

2 Planning, preparation and management

Date of the census

- 2.1 The choice of date for the census is central to its planning because it affects the quality of the data collected. The date of the census is set in secondary legislation but needs to be determined well in advance so that all aspects of the census can be planned accordingly. Although the census does not have to take place on a specific day of the week, a Sunday has traditionally been chosen as the most likely time that people will be at home. The date must also maximise the number of households present and ensure minimum interruptions to the delivery and collection of questionnaires. Other factors to be considered are:
- avoiding holiday periods (to maximise the number of people present at their usual residence and the recruitment/retention of field staff)
 - maximising the number of students present at their term-time address
 - avoiding local elections (when the publicity messages may get confused)
 - allowing sufficient hours of daylight for field work; and
 - harmonisation across the UK
- 2.2 The UK Census Offices jointly selected three potential dates for the 2011 Census: Sunday 20 March, Sunday 27 March or Sunday 15 May. This last date was eliminated because it would cause significant problems with the timing of UK local elections. The other dates were seriously considered and in February 2008 the UK Census Offices agreed to hold the 2011 Census on Sunday 27 March 2011, the date that British Summer Time began. This optimum date would provide longer daylight hours to assist in particular the field operation in Scotland and Northern Ireland (where questionnaires were to be hand delivered), and would also benefit follow-up activities across the UK.

Stakeholder management

Introduction

- 2.3 Because a census encompasses the whole population it has an exceptionally large number of stakeholders with varying degrees of influence and interest. Engagement with different sectors (such as users, partners, Parliament and the media) has traditionally been undertaken by various teams within the census organisation. For the 2011 Census it was decided that a more strategic approach was needed for communicating with stakeholders as a whole, and a stakeholder management and communications team was established. Engagement with stakeholders comprised four steps, providing a progressively higher level of engagement:
- awareness raising
 - explanation
 - consultation, and
 - partnership working

- 2.4 ONS recognised that stakeholder groups would require different methods and degrees of approach, so different modes of engagement were developed to reflect this. It was also important that the mechanisms to be used for the census were tested at rehearsal, and that models of engagement for the rehearsal could be scaled up for the census itself.
- 2.5 Early in the planning ONS recognised that local authorities' knowledge and understanding of their areas and resident communities would be important to the success of the 2011 Census. The need for improved engagement with local authorities was one of the main lessons learned from the 2001 Census.
- 2.6 As part of the wider 2011 Census stakeholder management strategy, a programme of local authority liaison was initiated with the aims of:
- how raising local authority awareness and understanding of the census, local authorities helping to deliver a successful 2011 Census
 - encouraging LA participation and support for the census, and so contributing to maximising its coverage; and
 - building confidence and trust in the census methodology and the resulting outputs.
- 2.7 The 2011 Census stakeholder management strategy also included a programme of community liaison that built on the innovative community liaison activities of the 2001 Census, but at a much earlier stage. The main aim of the community liaison programme was to improve response, particularly among the key population groups. For 2011, community liaison started three years earlier than for 2001.
- 2.8 More information about the local and community programmes is given later in this chapter at paragraphs 2.199 to 2.232.

Parliamentary engagement

- 2.9 Engagement with Parliament, ministers and the National Assembly for Wales was seen as being an essential element of the wider 2011 Census stakeholder management strategy. The engagement approach was intended to be more proactive than had been the case in the 2001 Census.
- 2.10 Each census requires secondary legislation to be approved by Parliament to allow the enumeration to take place: a Census Order, and Regulations under the provisions of the 1920 Census Act. The census also generates considerable public, political and media interest. So it was important that ONS engaged with nationally elected representatives to discuss census issues. Their advice would also ensure that relevant interests and issues were taken into account, so that there should be no surprises when the legislation was put before Parliament.
- 2.11 Parliament and ministers play an important role in the scrutiny and passage of census legislation to ensure that all relevant interest groups have their needs taken into account. Additionally ministers and MPs might wish to have a role in promoting the census to the many special interest or lobby groups, and to the general public nationally and in their respective constituencies.

