

Subnational estimates of dwellings and households by tenure, England, quality and methods guide

What the subnational estimates of dwellings and households by tenure statistics cover, how we produce them, and their quality and comparability. Includes definitions and latest, past and upcoming changes.

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Release date:
1 August 2025

Next release:
To be announced

Table of contents

1. [Overview](#)
2. [Latest changes to quality and methods](#)
3. [What the statistics cover](#)
4. [Where the data come from and how we produce the statistics](#)
5. [Quality of the statistics](#)
6. [Changes and their effects on comparability over time](#)
7. [Users and uses of these statistics](#)
8. [Definitions](#)
9. [Related links](#)
10. [Cite this page](#)
11. [Contact details](#)

1 . Overview

Our [Subnational estimates of dwellings and households by tenure, England](#) statistics include the estimated number and percentage of dwellings and households by housing tenure type in local authority districts in England.

To estimate the number of households and dwellings that fall within each tenure category at the local authority level, we use the [Structure Preserving Estimator \(SPREE\) method](#), which is a small area estimation technique that combines and draws strength from several data sources.

SPREE takes census data from 2021 and supplements it with data from the Labour Force Survey and administrative data from the Ministry of Housing, Communities and Local Government (MHCLG) on dwelling stock and occupancy rates to generate more reliable and complete estimates than it would be possible to generate from each source individually.

The SPREE method uses Iterative Proportional Fitting (IPF) to benchmark the estimates to reliable row and column totals to ensure that they are correctly scaled to represent the population. We estimate for local authority (rows) by tenure (columns), for both households and dwellings.

2 . Latest changes to quality and methods

We updated this guide on 1 August 2025. Important changes to quality and methods include:

- basing the 2025 edition of the dataset on [the Structure Preserving Estimator \(SPREE\) method](#), where previous estimates have been produced using the [Generalised Structure Preserving Estimator \(GSPREE\) \(PDF, 2.26MB\)](#) method; this means that our recent estimates are not directly comparable with pre-2021 estimates
- using updated and alternative data sources, such as Census 2021 and the Labour Force Survey instead of the Annual Population Survey

For more information on this latest change, as well as any past and upcoming changes, go to [Section 6: Changes and their effects on comparability over time](#).

3 . What the statistics cover

We produce estimates of the counts and percentages of the tenure breakdown of households and dwellings at English local authority level.

For households, we produce data on four categories of tenure: owned outright, owned with a mortgage or loan, private rent and social rent.

For dwellings, we produce estimates on three categories of tenure: owned outright, owned with a mortgage or loan, and private rent. The Ministry of Housing, Communities and Local Government (MHCLG) already produce data on [socially rented dwellings for local authority districts](#) in England.

4 . Where the data come from and how we produce the statistics

Where the data come from

The data used to produce the subnational tenure estimates are provided by the Office for National Statistics (ONS) and the Ministry of Housing, Communities and Local Government (MHCLG).

2021 Census

The census is a once-in-a-decade opportunity to get an accurate, comprehensive and consistent picture of the population of England and Wales. It is the only source of directly comparable statistics for both small areas and minority population groups across England and Wales.

Tenure breakdowns at the household level are available for a range of geographies, as at Census Day on 21 March 2021. The current issues with bias in tenure estimates from the Annual Population Survey mean that census data produce more feasible results when used in our models.

We use Census 2021 local authority tenure data as the proxy dataset for the models, with an occupancy rate applied to adjust the data for the dwellings model.

We use Census 2021 national tenure distribution for the private sector, rolled forward to the year of interest (for example, 2022 or 2023). We account for the official estimate of the number of households in England from the Labour Force Survey (LFS) for the column benchmark in the households model, and the number of dwellings in England from the MHCLG live tables for the dwellings model.

Labour Force Survey

The [Labour Force Survey \(LFS\)](#) is a continuous household survey administered by the ONS, covering the UK, with the aim of providing estimates of social and labour market variables at a local area level.

Our estimates of household tenure are constrained by weighted estimates from the LFS of the number of households in England. We use the LFS (middle quarter of the year) as the [estimate of the number of households](#) in the year of interest (for example, 2022 or 2023) as these are the official estimates.

