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The 2011 Census: A Design for England and Wales^{*}

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INTRODUCTION

1. An Information Paper,¹ published in March 2004 and currently on the Office for National Statistics (ONS) census website sets out the proposed design for a 2011 Census in England and Wales, as part of the ONS' proposed future population statistics system.(http://www.statistics.gov.uk/downloads/theme_population/2011_design_information.pdf)

2. The design draws on the experiences and lessons learned from the 2001 Census, current world best practice, and the opportunities arising from UK Government initiatives for electronic data capture and other changes in available technology. The design also takes account of the several comments received from respondents in the UK to an earlier Discussion Paper published in October 2003 and of views expressed at a joint ONS/Royal Statistical Society Conference on the future of the Census held in London on 11-12 November 2003. In particular, the design recognises the comments and recommendations arising from Reviews of the 2001 Census by the UK Government's Treasury Select Committee (TSC)² and Public Accounts Committee (PAC).³ The key recommendations emerging from these related to:

- Increasing response rates from all population groups;
- Considering different ranges of question sets;
- Meeting the additional needs of disabled people;
- Tightening the control mechanisms for managing the field operation; and
- Seeking ways to produce faster results.

3. This statement highlights the key statistical and operational strategic aims that helped to frame the design and the major changes proposed from the 2001 approach. In doing so it identifies some of the problems experienced in 2001 and raises issues that should be considered in drafting the next United Nations Resolution. It concludes by identifying some of the key benefits of, and risks associated with, the proposed design.

4. The proposed design of the 2011 Census is for England and Wales only (the census being a devolved matter in the other consistent countries of the UK). However, a key goal for ONS is production of consistent UK-wide statistics in order to meet both user requirements and international commitments. To achieve this the England and Wales Census Office is involved in ongoing discussions and co-operation with corresponding officials in Scotland and Northern Ireland.

I. THE NEED TO MAXIMISE CENSUS RESPONSE RATES, PARTICULARLY IN INNER CITIES

5. In some areas, the response rate to the 2001 UK Census was lower than anticipated, and the need to increase response rates has been recognised. A key strategic component of the 2011 Census design is a move to a mail-out of census forms in the majority of areas. This strategy is dependent on the availability of an up-to-date and comprehensive national address list (see below) but would enable targeting of enumerator resources more strongly than ever before on achieving response from hard-to-count areas and population sub-groups, particularly by minimising differential non-response.

6. ONS' aim to do this using multiple enumeration methods, potentially including face-to-face interviews and the Internet. The design aim is to ensure that ONS can estimate the population to a common level of defined accuracy across the country. The consequence of this is that substantially more effort will need to be directed towards the hardest-to-count areas. The methodology will, however, endeavour to ensure that improvement in response in such areas should not be at the expense of any deterioration in those more 'easy-to-count' areas.

7. Further measures will be needed to address the several risks identified in moving to a post-out strategy with its concomitant loss of doorstep contact. In particular, more effective nation-wide publicity will be initially targeted at addressing the lack of face-to-face contact in the delivery phase, giving a much clearer message than was the case in 2001 about what the public should expect and when, and what to do if it does not happen. This message will need to be supported by clear assurances about confidentiality and security so that the general public may feel more positive and trusting about the Census and will, thus, be more encouraged to participate. This will be particularly important in areas where there is likely to be no traditional enumerator.

8. The Public Helpline for the 2001 Census was overwhelmed by the number of calls that far exceeded all expectations, which had been based on international experiences. This was encouraging, in as much as it demonstrated that the advertising campaign publicising the Helpline call centre had succeeded, but it put pressure on the system, which at times was unable to cope. A major message from the 2001 Census was that public helplines need to be easy to use, and designers of automated response processes must make them as user-friendly as possible. For the 2011 Census the aim will be for there to be more synergy between the Helpline and both national and local events as they occur during the enumeration period.