2.12 The objectives of the parliamentary and ministerial engagement strategy were to:

- manage the legislation through Parliament and the National Assembly, and engage appropriate stakeholders at key stages of the legislative process
- lay the groundwork to ensure support in Parliament and the National Assembly for the White Paper (see paragraphs 2.343 to 2.347), the Census Order (paragraphs 2.355 to 2.365) and Census Regulations (paragraphs 2.366 to 2.374)
- demonstrate that lessons from the 2001 Census had been learned and incorporated, where appropriate, into the 2011 design
- show that ONS was addressing specific issues relating to: income, disability, local and community liaison, field operations, non-response, Welsh identity and language, and managing the procurement contracts
- assure the National Assembly that Welsh-specific issues and concerns were being considered and addressed
- ensure that MPs' individual and constituency interests and concerns were identified and addressed in advance, and to ensure cross-party support
- ensure ministers were aware of, and fully supported, proposals for the 2011 Census
- encourage MPs to be local advocates for the census, ensure they were aware of plans for the census, how to access the results and their value for research
- better equip MPs for dealing directly with lobbying by constituents and interest groups
- reduce the risk of the census becoming a political battleground (particularly if there were to be a change of government); and
- mitigate the risks from late surprises (such as requirements for new questions)

2.13 The 2001 Census showed that it was difficult to encourage Westminster MPs' interest and enthusiasm for the census more than a few months before the event. So, for engagement to be as effective as possible for the 2011 Census, ONS contacted several parliamentary stakeholder groups: MPs as individual constituency representatives; relevant Select Committees; All-Party Parliamentary Groups (APPGs) with a potential interest; the House of Commons Library and Journals Office; and ministers of key policy departments. There was a similar programme of engagement with Assembly Members (AMs) and committees in Wales, led by Welsh Government officials.

2.14 The engagement mechanisms included: the publication of the White Paper; briefings for MPs/AMs (or their researchers); presentations at Westminster and the Welsh Assembly; meetings with APPGs; giving evidence at Select Committee hearings and Welsh Subject Committee meetings; ministerial and Cabinet briefings; responses to Parliamentary and Assembly questions and (where they were required) Early Day Motions; ministerial statements; and Parliamentary/Assembly debates.

2.15 Success varied considerably across these forums: while it was still difficult to engage the attention of all MPs, Assembly Members were generally supportive.

2.16 All-Party Parliamentary Groups are groups formed by MPs, on a non-party basis, with a common interest in a particular topic or issue. Out of more than 300 APPGs, some 35 were originally identified as having an interest in, or some relevance to, the census; of these, 15 were prioritised and targeted for engagement. Letters were sent

to the chairs of these groups on 11 December 2008, offering meetings to update them on progress towards the 2011 Census, and to discuss any particular interests or concerns. An executive summary of the 2011 Census White Paper was sent with the letters. The key APPGs identified were:

- Ageing and Older People
- Carers
- Chinese in Britain
- Community and Voluntary
- Deafness
- Equalities
- Friends of Islam
- Gypsy and Traveller Law Reform
- Homelessness and Housing Need
- Inter-Faith
- Irish in Britain
- Kashmir
- Punjabis in Britain
- UK Sikhs, and
- Youth Affairs

2.17 Not all of these APPGs responded to the invitation and, in the event, meetings were held with the following:

- Carers
- Chinese in Britain
- Deafness
- Friends of Islam
- Gypsy and Traveller Law Reform, and
- UK Sikhs

In addition, a meeting was held with the Humanist APPG at their request.

2.18 Letters to MPs and AMs (either en masse or to selected constituencies) were sent out at key dates to raise awareness of some key activities:

- the 2007 Census Test
- the White Paper proposals
- the 2009 Census Rehearsal, and
- the 2011 Census itself

2.19 In addition, articles were written for the *House Magazine*, alerting MPs to the publication of the White Paper (in December 2008) and the subsequent laying of the Census Order before Parliament (in October 2009).

2.20 Other avenues of engagement included arranging open meetings and presentations for MPs and AMs at Portcullis House on 4 November 2009 and the Senedd building in Cardiff on 27 January 2010. It was difficult to assess how much the awareness of the census was raised by such activities because attendance at these events was low.