Live tables on dwelling stock (including vacants)

Accredited official statistics on [live tables of dwelling stock](#) produced by MHCLG are used as row benchmarks in the dwelling stock model. These are the total number of dwellings in each local authority (live table 100).

We use the number of social-rented dwellings for English local authority districts in the live tables, meaning that we only model for private sector estimates. The live tables present social rent tenure figures for dwellings; we adjust them with the occupancy rate to produce estimates for the tenure for social rent for households.

Previous versions of estimates (data up to 2021)

In previous years (data up to 2021) we have used the [Annual Population Survey \(APS\)](#) and the [English Housing Survey](#) to produce estimates.

As set out previously, we are not currently using the APS because of increased bias identified when testing our current methods using 2022 and 2023 data. For more information see our article [Coronavirus and its impact on the Labour Force Survey](#).

Previously, we adjusted the APS data used for the proxy source (from households to dwellings for the dwellings model) by using occupancy rates from the English Housing Survey. The English Housing Survey provides a national occupancy rate broken down by tenure. However, we wanted to use something that reflected occupancy at local authority level, given that occupancy rates vary between areas. We use a different method for calculating occupancy rates, a description of which follows.

Once work is complete to improve quality of social surveys, we will revisit our methodology.

How we produce the statistics

To estimate the number of households and dwellings that fall within each tenure category at the local authority level we use [the Structure Preserving Estimator \(SPREE\) method](#).

SPREE uses small area estimation techniques to combine and draw strength from several data sources using a method known as Iterative Proportional Fitting (IPF). We apply the IPF method separately for households and dwellings.

SPREE assumes that the proxy source (Census 2021 local authority by tenure counts) and the target table (the estimates produced) have the same distribution. It works to preserve the underlying relationships in the proxy source, while still meeting the row and column benchmarks.

For good statistical practice, the SPREE method requires the sum of the row totals to equal the sum of the column totals before the IPF is run. If this is not the case, the local authority row totals are constrained to the national level column totals. A description of the data we use for benchmarks follows.

We calculate an occupancy rate by dividing the number of households from Census 2021 by the corresponding number of dwellings taken from the MHCLG [live table 100](#). To convert from dwellings to households, we multiply dwellings estimates by these occupancy rates. To convert from households to dwellings, we multiply by the inverse of the occupancy rate.

This gives us an occupancy rate for each local authority, rather than a national one. We use 2021 data to calculate the occupancy rate, and we assume that rate calculated holds true for 2022 and 2023.

We apply the occupancy rate in several places in our method:

- to convert administrative data on social-rented dwellings into social-rented household estimates
- to convert administrative data on private sector dwellings totals to private sector household totals for row benchmarks in the household SPREE model
- to adjust the proxy dataset (Census 2021, a household dataset) for the dwellings model

Estimates for dwelling stock by tenure and households by tenure are calculated using slightly different sources and methods, which we now outline.

Dwelling stock model

The input data, the census, is a household-level dataset, so we apply an occupancy rate adjustment to it, to provide an indication of the number of dwellings.

We ensure consistency with the total number of dwellings in each local authority published by MHCLG. We use the number of [socially rented dwellings for local authority districts](#) in England produced by MHCLG for this tenure at the dwellings level. This means that we only need to model for private sector dwellings.

To produce dwelling estimates (for the private sector), we use:

- proxy source: Census 2021 local authority by tenure counts adjusted using an occupancy rate to convert to dwellings
- column benchmark: Census 2021 national tenure distribution for the private sector rolled forward to the year of interest, accounting for the MHCLG estimate of the number of private sector dwellings
- row benchmark: the total number of private sector dwellings in each local authority (MHCLG, [live table 100](#))

Households model

We use administrative data with a occupancy rate adjustment for social-rented households ([MHCLG, live tables 100 and 104](#)). This means the SPREE approach is only necessary for estimating the three remaining categories (owned outright, owned with a mortgage, and private rent).

