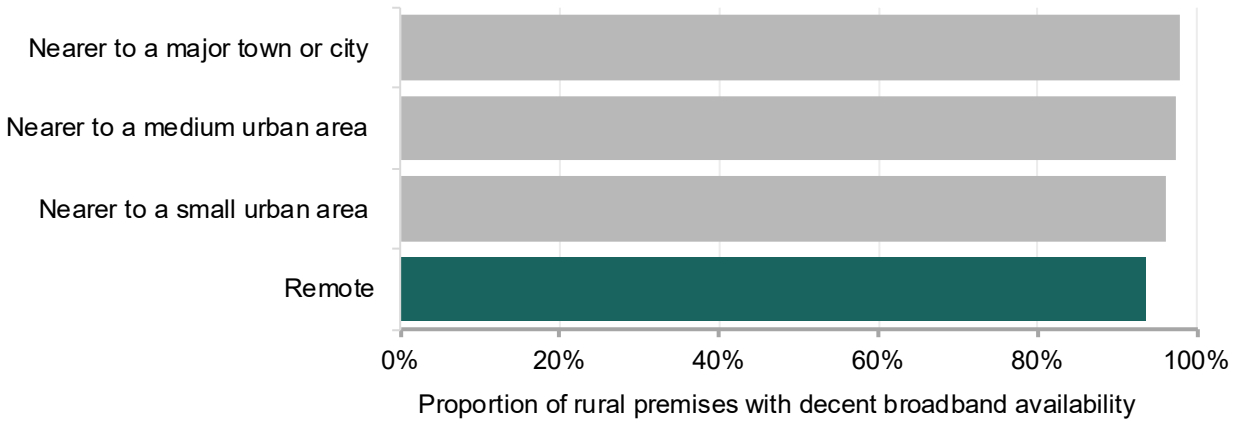


Almost all premises in England had access to a decent broadband service; however, proportions were lower in the smaller rural settlements. In January 2025, 95% of premises in smaller rural settlements had access to a decent broadband service. In other words, around 5% of premises in smaller rural settlements overall could not access a decent broadband service. Elsewhere in England (i.e., in larger rural settlements, or in urban areas), almost all premises (between 99.7% and 99.8%) had access to a decent broadband service.

In rural settlements specifically, how remote an area was impacted the proportion of premises with decent broadband availability. The bar chart in Figure A-2 shows the proportion of rural premises with decent broadband availability, by proximity to the nearest largest town or city. The more remote a rural settlement is, the smaller the proportion of premises with decent broadband availability. For the definitions of each proximity indicator, please see Note A-2.

In remote rural settlements, 94% of premises had access to a decent broadband service in January 2025. In rural settlements that were nearer to a small urban area, 96% of premises had decent broadband availability; this was 2 percentage points more than in remote rural settlements. In rural settlements that were nearer to a medium urban area, 97% of premises had decent broadband availability; this was 4 percentage points more than in remote rural settlements. In rural settlements that were nearer to a major town or city, 98% of premises had decent broadband availability – 4 percentage points higher than in remote rural settlements.

Figure A-2: Bar chart showing the proportion of all rural premises with decent broadband availability, by proximity to the largest town or city within a 30-minute drive, as defined within the 2021 rural-urban classification of output areas in England, January 2025



The map in Figure A-3 highlights the majority rural and intermediate rural parliamentary constituencies where the proportion of premises without access to a decent broadband service is more than 3%. Using smaller geographic areas such as Westminster Parliamentary Constituencies provides a clearer picture and makes it easier to spot local differences in broadband availability that may otherwise be hidden in larger administrative boundaries.

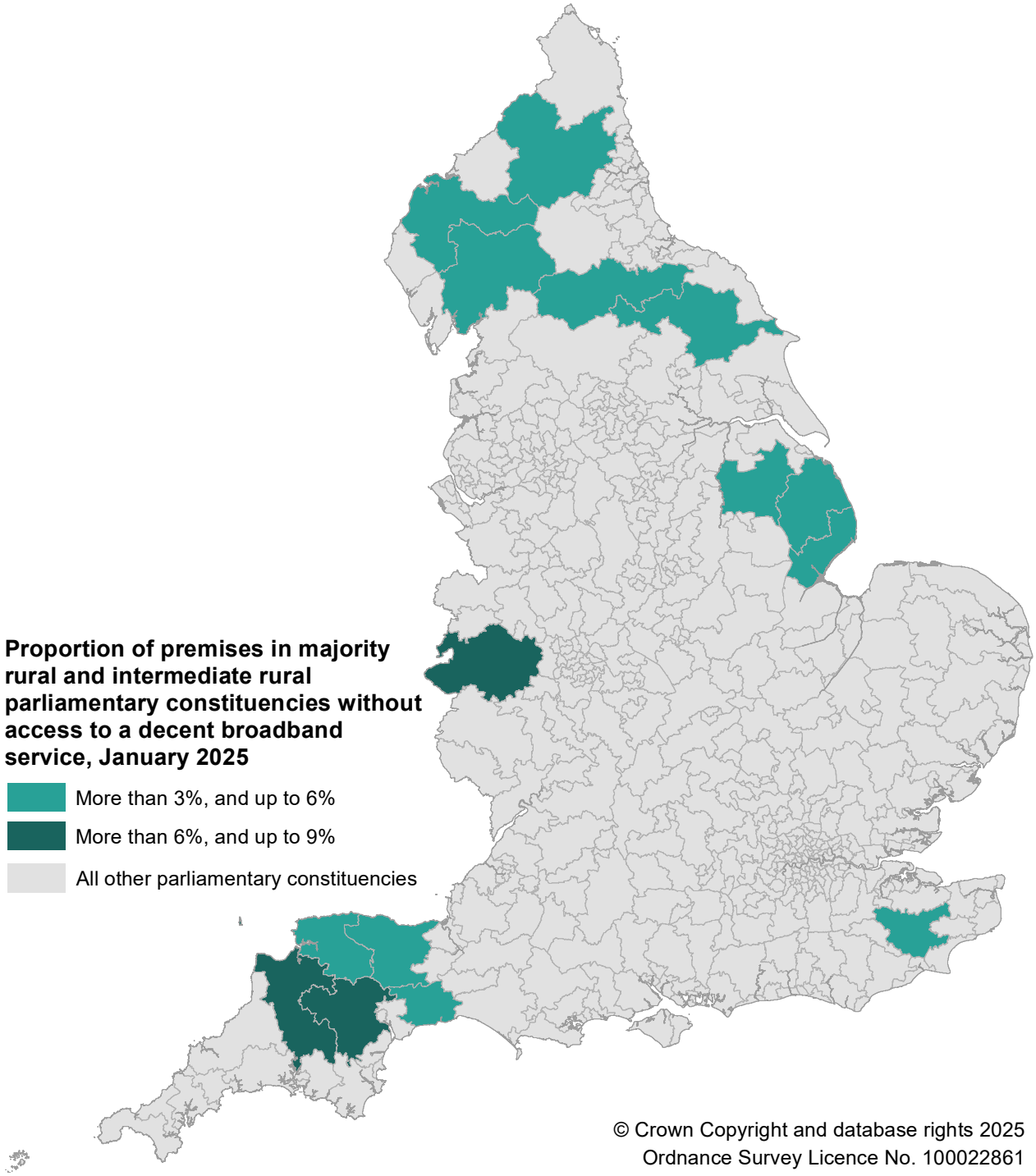
Proportions of premises without decent broadband for all constituencies can be found within the supplementary data tables.

At the time of data collection (January 2025), there were 119 majority rural or intermediate rural Westminster parliamentary constituencies in England:

- In 104 of these constituencies – equivalent to 87% – less than 3% of premises could not access a decent broadband service. In other words, in most majority rural and intermediate rural constituencies, more than 97% of premises could access a broadband service with download speeds of at least 10 Mbit/s.
- In 12 of these constituencies – equivalent to 10% – between 3% and 6% of premises could not access a decent broadband service. These are shown in the lightest shaded constituencies on the map, specifically around Northumberland, Cumberland, Westmorland and Furness, and North Yorkshire in the North of England. They are also near East Lindsey (East Midlands), Ashford (South East), North Devon (South West) and Somerset (South West).
- In 3 of these constituencies, more than 6% of premises could not access a decent broadband service; these are shown in the darkest shaded constituencies on the map. In both ‘Central Devon’ and ‘South Shropshire’, just under 8% of premises could not access a decent broadband service. ‘Torridge and Tavistock’ – a majority rural constituency next to ‘Central Devon’ - had the highest proportion of premises without access to a decent broadband service of all majority rural and intermediate rural constituencies, at just under 9%.

Figure A-3: Map showing the proportion of all premises in majority rural and intermediate rural Westminster parliamentary constituencies in England, as defined within the 2021 rural-urban classification, without access to a decent broadband service in January 2025

Intermediate urban and urban constituencies are presented in grey. Only majority rural and intermediate rural constituencies where more than 3% of premises had no decent broadband access are coloured on the map; the rest are also presented in grey to prevent distraction.



Comparison over time

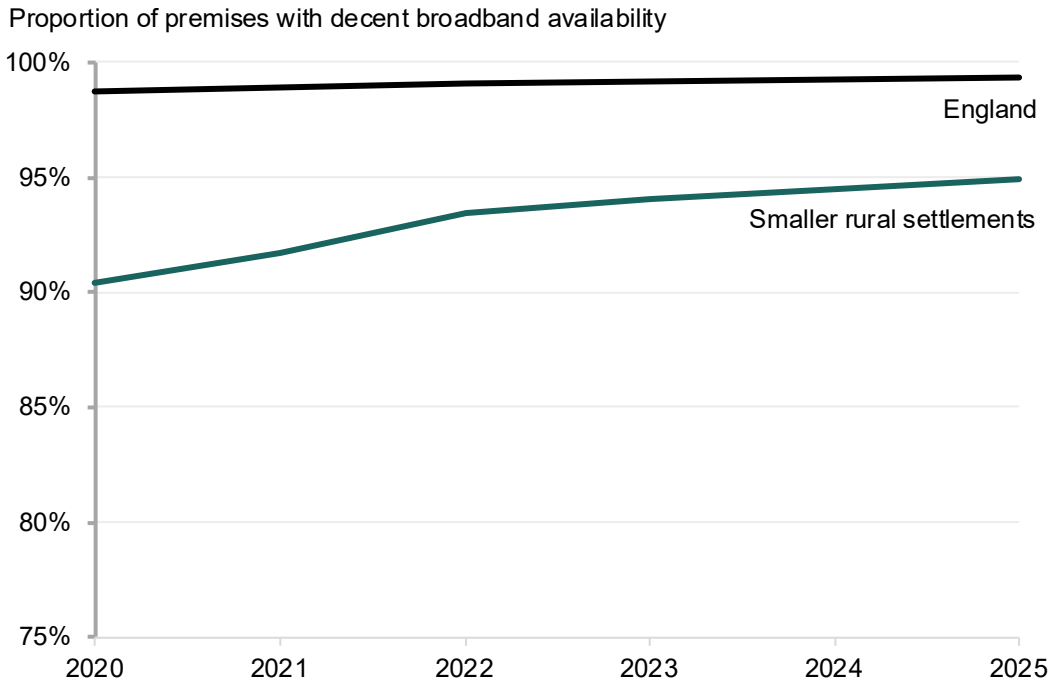
By comparing each of the spring interim Connected Nations reports, it is possible to measure the change in decent broadband availability over time. The line chart in Figure A-4 shows the change in the proportion of premises with decent broadband availability between January 2020 and January 2025. The chart specifically compares smaller rural settlements to the England average. Data for all settlement types can be found within the supplementary data tables.

Between 2020 and 2025, almost all premises in England - except for those in smaller rural settlements - had access to a decent broadband service. In smaller rural settlements, the proportion of premises with decent broadband availability increased between January 2020 and January 2025, but is still behind that of other areas in England.

In January 2020, 90% of premises in smaller rural settlements had access to a broadband service with decent download speeds. This proportion increased steadily to 93% of premises in 2022, followed by a smaller rate of increase to 2025. In January 2025, 95% of premises in smaller rural settlements had access to a decent broadband service.

The proportion of commercial and residential premises with decent broadband availability in smaller rural settlements has consistently been behind the England average. Between January 2020 and January 2025, the proportion of premises in England with decent broadband availability remained steady at 99%.

Figure A-4: Line chart showing the change in the proportion of all premises with decent broadband availability, for smaller rural settlements as defined within the 2021 rural-urban classification of output areas compared to the average for England, January 2020 to January 2025



Just 0.4% of premises in England (excluding those in smaller rural settlements) could not access a decent broadband service in January 2020; by January 2025, this proportion had decreased to just 0.2%. More specifically, the less rural the area, the higher the proportion of premises with decent broadband availability.

However, this was more apparent at the beginning of the series; in January 2020, 0.5% of premises in larger rural settlements could not access a decent broadband service, compared to 0.4% in urban areas outside of London, and 0.3% in London. By 2025, there was little difference between decent broadband availability in larger rural settlements or urban areas.

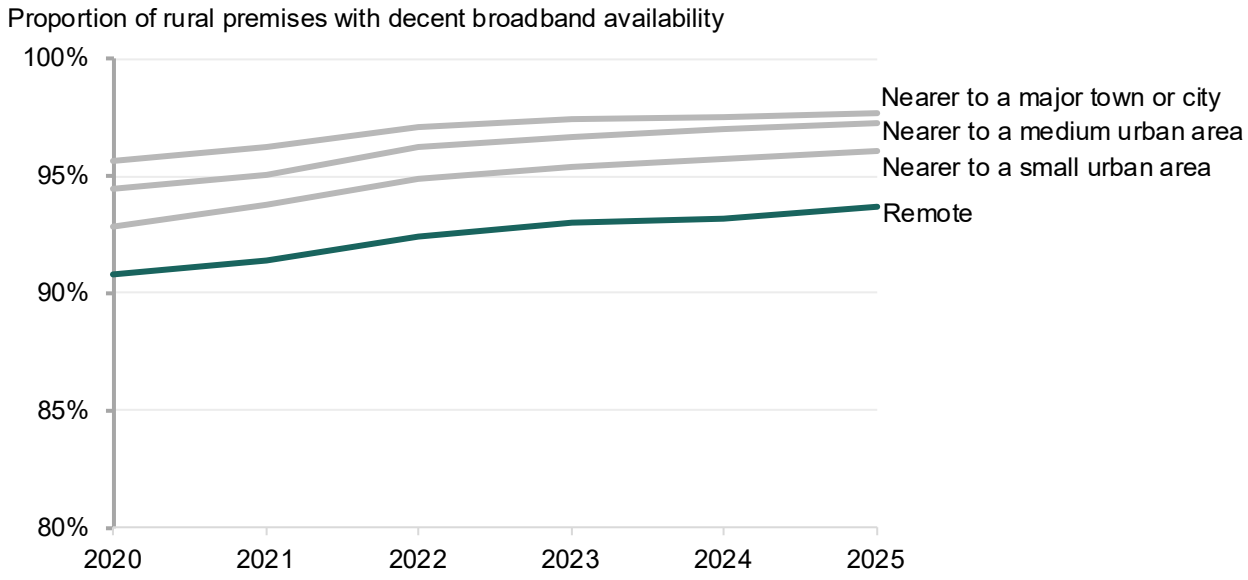
The line chart in Figure A-5 shows the change in the proportion of rural premises with decent broadband availability between 2020 and 2025, by proximity to the nearest largest town or city.

Between January 2020 and January 2025, the more remote a rural settlement was, the lower the proportion of premises with decent broadband availability. In January 2020, 91% of rural premises in remote settlements had access to a decent broadband service. This compared to 93% of premises in rural settlements that were nearer to a small urban area, and 94% of premises in rural settlements that were nearer to a medium urban area. In rural settlements that were nearer to a major town or city, 96% of premises had access to decent broadband in January 2020; this was 5 percentage points higher than in remote rural settlements. In all rural settlements, the proportion of premises with decent broadband availability increased steadily between 2020 and 2025.

In remote rural settlements, as well as those nearer to a small or medium urban area, the proportion of premises with decent broadband availability increased by 3 percentage points between 2020 and 2025. In remote rural settlements, the proportion of premises with decent broadband availability increased from 91% to 94%. In rural settlements that were nearer to a small urban area, the proportion increased from 93% to 96%. In settlements that were nearer to a medium urban area, the proportion increased from 94% to 97%. In settlements that were nearer to a major town or city, the proportion increased by just 2 percentage points, from 96% to 98%.

Among the remote rural settlements are the ‘very hard to reach’ areas, which are typically excluded from national coverage targets due to the higher rollout costs involved. Within these areas, some premises may not be able to access a decent fixed broadband connection. Instead, satellite services provide a new option for people and businesses to access broadband. For more information, see the Connected Nations UK report 2024.

Figure A-5: Line chart showing the change in the proportion of all rural premises in England, as defined within the 2021 rural-urban classification of output areas, with decent broadband availability between January 2020 to January 2025, by proximity to the largest town or city within a 30-minute drive



Superfast broadband

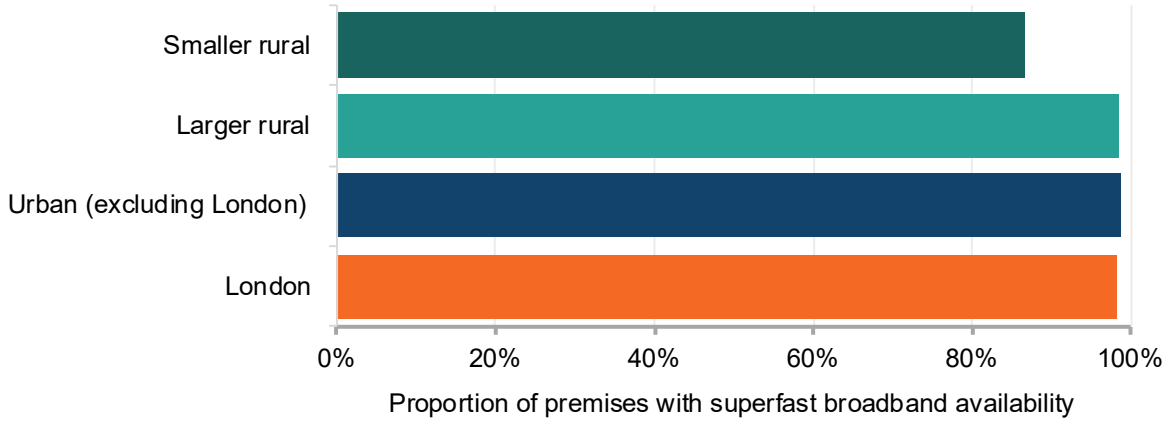
Within the Connected Nations reports, 'superfast broadband' is defined as a fixed broadband service that can provide download speeds of at least 30 Mbit/s; this can be delivered by FTTC, HFC cable, or full fibre (Note A-3). Superfast broadband provides sufficient speed for one-person streaming 4K/UHD video. Downloading a one-hour HD TV episode would take under four and a half minutes and several devices can work simultaneously (Connected Nations 2024). Data are taken from each interim spring update as at January of the reference year, with the latest being January 2025.

Latest estimates using the official statistics rural-urban classification

In January 2025, 92% of rural premises (commercial and residential) had access to a superfast broadband service. The bar chart in Figure A-6 shows the proportion of premises with superfast broadband availability, by 2021 rural-urban classification of output areas in England. The majority of settlements in England had access to superfast broadband; however, proportions were still lower in the smaller rural settlements.

In January 2025, 87% of premises in smaller rural settlements had access to a superfast broadband service. Between 98% and 99% of premises in England (excluding those in smaller rural settlements) had access to a superfast broadband service in January 2025. Superfast broadband availability was highest in urban areas outside of London (99%); here, the proportion of premises with access to a superfast broadband service in January 2025 was 12 percentage points higher than in smaller rural settlements.

Figure A-6: Bar chart showing the proportion of all premises with superfast broadband availability, by 2021 rural-urban classification of output areas in England, January 2025

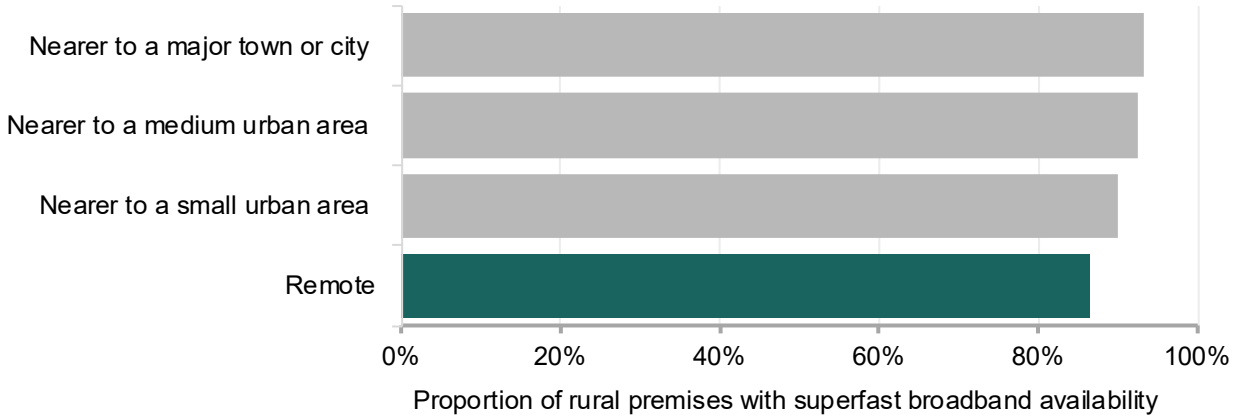


In rural settlements specifically, how remote an area was impacted the proportion of premises with superfast broadband availability. The bar chart in Figure A-7 shows the proportion of rural premises with superfast broadband availability, by proximity to the nearest largest town or city. For the definitions of each proximity indicator, please see Note A-2.

The more remote a rural settlement is, the smaller the proportion of premises with superfast broadband availability. In remote rural settlements, 86% of premises had access to a superfast broadband service in January 2025. In rural settlements that were nearer to a small urban area, 90% of premises had access to superfast broadband; this was 3 percentage points more than in remote rural settlements.

In rural settlements that were nearer to a major town or city, 93% of premises had access to superfast broadband; this was 6 percentage points more than in remote rural settlements. In rural settlements that were nearer to a medium urban area, the proportion of premises that had access to superfast broadband was similar to those settlements that were nearer to a major town or city.

Figure A-7: Bar chart showing the proportion of all rural premises with superfast broadband availability, by proximity to the largest town or city within a 30-minute drive, as defined within the 2021 rural-urban classification of output areas in England, January 2025



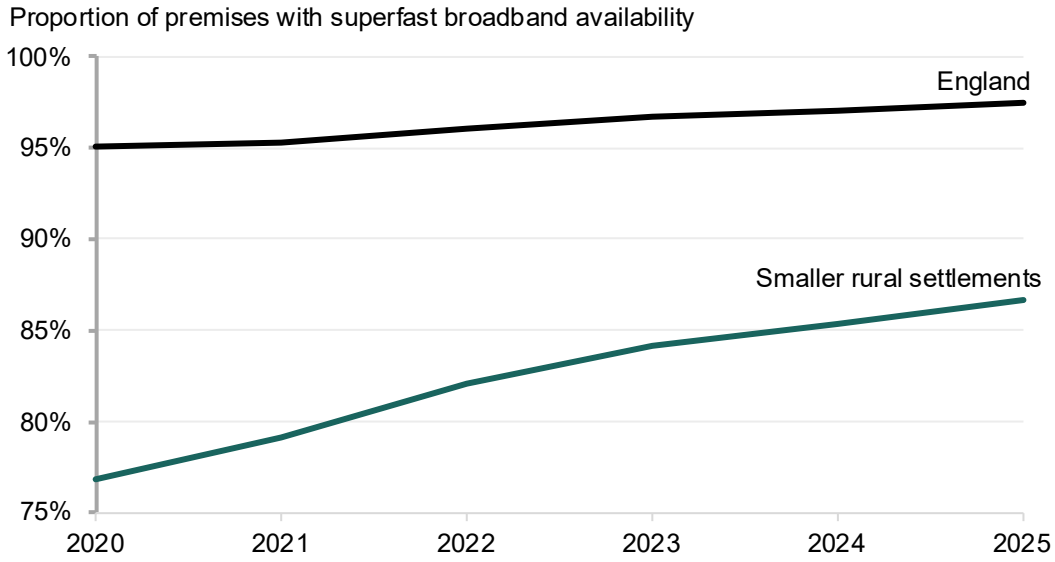
Comparison over time

By comparing each of the spring interim Connected Nations reports, it is possible to measure the change in superfast broadband availability over time. The line chart in Figure A-8 shows the change in the proportion of premises with superfast broadband availability between January 2020 and January 2025. The chart specifically compares smaller rural settlements to all other settlement types in England. Data for all settlement types within the 2021 rural-urban classification can be found within the supplementary data tables.

Whilst the proportion of premises with superfast broadband availability has increased in smaller rural settlements, the level of coverage has been behind that of other settlement types in England. In January 2020, 77% of premises in smaller rural settlements had access to a superfast broadband service. This proportion increased steadily to 87% in January 2025, resulting in an overall increase of 10 percentage points. The rate of increase in smaller rural settlements was greater than in England overall, but that is because the level of superfast broadband availability has consistently been higher. In January 2020, 95% of premises in England were able to access a superfast broadband service. More specifically, 96% of premises in either larger rural settlements or in London could access superfast broadband, compared to 97% in urban areas outside of London.

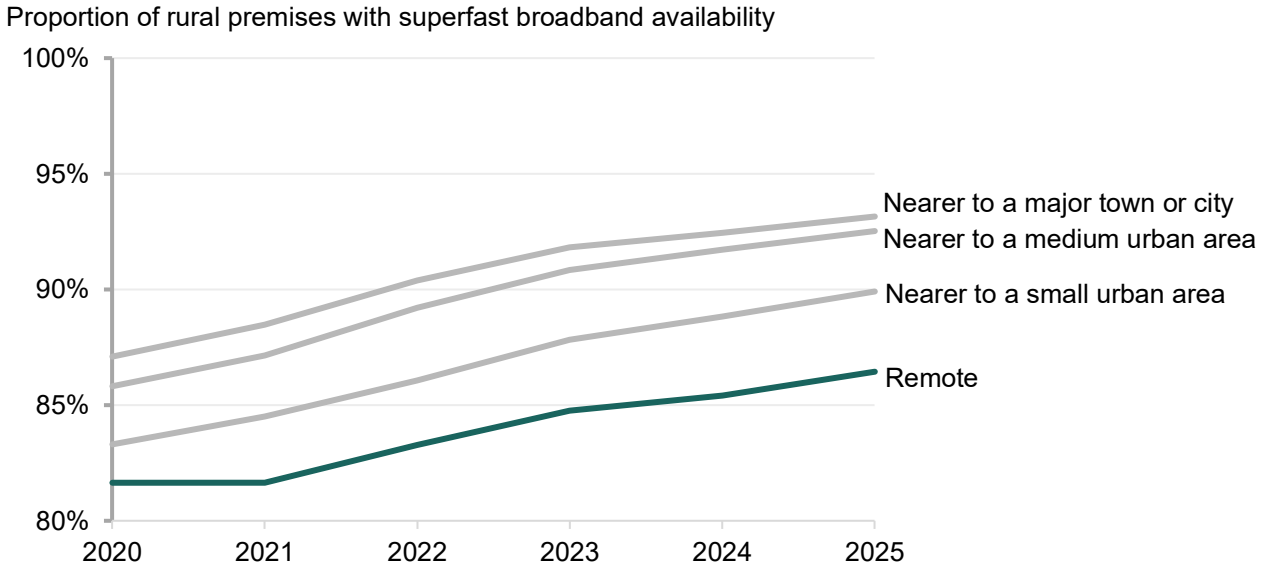
Between January 2020 and January 2025, the proportion of premises with access to superfast broadband in England increased by just 2 percentage points, from 95% to 97%. The remaining few per cent without superfast broadband availability are the ones with higher rollout costs due to being harder to reach.

Figure A-8: Line chart showing the change in the proportion of all premises with superfast broadband availability, for smaller rural settlements as defined within the 2021 rural-urban classification of output areas compared to the average for England , January 2020 to January 2025



The line chart in Figure A-9 shows the change in the proportion of rural premises with superfast broadband availability between January 2020 and January 2025, by proximity to the nearest largest town or city.

Figure A-9: Line chart showing the change in the proportion of all rural premises in England, as defined within the 2021 rural-urban classification of output areas, with superfast broadband availability between January 2020 to January 2025, by proximity to the largest town or city within a 30-minute drive



Between January 2020 and January 2025, the more remote a rural settlement was, the lower the proportion of premises with superfast broadband availability. In January 2020, 82% of rural premises in remote settlements had access to a superfast broadband service. This compared to 83% of premises in rural settlements that were nearer to a small urban area, and 86% of premises in rural settlements that were nearer to a medium urban area.

In rural settlements that were nearer to a major town or city, 87% of premises had access to superfast broadband; this was 5 percentage points higher than in remote rural settlements.

By January 2021, the proportion of premises in remote rural settlements with access to superfast broadband changed very little, although the absolute number of premises with access did increase. However, for all other rural settlements – regardless of the size of their nearest largest town or city – the proportion of premises with access to superfast broadband had increased.

Between January 2021 and January 2025, there were consistent increases in the proportion of rural premises with access to a superfast broadband service - whether the settlements were remote, nearer to a small or medium urban area, or nearer to a major town or city, superfast broadband availability increased by around 5 percentage points. In remote rural settlements, the proportion of premises with superfast broadband availability increased from 82% to 86%. In rural settlements that were nearer to a small urban area, the proportion increased from 85% to 90%. In rural settlements that were nearer to a medium urban area, the proportion increased from 87% to 93%. In rural settlements that were nearer to a major town or city, the proportion increased from 88% to 93%.

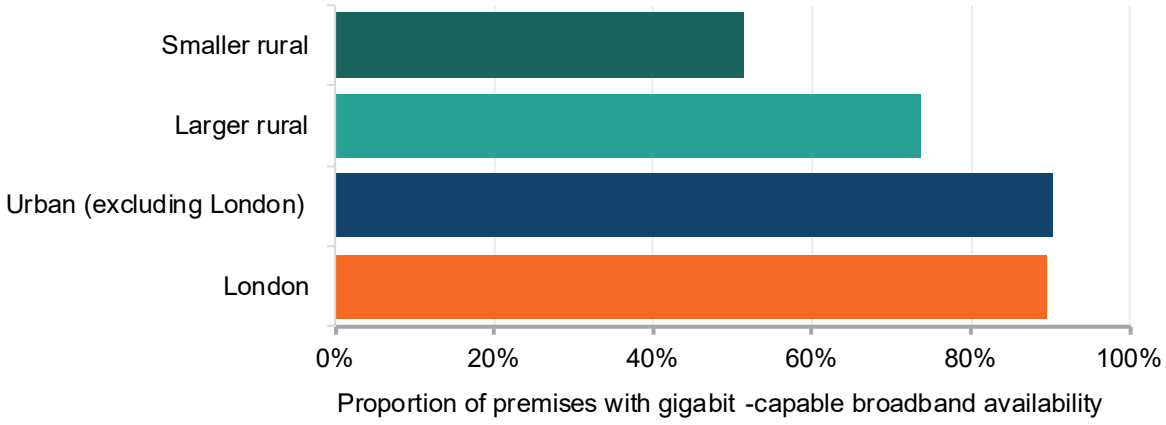
Gigabit capable broadband

Within the Connected Nations reports, ‘gigabit-capable broadband’ is defined as a fixed broadband service that can offer download speeds of 1 Gbit/s and above, delivered by HFC cable or full fibre (Note A-3). With gigabit-capable broadband, it is feasible to download a full 4K film (100GB) in under 15 mins, or a one-hour HD TV episode in 8 seconds (Connected Nations 2024).
Data are taken from each interim spring update as at January of the reference year, with the latest being January 2025.

Latest estimates using the official statistics rural-urban classification

In January 2025, 62% of rural premises had access to a gigabit-capable broadband service. The bar chart in Figure A-10 shows the proportion of premises with gigabit-capable broadband availability, by 2021 rural-urban classification of output areas in England.

