

# Household projections across the UK: user guide

Guidance for users about the coherence and comparability of household projections for England, Wales, Scotland and Northern Ireland.

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# 1 . Introduction

Each statistical agency in the four countries of the UK produces their own household projections. There are many similarities but also some subtle differences between methods. This user guide gives a broad description of the methodologies used in each country. It has been produced collaboratively by the Office for National Statistics, National Records of Scotland, Northern Ireland Statistics and Research Agency and the Welsh Government.

## 2 . Comparability summary

Overviews of the methodology for each country are shown in the flow diagrams in [Section 14](#).

While there are many similarities in the methods used to produce household estimates and projections for the four countries of the UK, there are some important differences between the methods used and these affect the comparability of the results.

The similarities between the methodologies mean that it is possible to broadly compare the results for the four countries. Although users should be aware that any differences may be partly because of the different methods used to produce the projection results.

### Similarities between methodologies

Household projections are based on population projections produced by each of the national statistical agencies. For each projection year, the household population is calculated by subtracting the number of people living in communal establishments, such as those living in student halls of residence, care homes or prisons, from the subnational population projections.

Past censuses provide information on household formation and household type, which are used to produce household headship rates or household membership rates. These are projected forward and applied to the projected private household population to estimate the number of households by age and sex of the household reference person (HRP).

All four countries produce household projections at national and subnational level, projecting 25 years into the future. The uses of household projections are broadly similar across the four countries. For example, they are used as a main source of information for assessing future housing need and service provision, such as waste collection, schools and community care; and for informing policy development and research.

### Differences between methodologies

One of the main differences in methodologies between the four countries is the use of headship compared with membership rates, which are then projected and applied to the projected household population. Wales and Northern Ireland use household membership rates, Scotland uses headship rates, while England uses elements of both in its two-stage household projection production process. Section 9 provides more detail on the use of these different rates in household projections.

England, Scotland and Northern Ireland constrain their local authority-level projections to sum to the national-level figures on the basis that national-level projections will be less subject to variation than those for regional areas due to population size. Wales does not constrain to the national-level figures; instead an all-Wales projection is currently produced alongside the local authority ones. The all-Wales projections are based on the sum of the figures for each local authority. There is guidance on when each should be used.

For England and Wales, the methodology used to produce household projections is also applied to mid-year population estimates to produce household estimates. For Scotland household estimates are instead based on Council Tax data.

Scottish estimates are based on more recent data than the household projections and so the household projections for the base year (y) and the following year (y+1) are adjusted to match the household estimates. For the third year onwards, the projections are adjusted by the same proportions as the (y+1) figures.

For Northern Ireland, household estimates are not published, although they could be produced using the same methodology based on population estimates rather than population projections. See section 10 for more information.

The household types projected vary substantially across the four countries; England has the fewest categories with more aggregated household types making comparisons difficult between the four countries. Section 11 provides more detail on the comparability of household types.

### **3 . Frequency of updates**

Household projections for the four countries of the UK all use the latest population projections and are updated whenever a new set of projections become available.

Household projections are published every two years for England and Scotland. Wales operate on a three-year cycle and update their household projections following an update to their subnational population projections.

Household projections for Northern Ireland are commissioned outputs, and so do not automatically follow releases of population projections. There have been five releases that used the base years 2002, 2006, 2008, 2012 and 2016.

### **4 . Geographical areas projected**

#### **England**

The household projections are published for the local authority districts, regions and England.

#### **Wales**

The household projections are published for the 22 local authority areas in Wales. Projections have also been developed for the three national park areas within Wales. Previously, the local authority-level and national park-level projections have been produced as separate publications. However, for the 2017-based household projections, the local authority and national park data will be published in one publication.

#### **Scotland**

The household projections are published for the 32 council areas in Scotland, for the two national parks (Loch Lomond and The Trossachs, and Cairngorms) and for the four strategic development plan areas (Aberdeen City and Shire, SESplan, TAYplan and Glasgow and Clyde Valley).