To produce household estimates (for the private sector), we use:

- proxy source: Census 2021 local authority by tenure counts
- column benchmark: Census 2021 national tenure distribution for the private sector rolled forward to the year of interest, accounting for the official estimate of the number of households in England from the Labour Force Survey (LFS)
- row benchmark: [MHCLG local authority dwellings estimates](#) (excluding social rented) with an occupancy rate adjustment

We combine results from the SPREE model with the administrative data on social rent to arrive at the total estimates. We ensure that when the row or column totals from the private sector model are added to the corresponding totals for social-rented households, they equal the national estimate of the number of households in England from the LFS.

Comparing households and dwellings

We produce the estimates for households and dwellings in slightly different ways, reflecting the differences in how they are defined.

First, we account for unoccupied properties in our dwelling stock estimates by applying the occupancy rate adjustment, described previously; this is not necessary for household estimates.

The input data source, Census 2021, is a household survey, so it only covers dwellings that are occupied on Census Day and does not provide tenure data on unoccupied dwellings.

Our estimates have shown that it is more common for a local authority district to have a higher total number of dwellings than households; there are a number of possible reasons for this including because it is more common to have a higher number of households occupying or owning multiple dwellings than singular dwellings being occupied by multiple households. Some dwellings may also be used for short-term lets or rentals so do not have a household living there permanently. Some dwellings may be unoccupied either in the short term (while waiting to be sold, being between tenancies or while undertaking repairs) or longer term.

Second, we use different sources for constraining the household and dwellings estimates.

At local authority level, the total number of dwellings is taken from MHCLG [live Table 100](#). We also use these data, with an occupancy rate adjustment applied, for the total number of households at local authority level in the household model.

At national level, the total number of dwellings by tenure at the country level are taken from the total of local authority dwellings data from MHCLG; the total number of households is estimated using weighted totals from the LFS.

Third, we treat social rent differently when calculating our household and dwellings estimates.

We can take social rent estimates for dwellings directly from MHCLG live table 100, which we combine with modelled private sector estimates to arrive at the totals and proportions for all dwellings.

National and regional social-rented household estimates are available from the English Housing Survey, the LFS and census; however, as there are no annual statistics available on the number of socially rented households at local authority level, we produce social rent tenure estimates by applying an occupancy rate adjustment to total social-rented dwelling stock from MHCLG live table 100.

5 . Quality of the statistics

Statistical designation

These statistics are labelled as [official statistics in development](#). They are based on information from Census 2021, Labour Force Survey and dwelling stock statistics. We are developing which sources we use and how we model the data and produce the statistics to improve their quality.

Once we have completed the developments, we will review the statistics with the Statistics Head of Profession.

If the statistics meet trustworthiness, quality and value standards based on user feedback, we will remove the "official statistics in development" label to publish under the "official statistics" label.

If they do not meet trustworthiness, quality and value standards, we will further develop them and might stop producing them.

We will inform users of the outcome of our, and any Office for Statistics Regulation (OSR) review, and any changes.

How we quality assure the data

Rigorous quality assurance is carried out at all stages of the data production process.

There are some checks that we undertake to ensure quality of results.

For good statistical practice it is important to make sure the row and column totals sum to each other before the Iterative Proportional Fitting is run. This requires adjustment, typically forcing the row totals (local authority level) to equal the column totals (national level).

Where appropriate, individual input data sources are evaluated for bias in 2021 rather than 2022 or 2023, to ensure consistency with the census. For example, the bias in the local authority social-rented administrative-based household estimates can be assessed by comparison between the 2021 estimates and the corresponding census estimates.

The final SPREE estimates for 2022 and 2023 were also assessed and plotted against Census 2021 estimates, taking into account the difference in time periods and the fact that the estimation uses Census 2021 data as an input. Because of the differences in time period, we expect some differences, particularly for the counts. However, we would not expect to see large or implausible changes. For example, if the Annual Population Survey (APS) tenure information was used in the model instead, then most local authorities have a notable increase in owned-outright households and a notable decrease in private-rented households.