Figure A-10: Bar chart showing the proportion of all premises with gigabit-capable broadband availability, by 2021 rural-urban classification of output areas in England, January 2025



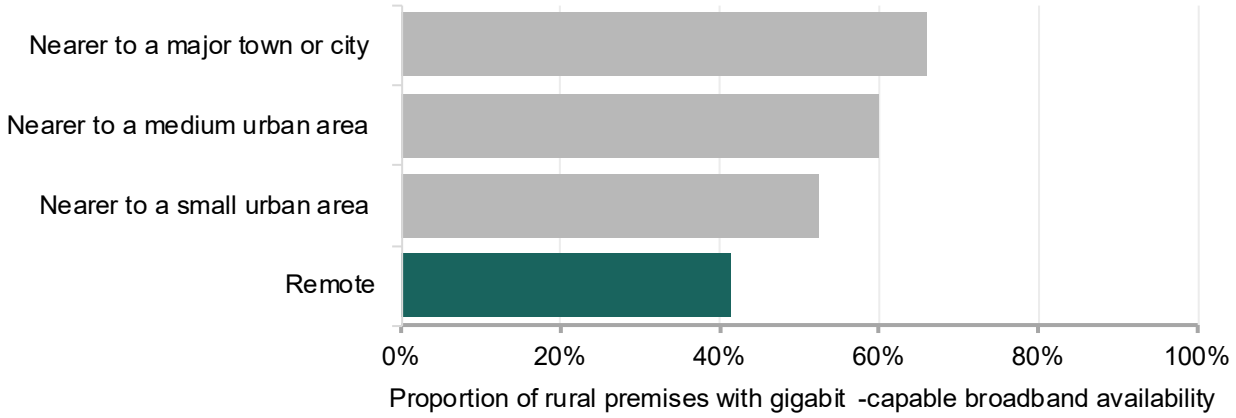
The more rural the area, the smaller the proportion of premises with gigabit-capable broadband availability. In smaller rural settlements, 51% of premises had access to a gigabit-capable broadband service in January 2025; this was the lowest availability of all settlement types in England. In larger rural settlements, 74% of premises had access to gigabit-capable broadband; this was 23 percentage points more than in smaller rural settlements. In urban areas, whether in London or not, 90% of premises had access to gigabit-capable broadband; this was 39 percentage points higher than in smaller rural settlements.

In rural settlements specifically, how remote an area was impacted the proportion of premises with gigabit-capable broadband availability. The bar chart in Figure A-11 shows the proportion of rural premises with gigabit-capable broadband availability, by proximity to the nearest largest town or city. For the definitions of each proximity indicator, please see Note A-2.

The more remote a rural settlement is, the smaller the proportion of premises with gigabit-capable broadband availability. In remote rural settlements, 41% of premises had access to a gigabit-capable broadband service in January 2025. In rural settlements that were nearer to a small urban area, 52% of premises had access to gigabit-capable broadband; this was 11 percentage points more than in remote rural settlements.

In rural settlements that were nearer to a medium urban area, 60% of premises had access to gigabit-capable broadband; this was 19 percentage points more than in remote rural settlements. In rural settlements that were nearer to a major town or city, 66% of premises had access to gigabit-capable broadband; this was 25 percentage points more than in remote rural settlements.

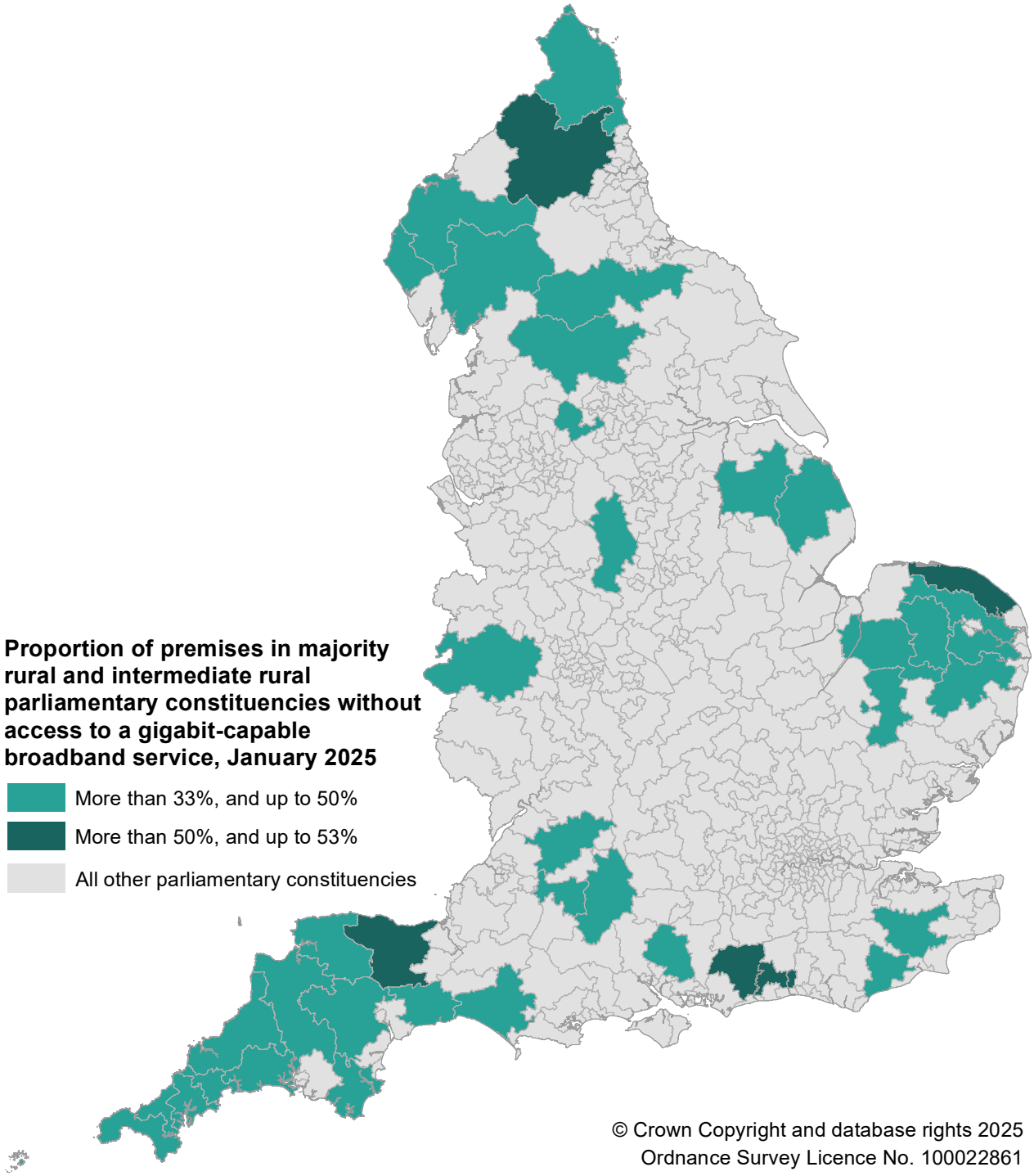
Figure A-11: Bar chart showing the proportion of all rural premises with gigabit-capable broadband availability, by proximity to the largest town or city within a 30-minute drive, as defined within the 2021 rural-urban classification of output areas in England, January 2025



The map in Figure A-12 highlights the majority rural and intermediate rural parliamentary constituencies where the proportion of premises without access to a gigabit-capable broadband service is more than 33%. Proportions of premises without gigabit-capable broadband for all constituencies can be found within the supplementary data tables.

Figure A-12: Map showing the proportion of all premises in majority rural and intermediate rural Westminster parliamentary constituencies, as defined within the 2021 rural-urban classification, without access to a gigabit-capable broadband service in January 2025

Intermediate urban and urban constituencies are presented in grey. Only majority rural and intermediate rural constituencies where more than 33% of premises had no gigabit broadband access are coloured on the map; the rest are also presented in grey to prevent distraction.



At the time of data collection (January 2025), there were 119 majority rural or intermediate rural Westminster parliamentary constituencies in England:

- In 80 of these constituencies – equivalent to 67% – less than 33% of premises could not access a gigabit-capable broadband service. The majority rural and intermediate rural constituencies with the lowest proportion of premises without gigabit-capable broadband access – or rather, the highest proportion of premises able to access gigabit-capable broadband – were located in the 'Yorkshire and the Humber' region of England. This is followed by constituencies in the 'South East', and 'East Midlands'.
- In 35 of these constituencies – equivalent to 29% – between 33% and 50% of premises could not access a gigabit-capable broadband service. These were concentrated in the Lake District, Yorkshire Dales, Devon and Cornwall, as well as in Norfolk, Central Lincolnshire, and Northumberland.
- In 4 of these constituencies, more than 50% of premises could not access a gigabit-capable broadband service. In 'Hexham', just under 51% of premises could not access gigabit-capable broadband. In both 'North Norfolk' and 'Arundel and South Downs', more than 52% of premises could not access gigabit-capable broadband. 'Tiverton and Minehead' had proportionally more premises without access to gigabit-capable broadband than any other majority rural and intermediate rural constituencies, at more than 53%.

Comparison over time

By comparing each of the spring interim Connected Nations reports, it is possible to measure the change in gigabit-capable broadband availability over time. The line chart in Figure A-13 shows the change in the proportion of premises with gigabit-capable broadband availability between January 2021 and January 2025. Whilst other broadband time series charts within this publication typically start at 2020, the gigabit chart starts at 2021, as this was the year Project Gigabit was launched. Data for all settlement types within the 2021 rural-urban classification can be found within the supplementary data tables.

Whilst the proportion of premises with gigabit-capable broadband availability has increased in smaller rural settlements, the rate of progression has been behind that of other settlement types in England. In January 2021, 20% of premises in smaller rural settlements had access to a gigabit-capable broadband service; this proportion increased steadily to 51% in January 2025. In comparison, in larger rural settlements, the proportion of gigabit-capable premises increased from 15% to 74% across the same period; this means that the proportional increase in gigabit-capable premises in larger rural settlements (59 percentage points) was almost double that of smaller rural settlements (32 percentage points). However, before Project Gigabit was introduced, there were proportionally fewer gigabit-capable premises in larger rural settlements compared to those in smaller rural settlements.

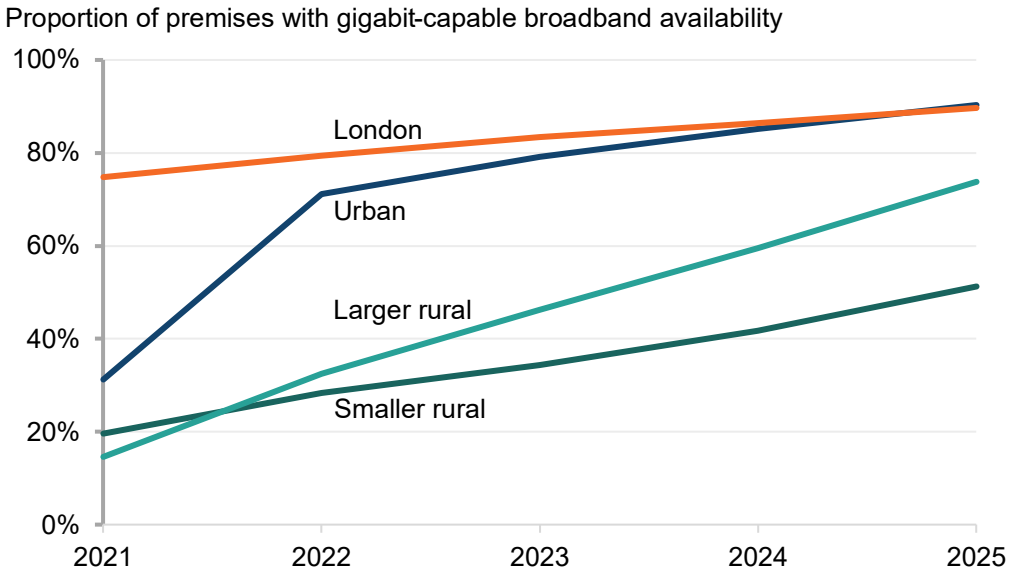
The proportion of gigabit-capable premises in urban areas was consistently higher than in rural settlements between January 2021 and January 2025. In urban areas outside of London, there was a considerable increase in the proportion of gigabit-capable premises at the start of Project Gigabit; between January 2021 and January 2022, the proportion of gigabit-capable premises in urban areas more than doubled, increasing from 31% to 71%. Following this, the proportion of urban premises with gigabit-capable broadband increased steadily to 90% in January 2025.

Therefore, whilst the rate of increase was not as consistent in urban areas as it was in larger rural settlements, the overall size of this increase was the same (59 percentage points).

In London, 3 in every 4 premises already had access to gigabit-capable broadband in January 2021; this means that the rate of increase was lower in these areas compared to other settlement types in England, increasing by 15 percentage points, to 90% in January 2025.

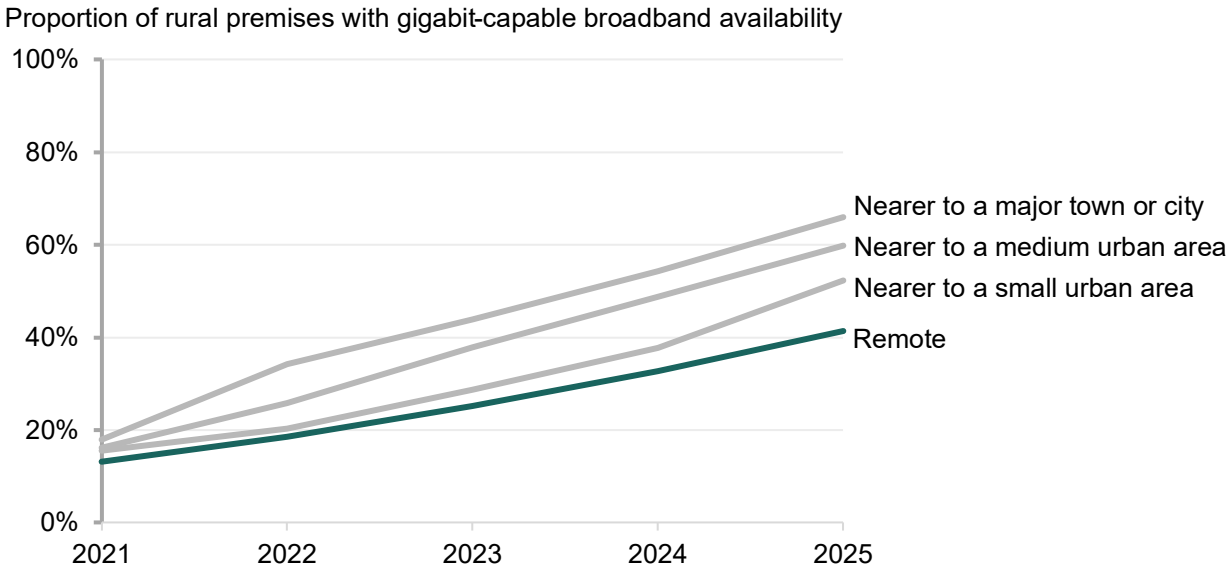
Figure A-13: Line chart showing the change in the proportion of all premises with gigabit-capable broadband availability, by 2021 rural-urban classification of output areas in England, January 2021 to January 2025

'Urban' excludes London.



The line chart in Figure A-14 shows the change in the proportion of rural premises with gigabit-capable broadband availability between January 2021 and January 2025, by proximity to the nearest largest town or city.

Figure A-14: Line chart showing the change in the proportion of all rural premises in England, as defined within the 2021 rural-urban classification of output areas, with gigabit-capable broadband availability between January 2021 to January 2025, by proximity to the largest town or city within a 30-minute drive



Between January 2021 and January 2025, the more remote a rural settlement was, the lower the proportion of gigabit-capable premises. In January 2021, 13% of rural premises in remote settlements had access to a gigabit-capable broadband service. This compared to 16% of premises in rural settlements that were either nearer to a small urban area, or nearer to a medium urban area. In rural settlements that were nearer to a major town or city, 18% of premises had access to gigabit-capable broadband; this was 5 percentage points higher than in remote settlements.

Whilst the proportion of rural premises with gigabit-capable broadband availability increased at varying rates depending on the settlements' proximity to urban areas, these rates of changes were fairly steady between January 2021 and January 2025.

Between January 2021 and January 2025, the proportion of remote rural premises with gigabit-capable broadband availability increased by 28 percentage points, from 13% to 41%. In rural settlements that were nearer to a small urban area, the proportion of gigabit-capable premises increased by 37 percentage points, from 16% to 52%. In rural settlements that were nearer to a medium urban area, the proportion of gigabit-capable premises increased by 44 percentage points, from 16% to 60%. In rural settlements that were nearer to a major town or city, the proportion of gigabit-capable premises increased by 48 percentage points, from 18% to 66%. This means that the rate of change in the proportion of gigabit-capable premises in rural settlements that were nearer to a major town or city was nearly double that of remote rural settlements.

Broadband explanatory notes

- **Note A-1**

Analysis in this section covers all premises (both residential and commercial) that are in scope for the location.

- **Note A-2**

Data used within this section are at the output area-level. The 2021 rural-urban classification of output areas provides information regarding a settlement's proximity to urban areas of a specified size:

Major town or city – at least 75,000 residents
Medium urban area – at least 30,000 residents
Small urban area – at least 10,000 residents

Proximity measures the largest urban area that can be reached within a 30-minute drive from the specified settlement. If the largest urban area that can be reached has fewer than 10,000 residents, then the settlement is classed as **remote**. For more information, see 2021 rural-urban classification - Office for National Statistics

- **Note A-3**

There are four primary types of fixed line connections for fixed broadband access:

Asymmetric Digital Subscriber Line (ADSL) – Copper (telephone) cables are used to connect the exchange to each premises. Maximum download speed is up to 24 Mbit/s. Actual speeds delivered diminish with length of cable from exchange to the premises.

Fibre to the cabinet (FTTC) – FTTC involves fibre to the street cabinet, with copper cables connecting the cabinet to the premises. FTTC uses 'very high-speed digital subscriber line' (VDSL) technology.3 As with ADSL, speeds diminish with length of cable, but as cabinets are generally located close to premises, maximum download speed is normally up to 80 Mbit/s.

Hybrid fibre coaxial (HFC) cable – With HFC, there is fibre to a street cabinet and coaxial cable from the cabinet to the premises. Because coaxial has less signal loss than telephone copper wires, HFC can deliver higher speeds over longer distances. Cable broadband in the UK is provided by Virgin Media O2, and its cable network can deliver gigabit speeds.

Full fibre or 'fibre to the premises' (FTTP) – The connection from the telephone exchange to the premises is provided entirely over fibre. Generally, distance to the premises does not affect the speed delivered. Full fibre can deliver gigabit speeds.

- **Note A-4**

Tables showing the data used within this section can be found within the Connectivity and Accessibility supplementary data tables.

B. Mobile coverage

There were proportionally more not-spots (in terms of voice and text, 4G, and 5G) in majority rural parliamentary constituencies overall than anywhere else in England.

Mobile coverage – key findings

Proportionally more premises are in 5G not-spots when outdoors in rural areas

- The proportion of premises not covered by 5G mobile signals from any operator when outdoors was greater in majority rural constituencies (22%) than in urban constituencies outside of London (2%).

Geographic voice and text or 4G coverage is lower in rural areas

- The proportion of landmass not covered by 4G mobile signals from any operator was greater in majority rural constituencies (2%) than in urban constituencies outside of London (0.2%).
- The proportion of landmass without voice and text coverage from any operator was greater in majority rural constituencies (0.9%) than in urban constituencies outside of London (less than 0.1%).

Mobile coverage from all operators is less available in rural areas

- The proportion of landmass covered by all four operators for 4G services in majority rural constituencies (87%) was lower than in urban constituencies outside of London (97%).
- The proportion of premises covered by all four operators for 5G services when outdoors in majority rural constituencies (1%) was lower than in urban constituencies outside of London (25%).

Summary

This section presents analysis of rural mobile coverage using a different method to that presented by Ofcom; whilst they use the ‘Locale’ classification only, this publication also uses the official statistics rural-urban classification.

In January 2025, just under 2% of landmass in majority rural constituencies was not covered by 4G mobile signals, and were therefore 4G not-spots. In comparison, around 0.2% of landmass in urban constituencies outside of London did not have 4G mobile coverage from any operator.

In January 2025, just over 22% of premises in majority rural constituencies were not covered by 5G mobile signals when outdoors, and were therefore 5G not-spots. In other words, when standing outdoors, around 1 in every 5 premises in majority rural constituencies did not have 5G mobile coverage from any operator. In comparison, just over 2% of premises in urban constituencies outside of London did not have 5G mobile coverage from any operator when outdoors.

In January 2025, less than 1% of landmass in England were voice and text not-spots, where no voice calls could be made or text messages sent. The proportion of voice and text not-spots was highest in majority rural constituencies (0.9%) and lowest in urban constituencies (less than 0.1%).

Background information

Data within this section comes from the Ofcom 'Connected Nations update: Spring 2025' publication which reports on fixed broadband and mobile networks. Ofcom use a 'Locale' classification for defining rural and urban areas. Ofcom use a 'Locale classification for defining rural and urban areas. This defines rural areas as settlements with populations of less than 2,000 and results in proportionally fewer premises having access to mobile coverage than if using the official statistics classification which includes settlements with populations up to 10,000 as rural.

For the Spring 2025 Connected Nations update, Ofcom collected and analysed data from the four mobile network operators to produce mobile coverage statistics (Note B-4). This data was collected as a snapshot in January 2025. Due to variations in mobile performance over time, these estimates should not be regarded as a definitive and fixed view of England's – or the UK's, if using the estimates directly from the Connected Nations report – mobile infrastructure. However, this analysis may instead be useful in identifying variations in mobile performance by geography.

Table B-1: Proportion of landmass able to access 4G mobile coverage, by operator availability and Ofcom Locale classification, January 2025
Shorthand has been used in this table. Proportions have been rounded to the nearest 1%; '[high]' indicates where proportions round to 100% but are not actually 100%. Similarly, '[low]' indicates where proportions round to 0% but are not actually 0%.

Operator availability	Rural	Urban	England
All operators	88%	99%	**90%**
At least one operator	99%	[high]	**99%**
No operators	1%	[low]	**1%**

Using Ofcom's 'Locale' classification to define rural and urban areas, the proportion of landmass able to access 4G mobile coverage as of January 2025 is given in Table B-1. The majority of England has good geographic 4G mobile coverage from at least one operator, with proportions decreasing slightly when considering all four operators. The proportion of England with no 4G mobile coverage was low, but still higher in rural areas than urban areas.

Table B-2: Proportion of all premises able to access 5G mobile coverage outdoors, by operator availability and Ofcom Locale classification, January 2025
Ofcom's 'very high confidence' estimate has been used in the table (95% probability). Proportions have been rounded to the nearest 1%.

Operator availability	Rural	Urban	England
All operators	2%	26%	**23%**
At least one operator	71%	97%	**93%**
No operators	29%	3%	**7%**

Using Ofcom's 'Locale' classification to define rural and urban areas, the proportion of landmass able to access 5G mobile coverage outdoors, as of January 2025, is given in Table B-2. The majority of England has good geographic 5G mobile coverage from at least one operator when outdoors. However, when considering all four operators, just 2% of rural areas had outdoor 5G mobile coverage from any operator in January 2025; this compares to 26% of urban areas.

Mobile coverage statistics presented within this publication are based on Westminster parliamentary constituencies, as of July 2024. The 2021 official statistics rural-urban classification of these constituencies is determined such that majority rural constituencies have 50% or more of their population in rural areas; intermediate (rural or urban) constituencies have between 20% and less than 50% of their population in rural areas; and urban constituencies have less than 20% of their population in rural areas.

The following analysis presents data on the availability of 4G mobile coverage across England, as well as updates on the progress mobile network operators are making with their 5G rollout plans. Data are at Westminster Parliamentary Constituency-level as released by Ofcom within their Connected Nations report, and are for England only; this has been used so that the 2021 rural-urban classification can be applied (Note B-1). For this reason, estimates presented within this section may not match those presented within the Connected Nations report. Whilst the source report presents several coverage types – such as inside premises, outside of premises, in vehicles on major roads, or in vehicles on 'A' or 'B' roads – this publication focusses on geographic 4G coverage and outdoor premises (commercial and residential) 5G coverage. Geographic voice and text coverage is also presented.

4G mobile coverage

4G not-spots using the official statistics rural-urban classification

While 5G coverage is expanding, it is important to note that most people still use voice and data services over 4G. Within the Connected Nations reports, landmass where there is no 4G mobile coverage from any operator can be described as a '4G not-spot'. Within these areas, some devices may still receive other signals, such as from 3G. However, 2G and 3G mobile networks are gradually being switched off: Switching off the UK's 2G and 3G mobile networks: what you need to know - Ofcom. 4G not-spot data are taken from the interim spring update with data collected for January 2025.

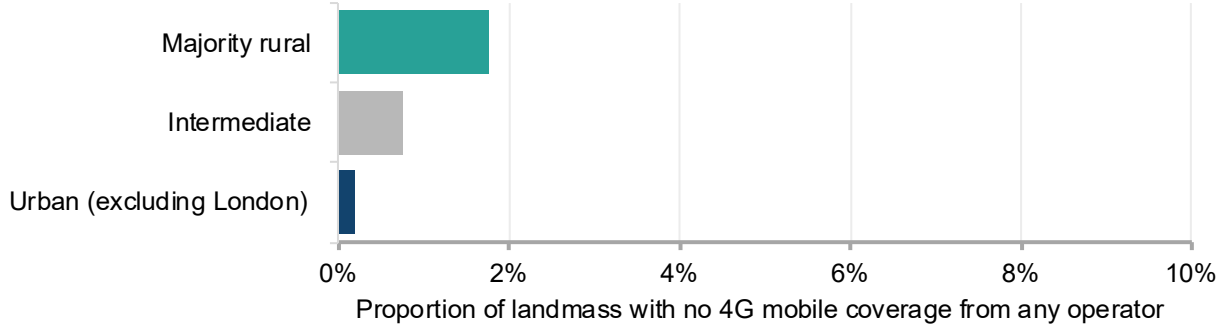
In January 2025, just under 2% of landmass in majority rural constituencies was not covered by 4G mobile signals, and were therefore 4G not-spots. This was higher than in any other classification of parliamentary constituency. The bar chart in Figure B-1 shows the proportion of landmass that were 4G not-spots, by 2021 rural-urban classification of parliamentary constituencies in England.

The more rural the constituency, the higher the proportion of landmass without 4G mobile coverage; however, for any classification of parliamentary constituency, these 4G not-spots generally represented less than 2% of landmass.

In majority rural constituencies, 1.8% of landmass did not have 4G mobile coverage from any operator in January 2025; this was more than double the proportion in intermediate (rural or urban) constituencies, of which 0.8% of landmass did not have 4G mobile coverage. In urban constituencies outside of London, just under 0.2% of landmass did not have 4G mobile coverage. In London (Note B-6), there were almost no 4G not-spots at ground level in January 2025; however, this does not take underground areas, such as the underground rail stations, into account. These areas typically do have 4G not-spots due to signal-blocking issues from being underground. To combat this, Transport for London are currently working on improving coverage on the Tube.

Figure B-1: Bar chart showing the proportion of landmass with no 4G mobile coverage from any operator, by 2021 rural-urban classification of Westminster parliamentary constituencies in England, January 2025 (Note B-2, Note B-3, Note B-4)

The horizontal axis has been scaled from 0% to 10% (instead of 0% to 100%) in order to highlight small differences. London has been excluded from the chart.



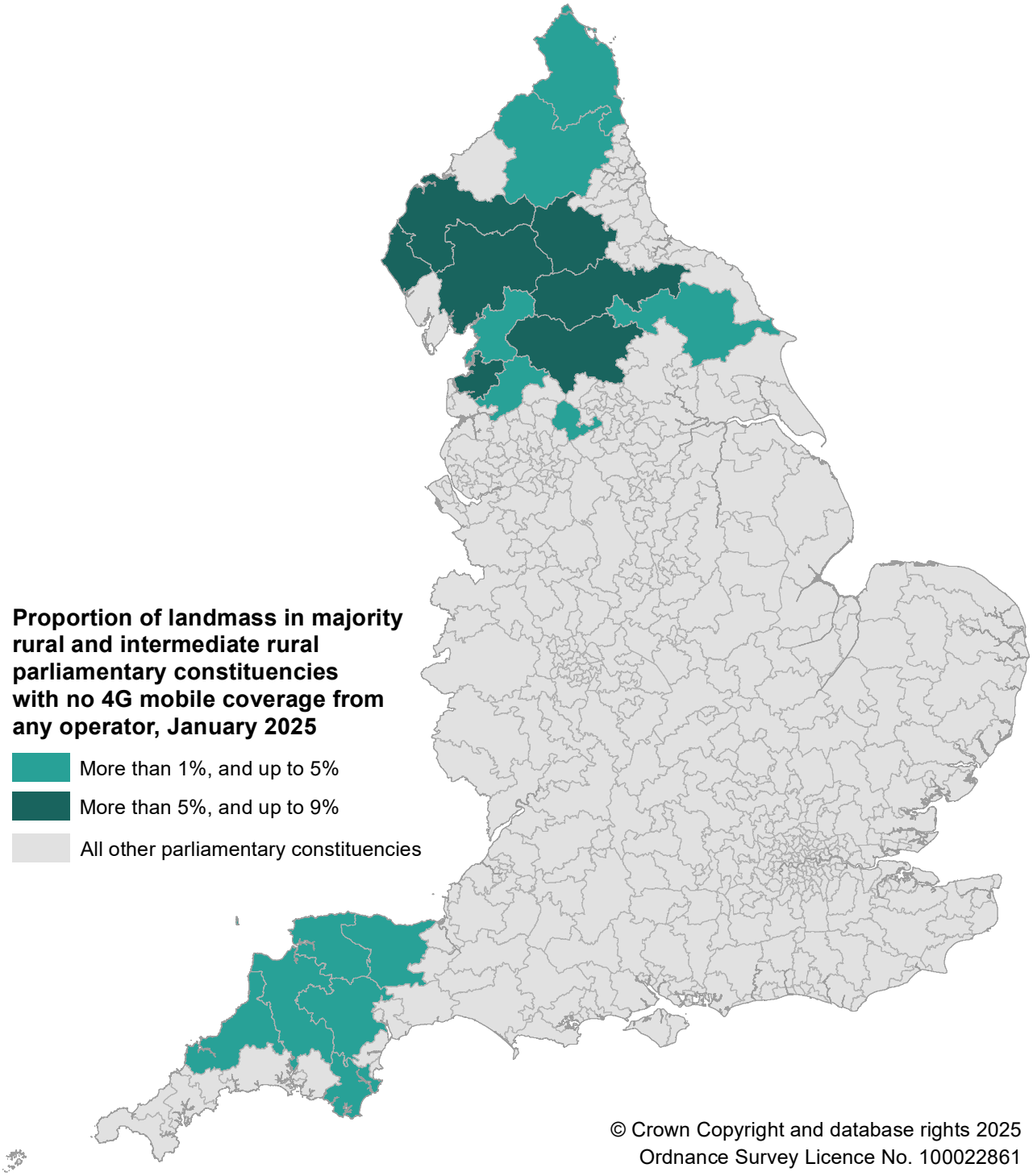
The map in Figure B-2 highlights the majority rural and intermediate rural constituencies where the proportion of landmass with no 4G mobile coverage is more than 1%. Proportions of 4G not-spots for all constituencies in England can be found within the supplementary data tables.

At the time of data collection (January 2025), there were 119 majority rural or intermediate rural Westminster parliamentary constituencies in England:

- In 100 of these constituencies – equivalent to 84% – less than 1% of landmass had no 4G mobile coverage. In other words, in most majority rural or intermediate rural constituencies, more than 99% of landmass had 4G mobile coverage from at least one operator.
- In 12 of these constituencies – equivalent to 10% – between 1% and 5% of landmass had no 4G mobile coverage. These were concentrated in the South West around Devon and Cornwall, as well as in the North of England.
- In 7 of these constituencies – equivalent to 6% – more than 5% of landmass had no 4G mobile coverage; these were concentrated in the North of England. ‘Whitehaven and Workington’ – an intermediate rural constituency in Cumberland - had the highest proportion of landmass (9%) having no 4G mobile coverage of all majority rural and intermediate rural constituencies. However, the highest rate of all constituencies in England was instead ‘Barrow and Furness’: an intermediate urban constituency in Cumbria where more than 10% of landmass had no 4G mobile coverage. This constituency neighbours ‘Whitehaven and Workington’.

Figure B-2: Map showing the proportion of landmass in majority rural and intermediate rural Westminster parliamentary constituencies in England, as defined within the 2021 rural-urban classification, with no 4G mobile coverage from any operator in January 2025

Intermediate urban and urban constituencies are presented in grey. Only majority rural and intermediate rural constituencies where more than 1% of landmass had no 4G mobile coverage are coloured on the map; the rest are also presented in grey to prevent distraction.