## Northern Ireland

The projections are published for the 11 Local Government Districts (LGDs 2014) in Northern Ireland.

## 5 . Projected time periods

Household projections across all four countries of the UK are published for the 25 years that follow the base year. This is identical to the timeframe available from the subnational population projections.

National population projections go further into the future than the household projections and subnational population projections, projecting 100 years following the base year (for example, the 2016-based national population projections are produced up until 2116).

## 6 . Uses of household projections within each country

The household projections are used as a main source of information for assessing future housing need and service provision, such as waste collection, schools and community care, by local authorities in England and Wales, council areas in Scotland and local government districts in Northern Ireland.

In Wales, the household projections also provide evidence to support the Local Development Plan prepared by local authorities, which come together under the Planning (Wales) Act 2015 to cover a wider geographical area and deal with broader issues.

In Scotland, the household projections are used to help inform policy development and for answering requests for information from Ministers, councils, academics, other organisations and the general public.

## 7 . Population estimates and population projections

All four countries of the UK use their corresponding [population projections](#) as one of the main inputs into production of the household projections. National and local authority levels are used for England, Wales also use national parks, while councils, national parks and strategic development plan areas are used for Scotland and local government districts (LGDs) are used for Northern Ireland. The relevant population for household formation is the adult population aged 16 years or over for England and Scotland, while Wales and Northern Ireland produce membership rates for all ages.

## 8 . Household population projections and communal establishments

Communal or institutional establishments include all people<sup>1</sup> not living in private households. Communal establishments provide managed residential accommodation, for example, nursing homes, student halls of residence, military barracks and prisons.

Household projections in all four countries of the UK are calculated by first subtracting the projected number of people living in communal establishments from the total population for each projection year to establish the private household population. The primary data source for projecting the number of people living in communal establishments is the 2011 Census, but other data sources are also used across the four countries to supplement census data.

## England

The census is used as the primary source of data to make assumptions about the communal establishment population. Estimates of the communal establishment population are available in the 2001 and 2011 Censuses, but during the inter-census years the communal establishment population is projected.

After 2011, it is assumed that a constant number are housed in communal establishments, by local authority and age group for those aged under 75 years, and a constant share of the population for those aged 75 years or over.

Small adjustments are made to the communal establishment population for 2012 to 2016 (the base year) to reflect the change in the prison population over this period. Data on the number of prisoners held in prison establishments is provided by the Ministry of Justice (MoJ).

## Wales

Population projection outputs do not include separate counts for communal establishments so data from the 2011 Census were used. For each projected year it is assumed that the number of people aged under 75 years and the proportion of people aged 75 years and over living in communal establishments were the same as at 2011.

## Scotland

Numbers of residents in communal establishments are collected from a range of data sources, depending on the establishment type. The data are chosen to represent, as closely as possible, the census definition of residence, that is those individuals “staying, or expecting to stay, in a residential establishment for six months or more”. Individuals resident for shorter stays would be considered visitors and are not included, as they should be accounted for in their usual place of residence.

Data are collected from a range of administrative data sources and surveys and refer to the base year, where possible. For some establishment types no such source is available, or base year data are not available, and in these cases earlier administrative data or 2011 Census data are used.

In many cases, more than one data source was combined, and estimation used to obtain a full age and sex breakdown. The final communal establishment proportions were then applied to the National Records of Scotland population projections for each year. This methodology assumes constant proportions of people living in communal establishments for each of the 25 projection years.

## Northern Ireland

Population projection outputs do not include separate counts for communal establishments so data from the 2011 Census were used. For each projected year it is assumed that the age-specific proportions of people living in communal establishments are the same as at 2011.

From the 2012-based projections onwards, the constant proportions for those aged 75 years and over living in communal establishments were replaced by the average of constant 2011 Census proportions and a 2001 to 2011 trended proportion based on census data.

