



Consultation document

The 2011 Census:
Initial View on Content for England and Wales
- Operational Context

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Operational Context of the 2011 Census

This paper describes the operational context within which the 2011 Census questionnaires will be designed. The paper considers lessons learned from the 2001 Census, key elements of the 2011 Census design and potential alternative sources of information. The paper forms one of a suite of supporting papers for the ONS consultation document: *The 2011 Census: Initial view on content for England and Wales*, which is available on the National Statistics web-site:

http://www.statistics.gov.uk/about/consultations/downloads/2011Census_consultation_content.pdf

1. 2011 Census objectives

The key aim of the 2011 Census will be to provide accurate population estimates on a consistent and comparable basis for small areas and small population groups. In order to achieve this, every effort will be made to maximise response and gain a good understanding of both under- and over-coverage of the Census.

The ONS information paper '*The 2011 Census: A design for England and Wales*' states that the 2011 Census should "provide a robust benchmark for key population statistics, on a consistent and comparable basis for small areas and small population groups, including:

- population units (people, housing and key demographics – age, sex, ethnicity, etc.);
- population structures (households, families);
- population characteristics, with multivariate analysis."

This information paper also states the aim of "maximising response rates in all areas (particularly inner cities) and from all population sub-groups and minimising differential non-response."

This paper is available on the national statistics web-site:

http://www.statistics.gov.uk/downloads/theme_population/2011_design_information.pdf

2. Local Authority studies

The 2001 Census under-estimated the population of England and Wales by around 275 thousand people, even after the initial adjustments for under-count. A proportion of this under-estimation was restricted to a small number of local authorities. As a result of this, a series of local authority specific studies were undertaken to assess and adjust for this problem. This project increased the 2001 population estimates for 15 local authorities by 107 thousand people.

These studies identified various factors that contributed to this under-estimation, which should be considered and addressed for the 2011 Census. The problems identified with the address list and enumeration procedures are being addressed by various elements of the 2011 Census design, and have no direct impact on the design or content of the questionnaire. However, some issues are of relevance when considering the 2011 Census questionnaires.

The 2001 Census did not collect information from visitors, which may have allowed respondents to declare themselves a visitor to avoid completing a Census return. This is being addressed in the 2011 Census by the change of enumeration base to include both usual residents and visitors, as discussed in section 4.

Another factor was that people may have appeared in administrative data sources at one location but completed a Census return elsewhere. This may be a problem

in London and other cities where people may for part of the week, with a family home elsewhere. However, the scale of this problem is difficult to quantify. ONS aim to address this problem in 2011 by developing a simpler and more understandable definition of usual residence, ensuring census returns are completed where required. The inclusion of questions on second residences and visitors will also facilitate the identification and investigation of these people.

The Local Authority Studies report is available on the National Statistics web-site: http://www.statistics.gov.uk/downloads/theme_population/LAStudy_FullReport.pdf

3. 2011 Census design

The Public Accounts Committee and the Treasury Select Committee undertook reviews of the 2001 Census shortly after the Census was conducted. Both reviews recommended that, for 2011, consideration be given to whether resources could be deployed more effectively in order to increase response in the worst performing areas. In addition, the National Audit Office review suggested that the Office should develop a robust field information system to provide up-to-date information on response rates and allow better informed decisions on the deployment of field staff to follow up outstanding returns.

The proposed 2011 Census design, described in the paper *The 2011 Census: A design for England and Wales*, suggests a mixed enumeration strategy with post-out/post-back being the main approach, underpinned by a comprehensive national address list. A high quality address list is necessary for the implementation of an effective field management system. This system, together with the resources released by posting out a substantial number of questionnaires, will make possible the more effective targeting of resources recommended by the above reviews.

However, a consequence of this design is that many respondents will no longer have face-to-face contact with a census enumerator. This may, in turn, impact on the questionnaire design and content, and will be taken into account when considering whether or not certain questions are suitable for the Census.

4. Enumeration base

The enumeration base relates to how census data are *collected*. There is no requirement for the enumeration base to be the same as the output base. However, it is essential to ensure that the required output bases can be derived from the data collected. The output population base is discussed in section 6.3.

The 2001 Census collected data on usual residents, but did not attempt to collect any information from visitors present at an address on Census Night who had a usual address elsewhere in the UK. This approach may have allowed some respondents to opt out of the 2001 Census, and the lack of information on visitors reduced the ability to understand the coverage of the Census itself. Furthermore, a review of the 2001 Census conducted by the Office of the Deputy Prime Minister concluded that the population base may not have been well understood by respondents. The review recommended that the precise definition of the population to be counted in 2011 should be reviewed and agreed with users.

Following a review of the enumeration base options for 2011, it has been decided to maintain continuity with 2001 by enumerating usual residents. However, it is proposed to collect information on visitors and second addresses if they can be shown to improve on the outputs that were possible from the previous Census.

The definitions to support a usual resident enumeration will be the subject of research and testing over the next couple of years, and a clear explanation of the basis for inclusion on the questionnaire will be developed.

A paper summarising the research that informed the choice of enumeration base is available on the National Statistics web-site:

http://www.statistics.gov.uk/about/consultations/downloads/2011Census_consultation_population_base.pdf

5. Constraints on questionnaire design

The key aim of maximising response, outlined in section 1 above, means that the census must strive to minimise respondent load, whilst still maximising the value of the information collected. It is therefore likely that the 2011 Census questionnaires will include a maximum of three pages of questions per person. Additionally, the requirement to maximise response necessitates a high priority to be placed on improving questionnaire design, which may result in the questionnaire being laid out differently from 2001 and in fewer questions per person.