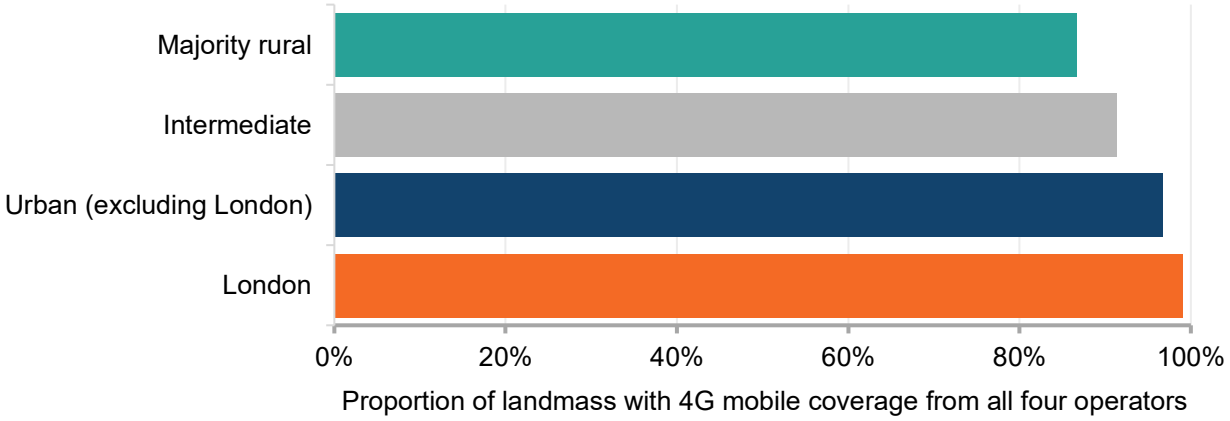


4G mobile coverage from all four operators

Within the Connected Nations reports, information is provided to show areas where all four operators provide 4G mobile coverage. Having network coverage from all four operators is preferable because it maximizes coverage, especially in rural areas, and provides greater reliability through redundancy. The proportion of landmass with coverage from all four operators is less than the proportion with coverage from at least one operator. Data are taken from the interim spring update for January 2025.

In January 2025, 87% of landmass in majority rural constituencies was covered by all four network operators in terms of 4G mobile coverage. This was lower than in any other classification of parliamentary constituency. The bar chart in Figure B-3 shows the proportion of landmass where all four operators provide 4G mobile coverage, by 2021 rural-urban classification of parliamentary constituencies in England.

Figure B-3: Bar chart showing the proportion of landmass with 4G mobile coverage from all four operators, by 2021 rural-urban classification of Westminster parliamentary constituencies in England, January 2025 (Note B-2, Note B-3, Note B-4, Note B-6)



The more rural the constituency, the lower the proportion of landmass with 4G mobile coverage from all four network operators.

In majority rural constituencies, 87% of landmass was covered by all four network operators for 4G services; in other words, 13% of landmass was not covered by all four operators, limiting connectivity for users. In intermediate (rural or urban) constituencies, the proportion of landmass with 4G mobile coverage from all four network operators was 5 percentage points higher than in majority rural constituencies, at 91%. In urban constituencies outside of London, 97% of landmass had 4G mobile coverage from all four operators; this was 10 percentage points higher than in majority rural constituencies. In London, 99% of landmass had 4G mobile coverage from all four operators – 12 percentage points more than in majority rural constituencies.

5G mobile coverage

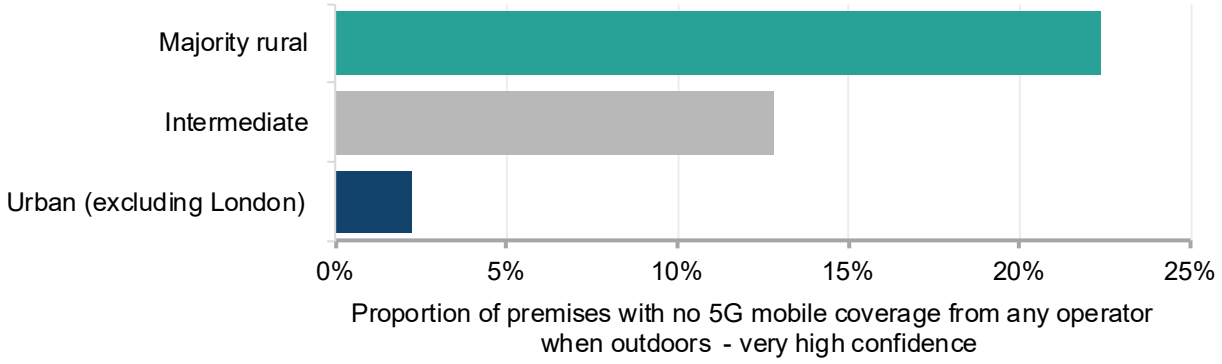
5G not-spots using the official statistics rural-urban classification

Within the Connected Nations reports, where there is no 5G mobile coverage from any operator outside of premises, this can be described as a '5G not-spot'. Within these areas, devices may still receive other signals, such as from 4G; that is, unless the device is also within a 4G not-spot. Then, they may still receive 3G signals, unless they are within a voice and text not-spot. However, 2G and 3G mobile networks are gradually being switched off: Switching off the UK's 2G and 3G mobile networks: what you need to know - Ofcom.

Analysis within this publication focusses on 5G mobile coverage when outside premises, as 5G landmass coverage is currently far behind that of 4G. Data are taken from the interim spring update with data collected for January 2025.

In January 2025, just over 22% of premises in majority rural constituencies were not covered by 5G mobile signals when outdoors, and were therefore 5G not-spots, based on the very high confidence estimates from Ofcom. The bar chart in Figure B-4 shows the proportion of premises where no operators provide 5G mobile coverage when outdoors, by 2021 rural-urban classification of parliamentary constituencies in England.

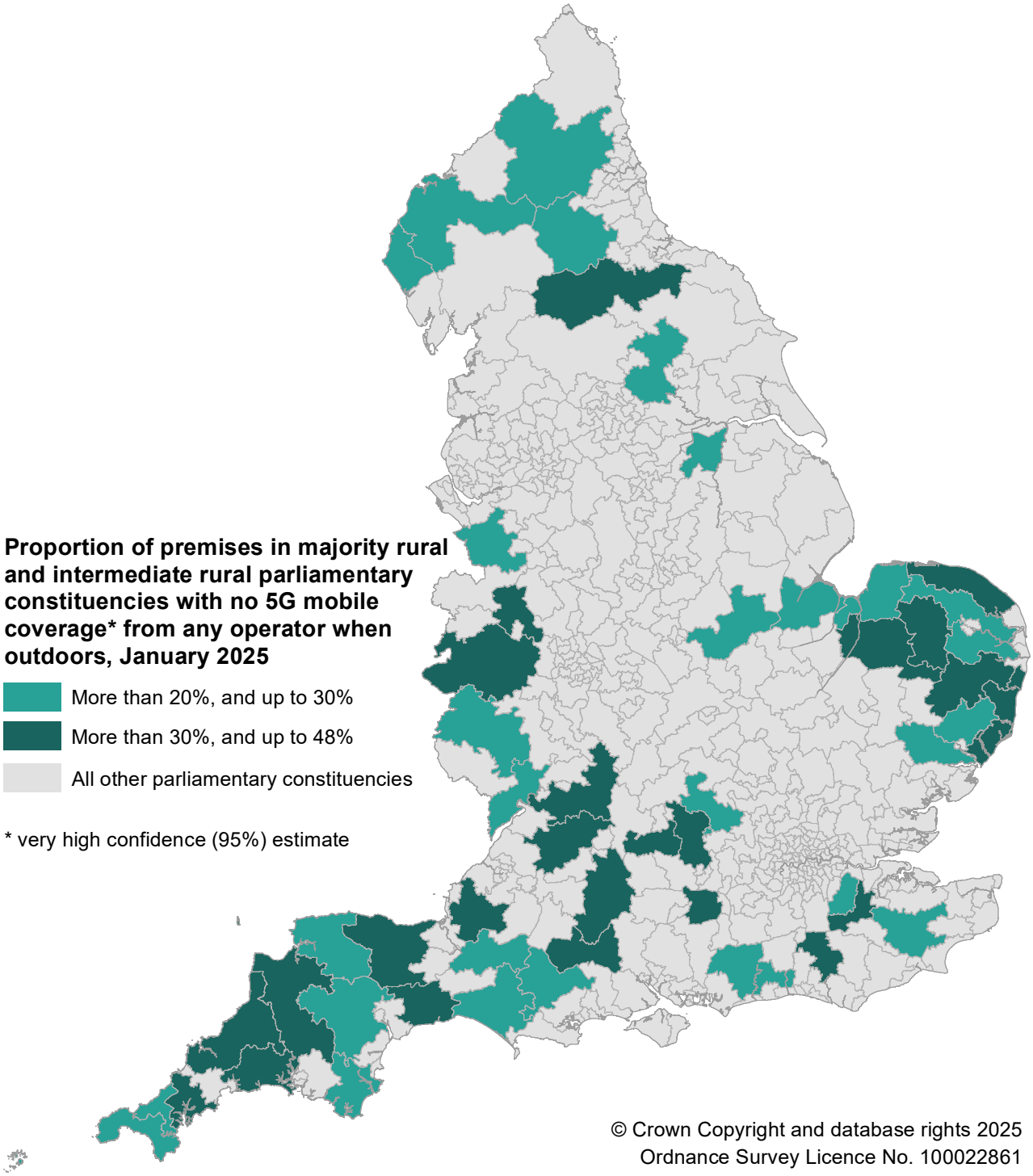
Figure B-4: Bar chart showing the proportion of premises with no 5G mobile coverage from any operator when outdoors, by 2021 rural-urban classification of Westminster parliamentary constituencies in England, January 2025 (Note B-2, Note B-3, Note B-4)
Ofcom's 'very high confidence' estimate has been used in the chart, where there is around a 95% probability of no 5G coverage being present. The horizontal axis has been scaled from 0% to 25% (instead of 0% to 100%) in order to highlight the differences in the proportions of 5G not-spots between classifications. London has been excluded from the chart, as fewer than 0.1% of premises did not have 5G coverage when outdoors in these areas.



The more rural the constituency, the higher the proportion of premises without 5G mobile coverage when outdoors. In majority rural constituencies, just over 22% of premises were not covered by 5G mobile signals when outdoors in January 2025. In comparison, 13% of premises in intermediate (rural or urban) constituencies did not have 5G mobile coverage from any operator when outdoors. In urban constituencies outside of London, just over 2% of premises did not have 5G mobile coverage when outdoors. In London (Note B-6), almost all premises had 5G mobile coverage from at least one network operator when outdoors.

Figure B-5: Map showing the proportion of premises in majority rural and intermediate rural Westminster parliamentary constituencies, as defined in the 2021 rural-urban classification, with no 5G mobile coverage from any operator when outdoors in January 2025

Ofcom's 'very high confidence' estimate has been used in the map, where there is around a 95% probability of no 5G coverage being present. Intermediate urban and urban constituencies are presented in grey. Only majority rural and intermediate rural constituencies where more than 20% of premises had no 5G mobile coverage when outdoors are coloured on the map; the rest are also presented in grey to prevent distraction.



The map in Figure B-5 highlights the majority rural and intermediate rural constituencies where the proportion of premises with no 5G mobile coverage when outdoors is more than 20%. Proportions of 5G not-spots for constituencies in England can be found within the supplementary data tables.

At the time of data collection (January 2025), there were 119 majority rural or intermediate rural Westminster parliamentary constituencies in England:

- In 67 of these constituencies – equivalent to 56% – less than 20% of premises had no 5G mobile coverage when outdoors. In other words, in just over half of all majority rural or intermediate rural constituencies, more than 4 in every 5 premises did have 5G mobile coverage from at least one network operator when outdoors.
- In 28 of these constituencies – equivalent to 24% – between 20% and 30% of premises had no 5G mobile coverage from any operator when outdoors.
- In 24 of these constituencies – equivalent to 20% - more than 30% of premises had no 5G mobile coverage from any operator when outdoors. ‘Didcot and Wantage’ – an intermediate rural constituency in South Oxfordshire - had the highest proportion of premises having no 5G mobile coverage when outdoors of all majority rural and intermediate rural constituencies, at 48%. In other words, in this constituency, nearly half of all premises did not have 5G mobile coverage when outdoors. ‘Mid Norfolk’ had the highest proportion of premises without 5G mobile coverage when outdoors of all majority rural constituencies.

5G mobile coverage from all four operators

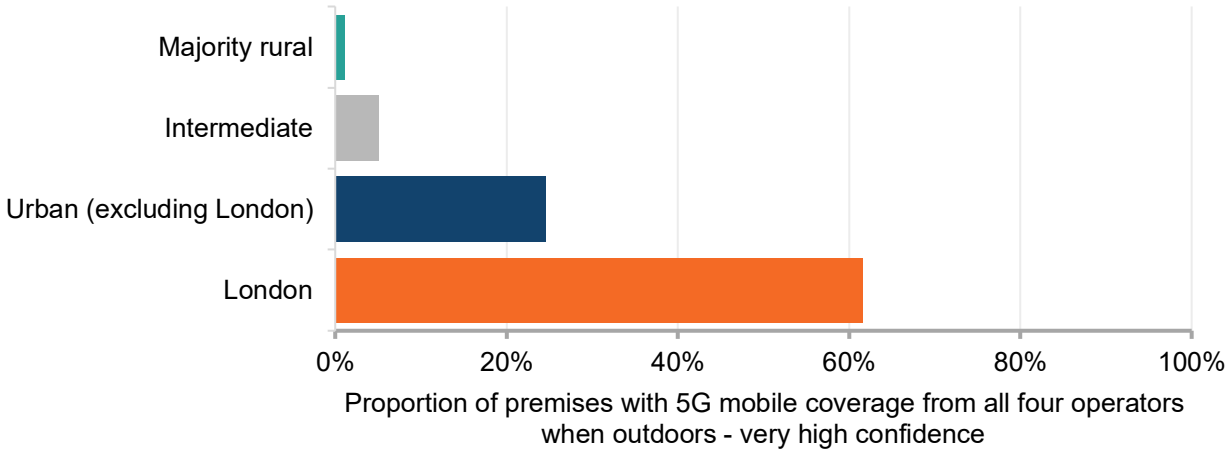
Within the Connected Nations reports, information is provided to show areas where all four operators provide 5G mobile coverage. Having network coverage from all four operators is preferable because it maximizes coverage, especially in rural areas, and provides greater reliability through redundancy. Analysis within this publication focusses on 5G mobile coverage when outside premises, as 5G landmass coverage is currently far behind that of 4G. The proportion of premises with coverage when outdoors from all four operators is less than the proportion with coverage from at least one operator. Data are taken from the interim spring update with data collected for January 2025.

In January 2025, just 1% of premises in majority rural constituencies had 5G mobile coverage from all four network operators when outdoors. The bar chart in Figure B-6 shows the proportion of premises where all four operators provide 5G mobile coverage when outdoors, by 2021 rural-urban classification of parliamentary constituencies in England.

The more rural the constituency, the lower the proportion of premises with 5G mobile coverage from all four network operators when outdoors.

In majority rural constituencies, just over 1% of premises had 5G mobile coverage from all four operators when outdoors. This means that almost all premises in majority rural constituencies did not have 5G mobile coverage from all four operators when outdoors. In intermediate (rural or urban) constituencies, 5% of premises had 5G mobile coverage from all four operators when outdoors – 4 percentage points more than in majority rural constituencies. In urban constituencies outside of London, 25% of premises had 5G mobile coverage from all four operators when outdoors; this was considerably higher than in majority rural constituencies. In London, 62% of premises had 5G mobile coverage from all four network operators when outdoors.

Figure B-6: Bar chart showing the proportion of premises with 5G mobile coverage from all four operators when outdoors, by 2021 rural-urban classification of Westminster parliamentary constituencies, January 2025 (Note B-2, Note B-3, Note B-4, Note B-6)
Ofcom's 'very high confidence' estimate has been used in the chart, where there is around a 95% probability of 5G coverage being present from all four operators.



Voice and text coverage

Voice and text not-spots using the official statistics rural-urban classification

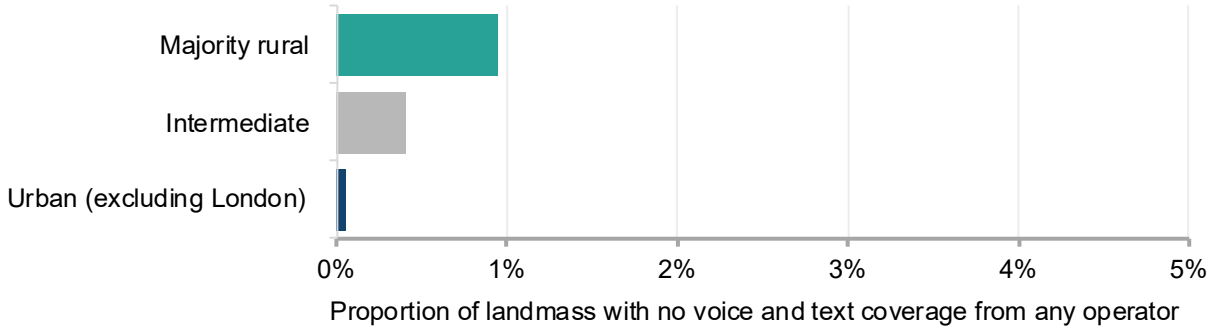
Within the Connected Nations reports, voice and text information corresponds to mobile services that are managed by the mobile network, as opposed to a third-party voice application on a handset. Having strong voice and text coverage is crucial, especially in critical situations, such as when contacting the emergency services. Landmass where there is no voice and text coverage from any operator can be described as a 'voice and text not-spot'. Data are taken from the interim spring update collected for January 2025.

In January 2025, less than 1% of landmass in England were voice and text not-spots, where no voice calls could be made or text messages sent. The bar chart in Figure B-7 shows the proportion of landmass that were voice and text not-spots, by 2021 rural-urban classification of parliamentary constituencies in England.

The more rural the constituency, the higher the proportion of landmass without voice and text coverage; however, for any classification of parliamentary constituency, these voice and text not-spots generally represented less than 1% of landmass. In majority rural constituencies, 0.9% of landmass did not have voice and text mobile coverage from any network operator in January 2025; this was higher than in intermediate (rural or urban) constituencies, of which 0.4% of landmass did not have voice and text coverage. In urban constituencies outside of London, less than 0.1% of landmass did not have voice and text mobile coverage. In London, there were no voice and text not-spots in January 2025.

Figure B-7: Bar chart showing the proportion of landmass with no voice and text coverage from any operator, by 2021 rural-urban classification of Westminster parliamentary constituencies in England, January 2025 (Note B-2, Note B-3, Note B-4)

The horizontal axis has been scaled from 0% to 5% (instead of 0% to 100%) in order to highlight the small differences in the proportions of voice and text not-spots between classifications. London has been excluded from the chart.



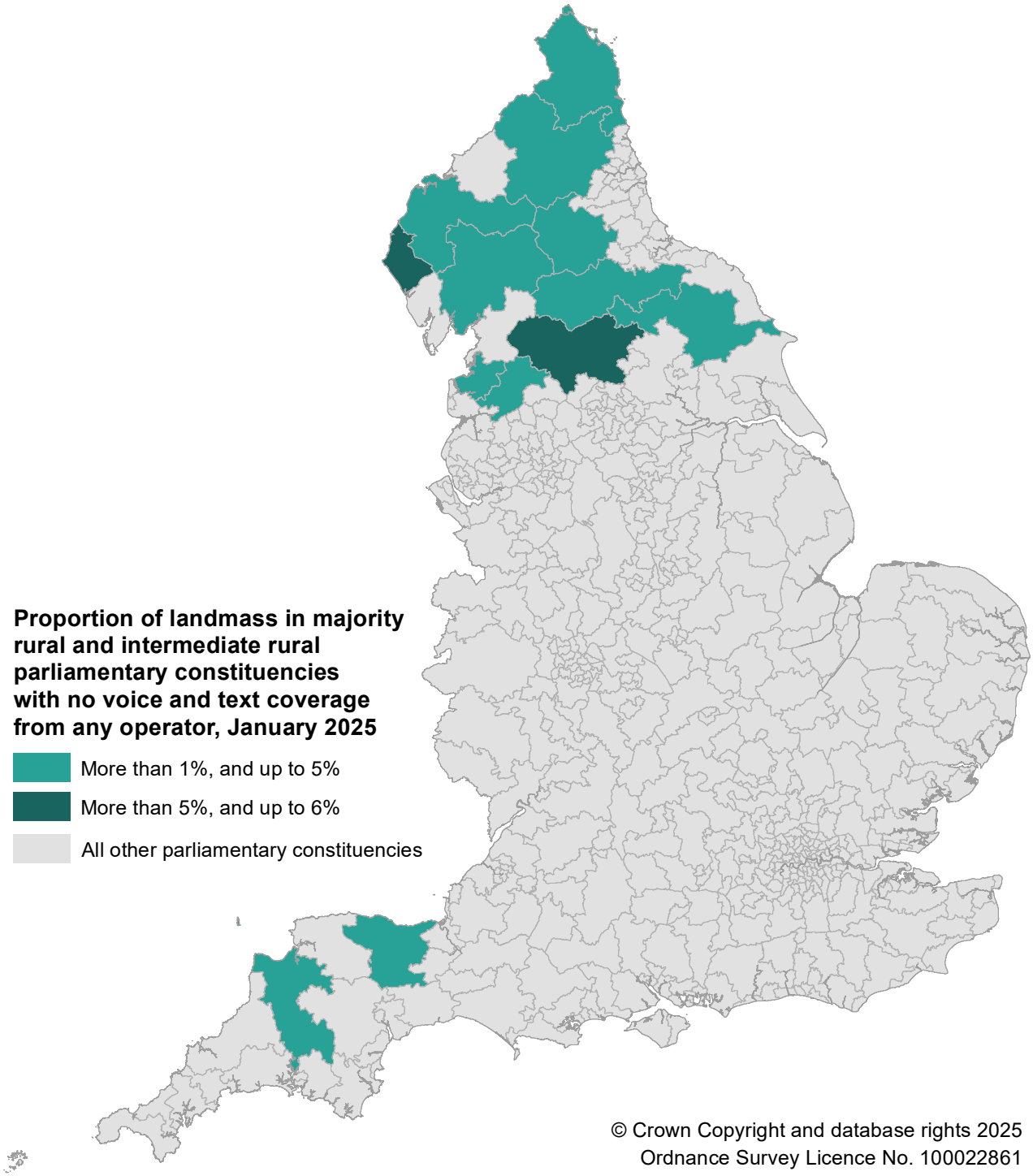
The map in Figure B-8 highlights the majority rural and intermediate rural constituencies where the proportion of landmass with no voice and text coverage is more than 1%. Proportions of voice and text not-spots for all constituencies can be found within the supplementary data tables.

At the time of data collection (January 2025), there were 119 majority rural or intermediate rural Westminster parliamentary constituencies in England:

- In 106 of these constituencies – equivalent to 89% – less than 1% of landmass had no voice and text mobile coverage. In other words, in most majority rural or intermediate rural constituencies, more than 99% of landmass had voice and text coverage from at least one operator and could therefore make voice calls and send text messages.
- In 11 of these constituencies – equivalent to 9% – between 1% and 5% of landmass had no voice and text mobile coverage. These were concentrated in the North of England, as well as in the South West in Somerset and Devon.
- In 2 of these constituencies, more than 5% of landmass had no voice and text mobile coverage. In ‘Whitehaven and Workington’ – an intermediate rural constituency in Cumberland – 6.0% of landmass had no voice and text coverage from any operator in January 2025. In ‘Skipton and Ripon’ – a majority rural constituency in North Yorkshire – 6.1% of landmass had no voice and text coverage; this was the highest of all majority rural and intermediate rural constituencies, but not the highest in England. Instead, ‘Barrow and Furness’ – an intermediate urban constituency in Cumbria – was the highest, as just over 7% of landmass had no voice and text coverage. However, it should be noted that this is a large constituency including nature reserves and sparsely populated areas; these are where the ‘not-spots’ are likely to be focussed.

Figure B-8: Map showing the proportion of landmass in majority rural and intermediate rural Westminster parliamentary constituencies in England, as defined within the 2021 rural-urban classification, with no voice and text coverage from any operator in January 2025

Intermediate urban and urban constituencies are presented in grey. Only majority rural and intermediate rural constituencies where more than 1% of landmass had no voice and text mobile coverage are coloured on the map; the rest are also presented in grey to prevent distraction.



Voice and text coverage from all four operators

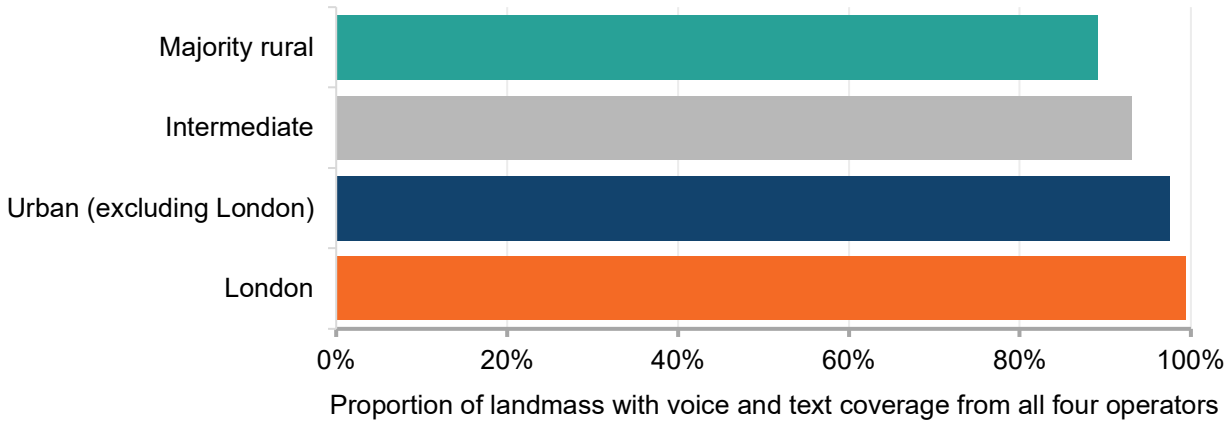
Within the Connected Nations reports, voice and text information corresponds to mobile services that are managed by the mobile network, as opposed to a third-party voice application on a handset. Having strong voice and text coverage is crucial, especially in critical situations, such as when contacting the emergency services. Having network coverage from all four operators is preferable because it maximises coverage, especially in rural areas, and provides greater reliability through redundancy. The proportion of landmass with coverage from all four operators is less than the proportion with coverage from at least one operator. Data are taken from the interim spring update collected for January 2025.

In January 2025, 89% of landmass in majority rural constituencies was covered by all four network operators in terms of voice and text coverage. This was lower than in any other classification of parliamentary constituency. The bar chart in Figure B-9 shows the proportion of landmass where all four operators provide voice and text coverage, by 2021 rural-urban classification of parliamentary constituencies in England.

The more rural the constituency, the lower the proportion of landmass with voice and text coverage from all four network operators.

- In majority rural constituencies, 89% of landmass was covered by all four network operators for voice and text services; in other words, 11% of landmass was not covered by all four operators, limiting connectivity for users.
- In intermediate (rural or urban) constituencies, the proportion of landmass with voice and text coverage from all four network operators was 4 percentage points higher than in majority rural constituencies, at 93%.
- In urban constituencies outside of London, 98% of landmass had voice and text coverage from all four operators; this was 8 percentage points higher than in majority rural constituencies.
- In London, 99% of landmass had voice and text coverage from all four network operators – 10 percentage points more than in majority rural constituencies.

Figure B-9: Bar chart showing the proportion of landmass with voice and text coverage from all four operators, by 2021 rural-urban classification of Westminster parliamentary constituencies in England, January 2025 (Note B-2, Note B-3, Note B-4, Note B-6)



Mobile coverage explanatory notes

- **Note B-1**

Data used in this section are at Westminster parliamentary constituency level. Some caution should be used when considering these results as the data will not distinguish where within a constituency the better mobile coverage is and makes no distinction between the rural and urban areas within each constituency. The parliamentary constituency boundaries used in this analysis relate to the current set of 543 constituencies for England used for the 2024 UK general election.

- **Note B-2**

The 2021 rural-urban classification of Westminster parliamentary constituencies has been used within this publication. 'Intermediate' refers to the grouping of 'intermediate rural' and 'intermediate urban' constituencies. For more information about the classification, see: Rural Urban Classification - GOV.UK.

- **Note B-3**

4G: Fourth generation of mobile systems, launched in the UK in 2012. It is designed to provide faster data download and upload speeds on mobile networks and can also support VoIP services.
5G: Fifth generation of mobile technology standards, launched in the UK in 2020 and used to deliver higher speed data services.

- **Note B-4**

The four main Mobile Network operators referred to in this report are BT/EE, Three, Virgin Media O2 and Vodafone.

- **Note B-5**

Tables showing the data used within this section can be found within the Connectivity and Accessibility supplementary data tables.

- **Note B-6**

Westminster parliamentary constituencies (as of July 2024) that are 'in London' can be defined in two different ways: 1) just constituencies in 'Inner London', or 2) constituencies in both 'Inner London' and 'Outer London'. For the purposes of this publication, constituencies 'in London' refers to only those in 'Inner London'. This is all 'London-area' constituencies, minus those in the 'Outer London-area', as given in the IPSA guidance from the 5 July 2024 General Election.
Included 'London' constituencies are listed within the supplementary data tables.

C. Average travel patterns

The more rural the area the more likely the population is to travel by car or van than by public transport or walking, and the further they are likely to travel.

Average travel patterns – key findings

On average, rural populations travel further and for longer than those in urban areas

- In 2024, on average, people living in rural settlements travelled around 8,600 miles per person; this compared to 5,600 miles per person on average for those living in urban areas.
- The average trip length for those living in rural settlements was 8.9 miles in 2024; this was 45% longer than the average trip length for those living in urban areas (6.1 miles).
- In 2024, on average, there were 969 trips made per person living in rural settlements; this was 6% more than the average number of trips made per person living in urban areas (913 trips).
- In 2024, on average, the total time spent travelling annually per person for those living in rural settlements was 388 hours; this was 31 hours – or around 9% - longer than for those living in urban areas (357 hours).

Rural residents typically rely more heavily on private modes of transportation

- In 2024, the average person in rural areas made 73% of their trips using private transport, equivalent to around 703 trips per person per year.
- In urban areas, private transport accounted for a smaller share of travel; the average person living in urban settlements made 58% of their trips using private transport, equivalent to approximately 529 trips per person per year.

Summary

Considering the difference in travel patterns between those who live in Rural areas and those in Urban areas can provide useful context to potential accessibility challenges. For example, those living in rural areas typically travel further per year to commute to work than people living in urban areas. For more information regarding accessibility issues, see E. Transport connectivity.

In 2024, people living in rural areas relied more heavily on private transport and travelled further than those in urban areas. On average, rural residents made 703 trips by private transport per year, representing 73% of their annual trips. In comparison, urban residents made an average of 529 trips by private transport per year, representing 58% of their annual trips. Public transport use by rural residents was much lower (4% of trips) than by urban residents (10% of trips). Total distance travelled was higher - the average rural resident travelled 8,600 miles, compared with

5,600 miles by urban residents. Journeys were generally longer for those living in rural areas, with the biggest difference seen in surface rail: the average trip was 56 miles – around 74% longer than for those living in urban areas. Average walking trip lengths were similar across both rural and urban respondents, at under 1 mile.

People living in rural areas travel further and for longer for most trip purposes than those living in urban areas. The biggest relative differences were for shopping and escorting, where rural residents travelled nearly twice as far as urban residents (1,040 miles versus 540 miles per year for shopping). Visiting friends made up the largest share of distance travelled annually, at 1,710 miles for rural residents and 1,100 miles for those living in urban areas (both around 20% of total travel). Journeys of rural residents were typically longer, with an average trip length of 8.9 miles - 45% higher than the 6.1 miles average trip of those living in urban areas. Rural residents spent an average of 388 hours travelling in 2024 - 31 hours more than for urban residents.

Children living in rural areas were more reliant on motorised transport and typically travelled much further to get to school than those living in urban areas. In 2024, 41% of school journeys made by children living in rural settlements were made by car or van and 30% by public transport, whereas for children in urban areas nearly half of all school journeys (49%) were made by walking or cycling. Journey lengths differed substantially: primary-aged children in smaller rural settlements travelled an average of 2.9 miles to school, around twice as far as those living in urban areas (1.4 miles), while secondary-aged children in smaller rural settlements travelled 8.8 miles - more than three times the average of 2.7 miles for children living in urban areas.

Background information

The National Travel Survey (NTS), published annually by the Department for Transport, is a household survey on personal travel, with an issued sample size of 31,680 addresses in 2024, to inform the development of policy (Note C-1). As the primary source of data on personal travel patterns; it collects information on how, why, when and where people travel as well as factors affecting travel. Travel patterns are measured using the average number of trips, the average distance travelled, the average trip length, and the average time spent travelling per person per year.

The detailed data have been simplified within this publication as follows:

- Some **modes of transport** have been combined. ‘Active travel’ represents walking and cycling. ‘Private transport’ includes car or van drivers and passengers, travel by motorcycle, and other private transport. ‘Public transport’ represents buses, trains, taxis or minicabs, and other forms of public transport.
- Some **travel purposes** have been combined. ‘Escort’ represents those escorting for education (i.e. taking children to school) as well as other reasons for escorting. ‘Visit friends’ represents visiting at any location, whether at a private home or elsewhere.

See Note C-5 for more information about the modes and purposes specified within the Survey.

The latest data (2024) use the 2021 rural-urban classification of output areas. Earlier years use the 2011 classification and are not comparable. As a result, the 2024 figures are presented as standalone statistics and no trends are shown.