## Footnotes for: Household population projections

1. Homeless people may be recorded in communal establishments such as shelters, or private households if staying with friends or family, or not recorded on the census depending on their situation on census day.

## 9 . Household formation – including household representative rates and household membership rates

Household projections for the four countries of the UK are dependent on census data from the 2001 and 2011 Censuses to inform trends in household size and composition. Scotland additionally uses data from the 1991 Census and the Scottish Household Survey (SHS), which can provide more recent information on trends in household size and composition.

The most fundamental difference is the use of headship and membership rates, and each method has its strengths and weaknesses. Using a methodology based on headship rates, it is possible to estimate the number of households of each type likely to be formed by age- and sex-specific<sup>1</sup> groups (for example, males aged 35 to 39 years) more simply than using membership rates. By contrast using a methodology based on membership rates, it is possible to estimate all persons in each household type by age and sex, for example, children by age in lone parent households.

All countries use a two-point exponential model to project forward their headship or membership rates. The formula for the model is:

$$y_i = k + ab^{x_i}$$

Where:

$i$  is the year of the projection

$y_i$  is the HRR or headship rate in year  $i$

$k$  is 1 if  $y_{2011} \geq y_{2001}$  or 0 if  $y_{2011} < y_{2001}$

$a$  is  $y_{2001} - k$

$b$  is  $(y_{2011} - k) / (y_{2001} - k)$

$x_i$  is  $(i - 2001) / (2011 - 2001)$

Scotland uses headship rates, Wales and Northern Ireland use membership rates, while to harness the strengths of each method, the household projection model for England uses a two-stage model that incorporates elements of both.

Despite the differences between the two methods, unpublished methodological development work has shown that projected total numbers of households produced using each approach at a country level can be very similar. As a result, it may be possible to compare growth in total households between the four countries of the UK with some degree of confidence. It is also possible to use average household size<sup>2</sup> statistics for each country with a similar level of assurance.

### England

Data from the 2001 and 2011 Censuses provide the proportions of people who were the household reference person (HRP)<sup>3</sup>, by geography, age, sex and household type.

As the number of HRPs is equal to the number of households for each geography, age, sex and household type, these proportions are projected forward using a two-point exponential model to determine the proportion of HRPs for the remaining years of the projection.

The projected HRRs or headship rates (and non-HRRs or non-headship rates) are constrained in two ways:

- they cannot individually go above one or below zero
- they sum to one within an area and age group

The household projections are then calculated by applying these projected HRRs to the population projections to give an estimate of the number of HRPs in each of the projection years for each geography, sex and age group of the HRP.

The same method is repeated to project headship and non-headship rates with a household type breakdown in stage two.

## Wales

Historical data on the population in each household type were obtained from the 2001 and 2011 Censuses and used to create projected membership rates for each household type. Membership of different household types tends to vary by age and sex, so historical proportions of people in each household type were calculated by sex for each age group. The age groups and household types used are shown in Section 11.

As only census data were used, these historical proportions were projected forward using a two-point exponential model. This model ensured that the resulting membership rates for each individual household type were greater than zero but less than one.

The projected rates were adjusted to add up to one for each age and sex group so that the private household populations by type add up to the total private household population.

The membership rate model uses historical data on the age and sex of each household member, to calculate historical membership rates for all types of household by age and sex. These historical membership rates are projected for future years and applied to projected population numbers to calculate projected numbers of households.

Multiplying the projected private household population by the projected household membership rates gives the projected population by age group, sex, and household type.

As household types are determined by size, the projected numbers of persons by household type were divided by household size (that is, one-person, two-person and so on) to give the number of households by age, household type, and sex. The number of people in household types with a household size of five or more people could vary. So, for these types an average household size figure was calculated for each household type using Wales-level data from the 2001 Census. Then the projected number of people in each household type was divided by this average household size figure to give the number of households by age, type, and sex for these larger household types.

The results of the previous stage were then summed by age and sex to give projected household numbers by household type for each year of the projection.