9. The innovative 2001 Census Community Liaison Programme will be further developed to establish contact with relevant groups and agencies. ONS feel that the biggest challenge to any future census will be in reaching groups that are traditionally undercounted. Further research into the types of people missed in the 2001 Census is being undertaken and findings will help to inform the type of initiatives needed. For example, alternative data collection methods would offer opportunities for increased coverage while reducing the burden on the public, and would provide the most appropriate completion methods for disadvantaged groups such as the visually impaired. Advances in technology may yet present further alternatives, but the present design envisages capture via paper form, the Internet and telephone.

10. The best partners in working to maximise census coverage have, in the past, been local authorities, whose need for reliable local information provides a strong incentive to assist in identifying and reaching hard-to-count populations; they are generally best placed to be aware of local interest groups. By positively engaging local authorities in the development and quality assurance of address lists, for example, and actively encouraging them to promote the benefits of the census in their areas ONS can seek to improve coverage.

II. THE NEED TO IMPROVE UNDERSTANDING OF COVERAGE

11. The One Number Census approach to the 2001 UK Census⁴ improved the UK's ability to assess coverage in 2001 and it is proposed that, in 2011, ONS should again make the necessary adjustments for undercoverage, building on the strengths of 2001 design and

addressing the methodological deficiencies that arose from the lack of sufficient independent statistical comparators at the local area level. But there are two other potential developments that may further improve our understanding of coverage, and where more research is needed before final decisions can be made.

12. The first (and the one that has most potential impact on the census operation) is the possibility of changing the population base for data collection from ‘usual residence’ (*de jure*) to ‘persons present’ (*de facto*). It has been suggested that the ‘usual residence’ definition used in 2001 introduced ambiguity about who should be included and may have resulted in higher non-response amongst certain population groups.

13. The second is the building of more ways of assessing coverage into the census question set by introducing further questions on residence arrangements, particularly multiple residence. Critical to the understanding of coverage will be research into the definitions of households, which must reflect the dynamics of societal change, particularly the increasing tendency towards: group living; weekly commuting; the children of divorced/separated parents having more than one home; second homes; and global living and employment patterns.

III. THE USE OF NATIONAL ADDRESS LISTS FOR FORM DELIVERY AND FIELD MANAGEMENT

14. It is proposed that pre-addressed forms with a unique identifier would be mailed out to most households using national address lists. Printing and despatch would be recorded on a form tracking system. A move to post-out strategy will, however, necessitate the use of more comprehensive and accurate address lists than are currently available, but would:

- Significantly reduce effort in stable areas where the address list is highly reliable and would allow field activities to be targeted to areas with known coverage problems;
- Significantly reduce the size of the field force; and
- Enable more consistent resolution of some issues in advance, for example, identifying some types of communal establishment before Census day.

15. An efficient form tracking system is seen as essential for monitoring the progress of forms both in the field and during processing. The system finally adopted will need to be able to track responses received through a variety of channels, including the Internet. The system would underpin the process of targeting enumeration resource at poorly responding areas, and it would also quickly provide information on the overall response rate.

16. Initially, follow-up would be by post, initiated by the form tracking system. This could be area-specific, and could be time- or response rate-based. Secondary follow-up would be carried out by local teams with access to technology in the field, acting on intelligence provided centrally by the form tracking system, enabling them to adopt a pro-active approach and provide help where needed.

IV. CENSUS QUESTIONS AND FORM DESIGN

17. Detailed requirements of users in terms of topics and questions to be included and outputs are not yet defined, but these are not critical to the overall census design, since the collection methodology as proposed would be able to accommodate whatever information is to be collected and disseminated.

18. The evaluation of questions to be included in the 2011 Census will, however, need to balance the benefits of increasing (or reducing) the previous question set to meet user needs against the need for ensuring that, in the context of increasing societal change, there are sufficient means of measuring coverage and quality. The ONS are currently identifying a number of themes around which any new questions will be evaluated. The issues for research cover:

- Balancing the benefits of focusing limited financial resources more on the enumeration process - in order to improve response rates – against the processing of an extensive question set to include, for example, any additional questions necessary to provide multiple population bases;
- The impact of a smaller question set on response;
- An improved understanding of the dynamics of changing household structures; and
- The availability (and comparable geography) of data on specific topics from other sources.