Average travel patterns by mode of transport

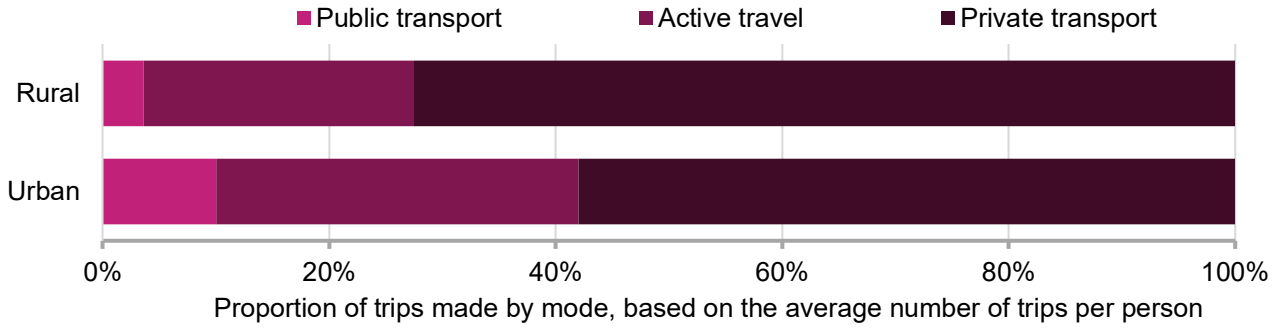
Travel patterns of course vary, with people using different modes of transport depending on journey purpose, distance, and local availability. National Travel Survey data show clear differences between rural and urban residents in the number of trips made, the total distance travelled, and the average trip length by mode of transport. These patterns highlight the greater reliance on private transport in rural areas and the relatively higher use of public and active travel in urban settings.

Average number of trips made by mode of transport

The bar chart in Figure C-1 shows the proportion of trips made by mode of transport and 2021 rural-urban classification; it is based on the average number of trips per person in 2024.

Public transport accounted for the smallest proportion of trips for both rural and urban residents. In 2024, on average people living in rural settlements made around 4% of their trips by public transport, equivalent to approximately 35 trips per person per year. For those living in urban settlements, 10% of trips were made by public transport, equivalent to around 91 trips per person per year.

Figure C-1: Bar chart showing the proportion of trips made by main mode of transport and 2021 rural-urban classification, based on the average number of trips per person in 2024
The legend is presented in the same order and orientation as the stacked bars. The underlying data for this chart can be found in Table 2b in Worksheet CA within the supplementary data tables.



People living in rural settlements were more reliant on private modes of transport, such as cars, vans and motorcycles. In 2024, the average person in rural areas made 73% of their trips using private transport, equivalent to around 703 trips per person per year or an average of 14 trips per week. In urban areas, private transport accounted for a smaller share of travel. The average person living in urban settlements made 58% of their trips using private transport, equivalent to approximately 529 trips per person per year or an average of around 10 trips per week.

In 2024, active travel accounted for 24% of trips made by the average person living in rural settlements, and for 32% of trips made by the average person in urban areas.

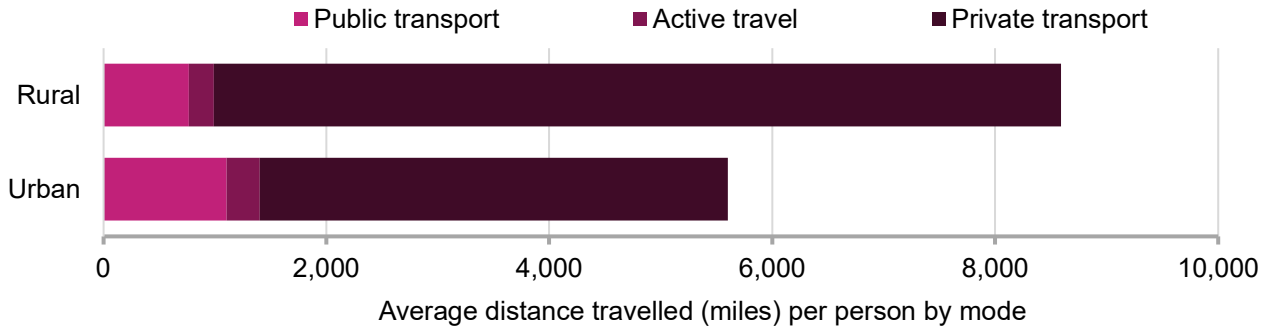
The more rural the settlement type, the greater the reliance on private transport and the lesser the reliance on public transport. The number and proportion of trips made by mode of transport and detailed 2021 rural-urban classification can be found in Worksheet CA within the supplementary data tables.

Average total distance travelled by mode of transport

People living in rural areas typically travel much further than those living in urban areas. In 2024, on average, people living in rural settlements travelled around 8,600 miles per person. In comparison, people living in urban areas travelled 5,600 miles per person on average. However, the average distance travelled varies depending on the mode of transportation. The bar chart in Figure C-2 shows the average distance travelled by mode of transport and 2021 rural-urban classification; it is based on the average number of miles travelled per person in 2024.

Figure C-2: Bar chart showing the average distance travelled by main mode of transport and 2021 rural-urban classification in England, based on the average number of miles travelled per person in 2024

The legend is presented in the same order and orientation as the stacked bars. The underlying data for this chart can be found in Table 1 in Worksheet CB within the supplementary data tables.



There were differences in the average total distance travelled per person by walking/cycling (active travel) or by public transport between those living in rural settlements and urban areas. For example, in 2024 the average person living in rural settlements travelled 770 miles by public transport, compared to 1,110 miles travelled by the average person in urban areas. However, there was a considerable difference in the average total distance travelled by private modes of transport, such as cars, vans, or motorcycles. On average, 88% of the distance travelled annually by those living in rural settlements was by private modes of transport, equivalent to 7,600 miles per person. In comparison, in urban areas, 75% of the distance travelled annually was by private modes of transport, equivalent to 4,200 miles per person.

The more rural the settlement type, the greater the average distance travelled per person, and the greater the reliance on private modes of transport. The average distance travelled by mode of transport and detailed 2021 rural-urban classification can be found in Worksheet CB within the supplementary data tables.

Average trip length by mode of transport

The average trip length varies depending on the mode of transportation. Table C-1 shows the average trip length (in miles) for selected modes of transport by 2021 rural-urban classification in 2024. A full table of average trip lengths for all modes of transport specified in the National Travel Survey can be found in Worksheet CC within the supplementary data tables.

The average trip length when travelling by public transport was considerably longer for those living in rural settlements than for those in urban areas. In 2024, the average trip by surface rail was 56 miles for rural residents: 74% longer than for those living in urban areas. The average trip by local bus was 7 miles for rural residents, compared to just under 5 miles for those living in urban areas.

However, the average trip length when travelling by a non-local bus was 13% lower for rural residents than for urban residents, at 89 miles and 101 miles, respectively.

People living in rural areas travelled further when using private modes of transport. When driving a car or van, the average trip length of those living in rural areas was 10 miles - 33% longer than the average for those living in urban areas. When taking a taxi or minicab, the average trip length for rural residents was nearly 11 miles - 64% longer than for urban residents. The average trip length by walking was similar between residents of rural and urban areas, at less than 1 mile.

Table C-1: Average trip length (miles) for selected modes of transport, by 2021 rural-urban classification in England, 2024

The average trip length is rounded to the nearest 0.1 miles. 'Car or van' represents drivers, not just passengers; for those not driving, the average trip length may be different. 'All modes' represents any mode of transport - not just those specified in the table.

Rural-Urban Classification 2021	Walk	Car or van	Local bus	Non-local bus	Surface rail	Taxi or minicab	All modes
Rural	0.7	10.2	7.2	88.6	56.0	10.5	**8.9**
Urban	0.7	7.7	4.9	101.3	32.2	6.4	**6.1**
England	**0.7**	**8.2**	**5.1**	**105.2**	**33.7**	**6.7**	**6.6**

Average travel patterns by trip purpose

Travel patterns vary by trip purpose, with rural and urban residents making different types of journeys and travelling different distances for them. National Travel Survey data show that people living in rural areas generally travel further for most purposes than those in urban areas, reflecting differences in local service accessibility and journey needs. Distinct patterns emerge across the number of trips made, the distances travelled, and the typical length and duration of journeys, highlighting how trip purpose affects overall travel patterns.

Average trip length by trip purpose

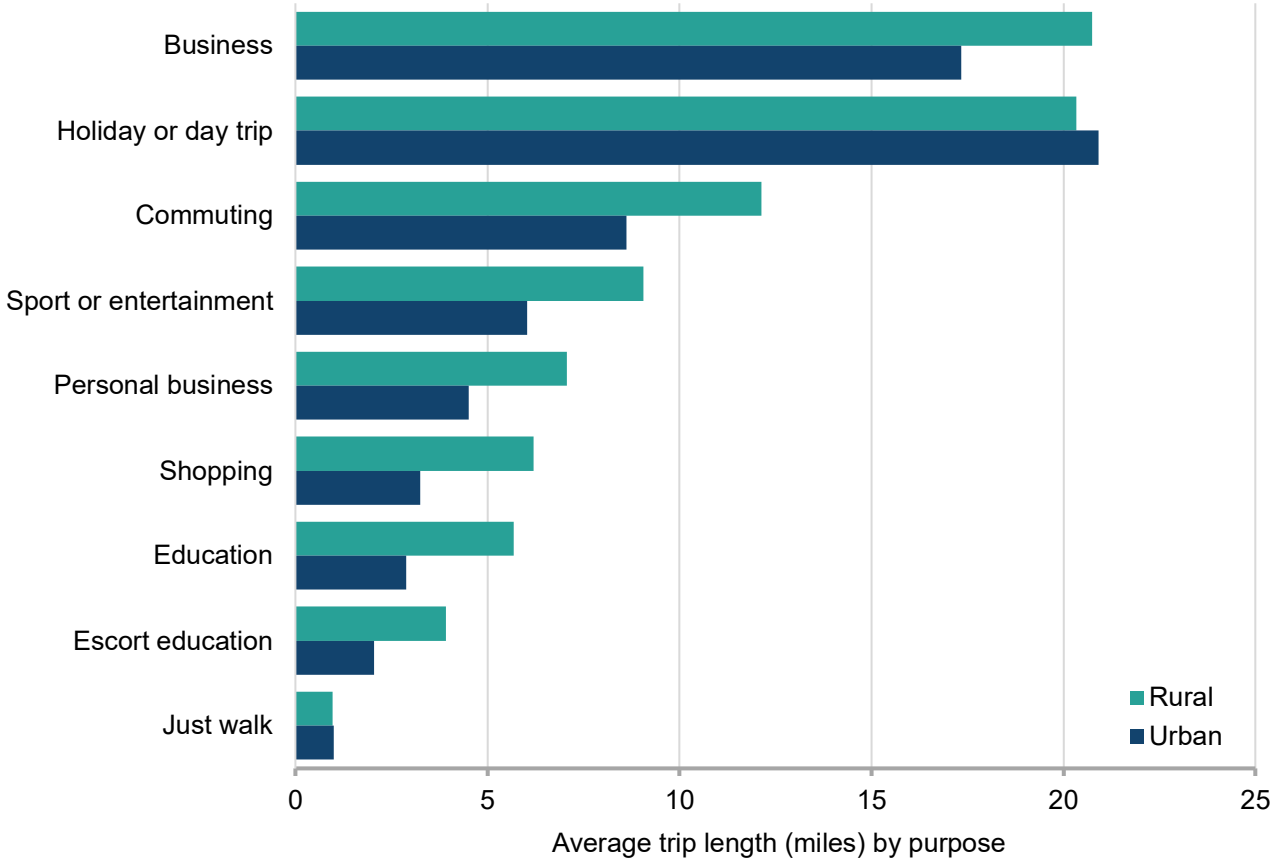
The average trip length for any purpose for those living in rural settlements was 8.9 miles; this was 45% longer than the average trip length for those living in urban areas (6.1 miles). However, the average trip length varies depending on the trip purpose. The bar chart in Figure C-3 shows the average trip length (in miles) for selected purposes by 2021 rural-urban classification in 2024.

In 2024, for almost all purposes shown on the chart, the average trip length for those living in rural settlements was greater than for those in urban areas. With the exception of 'holidays or day trips' and walking, rural residents travelled around 3 miles further per trip than those living in urban areas. As a result, for shorter journeys – such as, for example, travel to education, to escort, or to go shopping - the average trip length for those living in rural settlements was nearly twice the trip length of those living in urban areas.

For most trip purposes, the more rural the settlement type, the greater the average trip length. The average trip length by purpose (for all purposes specified within the National Travel Survey) and detailed 2021 rural-urban classification can be found in Worksheet CE within the supplementary data tables.

Figure C-3: Bar chart showing the average trip length for selected trip purposes by 2021 rural-urban classification in England, 2024 (Note C-5)

The legend is presented in the same order and orientation as the clusters of bars.



In 2024, on average people living in rural areas travelled furthest per trip for business purposes, at nearly 21 miles; this compares with an average of just over 17 miles for those living in urban areas. 'Holidays or day trips' also required considerable travel, with the average trip length being just over 20 miles for those living in rural areas. In urban areas, the average trip length was nearly 21 miles – this was greater than for any other purpose.

Table C-2: Average trip length (miles) for selected trip purposes by 2021 rural-urban classification in England, 2024 (Note C-5)

The average trip length per person is rounded to the nearest 0.1 miles.

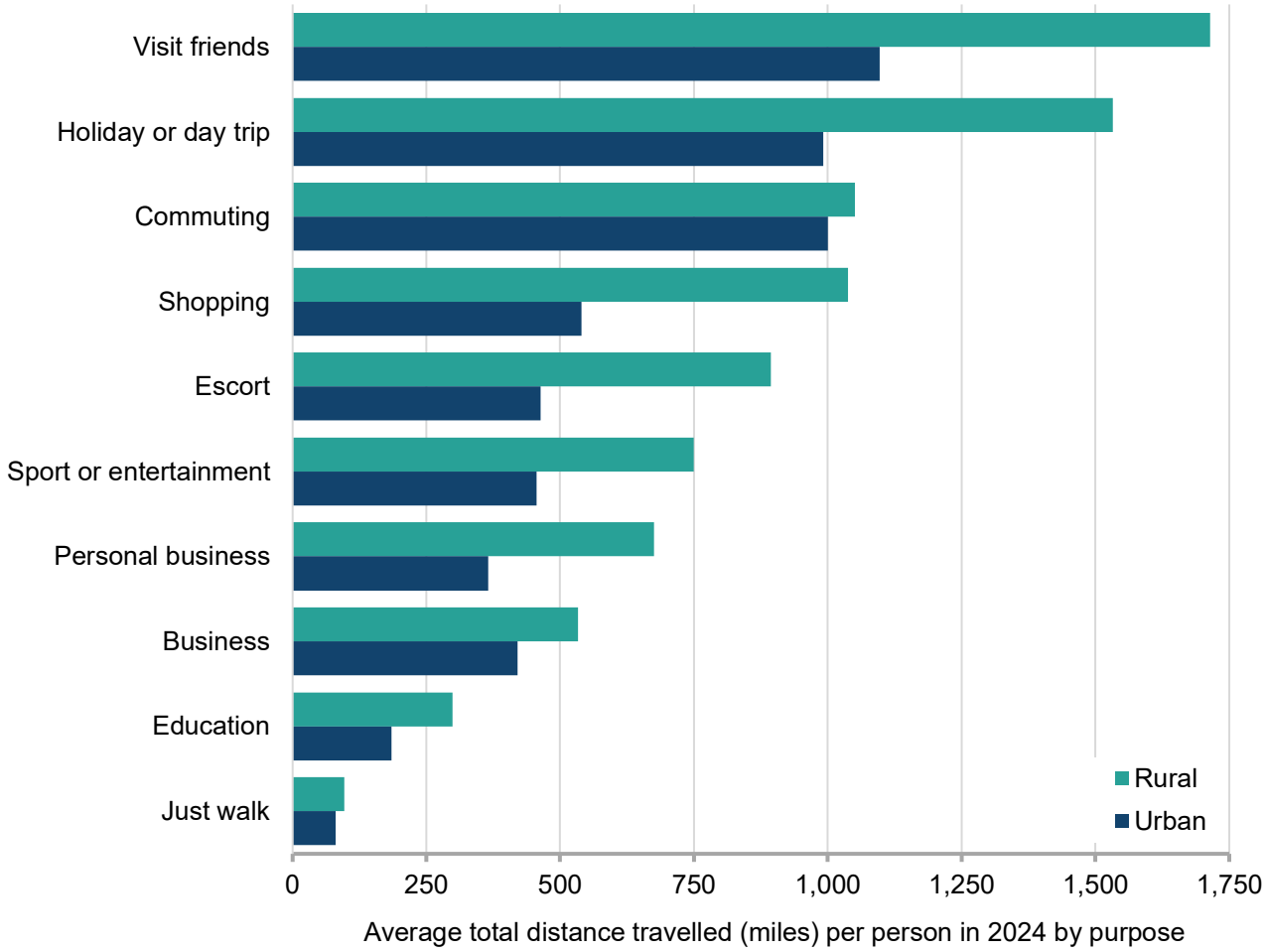
Trip purpose	Rural	Urban
Business	20.7	17.3
Holiday or day trip	20.3	20.9
Commuting	12.1	8.6
Sport or entertainment	9.1	6.0
Personal business	7.1	4.5
Shopping	6.2	3.2
Education	5.7	2.9
Escort education	3.9	2.0
Just walk	1.0	1.0

Average total distance travelled by trip purpose

People living in rural areas typically travel much further than those living in urban areas. In 2024, on average, people living in rural settlements travelled 8,600 miles per person. In comparison, people living in urban areas travelled 5,600 miles per person on average. However, the average distance travelled varies depending on the trip purpose. The bar chart in Figure C-4 shows the average total distance travelled annually by trip purpose and 2021 rural-urban classification; it is based on the average number of miles travelled per person in 2024. The underlying data is given in Table C-3.

Figure C-4: Bar chart showing the average total distance travelled annually for selected trip purposes and 2021 rural-urban classification, in England, based on the average number of miles travelled per person in 2024 (Note C-5)

The legend is presented in the same order and orientation as the clusters of bars. 'Other' purposes have been excluded from the chart as they represented fewer than 10 miles per person in 2024.



In 2024 on average, people living in rural settlements travelled nearly twice as far to escort others, go shopping, or for other personal business than those living in urban areas. For visiting friends, sport or entertainment, holidays or day trips, or for education, people living in rural settlements travelled considerably further annually than those living in urban areas. People living in rural areas travelled slightly further annually for business purposes and also did so when just going for a walk. The average distance travelled annually per person for commuting was similar between rural and urban areas.

Table C-3: Average total distance travelled annually by trip purpose and 2021 rural-urban classification, based on the average number of miles travelled per person in 2024 (Note C-5)
The total distance travelled per person is rounded to the nearest 10 miles; this is also given as a proportion of the total distance travelled for any purpose, rounded to the nearest 1%. 'Other' purposes have been excluded from the table as they represented fewer than 10 miles travelled per person in 2024.

Trip purpose	Rural - Total	Rural - Proportion	Urban - Total	Urban - Proportion
Visit friends	1,710	20%	1,100	20%
Holiday or day trip	1,530	18%	990	18%
Commuting	1,050	12%	1,000	18%
Shopping	1,040	12%	540	10%
Escort	890	10%	460	8%
Sport or entertainment	750	9%	460	8%
Personal business	680	8%	370	7%
Business	530	6%	420	8%
Education	300	3%	180	3%
Just walk	100	1%	80	1%

In both rural and urban areas in 2024, on average visiting friends accounted for the greatest distance travelled annually at 1,710 miles and 1,100 miles respectively – in both cases accounting for around 20% of the total distance travelled annually. Holidays and day trips, commuting, and shopping each accounted for substantial shares (at least 10% each) of the distance travelled by the average person.

Trip lengths varied across these purposes, and the total distance travelled typically reflects a small number of longer journeys alongside many shorter trips that accumulate over time. For example, Table C-3 shows that shopping represented 12% of the total distance travelled per person living in rural areas in 2024, equivalent to 1,040 miles. However, the average trip length to go shopping (as given in Table C-2) was just over 6 miles for those living in rural areas, suggesting shopping is a frequent yet short travel purpose.

For most trip purposes, the more rural the settlement type, the greater the average distance travelled per person. The average distance travelled by trip purpose and detailed 2021 rural-urban classification can be found in Worksheet CD within the supplementary data tables.

Average time spent travelling by trip purpose

In 2024, on average, the total time spent travelling annually per person for those living in rural settlements was 388 hours; this was 31 hours – or around 9% - longer than for those living in urban areas (357 hours). The average time spent travelling annually varies depending on the trip purpose. The bar chart in Figure C-5 shows the average time spent travelling (in hours per year) for selected trip purposes by 2021 rural-urban classification in 2024.

Figure C-5: Bar chart showing the average time spent travelling annually per person for selected trip purposes by 2021 rural-urban classification in England, 2024 (Note C-5)
The legend is presented in the same order and orientation as the clusters of bars.

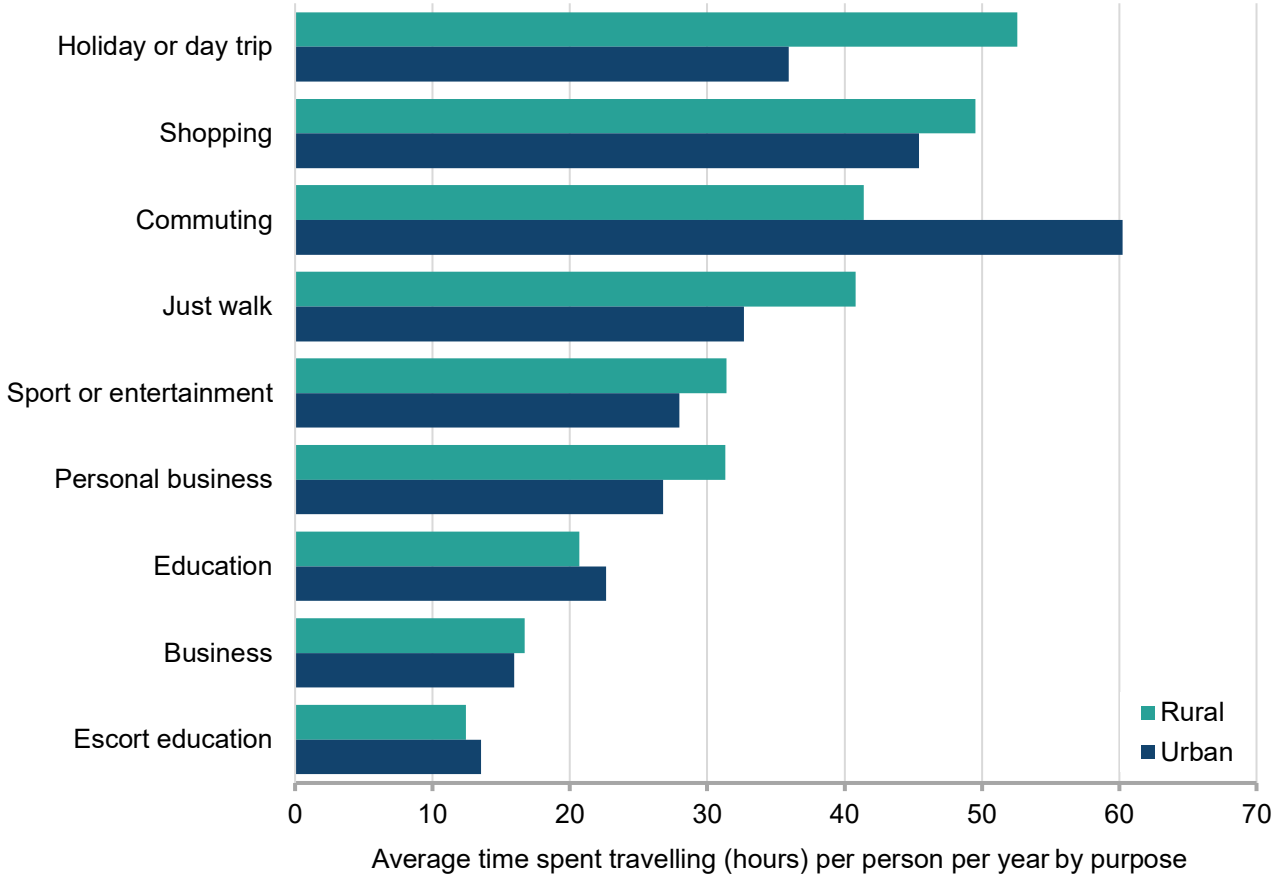


Table C-3: Average time spent travelling (hours) annually per person for selected trip purposes by 2021 rural-urban classification in England, 2024
The average time spent travelling per person per year has been rounded to the nearest 1 hour.

Trip purpose	Rural	Urban
Holiday or day trip	53	36
Shopping	50	45
Commuting	41	60
Just walk	41	33
Sport or entertainment	31	28
Personal business	31	27
Education	21	23
Business	17	16
Escort education	12	14

For commuting, education, and escorting those in education, on average those living in rural settlements spent less time travelling annually than those living in urban areas. This could reflect a number of factors including lower speed limits and traffic congestion in urban areas (see DfT's road congestion and travel time statistics).

For all other purposes, the average total time travelling annually was greater for those living in rural settlements.

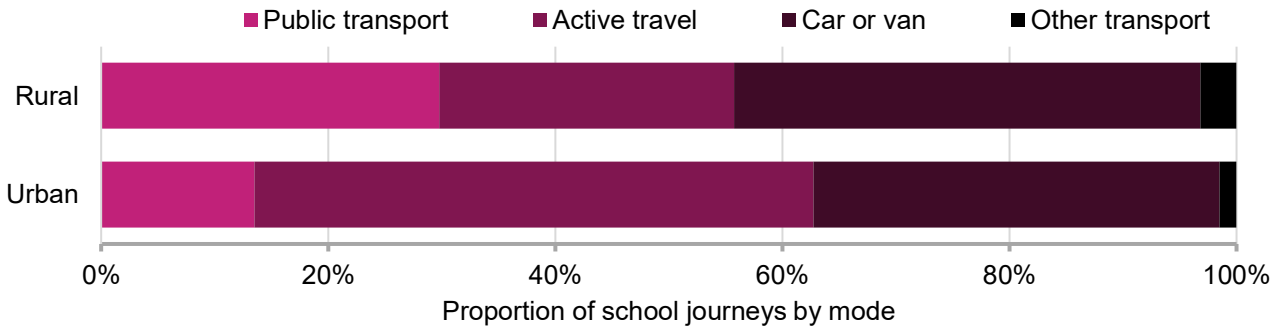
In 2024, the average time spent travelling per person for holidays and day trips in particular was considerably longer for those living in rural areas than for those in urban areas, at 53 hours and 36 hours, respectively. When travelling for business, sport/entertainment, shopping, personal business, or to escort, the difference between the average time spent travelling per person in rural and urban areas was fewer than 5 hours.

For some purposes, the more rural the settlement type, the more time spent travelling per person. The average time spent travelling per person by purpose (for all purposes specified within the National Travel Survey) and detailed 2021 rural-urban classification can be found in Worksheet CF within the supplementary data tables.

Journeys to school

The proportion of trips to and from school by mode, as well as the average length of these trips, can be used to look at differences in travel patterns for school children living in rural and urban areas. The bar chart in Figure C-6 shows the proportion of school journeys by mode of transport and 2021 rural-urban classification of residence; it is based on children aged between 5 and 16 years and whether they live in rural or urban areas, and includes journeys both to and from school (irrespective of whether the school is in a rural or urban areas).

Figure C-6: Bar chart showing the proportion of school journeys by main mode of transport, and 2021 rural-urban classification of residence, in England, 2024 (Note C-6)
The legend is presented in the same order and orientation as the stacked bars. The modes specified in the chart differ from the modes specified earlier in this section. The data for this chart can be found in Worksheet CF within the supplementary data tables.



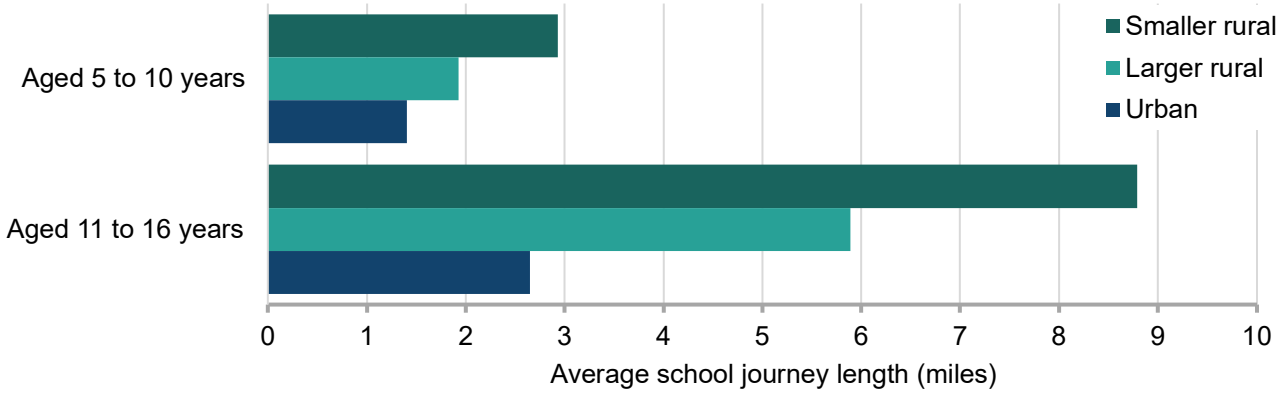
In 2024, children living in rural settlements most commonly travelled to school by car or van, which accounted for 41% of journeys. Public transport made up a further 30%, while 26% of journeys were completed by walking or cycling (active travel). For children in urban areas, active travel was the most common mode, representing 49% of school journeys - nearly twice the share for those in rural settlements. Car or van travel accounted for 36% of journeys in urban areas, followed by public transport at 13%.

These differences reflect the greater reliance on motorised transport among children living in rural areas, who typically travel longer distances to get to school. The difference is likely greater between primary and secondary school ages, with primary schools likely to be in rural settlements, but second schools less so.

Older children (i.e. those at secondary school) typically travel further to get to school than younger children. The more rural the area, the longer the average school journey, regardless of age. The bar chart in Figure C-7 shows the average school journey length (in miles) by age group and 2021 rural-urban classification in 2024.

Figure C-7: Bar chart showing the average school journey length by age group and 2021 rural-urban classification in England, 2024

The legend is presented in the same order and orientation as the clusters of bars. The data for this chart can be found in Worksheet CF within the supplementary data tables.



Among those aged 5 to 10 years, children in smaller rural settlements travelled an average of 2.9 miles to school, compared with 1.9 miles in larger rural settlements and 1.4 miles in urban areas. This means that, on average, primary school-aged children living in smaller rural settlements travel around twice as far as those living in urban areas.

For children aged 11 to 16 years, those living in smaller rural settlements travelled an average of 8.8 miles to school, compared with 5.9 miles in larger rural settlements and 2.7 miles in urban areas. On average, secondary school-aged children living in smaller rural settlements travel more than three times further to get to school than those living in urban areas.

Average travel patterns explanatory notes

- **Note C-1**

The results are weighted. Weights are applied to adjust for non-response to ensure the characteristics of the achieved sample match the population and for the drop off in trip recording. Of the 31,680 addressed issued the survey, 7,530 households participated fully. A further 1,312 households participated in the interviews but did not complete a 7-day diary, meaning they cannot be used for trip-level analysis. However, their participation in interviews mean their data is included in all analysis at household, individual, and vehicle level. The survey results are subject to sampling error. Further information can be found within the National Travel Survey technical report.

- **Note C-2**

Tables of the data seen in this section are available in the connectivity and accessibility supplementary data tables.

- **Note C-3**

Sources: DfT National Travel Survey.

- **Note C-4**

Figures in this section have been rounded. Proportions are typically rounded to the nearest 1%. Distances are typically rounded to the nearest 1 mile, or the nearest 0.1 mile for small distances (such as trip lengths). Time spent travelling is rounded to the nearest 1 hour.

- **Note C-5**

Purposes for travel include:
Commuting – trips to a usual place of work from home, or from work to home
Business – personal trips in course of work, including all work trips by people with no usual place of work (e.g., site workers) and those who work from home
Education – trips to school or college by students
Escort – when a traveller has no purpose of their own, other than to accompany another person (e.g., taking a child to school)
Shopping – all trips to shops or from shops to home (with or without purchase or intention to buy)
Personal business – visits to services (e.g., hairdressers, launderettes, dry-cleaners, banks)
Visit friends – visits to friends or relatives, either at a private home or elsewhere.
Sport or entertainment – all types of entertainment or sport, clubs, etc.
Holiday or day trip – trips within Great Britain to/from any holiday, or trips for pleasure within a single day.
Just walk – a trip for no particular reason other than to walk for recreational/exercise purposes.

Active travel includes walking and cycling. Walking includes all travel on foot. It is also used when respondents ride in non-motorised wheelchairs, prams or pushchairs, as well as when they ride on toy pedal cycles, roller-skates, skateboards, non-motorised scooters, or when they jog. For example, children who accompany their parents on a visit to the shops on toy pedal cycles (where the parents are walking) are coded as having walked there. E-bikes are included within the mode of pedal cycle.