## Scotland

Information on household formation is derived from data collected in Scotland's 1991, 2001 and 2011 Censuses. In the census, one member of each household is designated the "head of household" (the first adult resident recorded on the household census form).

The headship rate describes, for each age group, the proportion of the population that is designated the "head of household" in each household type. The number of people who head particular household types will be the same as the number of households of this type. The proportion of these within any particular age group and geography is known as the headship rate. This is projected forwards and then applied to the population projections (by age group and geographic area) to give the household projections. The proportion of the private population, for each age group, who are not a head of any type of household (non-heads) is also available from the census. Two sets of projected headship rates are produced using a modified two-point exponential model, one using headship rates from the 1991 and 2001 Censuses, and the other using headship rates from the 2001 and 2011 Censuses.

The two sets of projected headship rates are then combined into a final set of headship rates using weights and the following formula:

$$y = \frac{A^{(1)} * y_i^{(1)} + A^{(2)} * y_i^{(2)}}{A^{(1)} + A^{(2)}}$$

Where:

$i$  is the year, from base year ( $y$ ) to ( $y+25$ )

$y_i$  is final headship rate in year  $i$

$A^{(1)}$  is weight given to rates projected using 1991 and 2001

$A^{(2)}$  is weight given to rates projected using 2001 and 2011

$y_i^{(1)}$  is projected headship rate in year  $i$  using 1991 and 2001 data

$y_i^{(2)}$  is projected headship rate in year  $i$  using 2001 and 2011 data

The weights are chosen so that the projection for year  $y$  has a distribution of households across the seven household types that is as close as possible to the distribution found in Scottish Household Survey (SHS) data for the same year. This allows the projection to incorporate more recent information on the types of households that people are living in, rather than purely relying on historical census data.

The projected headship (and non-headship) rates are constrained in two ways:

- they cannot individually go above one or below zero
- they sum to one within an area and age group

The household projections are then calculated by applying these projected headship rates to the private household population projections to give an estimate of the number of heads of household in each of the projection years for each household type, age group of the head of household, and area.

These figures are then constrained to the Scotland total number of households. Therefore, the projected number of households for council areas, for national parks (and the rest of Scotland) and for strategic development plan areas (and the rest of Scotland) each sum to the total for Scotland.

## Northern Ireland

Historical data on the population in each household type were obtained from the 2001 and 2011 Censuses and used to create projected membership rates for each household type. Membership of different household types tends to vary by age and sex, so historical proportions of people in each household type were calculated by sex for each age group. The age groups and household types are detailed later in this user guide.

Household membership proportions are projected using the two-point exponential model. This model ensured that the resulting membership rates for each individual household type were greater than zero but less than one. Also, the trend slows down when rates approach zero or one.

The projected rates were adjusted to add up to one for each age and sex group so that the private household populations by type add up to the total private household population.

Multiplying the projected private household population by the projected household membership rates gives the projected population by age group, sex and household type. As household types are based on size in terms of number of persons, the projected private population by household type is divided by household size to give the projected number of households by type.

Since the 2006-based projections, two further refinements were made to the methodology, as some of the census trends did not seem to continue. Firstly, the projected number of households with children became driven by the projected number of children, with constant household membership rates. These households were then completed with adults of an age-sex distribution as observed in the most recent census.

The remaining adults from the projected household population were then distributed over childless household types according to the two-point exponential household membership rate method outlined previously. The refinement prevented the child-adult ratio from going askew.

Secondly, the two-point exponential model based on census trends projected the number of males aged 75 years and over in two-adult households to exceed that of females. The improved life expectancy of males did not seem to be captured in the household formation. The refinement in the methodology consisted of sourcing additional females from the one-adult household type to constrain the sex ratio of persons aged 75 years and over in two-adult households to be less than one.