- 2.21 However, the Assembly Members were able to take a more active interest in the census through their membership of several Subject Committees, at which Welsh Government and ONS officials were invited to report progress and answer questions. Meetings were held with:
- Local Services and Public Services Committee (21 September 2005)
 - Panel of Chairs (31 January 2006)
 - Equality of Opportunities Committee (15 February 2006, 24 January 2007)
 - Environment, Planning and Countryside Committee (13 December 2006)
 - Social Justice and Regeneration Committee (31 January 2007)
 - Health and Social Services Committee (1 February 2007)
 - Education, Lifelong Learning and Skills Committee (8 March 2007)
 - Culture, Welsh Language and Sport Committee (14 March 2007), and
 - Enterprise, Innovations and Networks Committee (21 March 2007)
- 2.22 These provided an excellent opportunity for the majority of AMs to be directly involved in discussions on the census because most attended at least one of the committees.
- 2.23 In addition to matters relating to the Welsh language and Welsh identity, the range of issues covered were (in no particular order): second homes, the enumeration of transient populations, carers, general health, place of birth, students, hours worked, place of work, income, educational qualifications, sign language, sexual identity, migrants, measuring undercount, the role of the Assembly, the 2007 Test, online completion, and confidentiality.
- 2.24 All the committees (and hence most AMs) were encouraged by this close co-operation between ONS and Welsh Government officials on briefings and presentations, and by the joint working arrangements. They were satisfied that, at least as far as Welsh issues were concerned, the lessons from 2001 had been well learned.
- 2.25 Consequently it was considered unnecessary to engage further with the new committees created by the re-organisation of the Assembly structures following the Government of Wales Act in 2007. Nevertheless, Ieuan Wyn Jones (the AM for Ynys Môn Isle of Anglesey and Deputy First Minister at that time) attended the launch of the census rehearsal in Ynys Môn Isle of Anglesey in October 2009.
- 2.26 The local MP for Fareham, Mark Hoban (then in Opposition) was invited to the ONS offices in Titchfield on 24 July 2009 to be given a tour of the census HQ, where he made a prototype online census questionnaire response. He was impressed enough to write about his enthusiasm and support for the census in the local newsletter that week.
- 2.27 More support and interest in the census was shown by the House of Commons Journals Office, during several meetings to discuss the best means of making census results available to MPs and researchers. Initial discussions (in April and August 2006) had suggested that, without a significant change to House rules, any report formally laid before Parliament under the provisions of s4(1) of the Census Act would have to be, at least in part, printed and published in hard copy (as in 2001).
- 2.28 Other engagement included letters sent in January 2009 to the Chairs of the Public Administration Select Committee (PASC), the Treasury Sub-committee, the Public

- Accounts Committee, and the Liaison Committee, offering informal meetings to update them on progress. In March 2009, letters and a census overview booklet were sent to all MPs, Lords and AMs updating them on progress towards the census.
- 2.29 A number of Parliamentary committees conducted hearings about the census including the Treasury Select Committee's 'Counting the Population'⁷⁵, and the first enquiry in February 2010 of the newly formed (but short lived) London Regional Committee which covered 'London's population and the 2011 Census'¹¹.
- 2.30 The Public Administration Select Committee took over responsibility for scrutiny of the work of the Office for National Statistics in April 2008 with the establishment of the independent UK Statistics Authority. In June 2009 PASC conducted a formal review on 'Progress towards the 2011 Census'¹³ with a further review in November on 'Official Statistics 2011 Census Questions'¹⁴. Generally, the outcome of these hearings was very positive and several of their recommendations helped to cement the final plans and approaches for the census.
- 2.31 After the census, towards the end of 2011, the House of Commons Science and Technology Committee held an inquiry into 'The Census and Social Science'¹², and in September 2012, PASC launched a programme of work on statistics and their use in government. The role of the census was included in this programme and was the subject of a specific enquiry in February 2014¹⁵.