Other private transport includes electric scooters, mobility scooters, motorised wheelchairs, ambulances, hospital cars, caravans, dormobiles, quad bikes, minibuses and private hire bus (including school bus).

Other public transport includes air, ferries and light rail.

- **Note C-6**

For the journey to school statistics, modes of transport differ slightly from other subsections. In this analysis, public transport represents buses (including private school buses and local buses) and surface rail.

- **Note C-7**

For some commentary in this section, only selected trip purposes are presented. For example, the raw data as from DfT presents ‘visiting friends at a private home’ and ‘visiting friends elsewhere’ separately. In some instances (such as in Figure C-4) it is possible to combine these two purposes. However, in many cases it is not possible to combine them due to the method of calculation. In these circumstances, we have been selective about which purposes we present in the main report for brevity. However, the complete analysis of all purposes can be found within the connectivity and accessibility supplementary data tables.

- **Note C-8**

This publication was developed using support from generative AI tools to assist with drafting. All analysis, interpretation and final wording were produced, checked and quality-assured by Defra statisticians in line with the Code of Practice for Statistics.

D. Access to vehicles and charging infrastructure

Households in majority rural authorities are less likely to have a plug-in vehicle, but the provision of public charging is proportionally higher per vehicle compared with urban authorities.

Access to vehicles and charging infrastructure - key findings

Rural households were more likely to have access to multiple vehicles

- 51% of rural households had two or more cars or vans in 2024, compared with 31% in urban areas.
- Only 10% of rural households had no car or van in 2024, compared with 24% in urban areas.
- In smaller rural settlements specifically, just 8% of households had no car or van, whilst 59% had two or more vehicles.

Plug-in and hybrid electric vehicles were the most common fuel types for new cars

- In September 2025, plug-in vehicles accounted for 24% of new (less than 1 year old) cars registered in majority rural authorities.
- Hybrid electric cars were the most common fuel type among new cars in majority rural authorities (34%), overtaking petrol (32%).

Proportionally more public electric vehicle chargers in majority rural authorities

- In majority rural authorities, there were 580 public chargers per 10,000 licensed plug-in vehicles, as of January 2026. This compares with 281 public chargers per 10,000 plug-in vehicles registered in urban authorities outside of London.
- 10% of all publicly available electric vehicle chargers were located in majority rural authorities. This proportion is higher than the 8% of licensed plug-in vehicles registered in majority rural authorities.

Proportionally fewer public rapid chargers in majority rural authorities

- In majority rural authorities, 25% of public electric vehicle chargers had a power rating of at least 50kW, as of January 2026. This compares with 29% of public chargers in urban authorities outside of London.

Summary

Having access to (or owning) a car is important in rural areas for accessing services, work, and other activities since public transport is less widely available. Choosing vehicles powered by electricity rather than petrol or diesel is becoming more popular, particularly in the last few years.

Rural households are more likely to have multiple vehicles than urban households. 51% of rural households had two or more cars or vans, compared to 31% of households in urban areas. In smaller rural settlements specifically, 59% of households had two or more cars or vans, compared to 44% of households in larger rural settlements. 10% of households in rural areas had no car or van in 2024; this compares to 24% of households in urban areas.

Hybrid electric and plug-in vehicles have become increasingly more common in recent years. In September 2025, within majority rural authorities, of all new cars (i.e. less than 1 year old), hybrid electric vehicles were slightly more common than petrol-fuelled cars, representing 34% and 32% of the fleet respectively. 24% of new cars in majority rural authorities were plug-in vehicles. Diesel is the least common fuel type of newer cars (i.e. less than 4 years old). Trends in fuel types by age of the vehicle are similar between majority rural authorities and urban authorities outside of London, although diesel-fuelled vehicles were slightly more common in majority rural authorities, whilst plug-in vehicles were slightly less common. Of all vehicles on the road regardless of age, petrol-fuelled vehicles were the most common and diesel-fuelled were the second most common; this was true for all authority types.

As of January 2026, 10% of all publicly available electric vehicle chargers are located in majority rural authorities. This proportion is higher than the 8% of licensed plug-in vehicles that are registered in majority rural authorities. Outside of London, the more rural the authority type, the higher the number of public electric vehicle chargers per plug-in vehicle. In majority rural authorities, there were 580 public chargers per 10,000 licensed plug-in vehicles, i.e. around 6 chargers per 100 plug-in vehicles registered in these authorities. In comparison, in urban authorities outside of London, there were 281 public chargers per 10,000 plug-in vehicles, i.e. around 3 chargers per 100 plug-in vehicles registered in these authorities. Majority rural authorities had proportionally fewer publicly available rapid chargers (with a power rating of at least 50kW) than intermediate rural authorities, but proportionally more than the more urban authorities in England.

Car availability

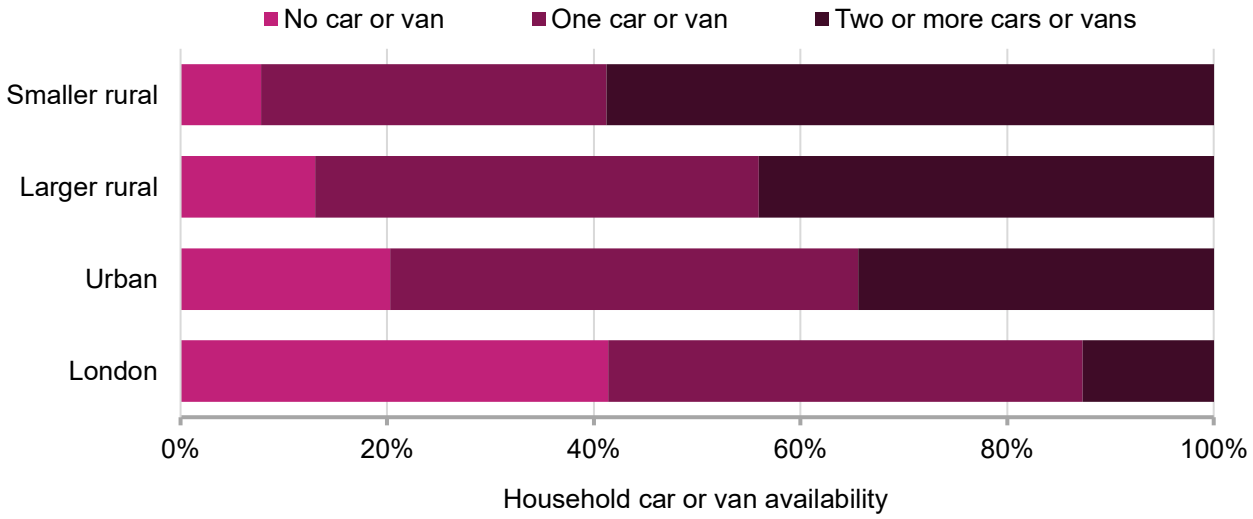
Having access to (or owning) a car is important in rural areas for accessing essential services, work, and other activities since public transport is less likely to be available or practicable. Section C provides more detail regarding travel patterns, particularly by public transport.

The National Travel Survey (NTS) is a household survey of personal travel; findings are published annually, with the latest being for 2024.

- Overall, 10% of households in rural areas had no car or van in 2024; this compares to 24% of households in urban areas including London.
- 51% of rural households had two or more cars or vans, compared to 31% of households in urban areas including London.

The bar chart in Figure D-1 shows car availability for households in England, by detailed 2021 rural-urban classification, as presented in the latest National Travel Survey (Note D-2). The more rural an area is, the lower the proportion of households without access to a car or van (and similarly, the higher the proportion with access to multiple vehicles).

Figure D-1: Bar chart showing household car or van availability by 2021 rural-urban classification in England, 2024 (Note D-1, Note D-4, Note D-6)
The legend is presented in the same order and orientation as the stacked bars. 'Urban' excludes London. The underlying data can be found in Worksheet DA within the supplementary data tables.



In smaller rural settlements, just 8% of households did not have access to a car or van in 2024. In larger rural settlements, 13% of households did not have access to a car/van. In urban areas outside of London, 20% of households did not have access to a car or van in 2024. In London, 41% of households did not have access to a car or van in 2024.

Multi-car households were particularly prevalent in rural areas. In smaller rural settlements, 59% of households had access to two or more cars or vans in 2024. This compares with 44% of households in larger rural settlements , and 34% of households in urban areas outside of London. Just 13% of households in London had access to two or more cars or vans in 2024.

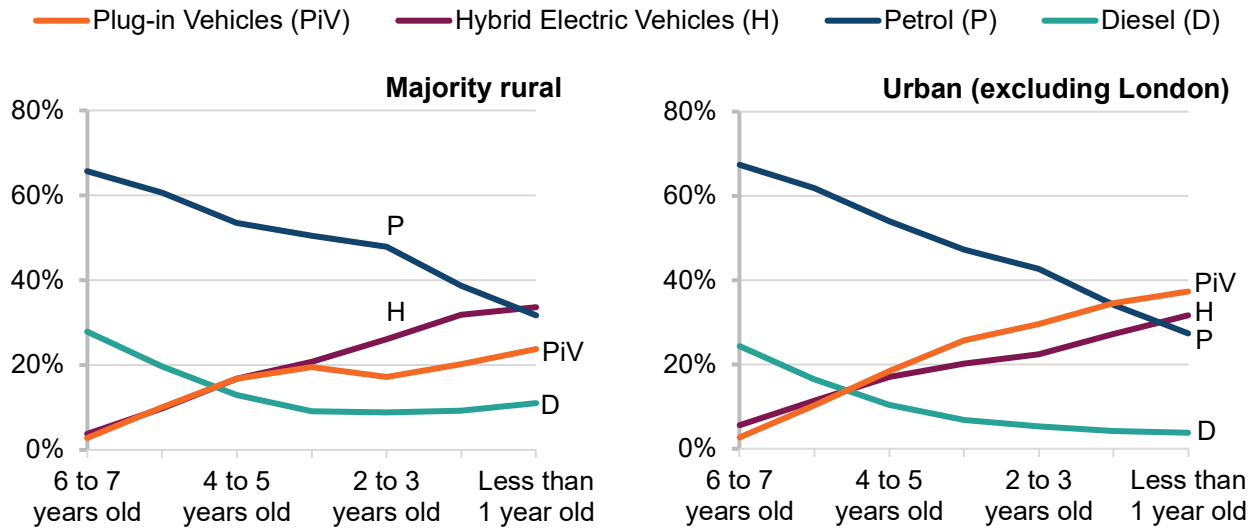
Fuel types

Considering the types of cars in use in rural areas is important as electric vehicles become more prevalent and rely on charging infrastructure. Most cars in England are either Petrol-fuelled, Diesel-fuelled, or Electric (including hybrid electric, battery electric, and plug-in hybrid electric). Other fuel types including liquefied petroleum gas (LPG), biofuels, steam, and experimental technologies are used by very small proportions of road vehicles.

Fuel types of newer vehicles

The line charts in Figure D-2 show the proportion of each fuel type (Diesel, Petrol, Hybrid Electric, or Plug-in Vehicles) for licensed road using cars by age of the vehicle as determined by the year of first registration. The left-hand chart focusses on vehicles registered in majority rural authorities, whilst the right-hand chart focusses on those registered in urban authorities outside of London, as defined within the 2021 rural-urban classification. Road using vehicles includes both privately-owned and company cars.

Figure D-2: Line charts showing the proportion of currently licensed road-using cars by fuel type and age for those registered in majority rural authorities (left-hand chart) and urban authorities outside of London (right-hand chart), as at September 2025 (Note D-4, Note D-5)
"Other fuel types" are not included on the charts, but represented less than 1% of road-using cars. The underlying data can be found in Worksheet DB within the supplementary data tables.



Among cars currently licensed on the road at the end of September 2025, fuel types strongly depends on the age of the vehicle and on whether the vehicle is registered in majority rural authorities or in urban authorities outside London. In both area types, newer cars are less likely to be petrol-fuelled and more likely to be plug-in or hybrid electric than older cars. For example, among cars aged 6 to 7 years, petrol makes up around 66% of cars in majority rural authorities and 67% in urban authorities outside London, while plug-in vehicles only make up around 3%. For cars less than 1 year old, the proportion of petrol-fuelled cars falls to 32% in majority rural authorities and 27% in urban authorities outside London.

The proportion of plug-in vehicles increases steadily for newer age groups. In majority rural authorities, the proportion of plug-in vehicles increases from 3% of cars aged 6 to 7 years to 24% of cars less than 1 year old. In urban authorities outside London, there is a greater proportional increase over the same age range, with 37% of cars less than 1 year old using plug-in technologies. The proportion of hybrid electric vehicles also increases the younger the vehicle: from 4% to 34% in majority rural authorities, and from 6% to 32% in urban authorities outside London.

In contrast, the proportion of diesel-fuelled cars declines sharply with newer vehicles. Diesel falls from 28% of cars aged 6 to 7 years to 11% of cars less than 1 year old in majority rural authorities, and from 24% to 4% in urban authorities outside London. However, in majority rural authorities, the proportion of diesel-fuelled cars has been increasing slightly for the newest vehicles (i.e. those less than 2 years old).

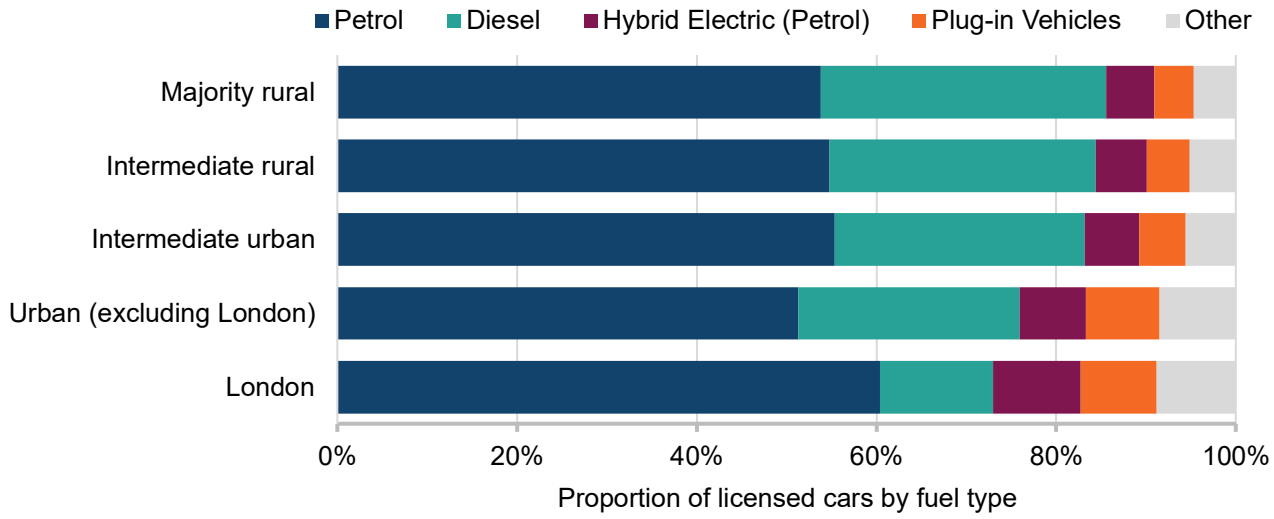
While petrol remains the most common fuel type among the newer cars in majority rural areas, it has been overtaken by hybrid electric vehicles for cars less than 1 year old. In urban areas outside London, petrol-fuelled cars form a smaller proportion of the newest vehicles than either hybrid or plug-in vehicles.

Fuel types of all vehicles

The line charts in Figure D-2 focus on the fuel types of newer cars. However, considering all cars on the road can be useful to contextualise the uptake of electric vehicle technologies. The bar chart in Figure D-3 shows the proportion of licensed cars by fuel type and 2021 rural-urban classification of the registered keeper's residence; the chart represents all road-using vehicles regardless of age.

Figure D-3: Bar chart showing the proportion of all currently licensed road-using cars by fuel type and 2021 rural-urban classification of the registered keeper's residence, as at September 2025 (Note D-4, Note D-6)

The legend is presented in the same order and orientation as the stacks of bars. The underlying data can be found in Worksheet DC within the supplementary data tables.



Among cars currently licensed on the road at the end of September 2025, fuel types vary slightly depending on where the vehicle is registered, although petrol-fuelled cars remained the most common across England. In majority rural authorities, 54% of licensed road-using cars were petrol-

fuelled. This proportion was similar in intermediate rural and intermediate urban authorities (both around 55%), slightly lower in urban authorities outside London (51%), and highest in London (60%).

Diesel-fuelled cars were the second most common fuel type across England. Their prevalence was greatest in majority rural authorities, where they accounted for 32% of licensed cars. This compared with 30% in intermediate rural authorities, 28% in intermediate urban authorities, and around 25% in urban authorities outside London. The proportion of diesel-fuelled cars was lowest in London (13%).

Cars using hybrid electric (petrol) technologies were considerably less common than petrol or diesel-fuelled cars. In majority rural authorities, just over 5% of licensed road-using cars had hybrid electric technologies; this was proportionally less than in other types of authority, comparing to 6% in both intermediate rural and intermediate urban authorities, and 7% in urban authorities outside of London. In London, nearly 10% of road-using cars used hybrid electric (petrol) technologies.

Plug-in cars were slightly less common than those with hybrid technologies across England. They accounted for 4% of licensed cars in majority rural authorities and 5% in intermediate rural and intermediate urban authorities. The proportion increased to 8% in both urban authorities outside London and in London.

Other fuel types – including liquefied petroleum gas (LPG), other types of gas, biofuels, steam, and experimental technologies – made up a small share of licensed cars across all authority types. They represented less than 5% of road-using cars registered in majority rural authorities.

Electric vehicle infrastructure

The increased uptake of electric plug-in vehicles has resulted in greater need for publicly available charging infrastructure. In the Department for Transport's charging infrastructure statistics, two different measurements are used:

- a **charging device** is the physical unit installed at a site, and it may contain one or more individual chargers.
- a **charger** is the individual component within that device that controls a single charging session and can charge one vehicle at a time. These are sometimes called electric vehicle supply equipment, or EVSE.

Historically, published statistics have only reported the number of charging devices. The number of chargers is a more recent addition to the data collection, meaning a long-term time series is currently only available for charging devices. The count of chargers more accurately reflects the number of plug-in vehicles that can be charged simultaneously in a given area, while the count of charging devices is likely to underestimate this capacity. For more information about the change in measures, see the source report, as well as their document regarding frequently asked questions.

There are different types of publicly available electric vehicle charging devices. Since October 2023, the industry defines any charger that is 50kW or above as a "rapid" charger. According to Zapmap, 50kW chargers can typically charge a plug-in vehicle to 80% in 20 minutes to 1 hour depending on the battery capacity and starting state of charge; after 80%, charging speeds tail off significantly in order to maximise charging efficiency and protect the battery.

There are ultra-rapid chargers, for example at some motorway services, which can supply up to 350kW, and these can - under ideal conditions - charge a battery to 80% in as little as 10 minutes. Using lower power public chargers can result in longer charging times, although this is still typically much faster than the speeds available from home chargers (typically 7kW, taking 6-8 hours to charge a battery from empty).

Increase in EV charging devices

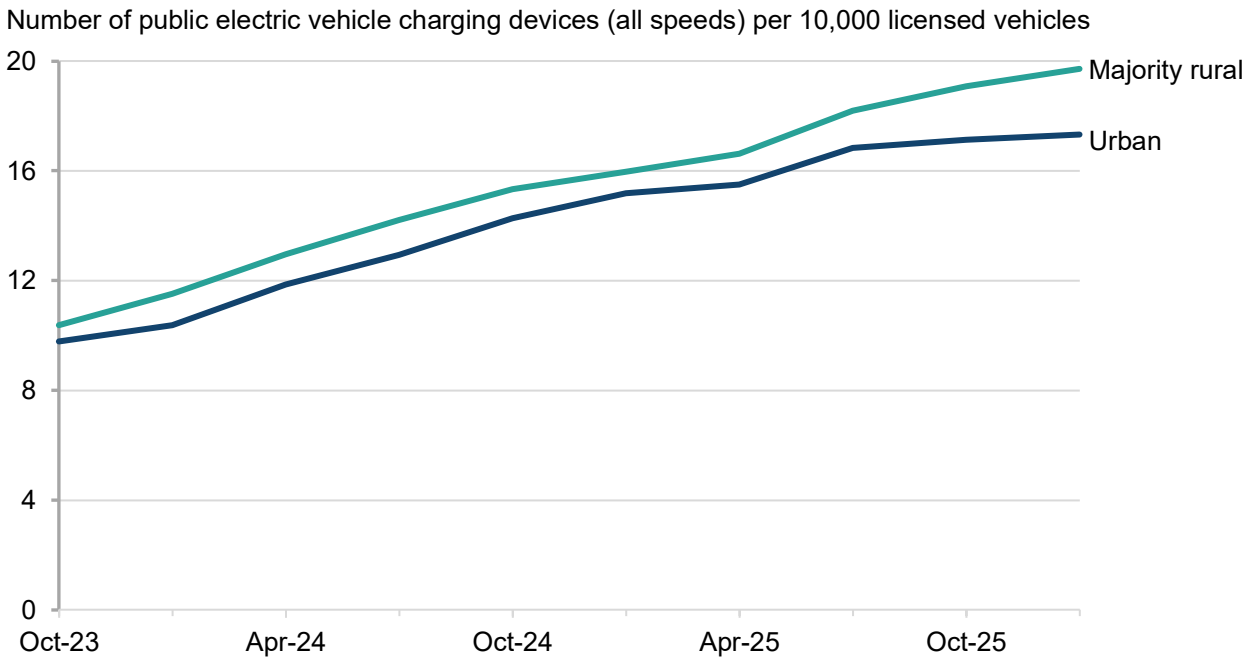
A charging device is a physical unit which may contain one or more individual chargers; this can potentially allow multiple plug-in vehicles to be charged at the same time. It is difficult to make comparisons by area as the provision of charging devices will account for demand on principal routes and in principal destinations, not necessarily reflecting plug-in vehicles licensed in an area. To allow some comparison by area, here we have used all licensed vehicles in an area, not just plug-in vehicles. Later we have looked at provision compared with licenced plug-in vehicles but with the caveat that provision of devices which be based on a wider considerations.

Comparing electric vehicle charging devices to road-using vehicles of any fuel type

The line chart in Figure D-4 shows the number of publicly available electric vehicle charging devices per 10,000 licensed vehicles registered in majority rural and urban authorities outside of London, as defined within the 2021 rural-urban classification; change is measured between October 2023 to January 2026.

Figure D-4: Line chart showing the number of publicly available electric vehicle charging devices per 10,000 licensed cars in majority rural and urban authorities outside of London as defined within the 2021 rural-urban classification of device location and keeper's residence, October 2023 to January 2026 (Note D-8)

'Urban' excludes London. Includes public charging devices of any speed. The underlying data can be found in Worksheet DD within the supplementary data tables.



In the most recent quarter (October 2025 to January 2026), charging device provision has increased more in majority rural authorities than in urban authorities outside of London:

- In January 2026, there were 19.7 publicly available electric vehicle charging devices per 10,000 licensed vehicles in majority rural authorities. This compared to 17.3 devices per 10,000 vehicles in urban authorities outside of London.
- In October 2025, there were 19.1 public electric vehicle charging devices per 10,000 vehicles in majority rural authorities, indicating a 3% increase in January 2026. In urban authorities outside of London, there was little change in the number of charging devices per 10,000 vehicles between October 2025 and January 2026.

Between October 2023 and January 2026, the number of public electric vehicle charging devices per 10,000 licensed vehicles increased steadily in both majority rural authorities and urban authorities outside London. Over this period, rates in majority rural areas were consistently higher than those in urban areas outside London.

In October 2023, majority rural authorities had 10.4 public charging devices per 10,000 licensed vehicles, compared with 9.8 devices per 10,000 vehicles in urban authorities outside London. The number of devices increased throughout 2024 and 2025 in both area types. By October 2024, rates had risen to 15.3 devices per 10,000 vehicles in majority rural authorities and 14.3 devices per 10,000 vehicles in urban authorities outside London.

The gap between the two area types widened slightly during the most recent year of data. By October 2025, majority rural authorities had 19.1 public charging devices per 10,000 vehicles, compared with 17.1 devices per 10,000 vehicles in urban authorities outside London. By January 2026, these figures had increased to the highest rates seen across the period.

Overall, the data show a continued increase in public charging device provision in both majority rural and urban authorities outside London, with majority rural areas maintaining (and slightly expanding) their lead over time.

Comparing electric vehicle charging devices to road-using plug-in vehicles

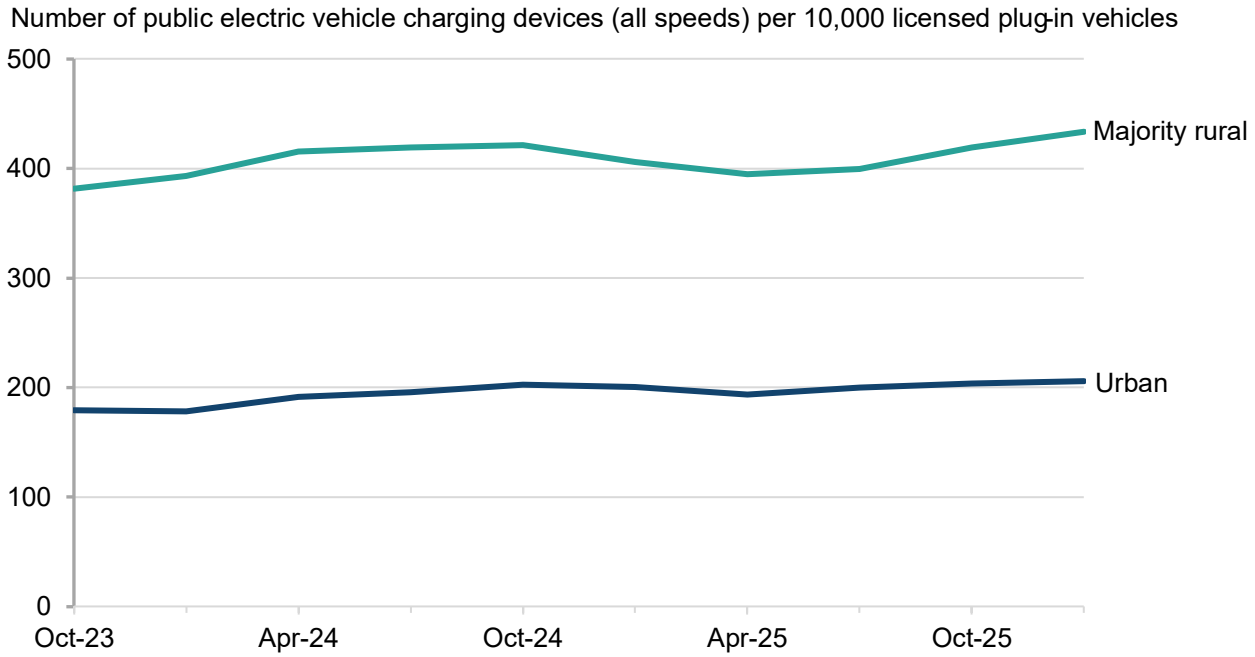
The line chart in Figure D-4 reflects all registered vehicles of any fuel type; however, only a small proportion of these will benefit from electric vehicle charging devices. To compare the supply and demand between authority types, the number of publicly available electric vehicle charging devices can be compared to the number of licensed plug-in vehicles registered in the area. This is shown in Figure D-5, comparing rates between majority rural and urban authorities outside of London (as defined within the 2021 rural-urban classification). Change is measured between October 2023 to January 2026.

The number of public charging devices per plug-in vehicle was highest in January 2026:

- In January 2026, there were 430 public electric vehicle charging devices per 10,000 licensed plug-in vehicles in majority rural authorities, equivalent to around 4 devices per 100 plug-in cars.
- In comparison, in urban authorities outside of London, there were 210 public charging devices per 10,000 plug-in vehicles, equivalent to around 2 devices per 100 plug-in cars.

Figure D-5: Line chart showing the number of publicly available vehicle charging devices per 10,000 licensed plug-in cars in majority rural and urban authorities outside of London as defined within the 2021 rural-urban classification of device location and keeper's residence, October 2023 to January 2026 (Note D-8)

'Urban' excludes London. Includes public charging devices of any speed. The underlying data can be found in Worksheet DE within the supplementary data tables.



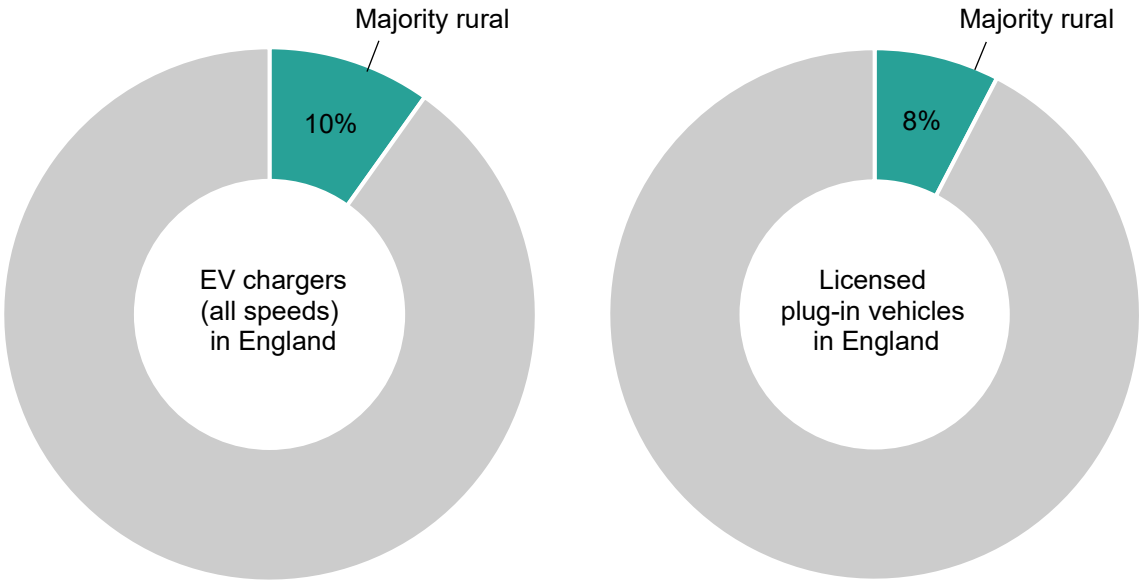
Between October 2023 and January 2026, the number of public electric vehicle charging devices per 10,000 licensed plug-in vehicles remained consistently higher in majority rural authorities than in urban authorities outside London. In majority rural areas, rates fluctuated between 380 and 430 charging devices per 10,000 plug-in vehicles over the period. In urban authorities outside London, rates were lower throughout, ranging from 180 to 210 devices per 10,000 plug-in vehicles. Although both area types saw some variation over time, the level of provision increased slightly in the most recent months, widening the gap between rates in majority rural and urban authorities.

Supply of EV chargers

A charger is the individual component within a charging device that controls a single charging session and can charge one vehicle at a time; a charging device can contain one or more individual chargers, potentially allowing multiple plug-in vehicles to be charged at the same time.

The charts in Figure D-6 compare the proportion of public EV chargers (left-hand doughnut chart) to the proportion of licensed plug-in vehicles (right-hand doughnut chart) in majority rural authorities in England. The underlying data for this infographic can be found in Worksheet DF within the supplementary data tables.

Figure D-6: Pie charts comparing the proportion of publicly available electric vehicle chargers to the proportion of licensed plug-in vehicles registered in majority rural authorities, as defined within the 2021 rural-urban classification, as of January 2026
Majority rural authorities are the only authority type indicated on the charts; therefore, the grey portions represent all other authority types in England combined (intermediate rural, intermediate urban, urban, and London).



The charts show that as of January 2026, 10% of all publicly available electric vehicle chargers are located in majority rural authorities. This was slightly higher than the proportion of licensed plug-in vehicles that were registered in these authorities (8%).

As said above, the provision of charging devices is likely be based on wider considerations than the number of licensed plug-in vehicles. They are likely to reflect principal routes and destinations.

Comparing electric vehicle chargers to road-using vehicles of any fuel type

There are different types of publicly available electric vehicle chargers. Since October 2023, the industry defines any charger that is 50kW or above as a “rapid” charger. The bar chart in Figure D-7 shows the number of public electric vehicle chargers per 10,000 licensed vehicles (of **any fuel type**) by power rating and 2021 rural-urban classification.

Although not included in the chart, London had proportionally more electric vehicle chargers than any other authority type. There were nearly 107 public chargers per 10,000 licensed vehicles in London, 92% of which had a power rating of less than 50kW.

Figure D-7: Bar chart showing the number of publicly available electric vehicle chargers per 10,000 licensed road-using vehicles, by power rating and 2021 rural-urban classification, in England, January 2026 (Note D-8)

The legend is presented in the same order and orientation as the stacked bars. 'London' has been excluded from the chart as there were considerably more public chargers per licensed vehicle than any other authority type. The underlying data can be found in Worksheet DG within the supplementary data tables.

