National population projections quality and methods guide

Quality and methodology information for national population projections, detailing the strengths and limitations of the data, methods used and data uses and users.

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Table of contents

1 . Overview

National population projections (NPPs) provide statistics on potential future population levels of the UK and its constituent countries.Projections relate to the usually resident population and do not include people who come to or leave the country forlessthan 12 months.

NPPs are notforecastsand do notattemptto directly predict the impact of future political and economic changes.They will inevitably differ fromtheactual future population to some extent and will become increasingly uncertain as they extend into the future. Long-term figures should be treated with great caution, especially projections by single year of age beyond 25 years into the projected period.

The NPPs use official mid-year population estimates of the usually resident population for each UK country as their base year. We produce assumptions for future levels of fertility, migration, and mortality by:

- reviewing what has happened in the past
- modelling plausible future scenarios
- consulting with independent academic experts

The cohort component method is used to project the population forward, according to these assumptions. Each new edition of the NPPs supersedes the previous one.

NPPs are accredited official statistics. For more information, see Section 6: Quality of the statistics.

2 . Latest changes to quality and methods

We updated this guide on 28 April 2026. Important changes to quality and methods include:

- changes to migration assumption setting - for the principal projection, we have used a stay rate-based method, previously used for the migration category variant (for everywhere except Northern Ireland), which is fitted to the latest data to mid-2025
- use of a 10-year time series of internal migration estimates within the UK, instead of the five-year time series used in previous releases - this avoids overrepresenting flows seen through 2020 to 2023, which included the coronavirus (COVID-19) pandemic and unprecedented levels of international migration; this also corresponds with the longer time series of data in use for the long-term assumptions for international migration
- changes to fertility assumption setting - we applied the final 2022-based assumptions to updated data to create provisional 2024-based assumptions, which were shared with an expert advisory panel for feedback and focused discussion to assist in the production of the final 2024-based assumptions
- changes to mortality assumption setting - we did not apply a mortality shock recovery or any post-modelling adjustments as we did in our 2022-based projections
- changes to mortality assumption setting - to disaggregate data for the UK into the three constituent countries (excluding Scotland), we used 10 years of data instead of three years

For more information on latest, past, and upcoming changes, go to Section 7: Changes and their effects on comparability over time.

3 . What the statistics cover

We normally publish national population projections (NPPs) by age and sex for the UK and its constituent countries every two years. We base them on the latest mid-year population estimates, together with assumptions of future levels of fertility, migration and mortality. Because updated projections are usually produced every two years, we do not go back and change old projections retrospectively.Each new edition of the NPPs supersedes the previous one.

We compute the population for each of the constituent countries of the UK and add the results together to produce projections for Great Britain and the UK. Therefore, the projections for the UK and its constituent countries are both geographically coherent and additive, and they are coherent with the definitions used for population estimates.

The timing of the publication of NPPs has varied in recent years because of the need to await rebased population estimates following Census 2021, and to accommodate users' requirements where possible. Additionally, in response to user requests, we have provided additional releases of the NPPs over the last few years to reflect new data and expert views on international migration.

The main purpose of the projections is to provide information on potential future population levels. NPPs are used as a common framework for national planning inseveraldifferent fields.They include a range of variant projections and are informed by new assumptions for fertility,migrationand mortality.

The projections are not intendedto directly predict the impact of future political and economic changes. This means, for example, that the principal projections do notdirectlyaimtomake adjustmentsfor the possible demographic consequences ofmigrationpolicy changes.

We produce assumptions for future levels of fertility, migration and mortality. We agree the underlying assumptions with the statistical agencies of the UK's devolved governments:

- Welsh Government
- National Records of Scotland (NRS)
- Northern Ireland Statistics and Research Agency (NISRA)

Detailed information on our demographic assumptions is available in our individual assumption methodology articles.

The focus of our statistical bulletin explaining the NPPs is on the 10 and 25 years following the base year, though we produce projections for 100 years. Uncertainty in population projections increases the further they are made into the future; this is particularly so for smaller geographical areas and age-sex breakdowns.

