

# Population statistics and sources guide

A comparison of the different types of population estimate that are planned for or are published in 2022 and early 2023. Includes information about whether these are official estimates of the population or used only for wider research, as well as the sources, coverage and main uses and comparability issues for the estimate.

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# 1 . Employee population by nationality

## Type of estimate

New experimental statistics about the population or supporting data and research

## Release information

- Data sources: Real-Time Information and nationality from Migrant Worker Scan
- Latest reference period: June 2021
- Geographical coverage: UK
- Lowest geographical breakdown: regions -- Nomenclature Units for Territorial Statistics Level 1
- Population definition: employees
- Publication type: research

## Uses and guidance

Provides information on the number of employees to guide decisions on the need for and methods used in future reweighting exercises of the Labour Force Survey. The different definition to other population estimates means it is not comparable with official estimates of the population.

The estimates published on 15 March 2022 provide an update to the ad-hoc estimates published in March 2021. These are not indicative migration or population estimates and should not be used as such. Reweighted Labour Force Survey (LFS) estimates were published on 14 June 2022 for periods from January to March 2020, incorporating the latest RTI by nationality (from MWS) data. More information on this is available in the [Impact of reweighting on Labour Force Survey key indicators article](#).

## Publication

Employments from Pay As You Earn Real Time Information: Ad hoc estimates of payrolled employees by NUTS1 region and nationality, seasonally adjusted. Published 15 March 2022.

# 2 . Population totals from Labour Force Survey re-weighting exercise

## Type of estimate

New experimental statistics about the population or supporting data and research

## Release information

- Data sources: Labour Force Survey
- Latest reference period: currently done annually
- Geographical coverage: UK
- Lowest geographical breakdown: regions - International Territorial Level 1
- Population definition: usual residents of households
- Publication type: research

## Uses and guidance

The main use of populations within the Labour Force Survey and Annual Population Survey data is to provide contextual comparisons of the labour markets for different areas, and for use as a denominator for calculating rates from within the published LFS and APS datasets. They are not comparable with the official mid-year population estimates.

## Publication date

14 June 2022

Rewighted Labour Force Survey data were published in our Labour Market bulletin on 14 June 2022. More information on this is available in the [Impact of reweighting on Labour Force Survey key indicators article](#).

We are looking at the impact of this alongside the release of Census 2021 estimates, and what effect this has on the best estimates of the population by country of birth and nationality. As a result, future publications of the [UK population by country of birth and nationality](#) are being reviewed and a decision on the next publication will be made by November 2022.

# 3 . Census 2021

## Type of estimate

Official statistics from Census 2021, giving a picture of the population at March 2021

## Release information

- Data sources: Census 2021
- Latest reference period: 21 March 2021
- Geographical coverage: England, and Wales Lowest geographical breakdown: local authority district
- Population definition: all resident people on Census night - households and communal establishments
- Publication type: official estimate of population as at 21 March 2021

## Uses and guidance

Census 2021 is our best estimate of the population of England and Wales as at Census Day. Subject to our final quality assurance processes and engagement with local authority users of census statistics, it will underpin the official mid-year population estimates, which will be published later in the year.

## Publication date

On 28 June 2022 we [released the first results from Census 2021 in England and Wales](#).

We published five datasets containing population and household estimates for England and for Wales, rounded to the nearest 100 at local authority level. These were

- Usual resident population by sex
- Usual resident population by 5-year age group
- Usual resident population by sex and 5-year age group
- Usual resident population density
- Number of households

To explain these data, we published two statistical bulletins, one focused on England and Wales and one focused on Wales. In these, we discuss the population size and change from 2011, population density and number of households.

