

## Confidentiality

Census tables are designed so that the confidentiality of individuals and households is not compromised.

- ❑ Where the number of cases in a particular category in a table is small, the National Statistics published figure may have been adjusted.
- ❑ Totals and subtotals in tables are calculated on the sum of the adjusted data.
- ❑ Tables are independently adjusted, therefore counts for the same population in two different tables may be different.
- ❑ Tables for higher geographies are independently adjusted, and therefore may not be the sum of lower constituent geographies.

Modifications are more likely where tables contain a large number of categories. The Census Area Statistics, which cross tabulate variables, are more likely to have been modified than the Key Statistics.

Modifications are also more likely to occur in areas with small populations thus modifications are least likely to occur in published tables for the City of Birmingham, simply because of the number of people in the City.

In contrast modifications are likely to occur in most tables for the smallest area for which Census Tables are produced – the Output Area. The target size for an Output Area was 125 households. There are 3,127 Output Areas in Birmingham. The average size is 125 households, but the least number of households in an Output Area is 53, and the greatest is 259.

## Conclusion

Census results should not be regarded as precise measurement, in interpreting Census results care must be taken to avoid making spurious conclusions about small differences between areas and group.

## Useful Websites

Further information about the accuracy and reliability of the Census results may be found on the National Statistics Website. The address is below:

<http://www.statistics.gov.uk/census2001>

This website also displays up to date information on the latest developments regarding the 2001 Census, in depth background information relating to methodology.



<http://www.birmingham.gov.uk/community>

This website displays Key and Themed Statistics from the 2001 Population Census for Birmingham, its Wards and Districts.

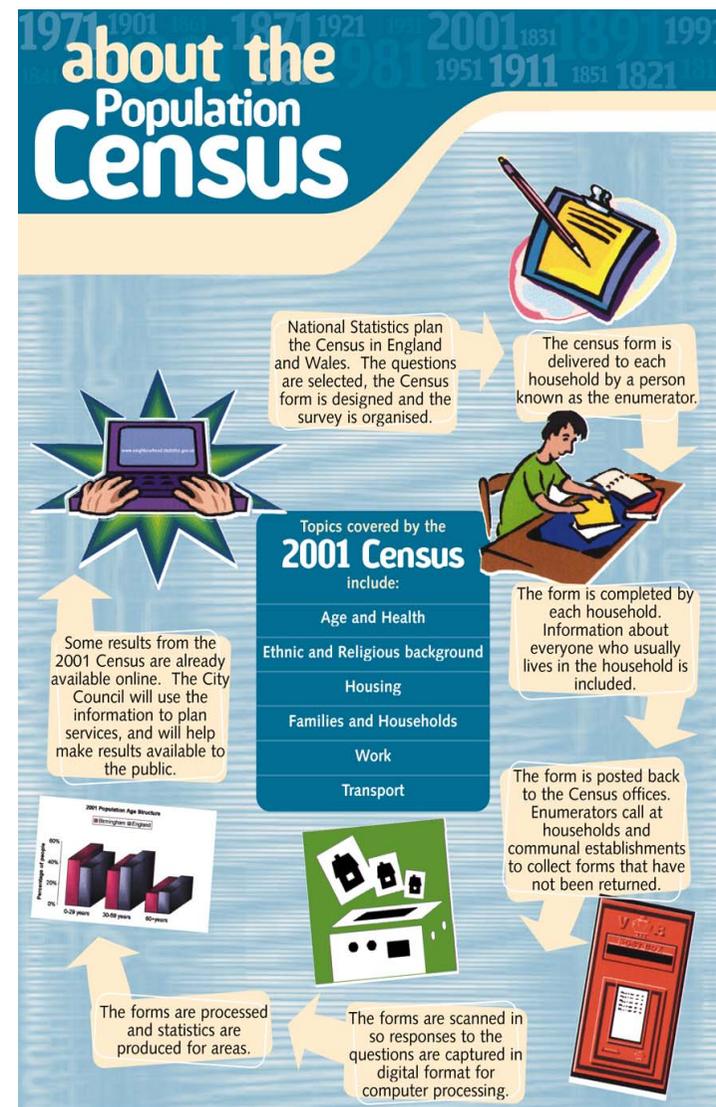
<http://www.neighbourhood.statistics.gov.uk>

This website makes it possible to download Key Statistics for all areas in England and Wales, including output areas. Selection may be made through an interactive map or by using area names.