For each country we have made one type of summary table and machine-readable data available to download. Our NPP table of contents tool can be used to navigate the NPP data and contains links to the full range of supporting materials.

All NPP publications from the 2014-based assumptions onwards are available on our website. The complete set of online materials up to the 2014-based NPPsis available on the National Archives website. This includes theNPP historic series web page, which contains data from the 1954-based to the 2004-based projections.

Content of datasets

All datasets provide the projected population for:

- UK
- Great Britain
- England
- Wales
- Scotland
- Northern Ireland

These are provided for the principal projection and the variant projections.

For all years of the projection, the summary table contains the projected:

- population
- components of change
- total fertility rate
- expectation of life at birth based on mortality rates for the year
- population at mid-years by age at last birthday (in 15-year age groups)
- children (aged under 16 years)
- working age population (aged between 16 years and State Pension age)
- pensionable age population (based on State Pension age)
- dependency ratios (children and pension age per 1,000 persons of working age)

For the principal projection and variant projections, the machine-readable data files contain the projected population by sex and single year of age and five-year age group for each year of the projection. Additionally, they contain the following at single year of age and sex detail for each year of the projection:

- fertility assumptions
- mortality assumptions
- cross-border rates
- births
- deaths
- cross-border migration
- international migration
- total migration

UK Population Projections Explorer

We also publish our UK population projections explorer. This is an interactive tool that shows how changes in life expectancy, net migration and fertility could affect the population over time.

4 . Where the data come from

Base population

The NPPs use official mid-year population estimates of the usually resident population for each UK country as their base year. The usually resident population is defined by the standard United Nations definition for population estimates and includes people whoresidein the area for a period of at least 12 months, whatever their nationality. Members of HMArmedForces in the UK are included, but members of HMArmedForces and their families who are stationed abroad are excluded. Members of foreign armed forces in the UK are included, with any accompanying dependants.

For each projections cycle, we use the most recent population estimates available for the corresponding base year. For England and Wales, we use the population estimates we produce. For Scotland, we use the population estimates produced by National Records of Scotland (NRS). For Northern Ireland, we use the population estimates produced by Northern Ireland Statistics and Research Agency (NISRA). Base year data can be found in:

- our Population estimates for England and Wales: mid-2024 bulletin
- NRS's Mid-2024 population estimates release
- NISRA's 2024 Mid-Year Population Estimates for Northern Ireland and Estimates of the Population Aged 85 and Over for Northern Ireland, 2024 (and 2001 to 2023 revised) release

NPPs do not use data from our Provisional population estimate for the UK bulletins because the NPPs build UK-level projections from each country's population estimate.

Official population estimates are calculated using the internationally recognised cohortcomponentmethod. This method starts with the population data from the last decennial census and updates each year with the available data on births,deathsand migration.OurPopulation estimates for local authorities across UK constituent countries: a comparison of data sources and methods report (PDF, 182KB)describes the population estimatesmethodologyused in each of the four UK countries.

Following the release of the Census 2021 data for England and Wales, the population estimates for mid-2012 to mid-2020 were rebased to ensure a consistent time series. More information is available in our Rebasing of mid-year population estimates following Census 2021, England and Wales bulletin. This involved identifying parts of the population estimates that were underestimated or overestimated between 2012 and 2020, using Census 2021 data and other sources. In Scotland and Northern Ireland, similar exercises have been completed for:

- NRS's Rebased population estimates, Scotland, mid-2011 to mid-2021 release
- NISRA's 2011 to 2021 Rebased Mid-Year Population Estimates for Northern Ireland release

Data from these releases are used in the NPPs as a denominator for demographic rates, such as 10 years of cross-border (within UK) migration data.

Data for mid-2025

For users who require a UK-level estimate for mid-2025 that is consistent with estimates for years before mid-2025, we recommend the continued use of our Provisional population estimate for the UK: mid-2025 bulletin. For users who require data by UK country, age, or sex for mid-2025, these projections can be used until equivalent mid-2025 population estimates are published later in 2026.

