

# **National Records of Scotland**

*Preserving the past; recording the present; informing the future*

## **Household and Dwelling Estimates Across the UK**

**15 December 2011**

## Contents

1. Introduction .....	3
2. Household Estimates .....	3
2.1 Scotland.....	3
2.2 England .....	4
2.3 Wales.....	5
2.4 Northern Ireland.....	5
3. Dwelling (Stock) Estimates .....	6
3.1 Scotland.....	6
3.2 England .....	7
3.3 Wales.....	8
3.4 Northern Ireland.....	8
4. Impact of different methodologies on users .....	9
4.1 Household Estimates.....	9
4.2 Dwelling (Stock) Estimates .....	10
4.3 Conclusion.....	11

## 1. Introduction

This paper outlines the methods used to produce estimates of households and dwellings in the four UK countries. Dwelling estimates are often referred to as 'stock estimates'.

The paper has been split into three sections. Section 2 covers household estimates and section 3 covers dwelling (stock) estimates. Section 4 gives some information on the impact of the different methodologies on comparability of household and dwelling estimates across the UK.

This paper has been compiled by the National Records of Scotland (NRS) with contributions from the Department for Communities and Local Government (DCLG) in England, the Office for National Statistics (ONS), the Welsh Government, the Northern Ireland Statistics and Research Agency (NISRA) and the Department for Social Development in Northern Ireland.

## 2. Household Estimates

### 2.1 Scotland

Household estimates for Scotland are obtained from Council Tax information. Each local authority keeps a record of all dwellings, and any discounts or exemptions they are entitled to, for Council Tax billing purposes. If a dwelling is vacant, or is a second home, it is entitled to a Council Tax discount or exemption. This makes it possible to estimate the number of dwellings which are occupied or vacant. An occupied dwelling is approximately equivalent to a household. Household estimates for Scotland and for Scottish local authorities are produced as at June each year.

Summary information on the number of dwellings entitled to different discounts or exemptions is provided by each local authority to the Scottish Government, using the Council Tax Base form, 'Ctaxbase', which is available in the [Data Supplier Area](#) of the Scottish Government website. Household estimates are calculated using these figures.

To produce the household estimates, the information from Council Tax base is used to calculate the number of occupied dwellings (i.e. the total number of dwellings minus any which are vacant or second homes) in each local authority area. Council Tax Base information is provided as at September each year so to be consistent with population estimates and household projections (which are both based at 30 June each year), the figure for 'occupied dwellings' is adjusted back to June.

A further adjustment is made to the June 'occupied dwellings' figure to account for differences between the number of households recorded in Council Tax systems and in the 2001 Census. Factors contributing to the difference include the treatment of vacant dwellings, shared dwellings, holiday lets, caravans and some communal establishments (such as halls of residence). The household estimates for each local authority area are adjusted by the difference between the number of households recorded in the 2001 Census and the 2001 Council Tax occupied dwellings figure. The same adjustment is applied to each year's figures and will affect the number of households, but not the trends over time.

The Council Tax based approach has been used for Scottish household estimates for 2002 onwards. Figures for Census years are those obtained from the Census. Household estimates for the years between 1991 and 2001 are based on mid-year population estimates and information on household type taken from the 1991 and 2001 Censuses, as Council Tax information wasn't available for all of this period.

The smallest geography at which household estimate information is available is the data zone. Data zones are a statistical geography. When first created in 2004 the average data zone was designed to contain around 750 people. Information on the percentage of dwellings which are occupied, vacant, second homes, are entitled to a 'single adult' discount and are entitled to 'occupied exemptions' (e.g., all-student households, which are occupied but exempt from paying Council Tax) is available at data zone level on the [Scottish Neighbourhood Statistics](#) (SNS) website. This information is collected directly from local authorities and comes from their Council Tax systems. Like the Council Tax Base return it is provided as at September each year. The data zone level figures therefore give the position as at September each year.

Household estimates for Scotland are published in '[Estimates of Households and Dwellings in Scotland](#)', which is a National Statistics publication available on the NRS website. This publication also contains information on occupied and vacant dwellings for a range of geographies that can be built up using data zones (i.e. areas of deprivation, urban and rural areas, Strategic Development Plan areas and National Parks) and local authority level household estimates.