Engagement with the EU and international bodies

- 2.32 Census representatives continued to play a key part in co-ordinating the UK's input into liaison with the European Parliament, the Council of Ministers, the European Commission (through Eurostat) and the UN Economic Commission for Europe. They did this, both directly and through the ONS International Division, to ensure consistency of census content and quality across EU Member States, in line with European codes of practice and within the context of EU Census Regulations.

Consultations with users

- 2.33 The investment of time and resources in a national census can be justified only if the results are accessible to users and meet their needs. This involves wide consultation in accordance with the principles and practices set out in the Code of Practice for Official Statistics.
- 2.34 One of the long-standing ways in which ONS engages and consults with census users is through census advisory groups that represent the interests of the main user communities, such as:
- central government departments (Departmental Working Group – DWG)
 - local authorities (the census sub-group of the Central and Local Government Information Partnership – CLIP)
 - the health service (Health Service Advisory Group – HSAG)
 - the business sector and professional interest groups (Business Advisory Group – BAPIAG)
 - the academic community (Academic Advisory Group – AAG)
 - organisations with interests in diversity, religion, ethnicity, special needs and minority populations (Diversity Advisory Group – DiAG)
 - users in Wales (Census Advisory Group for Wales – CAGW)

- 2.35 The first five of these groups had been in existence since the planning of the 1991 Census. Retaining the input of knowledgeable and experienced census users had proved useful to ONS in previous censuses, and the users themselves had found it valuable to be involved in the census from the start of planning. In preparing for the 2011 Census two new groups were established. One of these (DiAG) addressed the concerns and requirements of organisations that represented special and minority population groups and communities, focusing on diversity and equality issues. The other (CAGW) provided a forum for communication between ONS, the Welsh Government, and users in Wales, to address issues of particular relevance in Wales.
- 2.36 Advisory groups usually met twice a year but received papers and reports as and when relevant issues arose between meetings. The groups provided a forum for discussion on a wide range of census components, including:
- the population base
 - topic content and classifications
 - test and rehearsal plans and outcomes
 - data collection methodology
 - quality assurance plans
 - local authority and community liaison plans
 - outputs, including geography and dissemination media
 - disclosure control
- 2.37 In addition to these long-standing groups, others comprising specialist experts were established to cover topic, methodological, and other particular issues in more detail. These included:
- Population Definitions Working Group
 - Output Working Group
 - UK Census Design and Methodology Advisory Committee
 - Operational Management Advisory Group
- 2.38 A public consultation on the content of the 2011 Census questionnaire for England and Wales was undertaken between May and August 2005. It began with a paper '*The 2011 Census: Initial view on content for England and Wales*¹⁶ published 13 May 2005 that provided an initial view on the content and invited comments on the proposals by August 2005. The consultation paper was supplemented by a series of public 'roadshow' meetings throughout England and Wales during June/July 2005 attended by more than 300 people. The paper gave users an initial idea of the information to be collected in the 2011 Census, and a view of the likely constraints and trade-offs. The paper also explained that the strength of the cases made for new data to be gathered would be evaluated against a number of criteria, in particular that:
- the data must carry a strong and clearly defined user need
 - the data should be required for small population groups and/or at detailed geographical levels
 - the census should seek to collect only that data which could not be collected in any other way
 - the data collected must be of major national importance and allow high quality statistical outputs that are consistent across the UK
 - only data used in multivariate analyses with other census data items should be collected; and