Estimates of the population aged 90 years and over

We produce official mid-year population estimates by individual age to the age of 89 years, with an upper age band for all those aged 90 years and over. We also produce estimates of the population aged 90 to 104 years by single year of age, and for those aged 105 years andover. To do this, we usethe Kannisto-Thatcher survivor ratio method, constraining the results to the official estimates of all those aged 90 years and over.

Fertility, migration and mortality

The rebased population estimates are used in the NPPs for the development of assumptions for fertility, migration and mortality. NPPs also use the latest available data on births, deaths, and internal and international migration to set assumptions.

5 . How we produce the statistics

Setting assumptions

We consider eachcomponentof the projections(fertility,migration and mortality)separately when setting demographic assumptions. Assumptions are basedlargely ontheextrapolation of past trends andanelement of subjective judgement. Our choice of assumptionsisproduced by analysis of historical trends todetermineplausible scenarios.

We also consult independent advisory panels of academic experts to helpus.Expert advisory panelsdo not have direct influence over our final assumptions, which are produced by us and agreed solely by the NPPCommittee, which oversees the projections process. This committee includes representatives from the Office for National Statistics (ONS) and the statistical agencies of the devolved governments, and is accountable to the National Statistician and Registrars General.

Because of the inherent uncertainty around future demographic behaviour, we often hold long-term assumptions constant for each component from some way into the projections period. We provide information on this in our articles coveringassumptions for fertility, migration and mortality. In this sense, long-term assumptions should be viewed as a plausible long-term average around which there will be year-to-year variation.

We agreethe maindecisions in the National Population Projections (NPP) production process with the NPPCommittee. We produce final demographic assumptions and these are approved by the NPPCommittee once they are satisfied with theirrigour and plausibility.

More detailed information on our demographic assumptions is available in our individual assumptionarticles.

Projection methodology

We produce projections for successive years, running from one mid-year to the next using the cohort component method, which can be summarised as:

$$\begin{aligned}\text{Population (year y)} = {} & \text{Population (year x)} + \text{Births (between years x and y)} \\ & - \text{Deaths (between years x and y)} \\ & + \text{In migrants (between years x and y)} \\ & - \text{Out migrants (between years x and y)}\end{aligned}$$

For each age, we take the starting population and then account forassumednet migration(using inflows and outflows),less the number of deaths, to produce the number in the population that are one year older at the end of the year. We then add survivors of those born during the year. Age is defined as completed years at the last birthday.

Variant projections

The method we use to produce the projections does not allow us to attach statements of probability or to ascribe confidence intervals. Variant population projections based on alternative assumptions about the futuregive users an indicationof uncertainty.Theyoffer a set of plausible alternative scenarios according to higher or lower assumptions about the trajectories of fertility,migration and mortality. Some of the variants combine alternative assumptions. For example, a "young" population variant might include assumptions of high fertility, highmigrationand low life expectancy.

Because the variants are based on different demographic scenarios, the indication of uncertainty they provide for fertility, migration and mortality assumptions are not directly comparable.

We provide guidance and examples of how our variants are used in our Variant NPPs for the UK and subnational population projections and household projections for England user guide.

Calculating births, deaths and migrants

We calculate the numbers of births, deaths and migrants using the assumptions of future levels of:

- fertility
- mortality
- migration

Wedeterminetheselevelsusing a mixture of data observation and extrapolation, and consideration of expert opinion. We may also adjust the assumptions for the first year of the projection to accountfor the latest data.

We produce variant projections using the same methods, but with alternative assumptions of future levels of fertility,migration and mortality. We publish details of thesealongside the release.Forguidance on how to use variant projections, please seeourVariant nationalpopulation projections for the UK and subnational population projections and household projections for England:user guide.