Further Information can be found within the [Households](#) Section on the NRS website.

The Scottish Government (SG) includes NRS's household estimate figures in the 'Key Indicators' table in [Housing Statistics for Scotland - Key Information and Summary Tables](#) which is available on the SG website.

## 2.2 England

Household estimates for England are calculated using the model used to produce household projections for England. Household estimates refer to figures for household projections for the base year of the latest set of projections and earlier years.

The household estimates for England are based on the mid-year (30 June) population estimates ONS, using the model for household projections. An estimate of the population living in communal establishments is removed from the population figures to obtain the private household population. This estimate is based on the 2001 Census data. The private household population is then split by age, sex and marital status and multiplied by household representative rates. The household representative rates (the probability of anyone in a particular demographic group being part of a separate household) are based on the 1971, 1981, 1991 and 2001 Censuses and Labour Force Survey data. A projection of headship rates from the 1991 and 2001 Censuses is used to produce the breakdown of household representative rates into detailed household types.

The smallest area at which the household estimates / projections figures are available is local authority district as this is the smallest unit for which ONS produce population estimates.

Household projections for England, which are National Statistics, are available on the [Department for Communities and Local Government](#) (DCLG) website. The information contained in the household projections publications and historical data can be found in '[Live Tables on Household Projections](#)' section of the same website.

England's household estimates and projections are produced by the Department for Communities and Local Government. More detailed information on the methodology used to produce household estimates and projections can be found in the [Household Projections section](#) of their website.

### 2.3 Wales

Household estimates for Wales are obtained from population estimates and projections of household membership rates. They are produced as at June each year.

Mid-year population estimates produced by the ONS give the total population. An estimate (based on Census figures) of the population living in communal establishments is subtracted from the population estimate to give the private household population. Household membership rates (the probability of anyone in a particular demographic group being a member of a particular type of household) are calculated based on a projection of data from the 1991 and 2001 Censuses. The private household population is then multiplied by these projected household membership rates to give the estimated population by age, gender and household type. (Household types are based on size, in numbers of persons, and the presence of children). The results are then divided by household size and aggregated to give the estimated number of households. This method is used for each local authority in Wales.

The smallest area at which the household estimates are available is local authority area.

Household estimates for Wales are published in '[Household Estimates for Wales](#)', which is a National Statistics publication available on the Welsh Government website.

Wales's household estimates are produced by the Environment, Sustainability and Housing Statistics section of Knowledge and Analytical Services within the Welsh Government. More information on the methodology used can be found in [Household Estimates for Wales, 1991-2007 Summary Report](#) which is available on their website.

### 2.4 Northern Ireland

Northern Ireland does not publish household estimates. It does however publish household projections; most recently, the 2008-based household projections for Northern Ireland and Local Government Districts. These can be used as a proxy for household estimates. Household projections are derived from population projections and projected trends in household membership rates.

Household projections for Northern Ireland are designated as National Statistics. They are produced by the Northern Ireland Statistics and Research Agency (NISRA). Projections, statistical reports and more information on the methodology used to produce the household projections can be found within the [Household Projections](#) section of the NISRA website.

### 3. Dwelling (Stock) Estimates

#### 3.1 Scotland

Estimates of the number of dwellings in Scotland are obtained from two administrative sources. They are produced as at September each year (from Council Tax billing systems) and as at late December/early-mid January (from the Assessors' Portal).

Figures for the total number of dwellings are published alongside household estimates annually in '[Estimates of Households and Dwellings in Scotland](#)'. They are obtained from Council Tax information and are provided as at September each year.

Each local authority keeps a record of all dwellings, and any discounts or exemptions they are entitled to, for Council Tax billing purposes. Summary information on dwellings in Council Tax billing systems is provided by each local authority to the Scottish Government, using the Council Tax Base form, 'Ctaxbase' (available in the [Data Supplier Area](#) of the SG website. This summary information is provided as at September each year. The total number of dwellings in each local authority and Scotland as a whole is taken from the Council Tax Base figures.