- questionnaire content should not differ drastically from previous censuses, to enable comparisons with previous censuses
- 2.39 ONS evaluated what information should be collected in the 2011 Census by considering the user requirements for it against a number of criteria. In particular census questions should not:
- be sensitive or potentially intrusive, not require lengthy explanations nor instructions to ensure an accurate answer
 - impose an excessive burden on respondents, or seek information that is not readily known or is unlikely to be remembered accurately
 - enquire about opinions or attitudes
 - present major coding problems, or require extensive processing that would significantly add to the cost of the census
- 2.40 It is important that the census is seen to be carried out purely for statistical purposes. It should not therefore be used to collect data that would deliberately promote political or sectarian groups, or sponsor particular causes. The limited space available on the questionnaire meant that the design and size of a question was also an important factor in deciding whether or not certain data could be collected.
- 2.41 The public consultation generated a higher than anticipated response, with approximately 2,000 submissions from nearly 500 organisations or individuals across central and local government, academia, business, other groups and the general public. The consultation showed there was a continuing need for almost all the information that the 2001 Census asked for, and strong cases were also made for new topics:
- income – needed by central and local government to improve identification and understanding of areas of deprivation
 - language – required to monitor equality legislation and to improve service provision to minority groups
 - sexual identity – for use in monitoring equality legislation and improving service provision to the lesbian, gay, bisexual and transgender (LGBT) community, and
 - second homes – needed to help housing and transport planning and to improve the accuracy of population estimation
- 2.42 Moreover, a clear requirement for additional information on ethnicity and national identity was also identified, with particular interest in Wales in the collection of information on Welsh identity.
- 2.43 The responses were evaluated using the criteria outlined in paragraphs 2.38 to 2.40 to provide an overall assessment of the strength of the user requirement.
- 2.44 The culmination of the first consultation was the publication 8 March 2006 of ‘*The 2011 Census: Assessment of initial user requirements on content for England and Wales*’¹⁷. This paper updated the ‘*ONS initial view on content of the 2011 Census.*’ Summaries of user requirements for each topic and the individual responses to the consultation were also published on the ONS website.

- 2.45 Further consultation specific to the collection of information for each topic, and particularly on ethnicity, identity, language and religion was undertaken in 2006/2007 to:
- gain a better understanding of key data requirements
 - gain an awareness of the range of views held on these topics, and
 - identify the relative priorities for this information given the constraints of space on the census questionnaire

A report on the responses was published on the ONS website in October 2007.¹⁸

- 2.46 One-day open meetings were held during March 2007 in Sheffield, London and Cardiff to present the ONS view of the likely content of the 2011 Census.

Consultation on output geographies

- 2.47 In parallel to the programme of consultation on census topics and questions, ONS also engaged with users on a proposed National Statistics small area geography policy for England and Wales. This was first put to census advisory groups in the autumn of 2005. Its main thrust was to seek to maintain a high degree of geographic stability with the innovative output areas (OAs) and super output areas (SOAs) developed for the 2001 Census.

- 2.48 A National Statistics consultation on small area geographies for England and Wales subsequently ran for three months, from 15 November 2006 to 21 February 2007. Its aim was to inform thinking on the future policy for small area geographies for National Statistics, and specifically the way forward on the use of OAs and SOAs in the 2011 Census. More than 240 completed responses were received, as well as 40 comments on specific aspects of the proposed policy, and a further 65 comments from an online blog.

- 2.49 There was strong and clear demand for stability at the SOA level, although this was less clear at the OA level. While some users asked that OAs should reflect 'reality' at the time of the 2011 Census, just as many argued for no change. Overall the case was not made for any significant change to OAs.

- 2.50 There was strong support for: OA and SOA boundaries to continue to be freely available; keeping the licensing arrangements for sharing and distribution as simple as possible; and a common boundary between England and Scotland.

- 2.51 The outcome was that the National Statistics small area geography policy was to retain a high degree of stability – both at the OA and SOA level – and that no major change would be made to the existing OAs and SOAs before the 2011 Census (see paragraphs 7.19 to 7.22).

Consultation on the population base

- 2.52 Following earlier user consultation in 2004/05 through a Population Definitions Working Group, a decision was reached jointly by ONS and the census offices in Scotland and Northern Ireland to enumerate the 2011 UK Census on a usual residence basis (as had been done in 2001), but at the same time to collect some information on each visitor present at an address on census night (which had not been done in 2001). It was also decided that ONS would consider the need for including any additional questions necessary to record address information for the

purposes of obtaining accurate counts of other population bases, such as workplace and daytime populations.