Births

Wecalculate the number of births in the year by multiplying the average number of women at each single year of age during the year (taken as the mean of the populations at that age at the beginning and end of the year) by the fertility rate applicable to them during that year. We assume the total number of births in a year is divided between the sexes in the ratio of 105 males to 100 females, in line with recent experience. We calculate the number of infants aged zero years at the end of the year by taking the projected number of births, deducting the number of deaths, which is found by applying the infant mortality rate,and adding half the number of net migrants aged zero years at their last birthday.

Deaths

We obtain the number of deaths in a year by adding half of the net inward migrants at each age to the number in the population at the beginning of the year and applying the mortality rate:
$q_{x+\frac{1}{2}}$

This is the probability of death between one mid-year and the next. The mortality rates we use in the projectionsrepresentthe probabilities of death between one mid-year and the next, according to a person's age at their last birthday at the beginning of the period. We also give theappropriate rateof infant mortality (the probability of a newborn child not surviving until the following mid-year). This is about 85% of the full, first year of life infant mortality rate that is more generally used in official statistics.

Migrants

We assume migration occurs evenly throughout the year. For computing purposes, this is equivalent to assuming that half the migrants,in a given year andat a given age, migrate at the beginning of the year and half migrate at the end of the year. The number of net migrants we add to obtain the population aged x plus 1 at the end of the projection year therefore consists of half of those migrating during the year at age x and half of those migrating during the year at age x plus 1.

Changing State Pension age

The State Pension age is rising from 66 years to 67 years between 2026 and 2028 for those born on or after April 1960. It is legislated to rise to 68 years between 2044 and 2046 for those born on or after April 1977.

We explain how the phased legislated increases in State Pension age will be implemented in Section 6: Changing State Pension age of our National population projections, background and methodology: 2018-based.

Our published national projections output tables (see components of change summary tables in our NPP table of contents tool) include the projected number and percentage of people that are of working age and pensionable age, based on this legislated phasing.

6 . Quality of the statistics

Statistical designation

The Office for Statistics Regulation independently reviewed these accredited official statistics in April 2019. They comply with the standards of trustworthiness, quality and value in the Code of Practice for Statistics and should be labelled "accredited official statistics".

How we quality assure the data and statistics

Quality assurance of the underlying data we use is completed in detail at each stage and where appropriate, with the National Population Projection (NPP) Committee. The NPP Committee oversees the projections process and includes representatives from the Office for National Statistics (ONS) and the devolved administrations. It is accountable to the National Statistician and Registrars General.

Expert advisory panel input is sought on each component's topic area, and we keep this under review throughout the production of the NPPs. To ensure the quality of the assumptions under development and the resulting projections, with agreement from the Head of Profession for Statistics, in some instances we showed draft assumptions and results from our assumption setting to experts for their comment and feedback. We are grateful for the further feedback from those who input into this process.

Detailed quality assurance of results is completed by a range of ONS staff and the NPP Committee. Methods are regularly reviewed, and improvements are made where possible. Staff are encouraged to apply "curiosity" to each component of population change. The result is that each element of the population projections is rigorously checked by multiple people to ensure that changes over time are plausible.

Additionally, all input and output data tables are reviewed to ensure that:

- there are no missing or incomplete data
- aggregated figures sum correctly to the stated totals
- output data are consistent with the corresponding input data, where applicable
- table titles and descriptions accurately describe the content

Production code is quality assured through peer review, alongside quality assurance of all associated outputs.

Data source quality assurance

The ONS Demography team has published a set of Quality Assurance of Administrative Data (QAAD) reports for all its relevant administrative datasets. Links to these QAAD reports can be found in Section 6: Methods used to produce mid-year population estimates data of our Mid-year population estimates quality and methodology information (QMI).

Population projection accuracy

An indication of the accuracy of previous national population projections (NPPs) can be drawn from comparing projections with subsequent mid-year population estimates. However, population change that occurred after the publication of NPPs may have been caused by events not known about when the assumptions for them were set. Additionally, public policy set as a result of information in the NPPs may also cause deviation of population change from that assumed in the NPPs. For this reason, the concept of accuracy in this sense cannot be considered true accuracy.