Additionally, to support the data we have published a Quality and Methods Information (QMI) report, about the quality of the data

- Maximising the quality of Census 2021 population estimates report
- an overview of the estimation and quality assurance processes we used to create and ensure the estimates are fit for purpose
- a [local authority comparison tool](#), letting you compare estimates for local authorities with other sources of data

You may also want to explore the [interactive content from the Census 2021 first results](#), including:

- a [scrolly-telling article](#), about how the population has changed in different local authority areas and how they compare with others across England and Wales
- the [Census 2021 population map game](#), testing your knowledge of the population of local authorities

## 4 . Research report on the proof of concept for the dynamic population model (annual basis)

### Type of estimate

New research outputs about the population, supporting data and research

### Release information

- Data sources: predominantly admin data
- Latest reference period: 2022
- Geographical coverage: England and Wales
- Lowest geographical breakdown: synthetic example at local authority district level
- Population definition: target is usual residents of households and communal establishments
- Publication type: research

## Uses and guidance

This research report updates on progress towards a proof of concept for age and sex profiles of the population for local authorities on a 2022 base using the Dynamic Population Model.

Providing these timely population totals will allow decision-makers to see quickly when things have changed, to ensure that public services are targeted to the right population groups in the right places. This has never been more important to understand than as we emerge from the pandemic, and since our departure from the EU.

The example population estimates presented in this report are based on synthetic data for a single Local Authority with a population typical of areas that contain a university. These outputs are for illustrative purposes only and should not be used in decision-making.

## Publication date

On 14 July we outlined the new methods we are developing to [produce estimates of the size of the population and population change using a dynamic population model \(DPM\)](#). This article explains what the DPM is, how it differs from the existing method for creating population estimates, the data it uses and the outputs it will produce.

Alongside this we have also published an [article](#) explaining how we intend to move through the next stages of the international migration transformation programme. Users require international migration estimates which are timely frequent and granular. These estimates are also a key input to the dynamic population model. This article explains our plans to meet both requirements. We aim to publish the latest set of international migration flow estimates for the year ending 2022, derived from administrative data, in November 2022.

These articles are the first in a series of publications over the coming months which will outline our plans to use a dynamic population model to produce coherent population and migration estimates.

# 5 . Population totals from Annual Population Survey re-weighting exercise

## Type of estimate

New experimental statistics about the population or supporting data and research

## Research information

- Data sources: Annual Population Survey
- Latest reference period: currently done annually
- Geographical coverage: UK
- Lowest geographical breakdown: local authority district
- Population definition: usual residents of households
- Publication type: research

## Uses and guidance

The main use of populations within the Labour Force Survey and Annual Population Survey data is to provide contextual comparisons of the labour markets for different areas, and for use as a denominator for calculating rates from within the published LFS and APS datasets. They are not comparable with the official mid-year population estimates and so, although they feed into the production of other official statistics, they are not an official measure of the population themselves.

## Publication date

16 August 2022

Rewighted Annual Population Survey data will be published in our Labour Market bulletin on 16 August 2022. More information on this is available in the [Impact of reweighting on Labour Force Survey key indicators article](#).

We are looking at the impact of this alongside the release of Census 2021, and what effect this has on the best estimates of the population by country of birth and nationality. As a result, future publications of the [UK population by country of birth and nationality](#) are being reviewed and a decision on the next publication will be made by November 2022.

# 6 . Local authority district student case studies

## Type of estimate

New experimental statistics about the population or supporting data and research

## Release information

- Data sources: Mid-year population estimates, Census 2021, Higher Education Statistics Authority data, Personal Demographic Service data
- Latest reference period: 2021
- Geographical coverage: England and Wales
- Lowest geographical breakdown: local authority district
- Population definition: Students and selected age groups of usual residents of households and communal establishments
- Publication type: research

## Uses and guidance

We are working on case studies of data relating to students in local population estimates, building on our work towards understanding students across administrative data in England and Wales, which we published in November 2021. This analysis used a combination of admin data on health and higher education to ascertain, among other things, how well the data highlight moves of students into and out of student accommodation.