Question testing

- 2.53 Following user consultation in 2005, ONS launched a programme of question development and testing, to ensure the 2011 Census met as many user requirements as possible. New questions were developed for topics where there was a new demand for information, and existing questions were redeveloped to accommodate changing user requirements and to improve the accuracy of response.
- 2.54 A range of qualitative and quantitative tests were used to develop questions that met users' requirements. This testing was supported by further, targeted, consultations to ensure understanding of detailed requirements and to assess where compromises could be made if testing highlighted any difficulties.
- 2.55 Several UK-wide working groups were established to manage the development of topic-specific questions that met user requirements, and these included data users who were topic experts drawn from across the UK and ONS. These working groups reported to a UK Census Questionnaire Design Working Group, which had responsibility for overall questionnaire development, ensuring that the needs of different topics were balanced appropriately.
- 2.56 The ONS data collection methodology team carried out a large programme of qualitative and cognitive testing of census questions, in both English and Welsh, between February 2005 and July 2009. The purpose of this testing was to explore, understand and explain the ways in which respondents answer questions, to ascertain whether or not a question was acceptable and worked as intended. Cognitive testing usually took place as a one-to-one interview to maximise effectiveness. This testing helped develop questions designed to collect accurate and meaningful information that met user requirements, were readily understood and easy to answer, and conformed as closely as possible to international best practice of questionnaire design.

2007 Census Test

- 2.57 A large scale census test covering 100,000 households was carried out in England and Wales 13 May 2007. A 24-page questionnaire was used that included four pages of individual questions per person for five respondents. The opportunity was taken to test a number of new and revised questions.
- 2.58 As a result of this test, and further consultation and re-evaluation of user requirements, not all of these questions were included in the final set proposed for the 2011 Census. The detailed evaluation of the 2007 Test and the questionnaire can be found on the ONS website.¹⁹ More information on the aims and scope of the 2007 Census Test is given in paragraphs 2.233 to 2.241, including an assessment of the impact that a question about income would have had on response.

Small-scale testing

- 2.59 A number of small-scale postal tests were also conducted to collect sufficient quantitative information about questionnaire design and content, and to collect further information on the success of all new questions. In April 2007 a split-sample postal

test of 10,400 households was carried out in order to inform the decision on the length of the 2011 Census questionnaire. There was sufficient user demand for the questionnaire to be expanded to four pages of questions per person, requiring a questionnaire of 32 pages in total. This was considerably longer than the 2001 Census questionnaire (20 pages with 3 pages per person), and there were serious concerns that the longer questionnaire would affect response.

- 2.60 This test concluded, however, that the length of the questionnaire would not significantly affect response rates if the questionnaire was well designed. This was a contributing factor in the ONS decision to increase the length of the questionnaire to 32 pages in order to accommodate six respondents.
- 2.61 In July 2008, two postal tests were carried out, one across England, and the other in Northampton - an area with a high concentration of international migrants. These tests would inform the decision on whether to include 'short-term UK residents' (sometimes referred to as 'short-term migrants') in the 2011 Census. The conclusion was that people resident in the UK for less than 12 months would complete a census questionnaire if asked to do so. Consequently the 2011 Census was the first to gather information on such short-term UK residents, providing a new population base while at the same time allowing comparison with the enumeration base used in the 2001 Census.
- 2.62 Then in March 2009, ONS carried out two further postal tests, each with a sample of 10,000 households, one across England and one targeting areas of Durham and Norwich. Their main purpose was to explore issues around the enumeration of students. ONS concluded that it was possible to collect information about students' term-time address at their family home, and vice versa. Collecting this information in 2011 would help to ensure a more accurate enumeration, and estimation, of the student population.
- 2.63 Later, in July 2009, a postal test of 27,000 households was carried out in areas known to have a high concentration of Pakistanis. The main purpose here was to explore the issues surrounding the inclusion of a 'Kashmiri' tick box in the ethnic group question. This testing showed that respondents would be significantly more likely to record their ethnicity as Kashmiri if a specific tick box was available, rather than a write-in space, but that the user requirement for this additional tick box was insufficient to expand the ethnicity question in this way. This work is discussed in more detail in a separate paper, available on the ONS website²⁰. In addition, in July 2009 ONS commissioned some focus groups and in-depth interviews to explore issues around the potential effect of a Kashmiri tick box in the ethnic group question, to help inform the final decision on whether or not to include one.
- 2.64 The ONS Opinions (formerly Omnibus) Survey was used in 2007, 2008 and 2009 to test new migration questions (year of arrival in UK, citizenship and intended length of stay in the UK); questions on language, national identity and religion; and attitudes towards colour terminology within the ethnicity question. This testing informed the decision to include a range of new questions on migration, and to retain the basic wording of the ethnic group question, as most respondents were happy to answer them and were able to do so accurately.
- 2.65 In April and May 2007, ONS held focus groups in England to discuss the acceptability of colour terminology within the ethnic group question and to seek to reconcile conflicting views on the issue. The outcome of the focus groups, which had