On a regular basis, we have published a comparison of population projections, population estimates, and fertility, migration and mortality data. This gives users an indication of uncertainty. With the 2022-based NPPs, we published our Comparing national population projections to estimates methodology. This follows our standard practice of publishing a comparison of projections and estimates once rebasing of population estimates has taken place. The report shows national population projections releases over time, compared with outcomes (estimates and components of change) for the UK and its constituent countries. Previous versions of these reports include:

- our National Population Projections Accuracy Report, published in 2016
- our Fifty years of United Kingdom population projections report (PDF, 868 KB), published in 2007
- previous analyses covering the projections made from 1971 to 1991 (Population Trends Number 77); details of these analyses are in our Index to articles 1975 to 2003 document (PDF, 383KB)

These articles consider the proximity of the NPPs to the actual outcome when compared with each of the three individual assumptions, by each component of change and whether accuracy has improved in more recent projections. These analyses are inevitably dependent on comparisons with the latest population estimates. Revisions to estimates of the past and current population (for example, the revisions made to population estimates following the 2001 and 2011 Censuses), also play a part in explaining projection error. Revisions may make the projections look more or less accurate than they really are.

The UK national population projections in perspective article (PDF, 2.55MB) by Professor Nico Keilman (University of Oslo) offers an international comparison of accuracy.

The NPPs are not forecasts. Because of the inherent uncertainty of demographic behaviour, any set of projections will inevitably differ from actual future outcomes to some extent. It would be improbable for any projection to correspond entirely with the actual demographic outcome. Changes in government policy, the economy, individual, family and household behaviour, and events both inside and outside the UK will influence the components of population change. This will inevitably include longer-term impacts from the coronavirus (COVID-19) pandemic.

Strengths and limitations

Strengths

- These data provide users with an indication of the potential size, age and sex structure of the future population of the UK and its constituent countries.
- These data provide an indication of the demographic causes of potential population change.
- Projections are produced on a nationally consistent basis, using the internationally accepted cohort component methodology and the same data sources across the constituent countries of the UK.
- Variant projections offer a wide range of alternative demographic scenarios.

Limitations

- Population projections are not predictions of the future; they are an illustration of future population size and structure that is based on assumed levels of fertility, migration, and mortality.
- Demographic behaviour is inherently uncertain and therefore projections will inevitably differ from actual future population trends; long-term figures should be treated with great caution, especially projections by single year of age beyond 25 years into the projected period.
- In recent years, the UK has experienced relatively rapid demographic change, including declines in fertility rates, large fluctuations in international migration and continued changes in mortality; given the magnitude and pace of these changes, it is particularly challenging to make assumptions about future components of population change required for projections.
- Long-term assumptions are held constant throughout much of the projection period; each assumption is not a prediction, but an illustration of an assumed average that is sustained in the long-term.
- Variant population projections are illustrations of alternative scenarios and are not quantified measures of uncertainty.

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. These are:

- relevance
- accuracy and reliability
- timeliness and punctuality
- comparability and coherence
- accessibility and clarity

We have integrated these considerations into the guide.

7 . Changes and their effects on comparability over time

Latest changes

Change to migration assumption-setting method

We have used a new method for setting the migration assumptions for the UK and constituent countries, except Northern Ireland. This is the same method that was used to produce the migration category variant in our National population projections: 2022-based. It has been applied to the principal projection, which is fitted to the latest data to mid-2025. Variant projections are scaled accordingly. For more information on this method, please see our National population projections, migration assumptions: 2024-based methodology article.

This change does not affect comparability over time, as each new set of projections supersedes the last. Though the results ofsubsequentprojections can be compared, this would not be comparing like withlike, butwould instead be observing what effect the most recent data have on the projected future population of the country.

Change to 10-year time series of internal migration

We use a 10-year time series of internal migration within the UK, instead of the five-year time series used in previous releases. This avoids overrepresenting flows seen between 2020 and 2023, when the coronavirus (COVID-19) pandemic and unprecedented levels of international migration occurred. This also corresponds with the longer time series of data in use for the long-term assumptions for international migration.