V. THE NEED TO PROVIDE OUTPUTS ON MULTIPLE POPULATION BASES

19. In addition to the issue of the population base for data collection, census takers also need to consider the population base for the production of outputs. Particularly in high commuter areas ‘usual residents’ may make up only a proportion of the population that draws on public services in an area. A count of the usually resident population is clearly still needed in the UK, but potentially, so are daytime, weekday and ‘service’ populations, for example. We need to ensure that we have the right statistical measures to enable the planning of services provided to the country.

VI. THE NEED FOR SPEEDIER PROCESSING AND PRODUCTION OF RESULTS

20. There has been criticism that the census is a slow process, with some population statistics not available until two years or more after Census day. The main census results from the 2001 Census, for example, were not fully completed until around mid-2004. The proposed design provides an opportunity to produce results more promptly, by means of an earlier start to processing, reduced processing through Internet completion, and a tightly integrated processing timetable.

VII. TO PROTECT, AND BE SEEN TO PROTECT, CONFIDENTIAL PERSONAL CENSUS INFORMATION

21. ONS will continue to make every effort to protect the confidentiality of personal data, throughout all census processes from form collection, including electronic collection, to production of outputs and the long-term custody of the individual records.

22. There was much concern expressed by users about the levels of disclosure control imposed in the 2001 Census output for small areas, and further research into statistical disclosure control measures will be necessary to identify and develop procedures that maximise both data protection in an era of increased public access to databases and the utility of the information produced.

23. As well as physical confidentiality protection measures, ONS consider equally as important the public perceptions of confidentiality raised by the approaches adopted, in order to avoid eroding public confidence.

VIII. TO BUILD USER CONFIDENCE IN THE FINAL RESULTS

24. High quality census operations and effective partnerships may result in high quality output, but will not necessarily result in user confidence in the figures. Even if the results are of high quality, if users do not have confidence in them, the value of the data will be eroded and information will not be used to its fullest extent. ONS will thus put particular emphasis on the need for the core population counts, in particular, to be as accurate and reliable as possible.

25. To build user confidence, in addition to developing high quality processes and partnerships, ONS will be explicit about the trade-offs between cost, quality, confidentiality and delivery. It will do this through consultation and clear presentation of the issues behind the decisions and the implications for census results. ONS see a need to describe, clearly and unambiguously, statistical methodologies in terms that can be readily understood by non-expert audiences, and avoid black-box processes.

IX. THE NEED TO PROVIDE VALUE FOR MONEY SOLUTIONS

26. ONS will seek to gain maximum benefit from utilising its own corporate tools and systems for the 2011 Census, unless there are clear reasons to do otherwise. Where new systems are developed specifically for the census, ONS will seek to gain benefit for other parts of the Organisation from the census investment. Where such systems will not be able to respond fully to the particular requirements of the Census, these will be outsourced to contracted service providers.

27. A proposed outsourcing strategy has been drawn up covering the range of potential services that could be provided by external suppliers. These include postal services, form printing, scanning and data capture, call centre services, field staff payroll and publicity. Other areas such as the recruitment of field staff and provisions of portable field technology are also being considered.

28. The use of external service providers for the 2001 Census brought mixed fortunes. On the positive side, the contracts generally delivered quality services, risk was transferred from the Census Offices, strong partnerships were formed, considerable goodwill on both sides resolved some very difficult issues, and skills have been transferred to the Census Offices. However, the effort required to manage the contracts was under-estimated, and in an operation as complex as the Census there are bound to be problems that may not be as easily

solved because of contractual and operational constraints (involving resources and costs) in a fast-moving arena.

29. All of the outsourced services being considered for the 2011 Census, including those previously successfully contracted out in 2001, will be subject to a current value for money assessment. An early decision will need to be taken on which of the proposed outsourced services will need to be included in the 2007 Test phase because, for instance, proof of concept will be necessary for a number of activities, such as field staff recruitment, that have previously only been done in house.