### **Footnotes for Household formation – including household representative rates and household membership rates:**

1. It is only possible to estimate the number of households by sex for one-person households using headship rates.
2. Average household size is a headline measure of trends in household size, measured in number of persons, which can be derived by dividing the private household population by the total number of households.
3. The household reference person (HRP) is the eldest economically active person in the household. A full explanation of the HRP definition can be found on [page 23 of the 2011 Census Glossary](#).

## 10 . Household estimates and household projections

England, Scotland and Northern Ireland constrain their local authority-level projections to sum to the national-level figures, but Wales does not. Instead, an all-Wales projection is currently produced alongside the local authority ones, where the all-Wales projections are based on the sum of the figures for each local authority. There is guidance on when each should be used.

For England and Wales, the methodology used to produce household projections is also applied to mid-year population estimates to produce household estimates. For Scotland, household estimates are instead based on Council Tax data. For Northern Ireland, household estimates are not published, although they could be produced using the same methodology based on population estimates rather than population projections.

### England

The total number of households within each local authority is “estimated” for each year to the base year of the projection period by applying the projected household representative rates (HRR) to the mid-year population estimates. However, these figures still use modelled HRRs from census data and so should still be viewed as projections. They will differ to household estimates, which can be derived from survey data.

The figures are adjusted to ensure that the minimum number of adults required to fill the projected households is not greater than the projected adult private household population (for example, a minimum of two adults would live in the household type “two or more adults”), and the same check is carried out for children.

### Wales

The exponential model also enables membership rates to be calculated for the years between the last census and the start of the projection period. The rates the model produces can therefore also be used to produce household estimates by applying them to historical population estimates using the approach outlined in Section 9.

### Scotland

The total number of households within each geography (council areas, national parks and strategic development plan areas) in the base year (y) and the following year (y+1) is adjusted to equal the household estimates for these years. The household projections for (y+2) year onwards are adjusted by the same proportion as the (y+1) figures, to preserve the trends.

Finally, the figures are adjusted to ensure that the minimum number of adults required to fill the projected households is not greater than the projected adult private household population (for example, a minimum of two adults would live in the household type “two or more adults”), and the same check is carried out for children. Where an adjustment is required, the number of households is kept constant, but the balance of household types is adjusted, to reduce the number of large households and increase the number of smaller households. (Note: in the last two sets of household projections – 2014-based and 2016-based – this final adjustment has not been required.)

### Northern Ireland

The Northern Ireland Statistics and Research Agency (NISRA) does not produce household estimates. However, the exponential model also enables membership rates to be calculated for the years between the last census and the start of the projection period. Household figures can therefore be created using population estimates rather than projections. However, as the membership rates are still inter- and extrapolated from the census data, such figures would still be regarded as projected.

## 11 . Household types

Different household types are projected for each country, and these tend to limit the comparability of the respective household projection results. It is possible to compare one-person household projections across the four countries if you aggregate male and female single-person households for England and Scotland. However, there is some difficulty when making comparisons across the four countries for households containing two or more people.

Comparisons can be made easily between Wales and Northern Ireland who use the same 12 household types. It is possible to aggregate some of the categories for Wales and Northern Ireland to make comparable household types with Scotland. The household types for England are far more aggregated than for the other counties of the UK, based upon the numbers of dependent children, rather than the overall household size. It is not possible with the data provided to aggregate the household types from Scotland, Wales and Northern Ireland to produce household type measures that are comparable with England.

Dependent children in England, Wales and Scotland are defined as any person aged 0 to 15 years living in a household, or a person aged 16 to 18 years in full-time education and living in a household with their parent(s) or grandparent(s). It does not include any people aged 16 to 18 years who have a spouse or child living in the household. In Northern Ireland, only 16- to 17-year-olds in full-time education are defined as dependent children; while 18-year-olds are categorised as adults.