Demographic Information Service  
Planning Strategy  
Development Directorate  
Phone: 0121 303 4208  
Fax: 0121 303 2716

Email: [population.census@birmingham.gov.uk](mailto:population.census@birmingham.gov.uk)



1971 1901 1921 2001 1831 1991  
1801 1951 1911 1851 1821

**Birmingham Council Guide on the Accuracy and Precision of Results from the 2001 Population Census .**  
November 2005

## Introduction

The latest national Census of population took place on 29th April 2001. The Office for National Statistics (ONS) is the agency responsible for the 2001 Census in England & Wales. The Census is the most comprehensive source of information about the country's population. It is a survey that covers everyone at the same time asking the same questions everywhere, making it easy to compare different parts of the country. The information provided by the census enables public and other organisations to make the best use of resources or to plan for the future. Topics include population, health, housing, employment, transport and ethnic group. There is a considerable delay in publishing results compared to the date the Census was taken. This is mainly due to the quality checks that must be carried out before the data can be released. Although the Census is the most comprehensive source of data about the population, results should not be regarded as wholly accurate or precise. This is for a number of reasons:



## Under enumeration

Although Censuses aim to be comprehensive, in practice it is not possible to achieve complete response from the whole population. National Statistics initially estimated that 91% of the population in Birmingham had been recorded by the Census survey.

The 2001 Census adopted a new strategy to deal with this. The actual Census survey was followed by an independent sample coverage survey. This sought to provide estimates of the numbers and characteristics of people and households that had not been captured by the Census survey itself. The published Census results are based largely on actual Census Forms but include an element of estimation based on the follow-up survey. The results were meant to represent the whole population. Because the published Census results are estimates, error levels can be used as a guide to accuracy. Birmingham's 95% Confidence Interval for the whole population is +/- 1.9% or a total of 18,565. This means that National Statistics are confident that the true population lies between 958,535 and 995,665. The population for Birmingham of 977,100 is taken as the mid-point of this range.

However the Census produced population figures that were lower than had been expected both nationally and in many local areas, including Birmingham. Research is ongoing but in November 2003, National Statistics already indicated that the Census population nationally and in a number of areas, was too low. As a result National Statistics issued revised estimates for the 2001 Mid-Year population estimate, in Birmingham's case the population was revised by +9,500 taking the resident population to 985,900. The Census results will not be adjusted.

## Non-Response

In a number of cases the returned Census Forms were incomplete, with not all questions answered. The level of non-response in Birmingham as a whole varied, the non-response rate for household questions was between 3.3% and 7.6%, for people questions it was between 0.5% and 21.2%. With the exception of the optional Religion question, National Statistics 'imputed' answers in such cases. This makes tables easier to interpret but introduces a further element of estimation.

A separate issue is where an answer on a Census Form is incorrect due to misinterpretation of the question or for some other reason. Some inaccuracies were screened out during the data processing stage by comparing answers to different questions: for example to identify cases where someone under 16 was recorded as married. Inevitably this means that many incorrect answers were not detected. A possible example is house type. The 2001 Census shows a noticeable smaller number of terraced houses than the 1991 Census and a similarly greater number of semi-detached houses. It is possible this may reflect differences in the way this question was answered. In 1991 the Census Enumerator

recorded house type, whereas in 2001 the household representative did so.



- Not all people were covered by the Census.
- Some people did not answer all questions.
- Some answers given may have been incorrect.
- To protect the confidentiality of individuals and households the Census Agency (National Statistics) has:
  - Swapped some records between similar Census areas.
  - Modified some published results.