Other procedures include:

- the input data sources have quality assurance processes in place before the data are published
- output tables are produced by code rather than manually created
- visual checks are carried out on the output tables to ensure there are no errors or inaccuracies
- thoroughly checking the data in charts and tables, and making sure the text of the article is consistent with the data in the main datasets

Strengths

- These data provide users with insight into the breakdown of tenure at the local authority level for both households and dwellings in England.
- The Ministry of Housing, Communities and Local Government (MHCLG) publish data on the number of socially rented dwellings and total number of dwellings at a local authority level; our estimates are consistent with that data at a local authority level.
- This is the only dataset that provides the tenure breakdown for households at a local authority level in non-census years.

Limitations

- For the purpose of these statistics, we assume that the tenure distribution is unchanged since Census 2021.
- We currently roll forward the Census 2021 distributions for private sector tenure at the national level, meaning that we are unable to account for large changes in the split of tenures in a local authority; so, while the volume will change in 2022 and 2023 based on new house building, the proportion of tenures in the private sector will stay perhaps artificially stable.
- We do not apply a different occupancy rate adjustment for each tenure; so, for example, we do not account for there generally being proportionally more unoccupied dwellings in the private rented sector compared with those owned outright.
- The change in method for the 2025 edition of the modelled estimates means that estimates for recent years (2022 onwards) are not directly comparable with those produced using the Generalised Structure Preserving Estimator (GSPREE) method (data up to 2021).

European Statistical System Quality Dimensions

The Office for National Statistics (ONS) has developed guidelines for measuring statistical quality based on the five European Statistical System (ESS) Quality Dimensions.

Relevance

Subnational tenure estimates are produced for local authority districts in response to demand for these statistics at this level of granularity.

We produce datasets that provide estimates of the tenure breakdown for both dwellings and households in English local authority districts. Households is the most useful measure for users interested in tenure estimates based on the people who live in properties. Dwellings is more suitable for users interested in the number of physical units of accommodation (including those that are vacant) available to be taken up by each of the tenure types.

Accuracy and reliability

It is not possible to produce [confidence intervals](#) for this round of estimates, but this does not mean that uncertainty does not exist within the estimates.

Lack of confidence intervals is in part because both the households and dwellings models use administrative data directly for the social rented category. The concept of confidence intervals for administrative data is more complex; more emphasis is normally placed on evaluating bias. Bias was evaluated in the input data sources and benchmarks as well as the final Structure Preserving Estimator (SPREE) estimates.

For the SPREE approach for the private sector categories, there is no natural way to produce confidence intervals from the Iterative Proportional Fitting (IPF) method. The concept of confidence intervals for this context is less clear given that a survey sample is no longer feeding into the estimation (as it was in previous releases up until 2021 when we used the Annual Population Survey (APS) with the GSPREE method).

We use administrative data from MHCLG for social-rented dwellings and households. We have explored further administrative sources but have not yet identified any with suitable coverage and representativeness of the private sector. We would welcome further input from users on other potential sources, as we continue to develop our methods in future.

Timeliness and punctuality

We aim to release these statistics in the spring two years following the year that the data refer to (that is, 2024 data published in early 2026). However, we delayed publication of our 2022 and 2023 estimates while we developed a new method to address quality concerns in our use of the APS.

For more details on related releases, the [GOV.UK release calendar](#) provides up to 12 months' advance notice of release dates. In the unlikely event of a change to the pre-announced release schedule, public attention will be drawn to the change and the reasons for the change will be explained fully at the same time, as set out in the [Code of Practice for Statistics](#).

Coherence and comparability

These estimates are not directly comparable with previous modelled estimates up to 2021 because of our change in method. However, future estimates should be comparable with current ones. We will revise the back-series each time we publish new estimates.

MHCLG produce accredited official statistics on the number of dwellings by tenure for local authority districts in England in [live table 100](#). However, these data do not provide a split of the private sector into owner-occupied and privately rented dwellings, but do provide an indication on the number of dwellings in the private sector, social rent sector and the total number of dwellings. We constrain our estimates of owner-occupiers and private renters to the private sector stock published and take the number of socially rented dwellings directly from MHCLG to ensure coherence across data sources.

Information on tenure can be found for other UK countries, but the methods used to produce estimates on tenure vary.