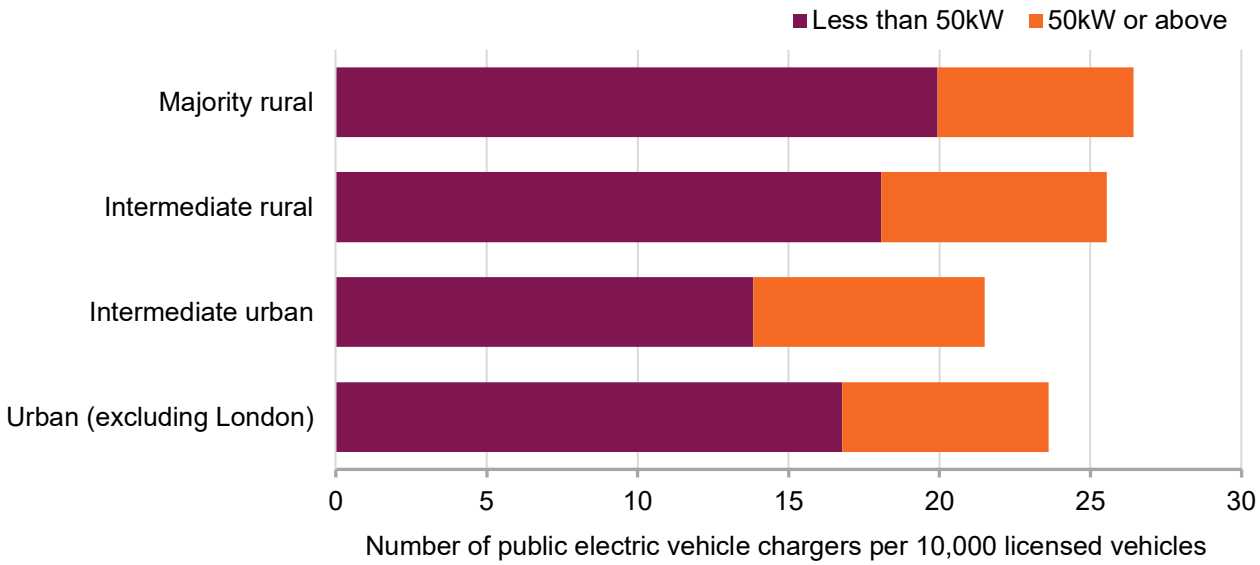


Figure D-7 can be summarised as follows:

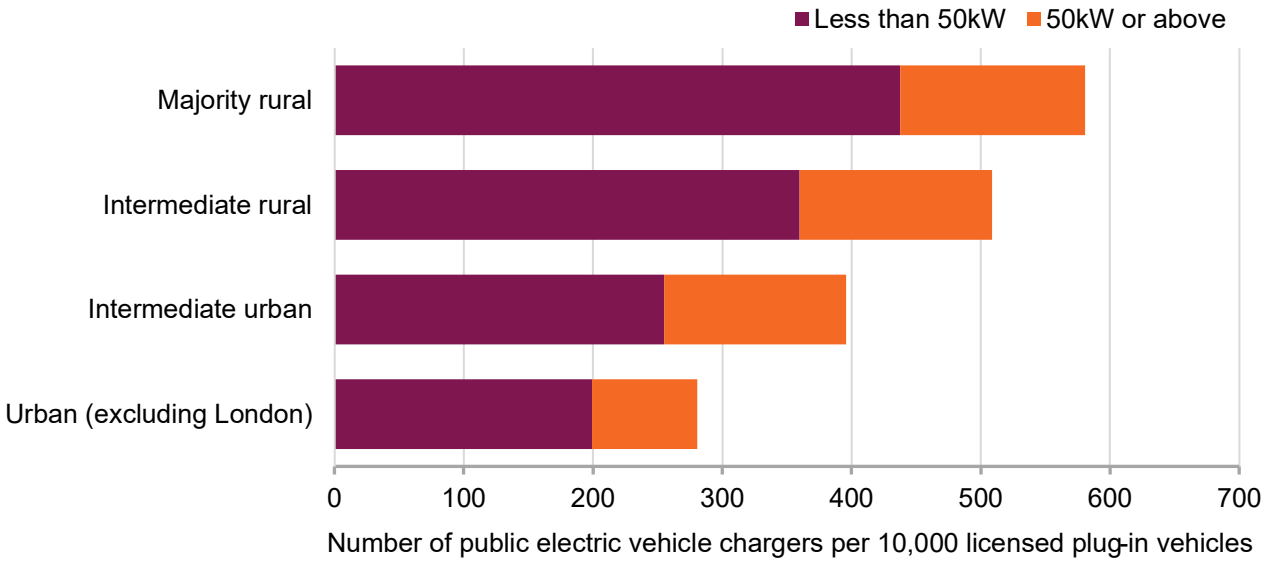
- There were more public electric vehicle chargers per licensed vehicle in majority rural authorities than any other authority type outside of London.
    - In January 2026, there were more than 26 publicly available electric vehicle chargers per 10,000 licensed road-using vehicles in majority rural authorities.
    - This compared to nearly 24 chargers per 10,000 vehicles in urban authorities outside of London.
- The majority of public electric vehicle chargers across England had a power rating of less than 50kW.
    - In majority rural authorities, nearly 20 public chargers per 10,000 licensed vehicles had a power rating of less than 50kW; this meant that 75% of public chargers in majority rural authorities had a power rating of less than 50kW.
    - In comparison, in urban authorities outside of London, nearly 17 public chargers per 10,000 licensed vehicles had a power rating of less than 50kW; this meant that 71% of public chargers in urban authorities outside of London had a power rating of less than 50kW.
- In intermediate rural authorities, the proportion of public chargers with a power rating of less than 50kW was similar to that of urban authorities outside of London (71%), equating to 18 chargers per 10,000 licensed vehicles. In intermediate urban authorities, the proportion of chargers with a power rating of less than 50kW was lower than for any other authority type (64%), equating to nearly 14 chargers per 10,000 licensed vehicles.

Comparing electric vehicle chargers to road-using plug-in vehicles

The bar chart in Figure D-7 reflects all registered vehicles; however, only a small proportion of these will benefit from electric vehicle supply equipment (EVSE). To compare the supply and demand between authority types, the number of publicly available electric vehicle chargers can be compared to the number of licensed plug-in vehicles registered in the area.

Figure D-8: Bar chart showing the number of publicly available electric vehicle chargers per 10,000 licensed plug-in vehicles, by power rating and 2021 rural-urban classification, in England, January 2026 (Note D-8)

The legend is presented in the same order and orientation as the stacked bars. 'London' has been excluded from the chart as there were considerably more public chargers per licensed plug-in vehicle than any other authority type. The underlying data can be found in Worksheet DH within the supplementary data tables.



The bar chart in Figure D-8 compares the number of public electric vehicle chargers per 10,000 licensed **plug-in vehicles** by power rating and 2021 rural-urban classification, and therefore expands upon the infographic shown in Figure D-6. It can be described as follows:

- Outside of London, the more rural the authority type, the higher the number of public electric vehicle chargers per plug-in vehicle in January 2026.
    - In majority rural authorities, there were 580 public chargers per 10,000 licensed plug-in vehicles; this is equivalent to around 6 chargers per 100 plug-in vehicles registered in these authorities.
    - In comparison, in urban authorities outside of London, there were 281 public chargers per 10,000 plug-in vehicles; this is equivalent to around 3 chargers per 100 plug-in vehicles registered in these authorities.
- Majority rural authorities had proportionally fewer publicly available rapid chargers (with a power rating of at least 50kW) than intermediate rural authorities, but proportionally more than any other authority type in England.
    - In majority rural authorities, 143 public chargers per 10,000 licensed plug-in vehicles had a power rating of at least 50kW, compared to 149 chargers per 10,000 plug-in vehicles in intermediate rural authorities.

    - In urban authorities outside of London, 81 public chargers per 10,000 plug-in vehicles had a power rating of at least 50kW; this means majority rural authorities had nearly double the proportion of public rapid chargers compared to urban authorities outside of London.

- Although not mentioned in the chart, London had proportionally more electric vehicle chargers than any other authority type.
    - There were around 1,230 public chargers per 10,000 licensed plug-in vehicles in London, equivalent to around 12 chargers per 100 plug-in vehicles.

A national view of electric vehicle infrastructure helps to show how majority rural authorities fare overall, but individual local authorities can differ substantially. A complete table showing the ratio of public electric vehicle chargers to plug-in vehicles for local authorities in England can be found in Worksheet DI of the supplementary data tables.

Access to vehicles and charging infrastructure - explanatory notes

- **Note D-1**

Tables containing the data seen in this section are available in the connectivity and accessibility supplementary data tables.

- **Note D-2**

Sources: DfT National Travel Survey; DfT Vehicle licensing statistics data tables; DfT Electric Vehicle charging infrastructure statistics; Zap-Map.

- **Note D-3**

The number of chargers/charging devices represents those reported as operational at midnight at the start of each quarter. A charging device can have a number of connectors (chargers) of varying speeds. As of 1 October 2023, the speed categories changed to 50kW and above to be in line with industry.

- **Note D-4**

Data includes both privately-owned and company cars. Does not include any other vehicle type (e.g. buses and coaches, HGVs and LGVs, motorcycles, and other vehicles). Data is for where the car is registered, and therefore does not necessarily reflect where it will be used.

- **Note D-5**

Hybrid Electric Vehicles (sometimes called ‘self-charging hybrids’) use technologies such as regenerative braking instead of needing to be plugged in. Plug-in Vehicles includes ‘battery electric’, ‘range extended electric’ (REEV), and ‘plug-in hybrid electric’ (PHEV). For more information about fuel type definitions, see Vehicle licensing statistics: notes and definitions - GOV.UK.

- **Note D-6**

The fuel types specified in Figure D-3 differ from those specified in Figure D-2 due to the data sources used. The underlying data behind Figure D-2 comes from table VEH9901 from the Vehicle licensing statistics data tables, where hybrid electric technologies are combined into a single category. The underlying data behind Figure D-3 comes from tables VEH0105 and VEH0142 from the same data collection; in VEH0105, ‘hybrid electric (petrol)’ is presented as a distinct category. Therefore, ‘hybrid electric (diesel)’ vehicles are likely represented elsewhere, such as in the ‘other’ category; however, this category generally refers to liquefied petroleum gas (LPG), other types of gas, biofuels, steam, and experimental technologies. Therefore, the hybrid technology category presented in Figure D-2 is not directly comparable to the category presented in Figure D-3.

- **Note D-7**

The 2021 rural-urban classification of local authorities is used to determine rurality within this section. It refers to the classification of residence of the registered keeper (based on postcode data). The registered keeper of a vehicle may not necessarily be the owner. For privately owned vehicles, this is the keeper's address, but for company vehicles this is often the company's registered address. Therefore, the address does not necessarily reflect where the vehicle is located, such as for fleet vehicles involved in leasing and rentals.

For analysis of electric vehicle infrastructure, the classification can also refer to the location of the charging devices and chargers. For more information about the classification, see Rural Urban Classification - GOV.UK.

- **Note D-8**

Data regarding electric vehicle infrastructure are collected at the start of each quarter. Q1 is referred to as January; Q2 is referred to as April; Q3 is referred to as July; Q4 is referred to as October. This is in line with the source data..

The denominator used for electric vehicle infrastructure analysis refers to the number of licensed road-using vehicles; for Figure D-5, Figure D-6, and Figure D-8, this specifically focusses on plug-in vehicles. The latest data for licensed vehicles is as of Q3 2025. Data for October 2025 and January 2026 regarding electric vehicle infrastructure have been apportioned using the number of licensed vehicles as of Q3 2025. As a result, the ratios of chargers or charging devices to licensed vehicles for these two periods should be treated as estimates, as they may differ slightly once more recent licensing data become available.

- **Note D-9**

This publication was developed using support from generative AI tools to assist with drafting. All analysis, interpretation and final wording were produced, checked and quality-assured by Defra statisticians in line with the Code of Practice for Statistics.

E. Transport connectivity

Rural areas tend to have poorer connectivity to services than urban areas, particularly when travelling by non-driving modes.

Transport connectivity - key findings

Rural settlements have lower overall connectivity than urban areas

- More than half of rural residents (54%) live in areas scoring below 40 for overall connectivity by walking, cycling or public transport.
- Around 62% of urban residents live in areas scoring 60 or above, compared with just 4% of rural residents.

Proximity to major towns does not necessarily result in good connectivity

- 10% of rural residents living nearer to major towns or cities live in areas scoring below 20 for walking, cycling, or public transport connectivity; this means their connectivity was around one-fifth of that found in the most connected areas.

Driving, of course, improves connectivity – particularly in rural settlements

- 70% of rural residents live in areas scoring above 70 for driving connectivity, compared with less than 1% for walking, cycling, or public transport.
- In urban areas outside of London, almost all residents live in areas scoring above 70 for driving connectivity, compared with 42% for walking, cycling, or public transport.

Summary

Generally, people living in rural areas have poorer connections – by walking, cycling, driving and public transport - for accessing key service locations and the opportunities they offer, compared with people living in urban areas. Not surprisingly, people living in remote rural areas have the poorest connections to services. However, proximity to towns or to main roads does not necessarily result in good connectivity where access by walking, cycling or public transport is limited.

When considering travel by walking, cycling, or public transport, 3% of rural residents live in the least connected areas in England – that is, with connectivity scores below 10, meaning their connectivity was around one-tenth of that found in the most connected areas. In remote rural settlements, this rises to 18% of the population. Driving of course improves connectedness; less than 1% of rural residents live in areas scoring below 40 for driving connectedness.

Using the Department for Transport's newly developed Connectivity Tool, connectivity scores can be derived for a combination of travel purposes and modes. When travelling to employment destinations by walking, cycling, or public transport, 22% of the rural population live in the least connected areas in England (i.e. with scores below 10). When travelling to education or healthcare destinations, respectively 26% and 46% of the rural population live in the least connected areas when walking, cycling, or taking public transport.

Background information

The Department for Transport (DfT) Connectivity Tool is a national resource that measures how well locations in England and Wales are connected to everyday services by walking, cycling, driving and public transport (Note E-7). It provides a consistent, evidence-based index designed to support planning and analysis of access to services.

The index incorporates destination value (i.e. importance), willingness to travel, and realistic mode-specific travel times. These elements are combined to show how easily people can reach a broad set of valued destinations using the existing transport network (Note E-6).

Each location receives a score between 0 and 100. All connectivity scores (overall, and for each mode of transport and type of destination) are expressed as a percentage of the most connected location in the country. Because of this, scores cannot be compared either between modes or between destination types. In particular, you cannot use the connectivity score to compare how well a location or settlement type is served by one mode versus another.

For example, a location scoring 60 for connectivity to education and 70 for health is not necessarily better connected to health than to education. Likewise, a site with a score of 60 for walking and 50 for public transport is not necessarily better connected by walking than by public transport.

Higher scores indicate better access within typical travel times. Scores are relative and reflect actual journeys rather than straight-line distance. When comparing across rural and urban geographies, it is important to recognise structural differences such as service density, public transport frequency, and typical travel patterns. For example, though a score of 55 may appear relatively low, that could be high for a relatively rural settlement that is not in close proximity to economic centres.

The latest data are as of Quarter 4 (October to December) 2024. To access the interactive tool, please visit Connectivity Tool - GOV.UK.

Overall connectivity

Connectivity scores can be derived for different travel purposes and modes. The overall score of an area reflects travel for any purpose or to any destination. Unless otherwise specified, the overall score reflects walking, cycling and public transport and excludes driving. Generally, people living in rural areas have lower overall levels of accessibility to key service locations – and therefore lower connectivity scores – compared with those living in urban areas.

National overall connectivity

The bar chart in Figure E-1 shows the proportion of the population living in areas within each connectivity score band in rural and urban areas outside London as defined by the 2021 rural-urban classification.

Figure E-1: Bar chart showing the proportion of the population living within each connectivity score band, by 2021 rural-urban classification of output areas in England
The chart represents travel for any purpose by any mode except driving (i.e. walking, cycling, and public transport). Scores of less than 10 ('<10') represent the lowest levels of connectivity, whilst scores close to 100 ('90-100') represent the highest levels. The legend is presented in the same order and orientation as the clusters of columns. The underlying data can be found in Worksheet EA within the supplementary data tables.

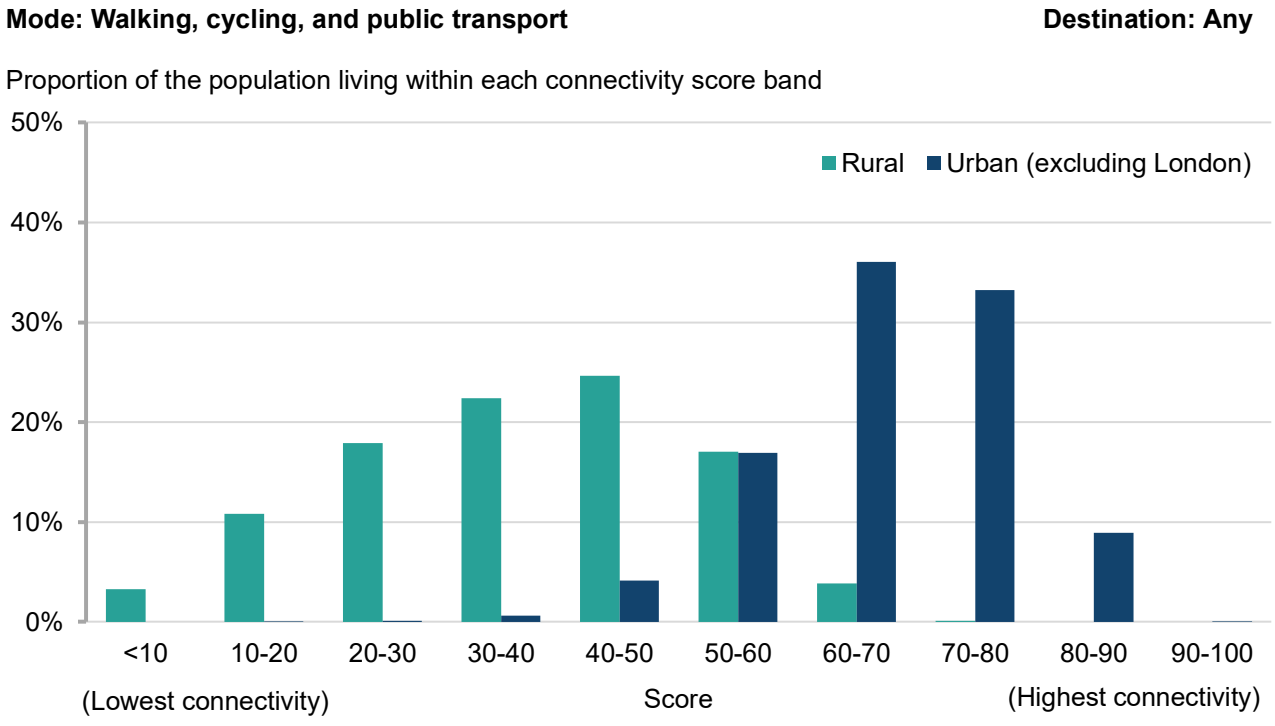


Figure E-1 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England. Rural areas were much more likely to have low scores - and therefore low connectivity - particularly when walking, cycling, or taking public transport.

- As of late 2024, 3% of rural residents live in areas with scores below 10, meaning their connectivity was around one-tenth of that found in the most accessible areas.
- More than half of rural residents (54%) live in areas scoring below 40.
- Urban residents were far more likely to live in high-scoring areas: around 62% live in areas scoring 60 or above, compared with only 4% of rural residents.
- The largest share of the rural population live in areas with scores between 40 and 50 (25%). For urban areas outside London, the largest share live in areas scoring between 60 and 70 (36%).

Proximity to major towns or cities is considered in the 2021 rural-urban classification. At output area-level, this relative access measure is split into four categories: 'nearer to a major town or city', 'nearer to a medium urban area', 'nearer to a small urban area', or 'remote'. Crucial to note here, this is based on driving times and does not reflect connectivity through public transport. Hence a settlement could be nearer to a major town or city based on driving time but have poor connectivity if there is poor public transport or service provision. See Note E-5 for the definitions used in the detailed relative access measure.

Table E-1 compares England-wide connectivity score bands for rural residents travelling by walking, cycling, or public transport, by relative access. Rural residents in all categories of relative access are heavily concentrated in the lower connectivity score bands, although this is especially pronounced for those living in remote areas. Overall, unsurprisingly, connectivity by non-driving modes is substantially poorer for remote rural areas than for rural areas closer to towns or cities.

Table E-1: Proportion of the rural population within categories of proximity to major towns or cities, as defined within the 2021 rural-urban classification of output areas, within each connectivity score band

Proportions have been rounded to the nearest 1%. Scores greater than 70 have been combined into a single column as the proportion of the population living in these areas was less than 0.5% for each score band. '[low]' represents proportions which round to 0% but are not a true 0. The underlying data can be found in Worksheet EA within the supplementary data tables.

Relative access	<10	10-20	20-30	30-40	40-50	50-60	60-70	70-100	Total
Nearer to a major town or city	1	8	17	23	28	19	4	[low]	**100**
Nearer to a medium urban area	5	16	22	23	19	13	3	[low]	**100**
Nearer to a small urban area	9	17	20	20	17	14	4	0	**100**
Remote	18	21	14	15	12	17	4	0	**100**
All rural areas	**3**	**11**	**18**	**22**	**25**	**17**	**4**	**[low]**	**100**

Table E-1 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England. Rural areas differ in connectivity depending on their proximity to towns and cities.

- Rural residents living in remote areas were the most likely to have very low connectivity. As of late 2024, 18% of the rural population in remote areas live in places with scores below 10. A further 21% live in places with scores between 10 and 20.
- Among rural residents living nearer to a major town or city, only 1% live in areas scoring below 10, and the largest share (28%) live in areas scoring between 40 and 50.
- For those living nearer to medium-sized urban areas, connectivity scores are broadly mid-range: 22% live in areas scoring between 20 and 30, and 23% live in areas scoring between 30 and 40.
- Rural residents living nearer to small urban areas also tended to have mid-range scores, with similar proportions across the 20-30, 30-40, and 40-50 bands.
- Across all proximity categories, only a very small proportion of rural residents live in areas with scores above 70.

The previous figure and table represented travel for any purpose by walking, cycling, and public transport. The proportion of the rural and urban populations living within each connectivity score band when travelling for any purpose by driving can be found in Tables 2a and 2b in Worksheet EA within the supplementary data tables. Whilst the distributions of scores are similar between driving and non-driving modes, there are notable differences as driving particularly improves connectivity in rural areas. The rural population's reliance on cars and vans is explored in section D. Access to vehicles and charging infrastructure.

The bar chart in Figure E-2 presents the proportion of the rural population falling into each England-wide connectivity score band for travel by driving and non-driving modes. While the chart only includes rural areas, the score bands reflect the national distribution of connectivity scores. Overall, non-driving modes show slightly poorer connectivity than driving for rural populations.

Figure E-2 can be summarised as follows:

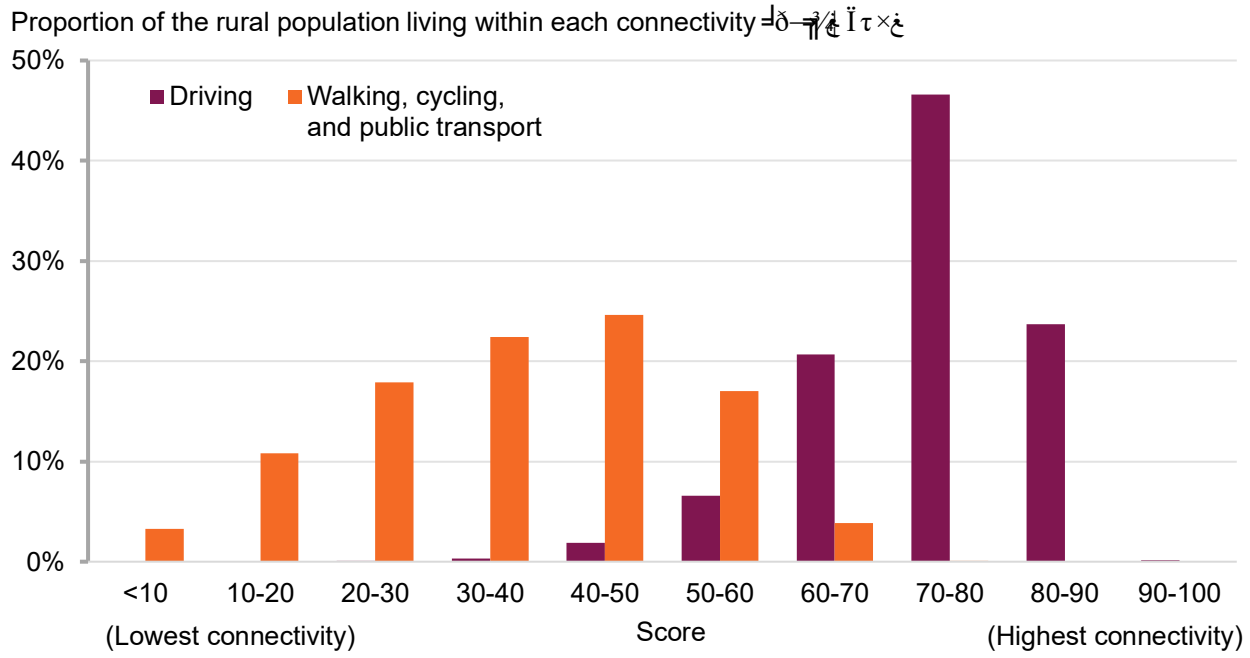
- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England – these are rescaled depending on mode. Rural areas were much more likely to have higher scores when travelling by car.
- The largest share of the rural population live in areas with scores between 70 and 80 when considering driving connectivity (47%, as of late 2024). In contrast, for walking, cycling, or public transport, the largest share of the rural population live in areas with scores between 40 and 50 (25%).
- Less than 1% of rural residents live in areas scoring below 40 for driving connectivity, compared with 54% for walking, cycling, or public transport.
- 70% of rural residents live in areas scoring above 70 for driving connectivity, compared with less than 1% for walking, cycling, or public transport.

Each mode of transport has its own scoring scale, so scores bands cannot be compared directly; the chart shows how populations fall into each score band specific to the mode. It does not show which mode is 'better'.

Figure E-2: Bar chart showing the proportion of the rural population, as defined within the 2021 rural-urban classification of output areas, living within each connectivity score band by mode of transport

Scores of less than 10 ('<10') represent the lowest levels of connectivity, whilst scores close to 100 ('90-100') represent the highest levels. The legend is presented in the same order and orientation as the clusters of columns. The underlying data can be found in Worksheet EA within the supplementary data tables.

Destination: Any



The least connected rural areas in England

Remote smaller rural settlements that are at least a 30-minute drive away from any urban settlements are likely to have the most limited access to key services. Communities in such areas are typically too small to support services locally. As a result, residents often need to travel for services such as employment, education, and healthcare. People living in remote smaller rural settlements tend to be especially reliant on driving, as public transport options are often limited or unavailable.

The bar chart in Figure E-3 shows the proportion of the population living in each connectivity score band in remote smaller rural settlement as defined within the 2021 rural-urban classification; it compares travel for any purpose by driving and non-driving modes. While the chart only includes remote smaller rural areas, the score bands reflect the national distribution of connectivity scores.

Each mode of transport has its own scoring scale, so scores bands cannot be compared directly; the chart shows how populations fall into each score band specific to the mode. It does not show which mode is 'better'.

Figure E-3: Bar chart showing the proportion of the population living within each connectivity score band in remote smaller rural settlements as defined within the 2021 rural-urban classification of output areas in England

Scores of less than 10 ('<10') represent the lowest levels of connectivity, whilst scores close to 100 ('90-100') represent the highest levels. The legend is presented in the same order and orientation as the clusters of columns. The underlying data can be found in Worksheet EA within the supplementary data tables.

Destination: Any

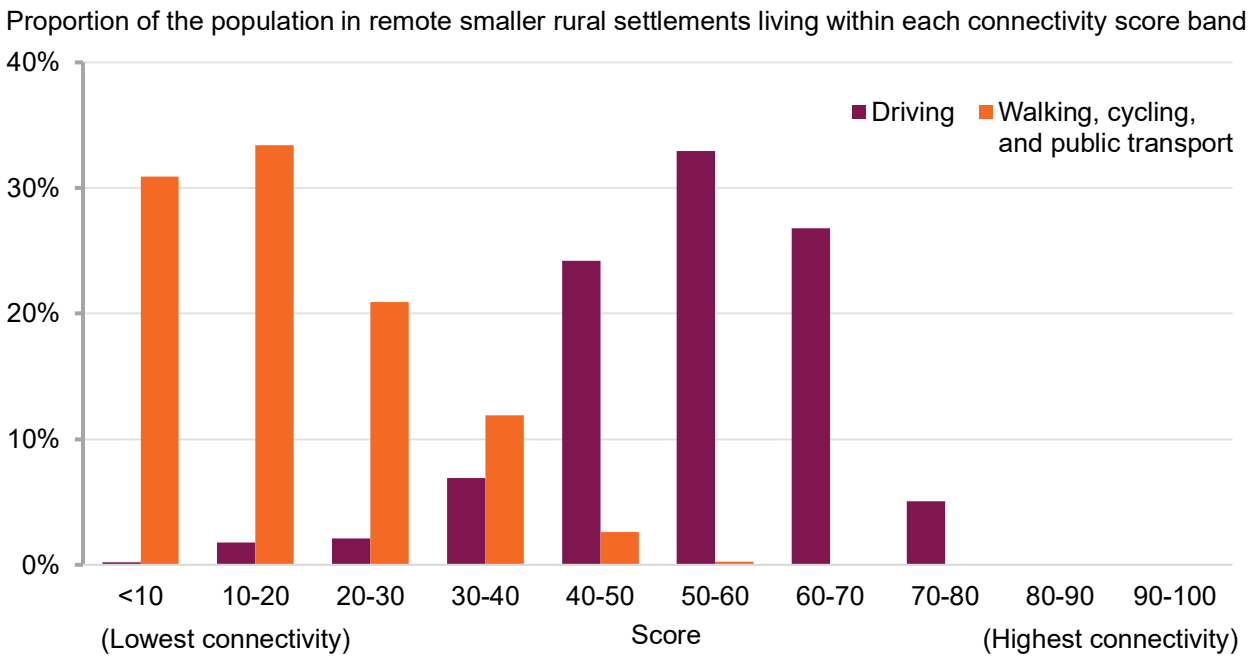


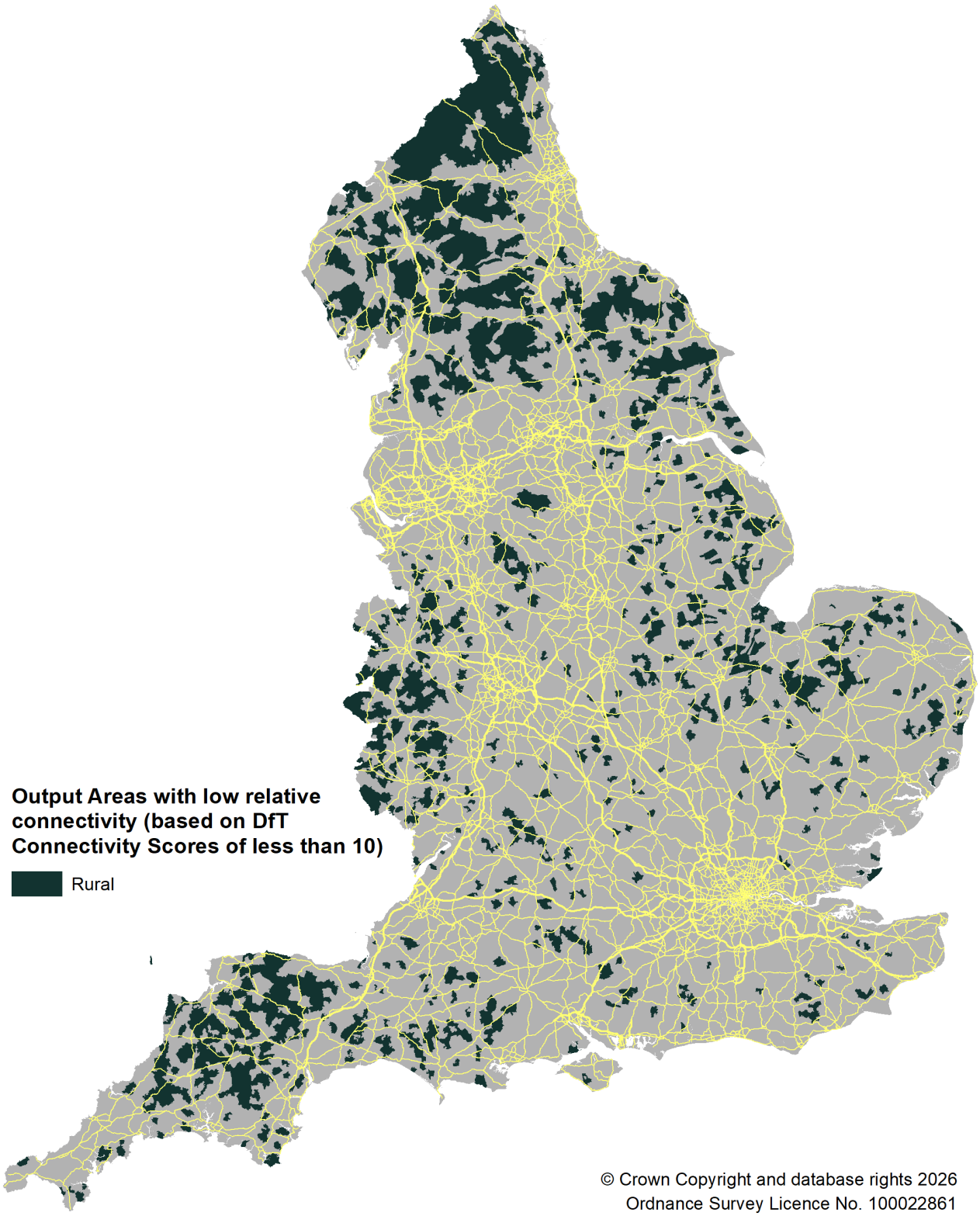
Figure E-3 can be described as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England - these are rescaled depending on mode. In remote smaller rural settlements, connectivity differed substantially by mode of travel. Non driving modes show a concentration of residents in the lowest connectivity score bands, while driving increases the connectivity scores, highlighting the strong reliance of remote smaller rural communities on car travel for connectivity.
- For walking, cycling, and public transport, connectivity was generally very low. 31% of residents live in areas with scores below 10, and a further 33% live in areas scoring between 10 and 20. In total, 85% of residents of remote smaller rural settlements live in areas scoring below 30.
- In contrast, driving connectivity was much higher. Less than 1% of residents live in areas scoring below 10, and only small proportions (4%) live in areas scoring below 30.
- The largest share of residents had driving connectivity scores between 50 and 60 (33%), followed by 60-70 (27%) and 40-50 (24%).
- No remote smaller rural settlements had walking, cycling or public transport connectivity scores of more than 60.