Figures for the total number of dwellings in each neighbourhood (i.e. data zone) are obtained from the Scottish Assessors' Portal. This information is published on the [Scottish Neighbourhood Statistics](#) website. Data from the Assessors' Portal are also used to calculate the percentage of dwellings in each Council Tax band, of various dwelling types and with various numbers of rooms. These figures are summarised for a number of geographies in the '[Estimates of Households and Dwellings in Scotland](#)' publication. They are also available at data zone level on the SNS website. The Assessors' Portal data is provided around December – January each year and is regarded as covering the calendar year (e.g. data taken from the Assessors' Portal in January 2011 is considered to cover the calendar year 2010).

The Scottish Assessors are responsible for valuing properties for Council Tax purposes. They maintain the web-based [Scottish Assessors' Portal](#), which contains details of every dwelling in Scotland along with its Council Tax band. This source, rather than the Council Tax information, is used for the total number of dwellings at data zone level because every dwelling has been assigned a postcode and as a result can be allocated to a data zone. However the Assessors' Portal does not contain information on whether a dwelling is occupied or vacant so it cannot be used to produce household estimates.

Second homes which are self-catering accommodation and are let out for less than 140 days per year are subject to Council Tax and will be included in both sets of dwellings figures. Those which are let out for more than 140 days per year are subject to non-domestic rates and will not be included in the figures.

The smallest area at which dwelling estimates are available is a data zone. Data zones are a statistical geography. When first created in 2004 the average data zone was designed to contain around 750 people.

Dwelling estimates for Scotland are produced by NRS. They are published in May each year in '[Estimates of Households and Dwellings in Scotland](#)', which is

a National Statistics publication available on the NRS website. Dwelling estimates at data zone level, along with information on Council Tax band, type of dwelling and number of rooms, are also published in May each year and can be found on the [Scottish Neighbourhood Statistics](#) website.

The Scottish Government's Housing Statistics team produces a breakdown of dwelling stock by tenure for Scotland. As a starting point, they use the Council Tax based dwelling estimate produced by NRS and adjust it from September back to 31 March. The adjusted dwelling estimate and the stock by tenure estimates can be found in [Housing Statistics for Scotland - Key Information and Summary Tables](#). It is this adjusted dwelling estimate that the Department for Communities and Local Government includes in its live table on dwelling stock by tenure in Scotland, which can be found in the [Live tables on dwelling stock](#) section of their website.

### 3.2 England

Estimates of the number of dwellings in England are obtained by projecting forward dwelling count figures from the most recent Census and applying information on net annual changes in housing stock to the projected Census figure. The estimate is provided as at 31 March each year.

The estimate of the number of dwellings in each year (dwelling stock estimate) is equal to the previous year's estimate plus the figure for net annual change in housing stock. Vacant dwellings and second homes are included in the figures. The 2001 Census is used as the baseline figure for years after 2001 and figures for years before 2001 have been adjusted to meet the 2001 figure. The 1981 Census does not provide a direct estimate of the number of dwellings so an estimate was made based on other information from the Census. This affects figures before 1991.

Information on net annual housing change (net housing supply) is collected using the Housing Flows Reconciliation return and from the Greater London Authority. This information covers gains made due to completions of new homes, net conversions and change of use and losses as a result of demolition and change of use. Information on gains and losses of non-permanent dwellings has been included since 1997.

Estimates of dwelling stock by tenure are produced using information from other returns provided by local authorities and registered social landlords (RSLs). Private rented sector information is obtained from Census figures and more up-to-date information from the Labour Force Survey (LFS) and the English Housing Survey. The owner-occupied sector is what remains after the subtraction of the aforementioned information.

The smallest geography at which the dwelling estimates figures are published is local authority district.

Dwelling estimates for England are published in 'Dwelling Stock Estimates, England', an Official Statistics publication produced by the Department for Communities and Local Government (DCLG). Publications and other information are available in the [Dwelling Stock](#) section of the DCLG website. More information on the methodology used can be found in the [Notes and definitions for dwelling stock data](#) page of the DCLG website.

### 3.3 Wales

Estimates of the number of dwellings in Wales are obtained by projecting forward dwelling count figures from the most recent Census and applying annual information on net change in housing stock. The estimates are provided as at 31 March each year.