Our case studies will provide analysis of these features in more detail at the local level, and the first analysis is expected for publication as soon as possible after Census 2021 results are available. We have decided to postpone this publication from the originally planned date of March 2022 to enable the completion of Census quality assurance by participating local authorities and to enable the inclusion of Census 2021 results into the analysis. Work to finalise the selected local authority districts and to analyse the mid-year population estimates in comparison with admin data will continue, and Census 2021 data will be included in our work as it becomes available. This will enable us to provide the most comprehensive picture possible of trends and changes in population for student areas.

## Publication date

October 2022

# 7 . Research update on the proof of concept for the dynamic population model

## Type of estimate

New research outputs about the population, supporting data and research

## Release information

- Data sources: predominantly admin data
- Latest reference period: to June2022
- Geographical coverage: England and Wales
- Lowest geographical breakdown: sample of local authority districts (October 2022), local authority district (December 2022)
- Population definition: target is usual residents of households and communal establishments
- Publication type: research

## Uses and guidance

Our latest research on transforming the population statistics system and our ambition to produce monthly population estimates using additional sources of admin data and innovative methods. We intend to include estimates by single year of age and sex from the Dynamic Population Model for a sample of Local Authorities in October, and for all Local Authorities in December.

These will offer a timelier indication of population changes than is available in the official population estimates. There is demand for this from numerous areas of rapid planning and policymaking.

## Publication date

October 2022 and January 2023

## 8 . Demography and migration: Census 2021 in England and Wales

### Type of estimate

Official statistics from Census 2021, giving a picture of the population at March 2021

### Release information

- Data sources: Census 2021
- Latest reference period: 21 March 2021
- Geographical coverage: England, and Wales
- Lowest geographical breakdown: Output Area
- Population definition: all resident people on Census night - households and communal establishments
- Publication type: official estimate of population as at 21 March 2021

#### ###Uses and guidance

This release is part of our topic summaries from Census 2021 results and includes univariate data (one variable only) and supporting commentary about demography and migration from Census 2021 in England and Wales.

Census 2021 is our best estimate of the population of England and Wales as at Census Day. Subject to our final quality assurance processes and engagement with local authority users of census statistics, it will underpin the official mid-year population estimates.

### Publication date

October -- November 2022

## 9 . Mid-2021 population estimates

### Type of estimate

Official statistics from 2021-based population and migration statistics

### Release information

- Data sources: Census 2021, births, deaths and international migration estimates
- Latest reference period: mid-2021 (year ending 30 June 2021)
- Geographical coverage: UK
- Lowest geographical breakdown: local authority district
- Population definition: usual residents of households and communal establishments
- Publication type: official estimate of the population as at 30 June 2021



## Uses and guidance

This will provide the official annual estimates of the population. They will represent the highest quality annual estimates consistent with previous mid-year estimates produced from the traditional cohort component method of population estimates, underpinned by Census 2021 for England, Wales and Northern Ireland, and rolled forward from the 2011 Census for Scotland.

These estimates are useful for planning and policy purposes as well as for use in onward analysis such as for sampling and weighting surveys and using in projections.

## Publication date

October to November 2022

# 10 . Research feeding into population estimates: including mid-2021 population estimates rolled forward from the 2011 Census

## Type of estimate

New experimental statistics about the population or supporting data and research

## Release information

- Data sources: 2011 Census, births, deaths and international migration estimates
- Latest reference period: mid-2021 (year ending 30 June 2021)
- Geographical coverage: England and Wales
- Lowest geographical breakdown: local authority district
- Population definition: usual residents of households and communal establishments
- Publication type: research

## Uses and guidance

This will be used to compare with the Census 2021-based rolled forward estimates to show areas of inter-censal drift. These estimates are not the official annual estimates of the population but are published for comparison purposes. They are superseded by and inferior to the Census 2021-based mid-year estimate.