X. ALTERNATIVES TO THE 'TRADITIONAL' CENSUS APPROACH

30. In coming to the strategic design for the 2011 Census outlined in this statement, ONS have responded to one of the recommendations of the Governments Treasury Select Committee² by reviewing a number of alternatives approaches. These have been more fully described in a series of Information Papers⁵⁻⁸ published in November 2003 and which are also available on the ONS website. In summary the alternative options covered:

- Rolling census
- Data from administrative sources with headcount
- Sample surveys with modelling
- Central population register
- Do nothing

31. At the present stage of planning for 2011 Census, none of these are currently able to provide users with data of sufficient detail, accuracy and coverage to replace the traditional approach. However, the longer-term view, set out in an ONS Discussion Paper in October 2003⁹ envisages a population statistics database that integrates data from a variety of administrative and survey sources and which may obviate the need to conduct full traditional-style decennial enumerations in the future.

XI. BENEFITS AND RISKS

32. There are both benefits and risks to the census in the proposed design. In consultation users have generally expressed strong support for the overall proposals for the 2011 Census, which they feel are sensible if, perhaps, challenging. But they provide, at least, an excellent starting point for further discussion.

Benefits

33. Among the several benefits identified are:

- Greater understanding of coverage, and increased confidence in counts and responsiveness to user requirements;
- Increased focus of resource in hard-to-count areas and population sub-groups;
- Greater flexibility in delivery of forms to suit disadvantaged groups; and

- More flexibility to provide outputs for multiple population bases, which will be increasingly important as we move towards an integrated population statistics system.

Risks

34. The proposals for the 2011 design have been particularly welcomed since they attempt to deal with difficulties that have been growing in the past 20 years. But users have expressed some concern that the proposals are high-risk in that: they envisage a move from a traditional approach, losing the benefits of tried and tested methods; they require commitment of resources at an early stage; and that the changes may simply achieve an alternative set of results with no better overall quality but less accumulated knowledge about the nature of that quality.

35. Among the main risks that have been identified are:

- Dependency on the accuracy of national and local address lists resulting in possible insufficient coverage and quality necessary for a post-out strategy;
- Increased reliance and burden on future postal services of unknown quality; and
- Inability of the system to increase response and data quality, resulting particularly from reduced contact with households.

36. For these reasons, ONS intend that consultation and research should continue, organised over the next two years explicitly and intensively around the major risks and benefits. Only then would plans be finally set.

References

¹ Office for National Statistics (2004). *The 2011 Census: a design for England and Wales*. ONS Discussion Paper.

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

² The House of Commons Treasury Committee (2002). *The 2001 Census in England and Wales*. First Report of Session 2001-02, HC 310. The Stationery Office: London

³ House of Commons Committee of Public Accounts (2003). *The Office for National Statistics: Outsourcing the 2001 Census*. Ninth Report of Session 2002-03, HC 543, The Stationery Office: London.

⁴ Office for National Statistics, General Register Office for Scotland, and the Northern Ireland Statistical and Research Agency (2001). *Census 2001: A guide to the One Number Census*. (see <http://www.statistics.gov.uk/census2001/pdfs/oncguide.pdf>)

⁵⁻⁸ Office for National Statistics (2003). *Alternatives to a census: review of international approaches*. ONS Information Paper.

(http://www.statistics.gov.uk/downloads/theme_population/international_approaches.pdf);

Office for National Statistics (2003). *Alternatives to a census: review of previous UK studies*. ONS Information Paper. (http://www.statistics.gov.uk/downloads/theme_population/previous_uk.pdf);

Office for National Statistics (2003). *Alternatives to a census: administrative sources* (see http://www.statistics.gov.uk/downloads/theme_population/census2011_admin_sources_review.pdf); Office for National Statistics (2003). *Alternatives to a census: rolling census* (see

http://www.statistics.gov.uk/downloads/theme_population/rolling_census.pdf)

⁹ Office for National Statistics (2003). *Proposals for an Integrated Population Statistics System*. ONS Discussion Paper (see http://www.statistics.gov.uk/downloads/theme_population/ipss.pdf)