The dwelling count from the most recent Census is used as a baseline. This is then projected forward by adding net annual change in housing stock. Net annual change in housing stock is calculated from information collected on new build completions plus any losses as a result of demolition. The 2001 Census is used as the baseline figure for years after 2001 and figures for years before 2001 have been adjusted to meet the 2001 figure.

Estimates of dwelling stock by tenure are produced from Census information, returns from local authorities and registered social landlords (RSLs) and the Annual Population Survey (APS), which has been used to calculate the tenure split between owner-occupied and privately rented dwellings since 1996-97.

The smallest geography at which dwelling estimates are published is local authority.

Dwelling estimates for Wales are published in '[Dwelling Stock Estimates](#)'. They are produced by the Environment, Sustainability and Housing Statistics section of Knowledge and Analytical Services within the Welsh Government.

### 3.4 Northern Ireland

Dwelling estimates at Northern Ireland level are produced using information provided by the Northern Ireland Housing Executive and the Housing Association Branch of the Department for Social Development for the social rented sector and by the Land and Property Services agency for the private sector. Adjustments are made using results from the Continuous Household Survey to calculate the private rented sector. These estimates are not available at any level lower than for Northern Ireland as a whole.

The information provided includes total stock, occupied stock and vacant stock. The estimates are provided as at 31 March each year.

Northern Ireland's Land and Property Services (LPS) agency also produces dwelling estimates covering the social and private sectors using its administrative data. These estimates are available for lower geographies, the lowest being Ward. The information published includes total stock, occupied stock and vacant stock. The LPS data is available at various geographies from the [Northern Ireland Neighbourhood Information Service](#) website.

LPS provides a value for all properties in Northern Ireland which are subject to rates. 'Rates' is a property based tax which is used to fund local authority and regional services in Northern Ireland. LPS is also responsible for billing and collecting rates. Vacant properties (those which are unoccupied, unfurnished and not used for storage) are exempt from rates and will continue to be until 1 October 2011. After this date, the same rates will be payable for all rateable properties (with a few exceptions). If a property is rented it is usually the landlord who pays the rates. More information on LPS can be found [here](#).

Dwelling estimates at Northern Ireland level are available in '[Northern Ireland Housing Statistics](#)', which is a National Statistics publication.



Northern Ireland's dwelling estimates are produced by the Analytical Services Unit in the Department for Social Development of the Northern Ireland Executive. More information can be found in the [Statistics on Housing Publications](#) section of their website.

#### 4. Impact of different methodologies on users

This section outlines some points users should take into consideration when analysing household and dwelling (stock) estimates data from across the UK.

##### 4.1 Household Estimates

The choice of approach used by each administration is a result of consultation with users on which method best meets their needs. The different methodologies used should be taken into consideration when making comparisons across the UK.

Wales and England use a similar method to produce household estimates. They project forward Census information on household formation and apply it to mid-year population estimates. This is similar to the methods used to produce household projections for each country. Comparisons of the methods used to produce household projections in Scotland, England, Wales and Northern Ireland can be found in [Household Projections across the United Kingdom: Technical Report](#), available on the Welsh Government website. Northern Ireland doesn't produce separate household estimates but household projections can be used in their place. The use of mid-year population estimates by England and Wales will ensure that their household estimates account for the current population structures.

For all three countries, household formation data is based on assumptions using trends from previous Censuses. This does not take into account any changes in household formation that may have arisen since the last Census as a result of government policies, economic conditions or other external factors. To partly account for such factors, England also uses survey data for intervening and recent years (i.e. the Labour Force Survey in England). Survey data are given a lower weighting than Census data in forming the household representative rates due to lower sample size. The household estimates for Wales do not include such an adjustment. Household projections for Northern Ireland have used information from the Central Health Index to improve projected household membership rates post-2001 Census.

Scotland has taken a different approach, using information taken from Council Tax billing systems to calculate the number of occupied dwellings and then adjusting this for differences with 2001 Census household figures. This method requires that the administrative systems used by local authorities are kept up-to-date and that consistent definitions are used for all categories involved in the household estimate calculation. It is possible that this may not be the case. Local authorities can be reliant on the person who is liable to pay Council Tax informing them of any changes in their household's circumstances. There can also be delays in changes due to demolitions or new house building being recorded.