This change does not affect comparability over time, as each new set of projections supersedes the last. Though the results ofsubsequentprojections can be compared, this would not be comparing like withlike, butwould insteadbe observingwhat effect the most recent data have on the projected future population of the country.

Change to fertility assumption-setting process

For the 2024-based projections, the final fertility assumptions from the previous round were applied to the updated data to produce a set of provisional fertility assumptions, unlike previous rounds of the NPPs. These were presented at the expert advisory panel meeting, alongside the fertility trends data and summarised questionnaire findings that are routinely shared. This allowed experts to give direct feedback on the provisional assumptions and allowed us to have a more focused and detailed discussion around how the final assumptions should be set. This change does not affect comparability over time.

Change to mortality assumption setting

Following advice from the expert advisory panel, we made the following changes when setting the mortality assumptions, compared with the method for producing the 2022-based projections:

- we did not apply a mortality shock recovery, as was done previously to account for the coronavirus pandemic
- no post-modelling adjustments were made, whereas previously one was made for Scottish males aged 60 years and over in the first five years of the projection
- to disaggregate data for the UK excluding Scotland into the three constituent countries, we used smoothed qx ratios based on 10 years of data instead of three years

These changes do not affect comparability over time, as each new set of projections supersedes the last. Though the results ofsubsequentprojections can be compared, this would not be comparing like withlike, but wouldinsteadbe observingwhat effect the most recent data have on the projected future population of the country.

Past changes

Using an Age-Period-Cohort model to set mortality assumptions

Since the 2022-based projections, we have used an Age-Period-Cohort (APC) model to set the mortality assumptions. In early 2023, we ran a user engagement exercise on the proposal to use the new method. This was accompanied by results from the model, published in our Prospective new method for setting mortality assumptions for national population projections, UK: January 2023 article. The APC model separates the contribution of age, period and cohort effects on mortality improvement. For more detail on the model used for the 2024-based projections, please see our National population projections, mortality assumptions: 2024-based methodology article.

This change does not affect comparability over time as each new set of projections supersedes the last. Though the results ofsubsequentprojections can be compared, this would not be comparing like withlike, but wouldinsteadbe observingwhat effect the most recent data has on the projected future population of the country.

Upcoming changes

Setting fertility assumptions

We plan to review how we set fertility assumptions for the NPPs. This will include consideration of improvements to the current methodology and assessing the potential use of alternative approaches, such as a statistical model. We aim to improve quality and value of the assumptions and resulting projections.

8 . Comparability and coherence with other statistics producers

Each set of national population projections (NPPs) is unique,comprisingassumptions made using the best information available at a point in time. This means that each new set of projections, using the most up-to-date background data availableat the time of production, supersedes thepreviousset. Though the results ofsubsequentprojections can be compared, this would not be comparing like with like but wouldinstead be observingwhat effect the most recent data has on the projected future population of the country.

To produce projections for Great Britain and the UK, we calculate the population for each constituent country and aggregate the results. This approach ensures that the projections for the UK and its individual nations are both geographically coherent and additive, while remaining consistent with the definitions used for population estimates.

Welsh Government, National Records of Scotland and Northern Ireland Statistics and Research Agency

The Welsh Government, National Records of Scotland (NRS) and the Northern Ireland Statistics and Research Agency (NISRA) also publish NPPs for Wales, Scotland and Northern Ireland, respectively. These are the population projections for the constituent UK countries that are produced by the Office for National Statistics (ONS) with the NPP Committee for quality assurance and publishing, so no differences exist between them.

United Nations

The only known official population projections for the UK, apart from those produced by the ONS, are those produced by the United Nations (UN). The UN produces worldwide population projections every two years. They publish a combination of population estimates and projections.

United Nations' (UN) National Population Projections are not comparable with ours because of the following differences.

Office for National Statistics

- We use data observation, extrapolation and expert opinion to project fertility, migration and mortality assumptions.
- We use official mid-year population estimates, produced by the ONS, NRS and NISRA, for each UK country as the base population.
- We produce projections for successive years, running from one mid-year to the next.