There are a number of key variables that are fundamental to census outputs. The questions necessary to collect this information are, therefore, certain to be included on the questionnaire. These are questions that relate to the benchmark population statistics described in section 1. Questions on date of birth, sex, ethnicity and marital status will be asked although their exact wording has yet to be determined.

6. Output strategy

This section discusses current thinking on key elements of the 2011 Census output strategy.

There is agreement in principle between the three Registrars General to aim for consistent UK Census statistics. To this end, the 2011 UK Census will aim to:

1. have concurrent release of first results in late summer 2012;
2. adjust for under and over coverage at the individual and household levels; and
3. implement a single disclosure control methodology across the UK.

The following sections outline the research planned into methods to protect the confidentiality of census data, as well as initial views on output geographies, key output bases and derived variables.

6.1 Disclosure control

ONS is embarking on a programme of research to determine the appropriate disclosure control strategy for the 2011 Census. The methodologies used in the 2001 Census in England, Wales and Northern Ireland caused difficulties for users in interpreting some Census outputs. In addition, the different approaches used across the UK resulted in difficulties with national comparability. The first stage of this research will be to review these methodologies and whether alternative measures may have been as successful at protecting the confidentiality of the data and more acceptable to users.

In addition to traditional disclosure control methodologies, this research will consider alternative methods for protecting the confidentiality of standard census

outputs and how statistical disclosure control methods could support on-line production of user-defined outputs. The research will also consider the use of data laboratories for access to census micro-data. This work will be conducted under the guidance of the UK Census Design and Methodology Advisory Committee, composed of key external experts and users.

6.2 Output geographies

Census outputs in England and Wales will be produced according to standard ONS geographies, in particular Super Output Areas. Outputs at smaller geographies will be reviewed but are likely to be for areas based on 2001 Census Output Areas. Super Output Areas and an appropriate maintenance policy are due to be reviewed by ONS during 2005 and 2006. Census requirements will be a key factor for consideration as part of this review. Outputs for administrative areas will be derived from the lowest geography of output.

The GROS strategy for 2011 Census geography has yet to be considered. It is likely that it will be based on the construction of one set of postcode-based Output Areas that nest as well as possible into higher geographic areas including the data-zones used for Scottish Neighbourhood Statistics.

Structures of local government in Northern Ireland are currently being examined in a Review of Public Administration and NISRA will consider the output geography for the 2011 Census in the context of the outcome of this review.

6.3 Population bases

Consultation on population bases for outputs has identified that the key user requirement is for data on the usually resident population, and this will be the main output base in 2011. However, a number of recent consultations in England and Wales have concluded that the 2011 Census should consider providing some outputs on other bases.

The 2011 Census will investigate the feasibility of producing supplementary outputs for the following population bases and groups:

- population present;
- day time population;
- work place population;
- the institutional population, by type of institution;
- households (although the precise definition of a household requires further work); and
- families.

As part of this current consultation, users should identify the populations to which their information requirements relate. This will allow ONS to determine which questions should be asked of usual residents, visitors and the population within institutions.

7. Alternative sources of information

A number of data sources exist, or are likely to exist in 2011, that may provide an alternative source for data that had previously only been available from the Census. The availability of alternative sources will be central to consideration as to whether users' requirements are best answered by the 2011 Census or another source. The following key sources are likely to exist by 2011.

7.1 Continuous Population Survey (CPS)

ONS has proposed to integrate the Government household surveys on which it leads into one Continuous Population Survey from 2008. The surveys included for integration are:

- Labour Force Survey (LFS)
- Annual Population Survey (APS)
- General Household Survey (GHS)
- Expenditure and Food Survey (EFS)
- The Omnibus Survey (OMN)

Whilst the content of the CPS has not yet been finalised, it will continue to meet the information needs now met by the five separate surveys and produce a range of new outputs too. The CPS sample will be composed of the cumulative total of addresses currently sampled by the existing surveys. On this basis the common core of the integrated survey would produce an annual achieved sample of around 270 thousand households, providing a new alternative source of data to meet national and sub-national information requirements on the core topics covered by the CPS.

The position in Scotland and Northern Ireland is not yet clear. In Scotland the CPS may be amalgamated with Scottish-based surveys such as the Scottish Household Survey. In Northern Ireland it is likely that CPS type outputs will be produced, but possibly through a less formal approach than in England and Wales.

More information about the CPS is available on the National Statistics web-site: http://www.statistics.gov.uk/about/consultations/ons_consultations/downloads/CPS_Consultation.pdf

7.2 Administrative data sources

Over recent years the quality and consistency of some administrative sources have improved significantly and opportunities for linking these sources for purely statistical purposes, subject to confidentiality and data protection safeguards, are increasingly being sought. Looking ahead to 2011, a number of administrative sources may be of sufficient quality to meet user needs for a number of topics.

These sources may include the following:

- Department of Work and Pensions (DWP) – Benefits data covering various population groups;
- Department for Education and Skills (DfES) - Data covering the school age population and qualifications data;
- Inland Revenue data - National Insurance data covering the working population, self-assessment and PAYE tax returns;
- Local Authority maintained sources - electoral register and council tax data; and
- NHS National Program for Information Technology (NPfIT).