Local overall connectivity

A national view of connectivity helps to show how rural areas fare overall, but local patterns can differ substantially.

Figure E-4: Map highlighting the rural areas with the lowest connectivity levels in England, based on the lowest scoring areas for connectivity by walking, cycling or public transport
Main roads are presented on the map to enhance understanding of connectivity. 'A roads' are presented as thin yellow lines, whilst motorways are presented as thick yellow lines.



Connectivity scores for all local authorities in England with the 2021 Rural-Urban Classification added can be found in Worksheets EE and EF within the supplementary data tables.

The map in Figure E-4 highlights the lowest-scoring rural areas in England (that is, those with connectivity scores below 10) based on access when walking, cycling, or taking public transport. The rural areas with the lowest levels of connectivity are widely distributed across England, but are most common in sparser, more rural parts of the country; almost all rural areas scoring below 10 are classed as 'smaller rural'. Larger clusters of the least-connected rural areas can be seen in remote and upland regions, including parts of the North of England, the South West, and along sections of the western and northern coastlines.

The yellow lines on the map show major roads in England, including motorways and 'A roads'. In many cases, the lowest-scoring rural areas are located away from these main transport routes and do not tend to intersect with them. This suggests that very low connectivity is more common in rural areas that are further from major towns or cities and from main road corridors. However, this is not always the case: some rural areas with connectivity scores below 10 are situated closer to major towns or cities, and in some cases have major roads running through or nearby. This indicates that proximity to towns or to main roads does not necessarily result in good connectivity, particularly where access to walking, cycling or public transport is limited. Although not presented directly on the map, around 30% of the rural output areas scoring below 10 are nearer to major towns or cities.

The Isles of Scilly are not included in the map. Due to their island geography, their connectivity scores are not directly comparable with those for areas in mainland England, and they are therefore excluded to avoid misleading comparisons.

Purpose-specific connectivity

Connectivity scores can be derived from a combination of travel purposes and modes. This section highlights how connectivity can differ when travelling for various purposes. Within the Connectivity Tool, scores are presented for:

- employment destinations (i.e. any workplace outside of the home, such as factories, offices, supermarkets, etc.),
- education destinations (such as schools and colleges), and
- healthcare destinations (such as pharmacies, General Practices, and hospitals),

as well as some not included in this analysis (leisure, shopping, and residential). See Note E-6 for more information about the destination definitions. Unless otherwise specified, the overall score reflects walking, cycling, public transport and excludes driving.

National purpose-specific connectivity

Generally, people living in rural areas have lower overall levels of access to key service locations – and therefore lower connectivity scores – compared with those living in urban areas. The proportion of the rural and urban populations living within each connectivity score band when travelling for each individual purpose can be found in Worksheets EB to ED within the supplementary data tables. Each destination type has its own scoring scale, so scores bands cannot be compared directly.

Lowest connectivity to employment destinations

The bar chart in Figure E-5 shows the proportion of the rural population living in the least connected areas in England (i.e. with scores below 10) when travelling to employment destinations, such as factories, supermarkets, offices, etc. Overall, the chart highlights that rural employment connectivity can be substantially more limited in the more remote settlements. Access to employment focusses on the working-age population (16 to 64 years).

Figure E-5: Bar chart showing the proportion of the rural working-aged population living within the lowest scoring areas for employment connectivity by walking, cycling or public transport, by relative access (Note E-3, Note E-6)
Scores of less than 10 represent the lowest levels of connectivity. The legend is presented in the same order and orientation as the clusters of columns. The underlying data can be found in Worksheet EB within the supplementary data tables.

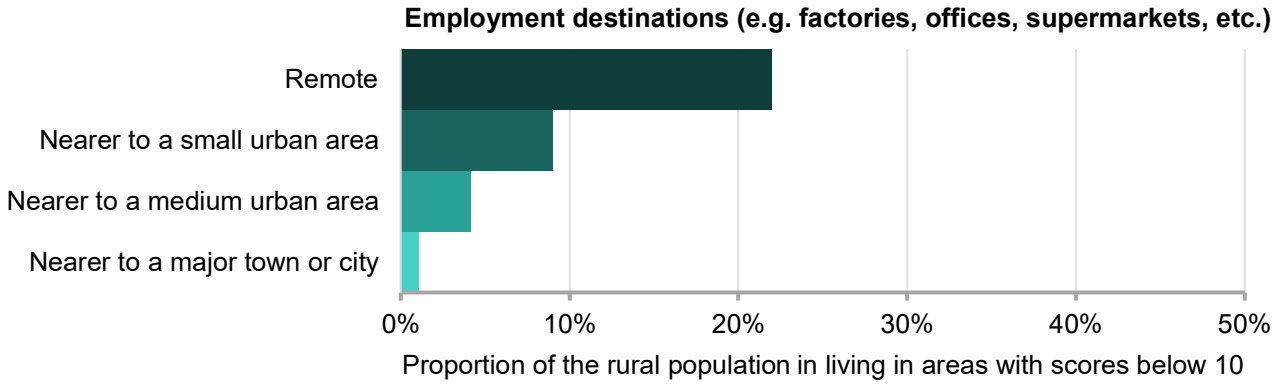


Figure E-5 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England when considering access to employment destinations. Scores below 10 indicate an area's employment connectivity is around one-tenth of that found in the most well-connected areas. Rural areas differ in connectivity depending on their proximity to towns and cities.
- Rural residents living in remote areas were the most likely to have very low connectivity (i.e. scores below 10); 22% of residents had very low connectivity for access to employment destinations (any workplace outside of the home, e.g. factories, offices, supermarkets, etc.)
- Connectivity was generally better for rural residents living nearer to towns and cities. Among those living nearer to a major town or city, only 1% live in areas with very low employment connectivity.

Lowest connectivity to education destinations

The bar chart in Figure E-6 shows the proportion of the rural population living in the least connected areas in England (i.e. with scores below 10) when travelling to education destinations, such as schools and colleges. Overall, the chart highlights that rural education connectivity can be substantially more limited in the more remote settlements. Access to education focusses on children and young people (4 to 21 years).

Figure E-6: Bar chart showing the proportion of rural children and young people living within the lowest scoring areas for education connectivity by walking, cycling or public transport, by relative access (Note E-3, Note E-6)
Scores of less than 10 represent the lowest levels of connectivity. The legend is presented in the same order and orientation as the clusters of columns. The underlying data can be found in Worksheet EC within the supplementary data tables.

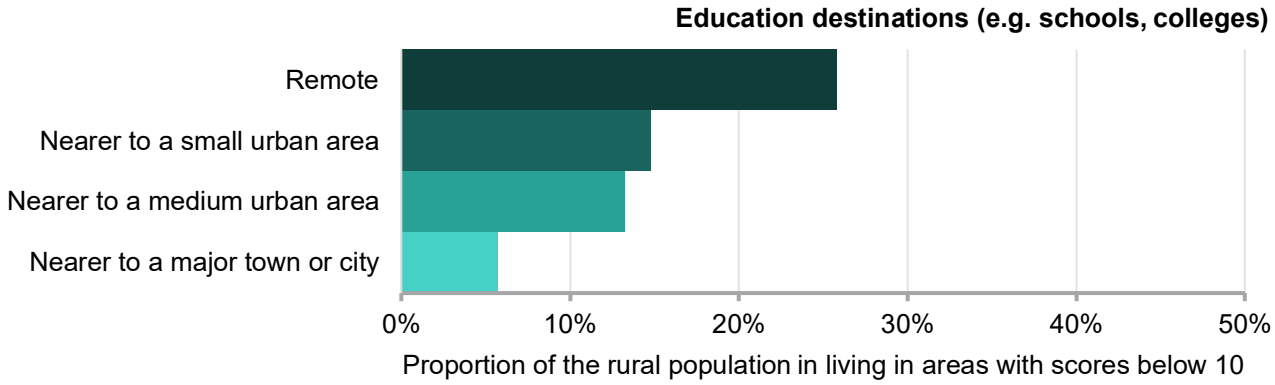


Figure E-6 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England when considering access to education destinations. Scores below 10 indicate an area's education connectivity is around one-tenth of that found in the most well-connected areas. Rural areas differ in connectivity depending on their proximity to towns and cities.
- Rural residents living in remote areas were the most likely to have very low connectivity (i.e. scores below 10); 26% of residents had very low connectivity for access to education destinations, such as schools and colleges.
- Connectivity was generally better for rural residents living nearer to towns and cities. Among those living nearer to a major town or city, only 6% live in areas with very low education connectivity.

Lowest connectivity to healthcare destinations

The bar chart in Figure E-7 shows the proportion of the rural population living in the least connected areas in England (i.e. with scores below 10) when travelling to healthcare destinations, such as pharmacies, General Practices (GPs), and hospitals. Overall, the chart highlights that rural healthcare connectivity can be substantially more limited in the more remote settlements. Access to healthcare focusses on the total population living in rural areas.

Figure E-7: Bar chart showing the proportion of the rural population living within the lowest scoring areas for healthcare connectivity by walking, cycling or public transport, by relative access (Note E-3, Note E-6)

Scores of less than 10 represent the lowest levels of connectivity. The legend is presented in the same order and orientation as the clusters of columns. The underlying data can be found in Worksheet ED within the supplementary data tables.

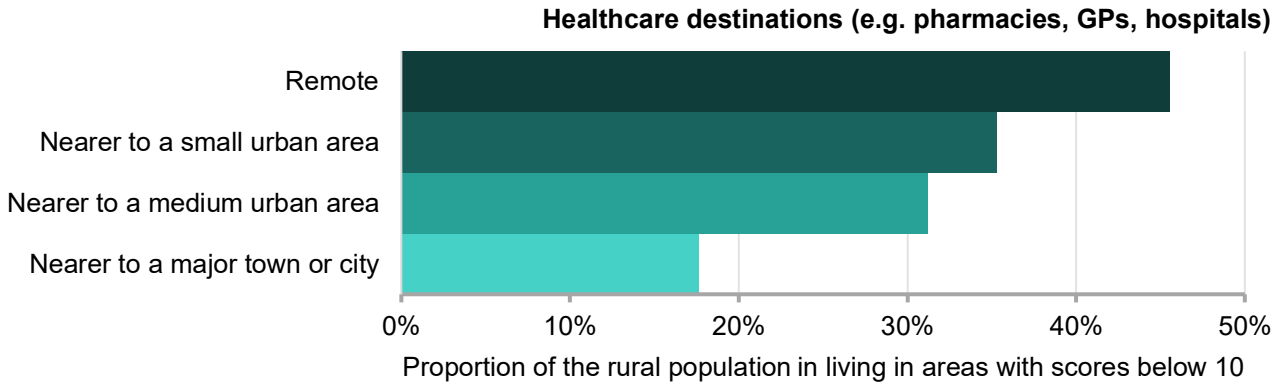


Figure E-7 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England when considering access to healthcare destinations. Scores below 10 indicate an area's healthcare connectivity is around one-tenth of that found in the most well-connected areas. Rural areas differ in connectivity depending on their proximity to towns and cities.
- Rural residents living in remote areas were the most likely to have very low connectivity (i.e. scores below 10); 46% of the rural population in remote areas live in places with very low connectivity when considering access to healthcare destinations, such as pharmacies, General Practices (GPs), and hospitals
- Connectivity was generally better for rural residents living nearer to towns and cities. Among those living nearer to a major town or city, 18% live in areas with very low healthcare connectivity.

Figures E-5, E-6, and E-7 represented travel for any purpose by walking, cycling or public transport. The proportion of the rural and urban populations living within each connectivity score band when travelling by driving to each individual purpose can be found in Worksheets EB to ED within the supplementary data tables. Whilst the distribution of scores is similar between driving and other modes, driving inevitably improves in connectivity in rural areas and particularly for accessing employment. The rural population's reliance on cars and vans is explored in section D. Access to vehicles and charging infrastructure.

Connectivity to employment destinations by mode of transport

The bar chart in Figure E-8 show the proportion of the rural population falling into each connectivity score band for travel by driving and non-driving modes to employment destinations. Whilst the chart only includes rural areas, the score bands reflect the national distribution of connectivity scores.

It should be noted that score bands cannot be compared directly between modes of transport due to having unique scoring scales. Therefore, the charts show the distribution of populations; they do not show which mode of transport is 'better'.

Figure E-8: Bar chart showing the proportion of the rural working-aged population living within each employment connectivity score band, by mode of transport (Note E-3, Note E-6)
The legend is presented in the same order and orientation as the clusters of bars. The underlying data can be found in Worksheets EB to ED within the supplementary data tables.

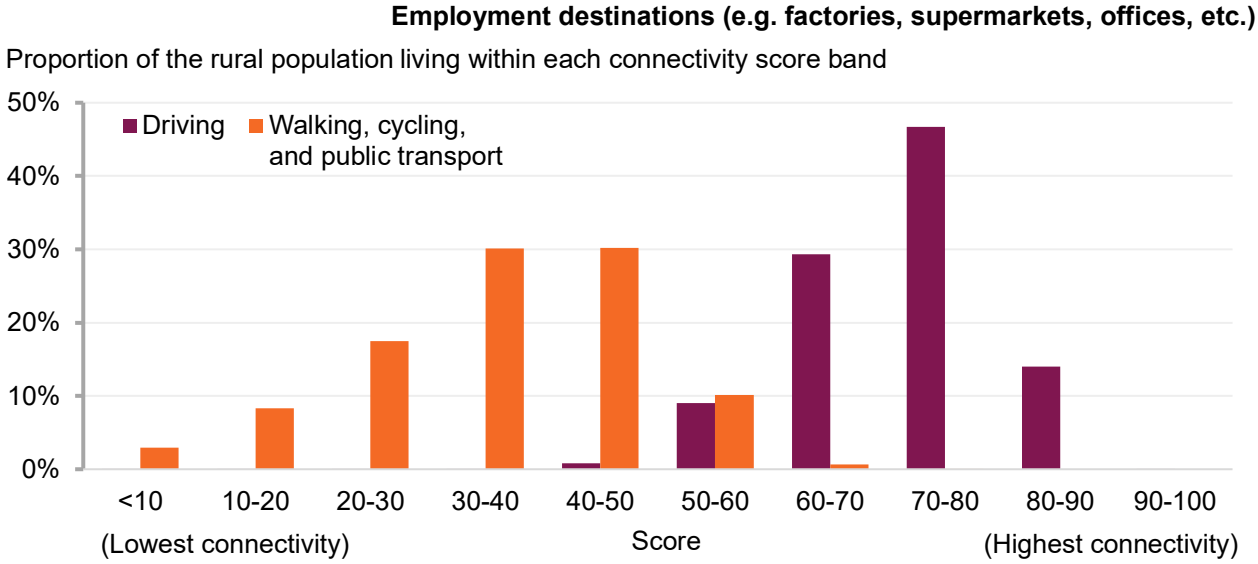


Figure E-8 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England when considering access to employment destinations. Rural residents were much more likely to have higher employment connectivity scores when travelling by car than when travelling by walking, cycling, or public transport.
- For driving connectivity, the largest share of rural working-aged residents live in areas with scores between 70 and 80 (47%). Less than 1% live in areas with scores below 40.
- In contrast, connectivity for walking, cycling, and public transport was concentrated in the mid-to-low score bands. The largest shares live in areas scoring between 30 and 50 (60%), with less than 1% of residents in areas scoring above 60.

Connectivity to education destinations by mode of transport

The bar chart in Figure E-9 show the proportion of the rural population falling into each connectivity score band for travel by driving and non-driving modes to education destinations. Whilst the chart only includes rural areas, the score bands reflect the national distribution of connectivity scores.

It should be noted that score bands cannot be compared directly between modes of transport due to having unique scoring scales. Therefore, the charts show the distribution of populations; they do not show which mode of transport is 'better'.

Figure E-9: Bar chart showing the proportion of rural children and young people living within each education connectivity score band, by mode of transport (Note E-3, Note E-6)
The legend is presented in the same order and orientation as the clusters of bars. The underlying data can be found in Worksheets EB to ED within the supplementary data tables.

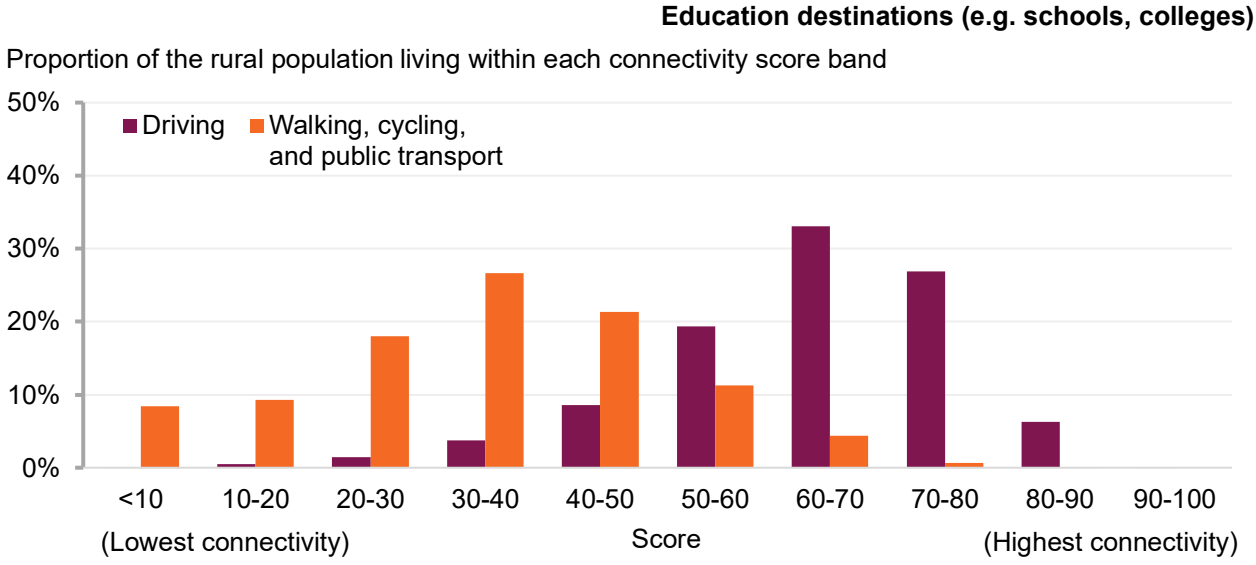


Figure E-9 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England when considering access to education destinations. Rural residents were much more likely to have higher education connectivity scores when travelling by car than when travelling by walking, cycling, or public transport.
- Driving connectivity for education destinations was generally high. The largest share of rural children and young people live in areas with scores between 60 and 70 (33%), followed by a substantial proportion in areas scoring between 70 and 80 (27%). Less than 1% live in areas with scores below 20.
- For walking, cycling, and public transport, connectivity scores were much lower. The largest shares live in areas scoring between 30 and 50 (48%), with less than 1% of residents in areas scoring above 70.

Connectivity to healthcare destinations by mode of transport

The bar chart in Figure E-10 show the proportion of the rural population falling into each connectivity score band for travel by driving and non-driving modes to healthcare destinations. Whilst the chart only includes rural areas, the score bands reflect the national distribution of connectivity scores.

It should be noted that score bands cannot be compared directly between modes of transport due to having unique scoring scales. Therefore, the charts show the distribution of populations; they do not show which mode of transport is 'better'.

Figure E-10: Bar chart showing the proportion of the rural population living within each healthcare connectivity score band, by mode of transport (Note E-3, Note E-6)
The legend is presented in the same order and orientation as the clusters of bars. The underlying data can be found in Worksheets EB to ED within the supplementary data tables.

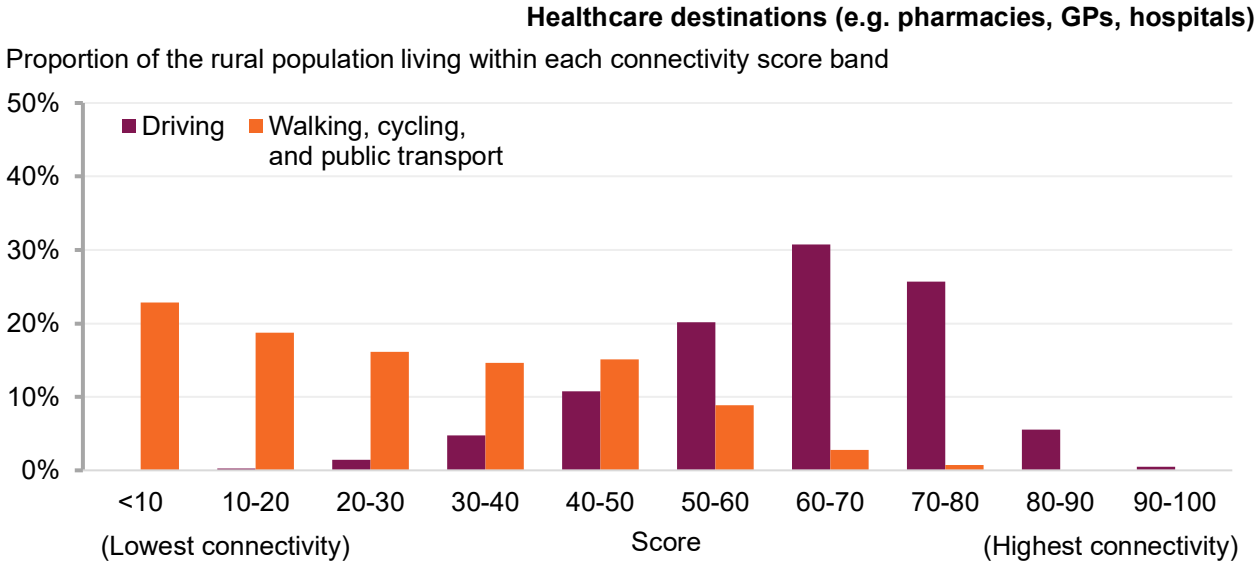


Figure E-10 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England when considering access to education destinations. Rural residents were much more likely to have higher education connectivity scores when travelling by car than when travelling by walking, cycling, or public transport.
- Driving connectivity to healthcare destinations was again high. The largest share of rural residents live in areas with scores between 60 and 70 (31%), followed by a substantial proportion in areas scoring between 70 and 80 (26%). Less than 1% live in areas with scores below 20.
- For walking, cycling, and public transport, the largest shares live in areas scoring below 10 (23%). More than half of rural residents (58%) live in areas scoring below 30. Less than 1% of residents live in areas scoring above 70.

A national view of connectivity helps to show how rural areas fare overall, but local patterns can differ substantially. Connectivity scores for all local authorities in England with the Rural-Urban Classification added can be found in Worksheets EE and EF of the supplementary data tables.

The least connected rural areas in England

Remote smaller rural settlements are those that are at least a 30-minute drive away from an urban area (a town of at least 10,000 residents). Communities in these areas are typically too small to support services locally. As a result, residents often need to travel to reach key services. People living in remote smaller rural areas also tend to be especially reliant on driving, as public transport and other non-driving travel options are often limited or unavailable.

Please note: Each destination type and mode of transport has its own scoring scale, so connectivity score bands cannot be compared directly; the charts below show how populations fall into each score band specific to the mode or destination. They do not show which destination is better connected/more accessible, nor which mode is 'better'.

Employment connectivity: The bar chart in Figure E-11 shows the proportion of the working-aged population (16 to 64 years) living in remote smaller rural settlements within each employment connectivity score band as defined within the 2021 rural-urban classification; it compares travel for any purpose by driving and non-driving modes. Whilst the chart only includes remote smaller rural areas, the score bands reflect the national distribution of connectivity scores.

Figure E-11: Bar chart showing the proportion of the working-aged population living within each employment connectivity score band in remote smaller rural settlements as defined within the 2021 rural-urban classification of output areas in England (Note E-3)

The chart compares driving and non-driving modes. The legend is presented in the same order and orientation as the clusters of columns. The underlying data can be found in Worksheets EB within the supplementary data tables.

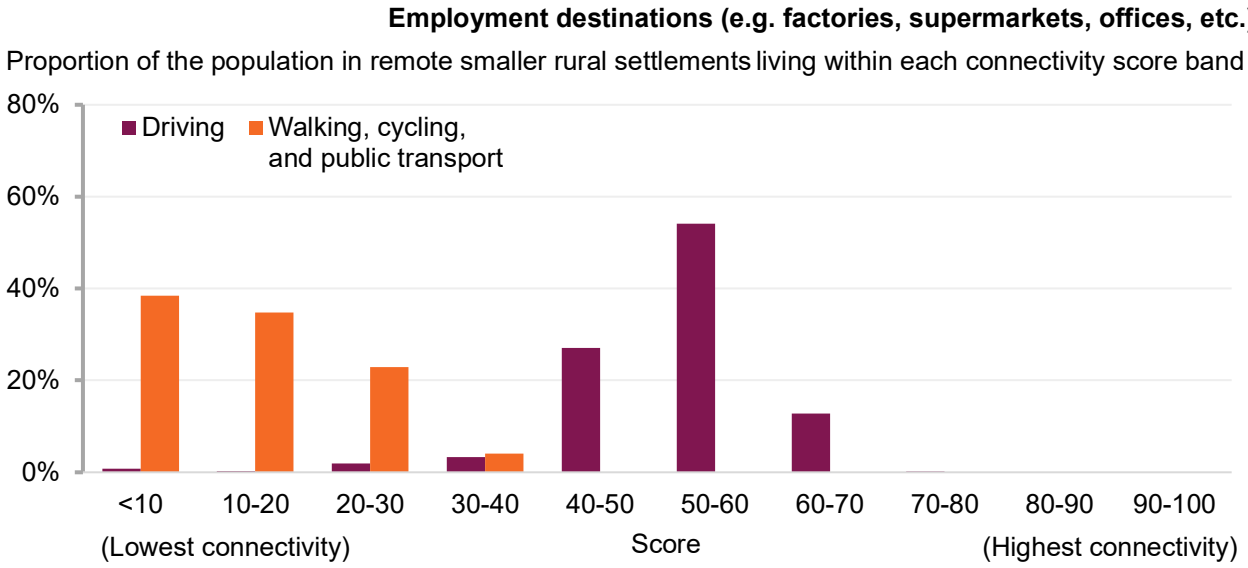


Figure E-11 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England when considering access to employment destinations. Residents of remote smaller rural settlements were much more likely to have higher scores when travelling by car than when travelling by walking, cycling, or public transport.

- For driving connectivity, the largest share of working-aged residents of remote smaller rural settlements live in areas scoring between 50 and 60 (54%). Around 1% live in areas with scores below 20.
- In contrast, connectivity for walking, cycling, and public transport was concentrated in the lowest score bands. 38% live in areas scoring below 10, and a further 35% live in areas scoring between 10 and 20. No remote smaller rural settlements scored above 40 for this mode and trip purpose.

Education connectivity: The bar chart in Figure E-12 shows the proportion of children and young people (4 to 21 years) living in remote smaller rural settlements within each education connectivity score band as defined within the 2021 rural-urban classification; it compares travel for any purpose by driving and non-driving modes. Whilst the chart only includes remote smaller rural areas, the score bands reflect the national distribution of connectivity scores.

Figure E-12: Bar chart showing the proportion of children and young people living within each education connectivity score band in remote smaller rural settlements as defined within the 2021 rural-urban classification of output areas in England (Note E-3)
The chart compares driving and non-driving modes. The legend is presented in the same order and orientation as the clusters of columns. The underlying data can be found in Worksheets EB within the supplementary data tables.

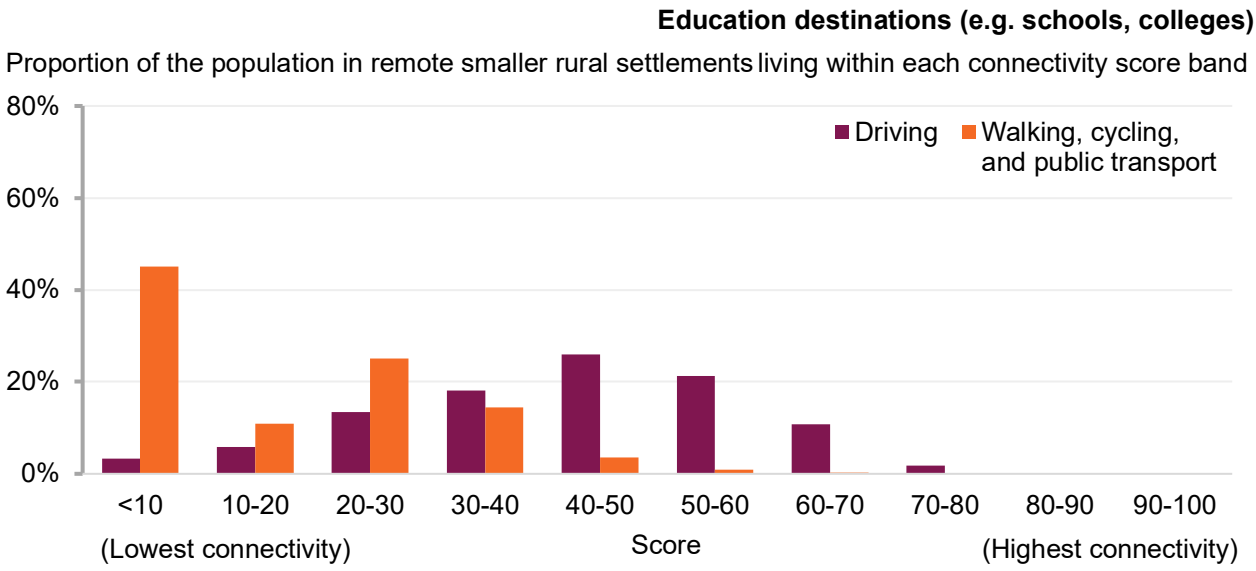


Figure E-12 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England when considering access to education destinations. Residents of remote smaller rural settlements were much more likely to have higher scores when travelling by car than when travelling by walking, cycling, or public transport.
- Driving connectivity for education destinations was generally mid-range. The largest share of children and young people in remote smaller rural settlements live in areas scoring between 40 and 50 (26%), followed by a substantial proportion in areas scoring between 50 and 60 (21%). No remote smaller rural settlements scored above 80 for this mode and trip purpose. 9% of

children and young people in remote smaller rural settlements live in areas with scores below 20.

- For walking, cycling, and public transport, connectivity was much lower. The largest share live in areas scoring below 10 (45%). No remote smaller rural settlements scored above 70 for this mode and trip purpose.

Healthcare connectivity: The bar chart in Figure E-13 shows the proportion of the population living in remote smaller rural settlements within each healthcare connectivity score band as defined within the 2021 rural-urban classification; it compares travel for any purpose by driving and non-driving modes. Whilst the chart only includes remote smaller rural areas, the score bands reflect the national distribution of connectivity scores.