United Nations

- The UN uses a probabilistic method to project fertility, migration and mortality assumptions.
- The UN produces their own population estimates, which are informed by UK censuses and the ONS's official estimates and statistics.
- The UN projects according to the calendar year from 1 January.

9 . Users and uses of these statistics

The national population projections (NPPs) serve a wide range of users across government and beyond. We produce the projections at the request of the National Statistician and the Registrars General for Scotland and Northern Ireland. As such, their content and method of production have been formally agreed and are regularly reviewed to see if changes arerequired.To ensure our releases meet user requirements, we regularly engage with stakeholders of the NPPs.

Within the projections process, the Office for National Statistics (ONS) and the devolved administrations consult leading stakeholders, including representatives from relevant government departments. User engagement meetings allow stakeholders to highlight potential new data requirements ortorequest changes to presentation or the publication timetable.As far as possible, wetake into accountstakeholder views and suggestions, within the Code of Practice for Statistics.

A range of organisations and government departments use our NPPs as a definitive dataset for long-term planning to inform services and policies, and to ensure targets are met. For example:

- the Department for Work and Pensions includes our life expectancy projections statistics in their analyses to assess and adjust the age of entitlement for the state pension, to estimate the future cost of state pensions and to evaluate the sustainability of the National Insurance Fund
- the Office for Budget Responsibility uses our population projections statistics as a base to assess long-term fiscal sustainability
- the Department for Education uses our NPPs to produce national projections for the number of pupils in schools in England
- the Government Actuary's Department uses our population projections of the number of future pensioners and the long-term number of working-age adults to produce reports on the Great Britain National Insurance Fund, as well as other analytical projects
- the ONS uses NPPs as the base for subnational population projections and household projections; the next release of these statistics is planned for 2028, using the 2026-based NPPs

How you can give feedback

We are always interested to hear how our statistics are used and ways to improve them. You can email us with any comments about this release at pop.info@ons.gov.uk.

10 . Definitions

Components of change

Population changes between one year and the next are caused by three components of change:

- births (fertility)
- deaths (mortality)
- migration

To inform the projections,we make assumptions about how each of these will change in future.

Fertility

In a demographic or projections context,"fertility"relates to how many children a group of women have, rather than their ability to conceive (which is thecommon understandingof fertility).

Mortality

Mortality is the likelihood of death, often presented as mortality rates. This is measured as the proportion of a group of a particular age and sex who dieduring the course ofthe year.

Mid-year

"Mid-year"refers to30 June of any given year, where the period from one mid-year to the next is from 1 Julyof year x until 30 June of year x plus one (for example, 1 July 2023 to 30 June 2024).

Usually resident

Population projections,and the estimates they are based on, include the "usually resident" population only. This is the standard United Nations (UN) definition and includes only people whoresidein a country for 12 months or more. As such, short-term international migrants are excluded.

11 . Related links

National population projections, fertility assumptions: 2024-based
Methodology | Released 28 April 2026
The data sources andmethodologyused to produce fertility assumptions in the 2024-based national population projections.

National population projections,mortalityassumptions: 2024-based
Methodology | Released 28 April 2026
The data sources andmethodologyused to produce mortality assumptions in the 2024-based national population projections.

National population projections,migrationassumptions: 2024-based
Methodology | Released 28 April 2026
The data sources andmethodologyused to produce migration assumptions in the 2024-based national population projections.

National population projections, variant projections: 2024-based
Methodology|Released28 April 2026
The variant projections, a range of scenarios with alternative demographic assumptions, used in the 2024-based national population projections.

Variant national population projections for the UK and subnational population projections and household projections for England: user guide
Methodology | Released 4 November 2021
Guidance and examples for those wishing to understand and use variant projections in policy and planning.

12 . Cite this methodology

Office for National Statistics (ONS), released 28 April 2026, ONS website, quality and methods guide, National population projections quality and methods guide