Wales

[Dwelling stock estimates by local authority and tenure](#)

The Welsh Government publishes annual statistics on dwelling stock by tenure, which provide a breakdown of owner-occupied, privately rented and social housing stock for local authorities. These estimates are produced using survey data from the APS (among other sources), so are not directly comparable with our estimates.

Scotland

[Estimated stock of dwellings by tenure](#)

The Scottish Government produces estimates of the stock of dwellings by tenure and local authority on an annual basis, which also breaks down the private sector into owner-occupied and privately rented dwellings. Since 2001, data have been provided for vacant dwellings, but this is only available for the private sector as a whole. Therefore, the percentages given for owner-occupied and privately rented dwellings do not differentially account for vacant dwellings.

Northern Ireland

[Household tenure](#)

The Department for Communities - Northern Ireland produces statistics on household tenure at the national level, where a breakdown of owned outright, owned with a mortgage, and privately rented and social rented is possible. However, these are not available at local authority level, or for dwellings.

Accessibility and clarity

Our recommended format for accessible content is a combination of HTML web pages for narrative, charts and graphs, with data being provided in usable formats such as Excel. Our website also offers users the option to download the narrative in PDF format. For further information, please contact us by email at: better.info@ons.gov.uk.

For information regarding conditions of access to data, please refer to [terms and conditions \(for data on the website\)](#) and [accessibility](#).

6 . Changes and their effects on comparability over time

Using the SPREE method

We based the 2025 edition of the dataset on the [Structure Preserving Estimator \(SPREE\) method](#), where previous estimates have been produced using the [Generalised Structure Preserving Estimator \(GSPREE\) \(PDF, 2.26MB\)](#) method.

We made this change in response to high levels of bias present in the [Annual Population Survey \(APS\)](#) estimates of tenure following the coronavirus (COVID-19) pandemic. The high bias was caused by issues in the APS tenure inputs, in part because of the telephone interviewing introduced during the coronavirus pandemic. This change affected who responds to the survey: there was a notable decrease in the proportion of respondents living in private-rental dwellings and an increase in those living in dwellings owned outright. For more information see our article [Coronavirus and its impact on the Labour Force Survey](#).

The 2025 edition of the dataset is [official statistics in development](#); the method is subject to change as quality issues in survey sources are addressed and depending on user feedback.

Past changes

There have been no important past changes to the quality or methods since we started producing the statistics.

Upcoming changes

We currently have no definite plans to change the methodology before the next publication. However, as official statistics in development, we will reflect on any feedback and continue to monitor changes in available data sources and how they could improve our methodology.

7 . Users and uses of these statistics

The main users of our subnational tenure estimates have been identified as the following:

- central government: monitoring housing trends in tenure at a local scale, to understand how the housing market is being used; they could also feed into policy-making
- local government: monitoring trends and changing distribution in tenure in their local authorities, which can inform housing policies being set in each area
- government departments: the estimates provide information that helps the sampling and adjustment of data collected about the private rented sector, including the House Price Index, and regional gross disposable household income
- housing industry specialists: these include organisations such as large estate agents seeking information on subnational housing trends
- housing bodies: these include organisations such as the Home Builders Federation and charities that carry out secondary analyses of official housing statistics

8 . Definitions

We include a [Glossary](#) in the article that accompanies the datasets.

9 . Related links

[Subnational estimates of dwellings and households by tenure, England: 2023](#)

Article | Released: 25 July 2025

Estimates which provide the breakdown of dwellings and households by tenure, for local authority districts in England, on an annual basis.

[Households by household size, regions of England and Great Britain constituent countries](#)

Dataset | Released: 23 July 2025

Labour Force Survey estimates including measures of uncertainty of the number of households by household size, for England, Scotland and Wales, as well as the regions of England.

[Ministry of Housing, Communities and Local Government, live tables on dwelling stock](#)

Dataset | Last updated 26 June 2025

The latest data tables on dwelling stock (including vacants).

10 . Cite this page

Office for National Statistics (ONS), released 1 August 2025, ONS website, quality and methods guide, [Subnational estimates of dwellings and households by tenure, England, quality and methods guide](#)

11 . Contact details

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