Table 1: Projected household types by country

<b>Household type</b>	<b>England</b>	<b>Wales</b>	<b>Scotland</b>	<b>Northern Ireland</b>
One-person	Can be derived	Available	Can be derived	Available
One-person (male)	Available		Available	
One-person (female)	Available		Available	
Two-person (no children)		Available	Available	Available
Two-person (1 adult, 1 child)		Available	Available	Available
Three-person (no children)		Available		Available
Three-person (2 adults, 1 child)		Available		Available
Three-person (1 adult, 2 children)		Available		Available
Four-person (no children)		Available		Available
Four-person (2+ adults, 1+ children)		Available		Available
Four-person (1 adult, 3 children)		Available		Available
Five+ person (no children)		Available		Available
Five+ person (2+ adults, 1+ children)		Available		Available
Five+ person (1 adult, 4+ children)		Available		Available
Three+ person (1 adult, 2+ children)		Can be derived	Available	Can be derived
Three+ person (2+ adults, 1+ children)		Can be derived	Available	Can be derived
Three+ person (3+ adults)		Can be derived	Available	Can be derived
Households with one dependent child	Available			
Households with two dependent children	Available			
Households with three or more dependent children	Available			
Other households with two or more adults	Available			
Households with dependent children	Can be derived	Can be derived	Can be derived	Can be derived
Other households without dependent children	Can be derived	Can be derived	Can be derived	Can be derived

## 12 . Age groups

### England and Scotland

- 16 to 19 years
- 20 to 24 years
- 25 to 29 years
- 30 to 34 years
- 35 to 39 years
- 40 to 44 years
- 45 to 49 years
- 50 to 54 years
- 55 to 59 years
- 60 to 64 years
- 65 to 69 years
- 70 to 74 years
- 75 to 79 years
- 80 to 84 years
- 85 to 89 years
- 90 years and over

## **Wales**

- 0 to 4 years
- 5 to 9 years
- 10 to 15 years
- 16 to 18 years
- 19 to 24 years
- 25 to 29 years
- 30 to 34 years
- 35 to 39 years
- 40 to 44 years
- 45 to 49 years
- 50 to 54 years
- 55 to 59 years
- 60 to 64 years
- 65 to 74 years
- 75 to 84 years
- 85 years and over

## **Northern Ireland**

- 0 to 3 years
- 4 to 15 years
- 16 to 18 years
- 19 to 24 years
- 25 to 29 years
- 30 to 34 years
- 35 to 39 years
- 40 to 44 years
- 45 to 49 years
- 50 to 54 years
- 55 to 59 years
- 60 to 64 years
- 65 to 74 years
- 75 to 84 years
- 85 years and over

## 13 . Variant household projections

Variant projections are based on alternative assumptions of future fertility, mortality and migration. Variant household projections are available for England, Wales and Scotland, but not for Northern Ireland, because there are no variant subnational population projections produced for Northern Ireland.

### England

The principal household projections are based on the principal population projections produced by the Office for National Statistics (ONS), which use assumptions about fertility, mortality and migration that are thought most likely to occur over the next 25 years.

Variant population projections are available at both the national level and subnational level. 2016-based variant subnational household projections are available based on high migration, low migration, 10-year average migration and projected household representative rates (HRRs). These variant projections are published on the ONS website at the national, region and local authority level.

### Wales

Variant household projections are based on the variant population projections produced for Wales, which use alternative assumptions of future fertility, mortality and migration. For the 2014-based household projections, variant projections were produced based on the high population, low population, 10-year average migration and zero migration assumption.

Variant household projections are published on the StatsWales website for each local authority area and Wales as a whole.

## Scotland

For the 2016-based population projections, the National Records of Scotland (NRS) produced both low and high migration variant projections at subnational level.

Variant household projections are published on the NRS website, for each council, national park and strategic development plan area.

## Northern Ireland

There are no variant household projections for Northern Ireland. In theory, it is possible to run the household projections model with variant population projections, although the results should be checked for consistency. For example, a high fertility variant population projection can indicate that more women have children, the same number of women have more children, or (most likely) a combination of the two.