Although an occupied dwelling is considered to be roughly equivalent to a household as defined for Census purposes, there are instances where this is not true. For example, if more than one household shares a dwelling, each household would be counted separately in Census data but as one occupied

dwelling in Council Tax data. Some communal establishments (e.g. halls of residence, barracks or prisons) may be included in Council Tax data but would be excluded from Census based household figures such as those produced by England, Wales and Northern Ireland.

To account for these and other differences, the Scottish 'occupied dwellings' figure is adjusted by the difference between the 2001 Census households figure and the 2001 Council Tax occupied dwellings figure. The same adjustment is applied to each year's occupied dwellings figure from 2002 onwards. This goes some way to adjusting for differences that may occur through the use of Council Tax rather than Census data. However, as we move further away from the Census point, changes may have occurred which mean this adjustment no longer properly accounts for the difference between the two data sources. This should be kept in mind when comparing Scottish household estimates with those from the rest of the UK.

#### 4.2 Dwelling (Stock) Estimates

The different methodologies used to produce dwelling (stock) estimates should be taken into consideration when making comparisons across the UK. We believe that the effect of these different methods will be small at a national level.

England and Wales use similar methods to produce dwelling (stock) estimates: they roll forward the number of dwellings taken from the most recent Census and apply information on net housing change collected through other means. Northern Ireland and Scotland use administrative sources based, at least partly in Northern Ireland's case, on property taxation. Scotland provides figures from two sources: Council Tax returns made to the Scottish Government (Council Tax Base) for figures at Scotland and local authority level and figures from the Scottish Assessors' Association (Assessors' Portal) for small areas.

The Scottish Council Tax return figures are provided at the beginning of September each year. Assessors' Portal figures are as at end December / early to mid-January each year and are considered to cover a calendar year. The other administrations' figures are provided at 31 March each year. This difference in timing should be taken into consideration when making any comparisons. However adjustments can be made to the Scottish figures produced by NRS to align them with the timing of the other administrations' data. The Scottish Government does this in its published web tables on housing statistics to provide a dwelling estimate which is consistent with the timing of other housing data. An average of the September dwelling estimates for the latest year and the previous year is taken (i.e. the 2010 dwelling estimate as at 31 March is the average NRS dwelling estimates for September 2009 and September 2010). These adjusted figures are used by DCLG to produce stock estimates for Great Britain and the UK as a whole.

The Census based dwelling estimates produced by England and Wales do not include communal establishments. The Council Tax based approach used in Scotland may include some dwellings which would be treated as communal establishments in Census data.

The Census based approach used by England and Wales and the administrative sources used by Scotland may also differ in their treatment of second homes. If a second home is used as self-catering accommodation and is rented out for less than 140 days a year, it is subject to Council Tax and will be included in the Scottish dwelling estimate. Those which are let out for 140 or

more days a year are subject to non-domestic rates and will be excluded from the Scottish figures. The Census figures used by England and Wales may include the latter type of second home.

DCLG have estimated in '[Dwelling Stock Estimates, 2011 England](#)' that the inclusion of some additional dwelling types in Council Tax data probably increases the Scottish dwelling count by less than 1% compared with a Census based estimate. This estimate is based on comparing sources of dwelling count information in England and it is possible that this proportion differs between England and Scotland. Scottish estimates based on comparing 2001 Census data with 2001 Council Tax dwellings data estimate a difference of much less than 1% though this may have changed over the years.

Northern Ireland's dwelling estimates do not include certain properties whose use is split between domestic and commercial (known as 'split hereditaments'). In general such properties will still be liable for Council Tax so should be included in Scottish dwelling estimates. As they are still partly domestic dwellings, we would also expect them to be included in the Census based estimates produced by England and Wales.

There can be delays in changes due to demolition and new house building being recorded in administrative systems. The extent of such delays and their impact could vary across the UK. It is also possible that there are differences in coverage between the administrative systems used to produce Scottish and Northern Irish figures. Furthermore the information on net change in housing stock used by England and Wales to produce their estimates may not be fully up-to-date or cover all tenures.

#### 4.3 Conclusion

This section has outlined some of the factors that should be taken into consideration when analysing household and dwelling (stock) estimates from across the UK. It is important to consider whether any difference observed when making comparisons can be attributed to the method used to produce the figures rather than a genuine variation.