Figure E-13: Bar chart showing the proportion of the population living within each healthcare connectivity score band in remote smaller rural settlements as defined within the 2021 rural-urban classification of output areas in England (Note E-3)
The chart compares driving and non-driving modes. The legend is presented in the same order and orientation as the clusters of columns. The underlying data can be found in Worksheets EB within the supplementary data tables.

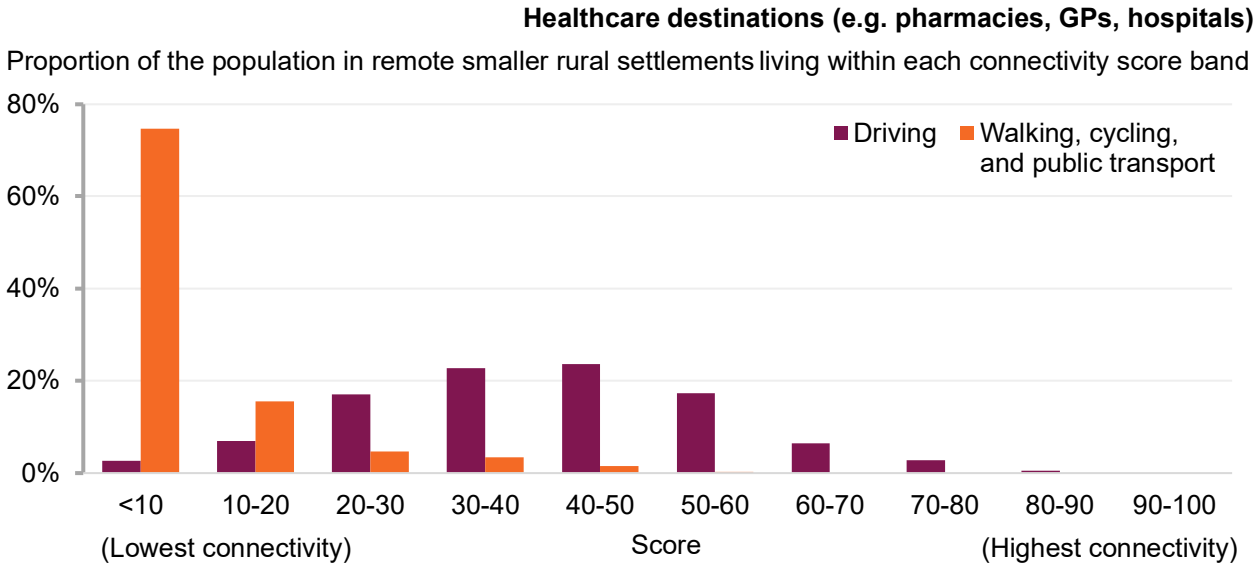


Figure E-13 can be summarised as follows:

- Connectivity scores range from 0 to 100, where 100 represents the most well-connected areas in England when considering access to healthcare destinations. Residents of remote smaller rural settlements were much more likely to have higher scores when travelling by car than when travelling by walking, cycling, or public transport.
- Driving connectivity to healthcare destinations was again mid-range. The largest share of residents live in areas with scores between 40 and 50 (24%), with a further 23% in areas scoring between 30 and 40. 10% live in areas scoring below 20, and less than 1% live in areas scoring above 80.
- For walking, cycling, and public transport, the majority (75%) live in areas scoring below 10. No remote smaller rural settlements scored above 60 for this mode and trip purpose.

Access to services explanatory notes

- **Note E-1**

An Output Area (OA) is a Census geography. OAs were developed (along with Lower and Middle Super Output Areas) to help improve the reporting of small area statistics, allowing for greater precision than reporting at Local Authority level. Each Local Authority will be built up of many OAs, therefore just because one OA scores poorly on accessibility of services it does not mean that this is an issue for the whole Local Authority.

- **Note E-2**

Tables of the data within this section are available in the connectivity and accessibility supplementary tables.

- **Note E-3**

When considering connectivity by destination type, the relevant population has been accounted for.
For access to employment, figures represent the working-aged population (aged 16 to 64 years).
For access to education, figures represent children and young people (aged 4 to 21 years).
For access to healthcare, figures represent the total population.
Population estimates are as of mid-2024, created via NOMIS.

- **Note E-4**

The 2021 Rural-Urban Classification of Census Output Areas has been used to define the settlement types specified within this analysis. Information about the classification can be found via: Rural Urban Classification - GOV.UK.

- **Note E-5**

For the relative access categories at output area-level, 'nearer to a major town or city' is defined as being within a 30-minute drive of a built-up with at least 75,000 residents. ‘Nearer to a medium urban area’ is defined as being within a 30-minute drive of a built-up area with at least 30,000 residents. ‘Nearer to a small urban area’ is defined as being within a 30-minute drive of a built-up area with at least 10,000 residents. ‘Remote’ is defined as having no access to any of these built-up areas; that is, a remote settlement is one where a built-up area of at least 10,000 residents cannot be reached within a 30-minute drive. More information regarding the detailed 2021 Census-based rural-urban classification can be found via: Rural-Urban Classification Methodology (2021) - Office for National Statistics.

- **Note E-6**

Destinations specified in the Connectivity Tool include the following:
Employment – includes all places of work outside of the home.
Education – includes primary and secondary schools, further education colleges (16-18), specialist SEND schools, and private education.
Healthcare – includes pharmacies, General Practices (GPs), opticians, dental surgeries, hospitals, emergency healthcare centres and private healthcare destinations.
Leisure (and community) – includes pubs, bars, nightclubs, sports facilities, green spaces, cinemas and theatres, halls and social clubs, destinations of culture, job centres, recycling centres, places of worship, post offices and post boxes, libraries, and banks or financial services.
Shopping – includes restaurants, general retail shops, supermarkets, and convenience stores.
Residential – includes all residences, whether it is the person’s own home or visiting friends or family members.
For more information about the destinations specified in the Department for Transport’s Connectivity Tool, see the guidance via Connectivity Tool Lite - DfT.

- **Note E-7**

The metric is calculated only for starting locations in England and Wales. Trips that start in England and Wales and end in Scotland are included.

- **Note E-8**

The ‘overall connectivity’ category presented in this section excludes driving; that is, it combines walking, cycling, and public transport. It is a weighted average, with weights determined by number of trips as reported in the National Travel Survey (NTS), and which are approximately 52%/40%/8% public transport, walking, and cycling, respectively. Connectivity is calculated separately for each mode and does not represent door-to-door journeys that involve switching between modes (for example, cycling to a rail station and continuing by train). Public transport connectivity includes walking access to and from stops, but does not include access by other modes.

- **Note E-9**

This publication was developed using support from generative AI tools to assist with drafting. All analysis, interpretation and final wording were produced, checked and quality-assured by Defra statisticians in line with the Code of Practice for Statistics.

F. Home working

A higher proportion of the working population living in rural areas work from home compared with those living in urban areas (35% versus 30%). However, this varies depending on the sector in which people are employed.

Home working - key findings

There was proportionally more home working in rural areas than urban areas

- 35% of the rural population said they worked from home for at least half of their working week in 2025; this compares to 30% of the urban population.
- In smaller rural settlements, 39% of the population worked from home.

Professional sectors had higher proportions of homeworkers than other sectors

- 79% of all ‘Information and communication’ sector workers living in rural areas were home workers (69% for urban areas). This was the sector with the greatest proportion of home workers for both rural and urban areas.
- The sector that saw the greatest difference in the proportion of home workers when comparing rural and urban areas was the ‘Agriculture, forestry and fishing’ sector. In rural areas 58% of all workers in the sector reported being home workers, 32 percentage points higher than in urban areas (26%). However, this would include farmers working on the farm where they live.

Rates of home working have increased over time

- Between 2018 and 2025, rates of home working increased in rural areas by 13 percentage points to 35%. In urban areas they increased by 17 percentages points to 30% over the same period.

Summary

Home working is defined by the ONS for statistical purposes as those who usually spend at least half of their work time working either within their home, within the same grounds or in different places using home as a base.

In 2025 there were an estimated 1.6 million home workers in rural areas, accounting for 35% of all workers living in rural areas. There were an estimated 7.0 million home workers in urban areas, accounting for 30% of all workers living in urban areas. The highest rate of home workers was found in smaller rural settlements, at 39%. In rural areas proximity to a major town or city has little impact on home working with home working accounting for 34% of workers living in rural settlements further from a major town or city, compared with 35% of workers living nearer to a major town or city.

Home working is more common in some sectors than others. In 2025, the sector with the greatest proportion of home workers in both rural and urban areas was the ‘Information and communication sector’ (79% being home workers for those living in rural areas and 69% for urban areas), followed by the ‘Financial and insurance activities sector’ (63% being home workers for those living in rural areas and 56% for urban areas) and then the ‘Professional, scientific and technical services sector’ (59% being home workers for those living in rural areas and 52% for urban areas).

Rates of home working have increased across all settlement types between 2018 and 2025, with London seeing the greatest increase of 22 percentage points (from 15% in 2018 to 37% in 2025), while the rate in rural areas increased by 13 percentage points (from 22% to 35%).

Home working in 2025

Home working is defined as those who usually spend at least half of their work time working either within their home, within the same grounds or in different places using home as a base. The following analysis uses data from the Office for National Statistics Annual Population Survey. Data are provided as part of a bespoke data request under a data sharing agreement.

The Annual Population Survey estimated that of the 28.1 million people in work in England in 2025 (see Note F-1), 8.6 million (31%) were home workers (see Note F-4). The proportion of home workers was greater for those living in rural areas at 35% (1.6 million workers) compared with 30% of workers living in urban areas (7.0 million workers) as shown in the bar chart in Figure F-1. This is to be expected as those in rural areas potentially have more to gain from home working. When considering average distances travelled those in rural areas may have further to travel to access places of work. For example, the average commute length in rural areas was 12.1 miles compared with 8.6 miles in urban areas for 2024. See Section C: Average travel patterns for more detail.

Figure F-1: Bar chart showing the proportion of workers aged 16 and over as home workers or working somewhere other than home based on where they live, by broad 2021 rural-urban classification, 2025

The legend is presented in the same order and orientation as the columns.

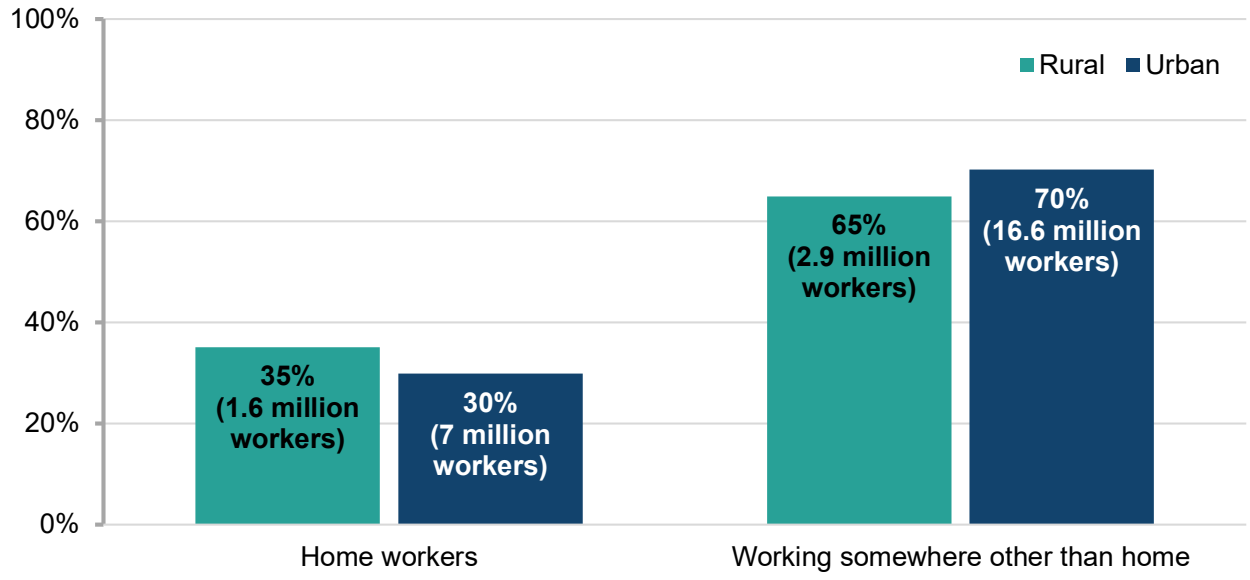
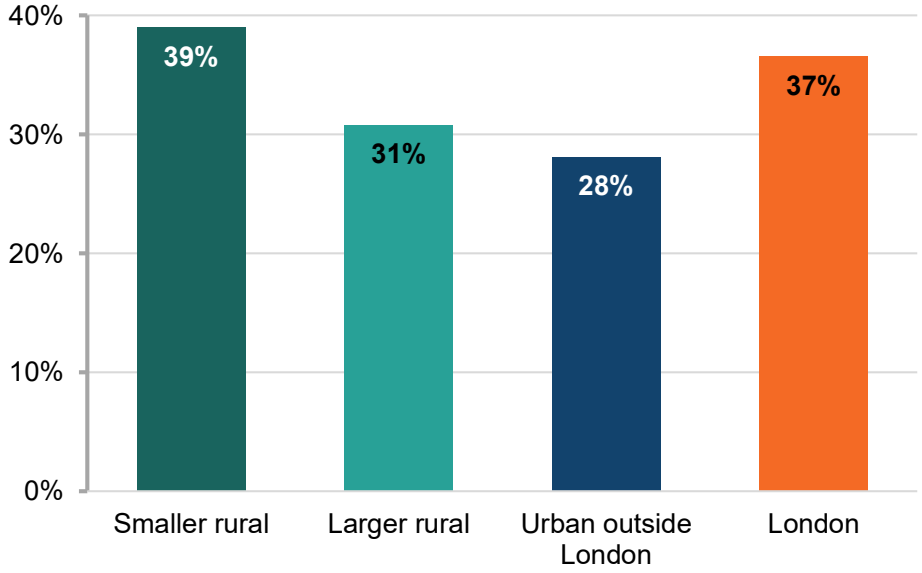


Figure F-2 is a bar chart showing that for those living in rural areas, rates of home working are highest in smaller rural settlements at 39% compared with 31% of workers being home workers in larger rural settlements. For those living in urban settlements outside of London the proportion of home workers drops to 28% of all workers, while rates for London are closer to those of smaller rural settlements at 37% of all workers. This could be due to London having a higher concentration of industry sectors where home working is more suitable such as communication and finance sectors.

According to the Office for National Statistics, home workers are more likely to be working in higher skilled roles and hence earn on average a higher hourly wage, however this will vary across rural and urban areas (see Note F-3).

Figure F-2: Bar chart showing home workers aged 16 and over as a percentage of all those employed, based on where they live, by detailed 2021 rural-urban classification in England, 2025



The 2021 rural-urban classification allows for analysis based on proximity to a major town or city however, as shown in the bar chart in Figure F-3, this has little impact on rates of home working in rural areas. Of those living in rural settlements further from a major town or city, 34% of workers were home workers compared with 35% for those living in rural settlements nearer to a major town or city.

Figure F-3: Bar chart showing the proportion of workers aged 16 and over living in all rural settlements that are home workers, by proximity to a major town or city, 2021 rural-urban classification, 2025

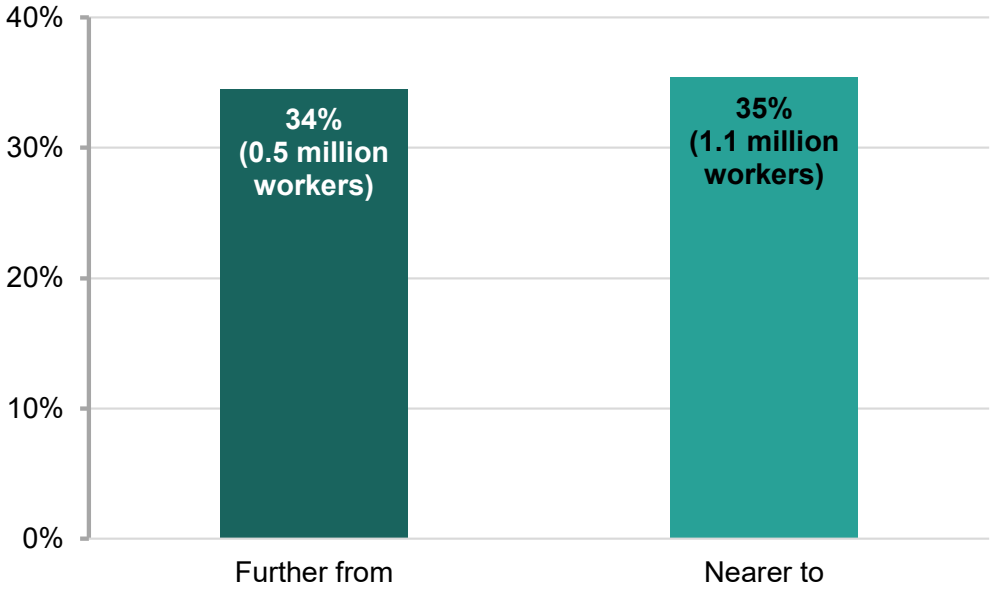
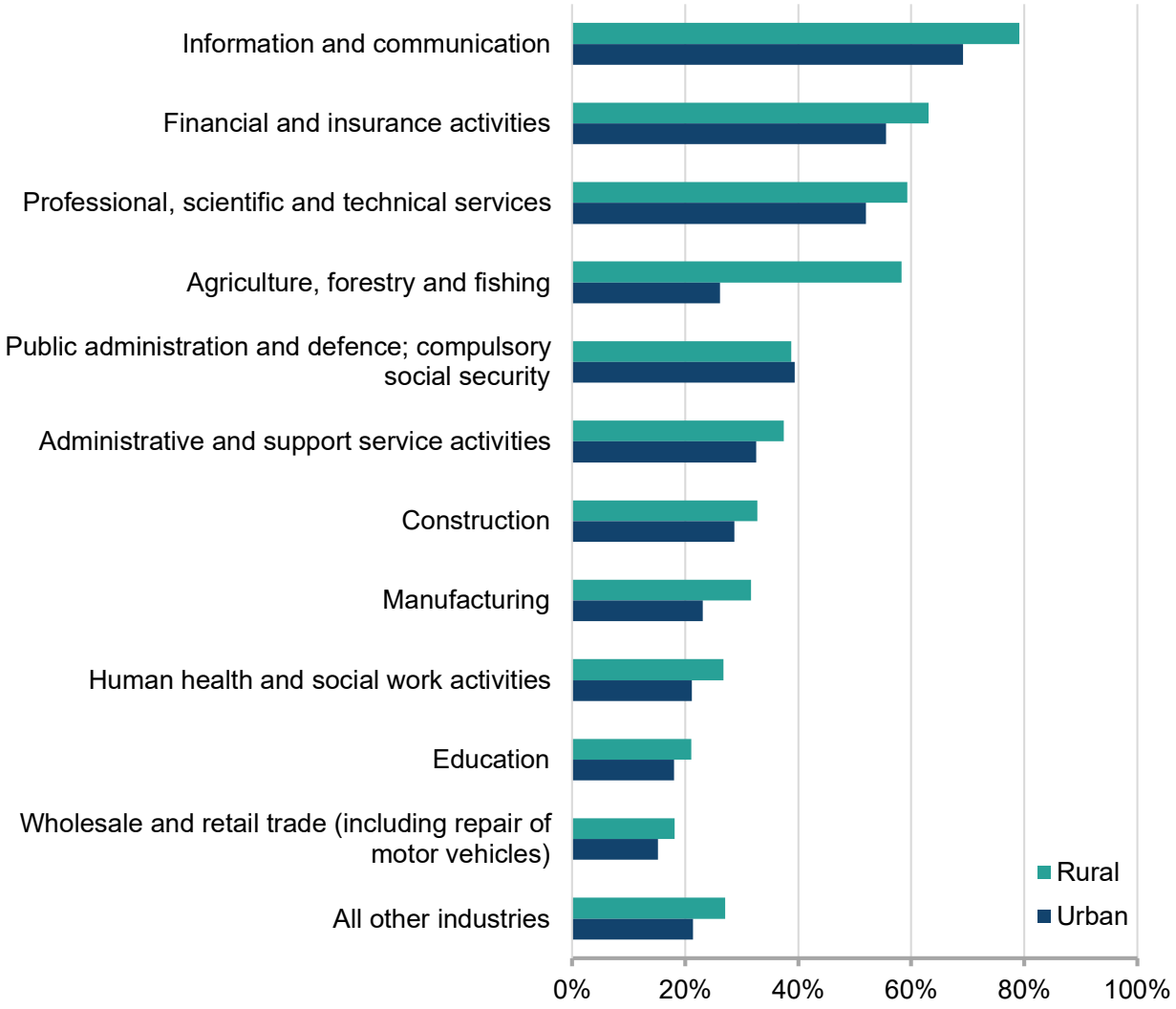


Figure F-4 is a bar chart showing home workers as a proportion of all workers for rural and urban areas by high-level sector groupings in 2025 (Note F-5).

Figure F-4: Bar chart showing home workers as a proportion of all workers, by sector, based on where they live, and 2021 rural-urban classification in England, 2025 (Note F-5)
The legend is presented in the same order and orientation as the bars.



Leaving aside the 'all other industries' grouping, Figure F-4 shows that the 3 sectors with the greatest proportions of home workers in both rural and urban areas were:

- Information and communication sector (79% of the sector's workers for those living in rural areas and 69% of the sector's workers for those living in urban areas);
- Financial and insurance activities sector (63% of the sector's workers for those living in rural areas and 56% of the sector's workers for those living in urban areas);
- Professional, scientific and technical service sector (59% of the sector's workers for those living in rural areas and 52% of the sector's workers for those living in urban areas).

In rural and urban areas the broad sector with the smallest proportion of home workers was the 'Wholesale and retail trade sector' (18% of the sector's workers for those living in rural areas and 15% of the sector's workers for those living in urban areas).

The ‘Agriculture, forestry and fishing’ sector saw the greatest difference in the proportion of home workers between rural and urban areas, with 58% of workers reporting as home workers for those living in rural areas, 32 percentage points higher than for urban areas (26%). This would include farmers working on the farms where they live.

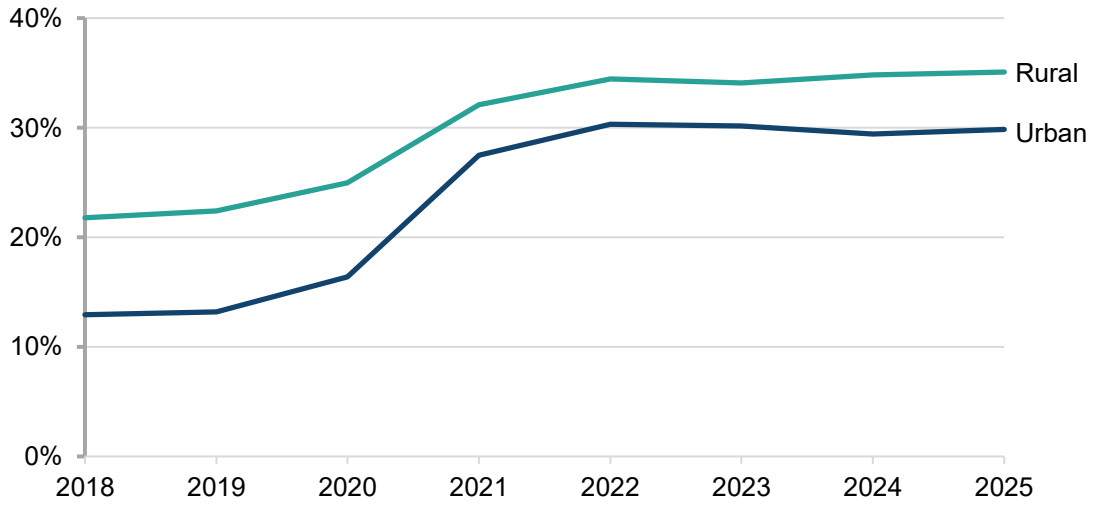
Changes in home working rates

Between 2018 and 2025 the rate of home working increased in both rural and urban areas, as shown in the line chart in Figure F-5.

The greatest increase in home working rates was between 2020 and 2021, very likely as a result of the COVID-19 pandemic. In the 2020 survey respondents were asked to consider where they would usually work in their main job prior to the COVID-19 pandemic, rather than the situation under COVID-19 restrictions. In 2021 the survey returned to the original question wording, simply asking respondents to record whether or not they work from home in their main job. This means it was not until 2021 that we started to see fully the anticipated increase in homeworking which came about as a result of the COVID-19 pandemic and its longer-term implications for working patterns. From 2022 rates of home working have seen little change in both rural and urban areas.

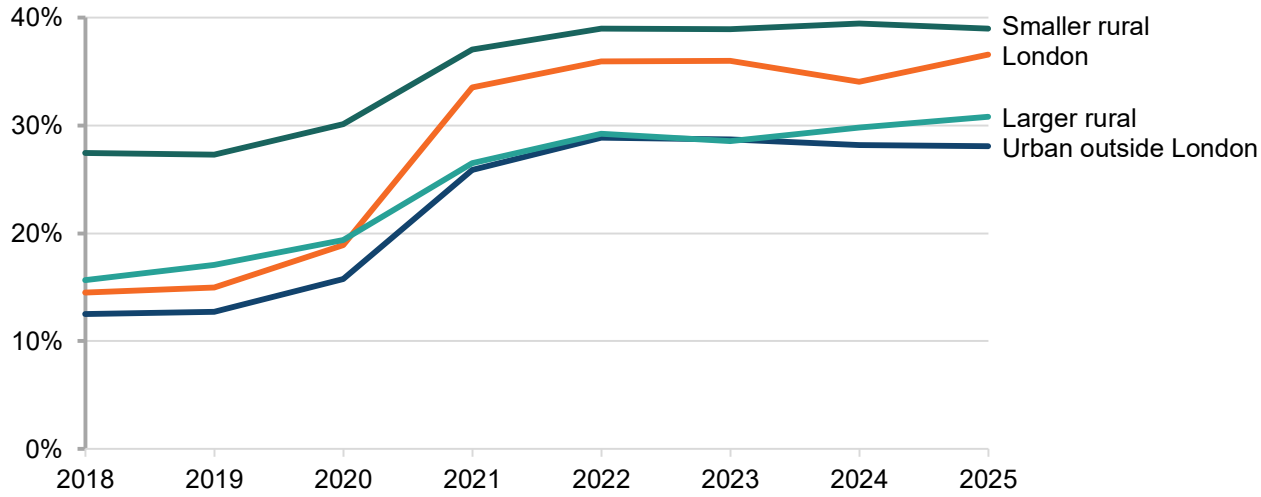
Over the period between 2018 and 2025, urban areas saw the greatest growth in home working, increasing by 17 percentage points (from 13% to 30%), compared with an increase of 13 percentage points in rural areas (from 22% to 35%).

Figure F-5: Line chart showing home workers as a percentage of all those employed (aged 16 and over), based on where they live, by broad 2021 rural-urban classification in England, 2018 to 2025



The line chart in Figure F-6 shows how rates of home working have changed between 2018 and 2025 across the more detailed breakdown of rural and urban areas. This shows that smaller rural areas consistently have the greatest proportion of home-workers, growing from 27% of workers in 2018 to 39% in 2025, while urban areas outside London generally have the lowest proportion of home workers growing from 13% to 28% over the time period.

Figure F-6: Line chart showing home workers aged 16 and over as a percentage of all those employed, based on where they live, by detailed 2021 rural-urban classification in England, 2018 to 2025

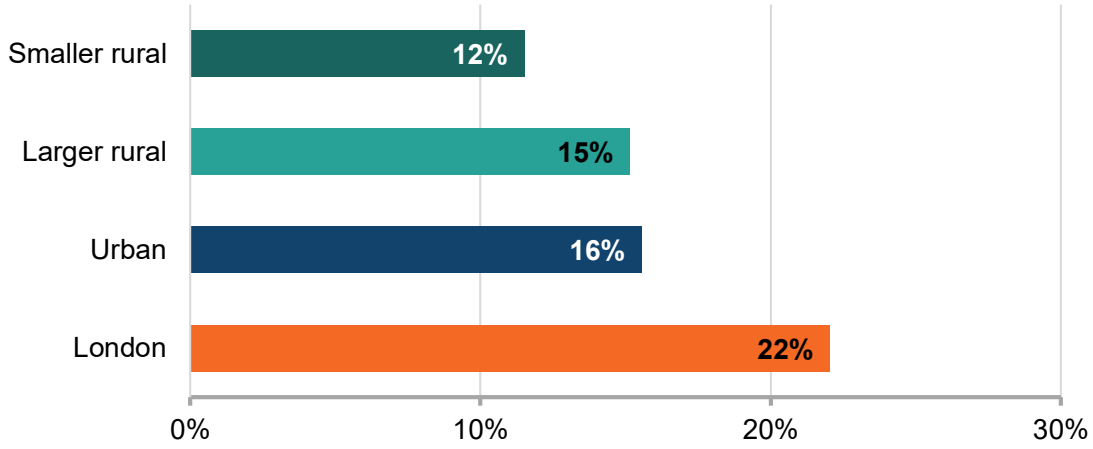


All area types showed a similar pattern over the period shown (2018 to 2025) with rates of home working growing steeply between 2020 and 2022 and then levelling off. Figure F-6 shows that although the direction of change was the same across all area types, the step change in home working rates around the time of the COVID-19 pandemic was much greater for urban areas than for rural areas.

In 2018, smaller rural areas had a noticeably higher rate of home working (27%) than the other area types which were more closely grouped (ranging from 13% for urban outside London to 16% for larger rural). Following the rapid rise in home working rates around the time of COVID-19 smaller rural settlements and London have similarly high rates of home working (39% and 37% respectively) while larger rural settlements and urban areas outside of London are at a lower level (31% and 28% respectively).

The bar chart in Figure F-7 compares the percentage point change in home working rates between 2018 and 2025 across the various area types. This clearly shows that while smaller rural areas saw an increase in the rate of home workers of 12% between 2018 and 2025 (and an increase of 15% for larger rural areas), it is London that saw the greatest increase in the level of home workers with an increase of 22 percentage points between 2018 and 2025.

Figure F-7: Bar chart showing the size of increase (in percentage points) in levels of home working between 2018 and 2025, based on where they live, by 2021 rural-urban classification in England



Home working explanatory notes

- **Note F-1**

This figure is for all those who reported their working status. It differs slightly from the total number employed as some respondents have not reported their home working status.

- **Note F-2**

Home workers are defined as those who usually spend at least half of their work time using their home, either within their grounds or in different places or using it as a base. Home workers will include both those who are employees of organisations and those who are self-employed. The category for home workers includes the following: those who work within their home, those who work in the same grounds or buildings of their home, and those who work in different places but use their home as a base.

- **Note F-3**

Further information can be found in the ONS document Characteristics of Home Workers, Great Britain: September 2022 to January 2023.

- **Note F-4**

Data presented within all figures from the Home working section are available in the Connectivity and accessibility supplementary data tables.

- **Note F-5**

All industries with less than 70,000 home-workers in rural areas have been grouped into the 'All other industries' category.

Appendix 1: The 8 thematic reports that make up the Statistical Digest of Rural England (and the topics included within them)

1. Population

A. Population level and change
B. Population age profile
C. Internal migration
D. Local Authority population data
E. Census 2021: Population

2. Housing

A. Housing stock: age and type
B. Housing stock: additions and affordable housing
C. Housing market
D. Second and empty homes
E. Homelessness
F. Land use change for housing
G. Housing quality

3. Health and Wellbeing

A. Life expectancy and Mortality
B. Wellbeing
C. NHS Dentistry provision
D. NHS General Practices
E. Childcare provision
F. Loneliness
G. Volunteering and charity

4. Communities and Households

A. Deprivation
B. Poverty due to low income
C. Household expenditure
D. Police recorded crime and outcomes
E. Crime surveys: local police and businesses
F. Feelings about the local neighbourhood

5. Connectivity and Accessibility

A. Broadband
B. Mobile coverage
C. Average travel patterns
D. Access to vehicles and charging infrastructure
E. Transport connectivity
F. Home working

6. Education, Qualifications and Training

A. Schools and their workforce
B. Class sizes
C. Secondary education attainment
D. School inspections
E. Free school meals - eligibility
F. Alternative and specialist education provision
G. Progression to higher education
H. Apprenticeships and on-the-job training
I. Workforce education level

7. Rural Economic Bulletin

A. Employment
B. Earnings
C. Redundancies
D. Unemployment-related benefits
E. Output and productivity measured by Gross Value Added (GVA)
F. Business demographics
G. Businesses by industry
H. Business survival and growth
I. Innovation and investment

8. Energy

A. Fuel poverty
B. Energy Performance Certificates: average Energy Efficiency Score
C. Energy Performance Certificates: achieving energy efficiency category C
D. Central heating
E. Energy consumption
F. CO_2 emissio

Each of the 8 themes also has their own set of supplementary data tables that include the larger source data that could not be included in the presented document. The chapter headings above are hyperlinked to the home page for that specific digest theme. The supplementary tables can be accessed from these home pages.

There is a further document including the individual Local Authority data tables, which have been separated for ease of use.