In the current household projections model, a high fertility variant would result in a uniform percentage rise in the projected number of households with children across size and types. These households are then headed by males and females, mainly in their 20s and 30s, leaving fewer adults to form childless households.

There are no variant subnational population projections for Northern Ireland; so it is not possible to create variant subnational household projections.

# 14 . Flow diagrams of methods for each country

## Figure 1: Household projections methodology for England

Source: Office for National Statistics

## Figure 2: Household projections methodology for Wales

Source: Welsh Government

## Figure 3: Household projections methodology for Scotland

Source: National Records of Scotland

## Figure 4: Household projections methodology for Northern Ireland

Source: Northern Ireland Statistics and Research Agency

# 15 . Stakeholder engagement, planned updates and developments

## England

The production of the household projections is guided by an expert steering group made up of main experts and users in the area. Significant methodological review work has been undertaken over the last few years, leading to a change in methodology for the 2016-based household projections. We plan to continue looking at administrative and survey data to provide more up-to-date information on the communal establishment population and household composition.

## Wales

The members of the Wales Subnational Projections working group (WaSP) are consulted on the methodology for the household projections. The methodology for calculating the subnational population and household projections will be reviewed prior to the release of the 2017-based projections.

The plan is to continue looking at Annual Population Survey (APS) data to inform trends in household membership and the use of more recent data on communal establishments to determine the total private household population.

## Scotland

The National Records of Scotland (NRS) is currently reviewing the methodology it uses to prepare household projections, including using only data from the 2001 and 2011 Censuses, producing some additional variants and carrying out sensitivity testing of the various input assumptions. The feasibility of small area (below council area level) projections is also being considered as some interest in population and household projections at this level of geography has been noted.

Members of the Household Analysis and Review Group (HARG) are consulted on the methodology used in preparing household estimates and projections for Scotland. Papers for HARG meetings can be found on the [NRS website](#).

## Northern Ireland

The latest projections (2016-based) include the use of administrative data and pooled household surveys. It was found that, while this information supported the methodology and assumptions, its current quality was insufficient to be incorporated into the analysis. Future household projections will re-assess the availability and quality of alternative data sources.

## 16 . Useful links

### England

The household projections are published as a National Statistics release on the Office for National Statistics (ONS) website. A detailed methodology article, quality and methodology report and a report comparing household estimates with previous household projection releases are published alongside the Statistical Release.

### More on household projections

- [Main data tables](#)
- [Detailed data tables](#)
- [Methodology report](#)
- [High-level overview of 2016-based methods](#)
- [Quality and methodology information](#)
- [Comparison paper household estimates and household projections](#)
- [Supplementary analysis comparing the differences between the 2014-based and 2016-based household projections for local authorities in England](#)

## Wales

The household projections report, tables, figures and detailed tables are published on the [Welsh Government website](#). The report includes summary results and analysis for Wales, and a brief background to the methodology. The reports available include:

- [Local authority household projections: 2014-based](#)
- [National parks household projections: 2014-based](#)

## Scotland

Household projections are produced for each council, national park and strategic development plan area, broken down into seven household types, based on the number of adults and children living in the household, and 16 age groups. These are published on the [National Records of Scotland website](#), together with background data on the proportion of the population living in communal establishments and the projected private household population. More information is also available on the [Scottish Government statistics website](#).

The [household projections for Scotland](#) report, tables, figures and background data are published on the NRS website. The report includes summary results, detailed analysis of the results for each subnational area in Scotland, and a brief description of the methodology used. The household projections for Scotland's strategic development plan areas, national parks and sub-council area level are also published on the [household projections page on the NRS website](#).

## Northern Ireland

The household projections report, press release, technical note, and detailed tables are published on the [Northern Ireland Statistics and Research Agency \(NISRA\) website](#). The report includes summary results and a brief background to the methodology.

## 17 . Contact details for further information

For enquiries about the household projections for each country please contact the appropriate organisation.

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