## Publication date

October to November 2022

# 11 . Population by country of birth and nationality

## Type of estimate

Official statistics about population and migration statistics

## Release information

- Data sources: Annual Population Survey (APS)
- Latest reference period: year ending June 2022
- Geographical coverage: UK
- Lowest geographical breakdown: local authority district
- Population definition: usual residents of households
- Publication type: official estimate of the population when broken down by country of birth and nationality

## Uses and guidance

The Annual Population Survey is not designed to measure long-term international migration flows but does give insights into changes and size of the non-UK born and non-UK national population. The population estimates in the statistical bulletin that accompanies the publication are referred to as 'stocks', but it is not possible to directly compare stocks from the APS with estimates of migration flows. These estimates are also not comparable with the population totals in the official mid-year population estimates.

## Publication date

November 2022

This publication is usually published biannually in May and November. However, we have decided not to publish these estimates in May 2022, and are looking at the impact of this alongside the release of Census 2021, and what effect this has on the best estimates of the population by country of birth and nationality. As a result future publications of the UK population by country of birth and nationality are being reviewed and a decision on the next publication will be made by November 2022.

# 12 . Rebased mid-2012 to mid-2020 population estimates at national level

## Type of estimate

Official statistics from 2021-based population and migration statistics

## Release information

- Data sources: 2011 Census, Census 2021, births, deaths and international migration estimates
- Latest reference period: mid-2020
- Geographical coverage: England, Wales and Northern Ireland
- Lowest geographical breakdown: country
- Population definition: usual residents of households and communal establishments
- Publication type: official

## Uses and guidance

These are the best population estimates to use for a comparable data time series of estimates with years before the mid-2021 estimates.

## Publication date

Early 2023

# 13 . Comparison of Statistical Population Dataset version 4 with Census 2021

## Type of estimate

New research outputs about the population, supporting data and research

###Release information

- Data sources: mainly admin data
- Latest reference period: mid-2021
- Geographical coverage: England and Wales
- Lowest geographical breakdown: local authority district level
- Population definition: target is usual residents of households and communal establishments
- Publication type: research

## Uses and guidance

The Dynamic Population Model (DPM) uses a range of data sources to produce estimates of the size of the population and population change. Admin-based population estimates (ABPEs) are an important data input into the DPM, which we will now refer to as Statistical Population Datasets (SPDs). This reflects that they are no longer seen as a finished estimate, but will be an input to the DPM along with several other sources relating to population and migration. The DPM then combines the sources to provide a coherent set of population and migration outputs.

This research report will explore how SPD version 4 compares with Census 2021 population estimates and explain the role of SPDs in rebasing mid-year population estimates. These estimates are not official estimates of the population but are published to give transparency around the inputs into the DPM and for comparison purposes. They should not be used in decision making.

## Publication date

Early 2023

# 14 . Rebased mid-2012 to mid-2020 population estimates at local authority district level

## Type of estimate

Official statistics from 2021-based population and migration statistics

## Release information

- Data sources: 2011 Census, Census 2021, births, deaths and international migration estimates
- Latest reference period: mid-2020
- Geographical coverage: England, Wales, and Northern Ireland
- Lowest geographical breakdown: local authority district
- Population definition: usual residents of households and communal establishments
- Publication type: official

## Uses and guidance

These are the best population estimates to use for a comparable data time series of estimates with years before the mid-2021 estimates.

## Publication date

Spring 2023

## 15 . Related links

### [Update on research and plans for population estimates and projections: May 2022](#)

Article | Released 26 May 2022

Outline of completed, ongoing and future work addressing recommendations in the Office for Statistics Regulation (OSR) review of ONS population estimates and projections.

### [International migration statistical design: July 2022 progress report](#)

Article | Released 14 July 2022

An update on the future of International Migration statistics in 2022 and beyond.

### [Dynamic population model for England and Wales: July 2022](#)

Article | Released 14 July 2022

The development of new methods to produce near real-time estimates on the size of the population, using a dynamic population model.

### [Population of the UK by country of birth and nationality](#)

Bulletin | Released biannually

Latest population estimates for the UK by country of birth and nationality, covering the period from 2004 to the year ending June 2021.