expressed strong views both for, and against, the use of colour terminology, led to a compromise on the descriptions used in the ethnic group question.

- 2.66 The Welsh Government also conducted a series of six focus groups in November 2007, in Cardiff, Carmarthen and Wrexham, specifically among people identifying themselves as 'White Welsh/British' to discuss national identity and ethnicity issues. The conclusion was that it would be acceptable to include a 'Welsh' tick-box in the new national identity question rather than as a specific ethnic group in the ethnicity question.
- 2.67 In August 2008, the National Centre for Social Research held focus groups and in-depth interviews with migrants and the general population to explore the acceptability of collecting information from short-term UK residents in the census. This supported the findings from the July 2008 postal tests, that it would be possible to enumerate this non-resident population.

Agreement to harmonise census design with Scotland and Northern Ireland

- 2.68 In 2005, the Registrars General for each of the UK countries signed an agreement to work towards a harmonised set of questions, questionnaires and outputs where possible. The agreement is reviewed and updated periodically and published on the ONS website².
- 2.69 Officials from each of the census offices met regularly to discuss progress through quarterly meetings of the UK Census Committee (UKCC) at the most senior executive level, and monthly meetings of the UK Census Questionnaire Design Working Group (UKCQDWG) at the working level. The results of all consultations, research and question testing was shared across the UK.
- 2.70 Eight UK-wide topic groups were set up that usually met monthly. These were responsible for establishing and prioritising user requirements for information, researching alternative sources of data, commissioning small-scale question testing, and making recommendations on the final set of questions. Each topic group included people with a range of skills and expertise from the following areas:
- ONS census division – to co-ordinate the work and provide census expertise for England and Wales
 - other ONS business areas – to provide expertise on each topic
 - ONS data collection methodology – to develop and test questions to meet user requirements and provide expertise in questionnaire design
 - ONS harmonisation – to ensure questions developed for the census were comparable with those from other surveys where possible
 - General Register Office for Scotland (GROS) now National Records of Scotland (NRS), and the Northern Ireland Statistics and Research Agency (NISRA) – to provide census expertise for Scotland and Northern Ireland respectively and ensure UK consistency where possible; and
 - the Welsh Government – to ensure Welsh requirements were met and that questions developed would be acceptable in Wales

These groups also included representatives from other government departments (most notably the Department for Education), where ONS did not have a recognised topic expert.

- 2.71 The work of these topic groups culminated in the production of question recommendations which were then reviewed by the UKCQDWG.

The final content and design of the census questionnaires

The enumeration base

- 2.72 Traditionally each decennial census covers all people in England and Wales. For censuses prior to 2001 the enumeration base had been those persons who were present at an address on census night, and counts of residents were estimated by transferring visitors back to the area of their usual residence. But following consultation in the lead-up to the 2001 Census, users had expressed a strong preference for the census to count persons at their place of residence whether or not they were actually present there on census night and this change was made. A decision was also made at that time not to collect any information about visitors in order to reduce the burden on the public.
- 2.73 However, this lack of any attempt to capture information about visitors, and the resulting loss of clarity as to where visitors should be recorded, may have been factors that led to some under-coverage in the 2001 Census. Consequently, although ONS again enumerated persons where they were usually resident, in 2011 two important additions to the enumeration base were made:
- information was collected on short-term UK residents (persons intending to stay in the UK for more than three months but less than 12 months), and
 - the householder also recorded the number of visitors present at the address on census night and certain basic demographic characteristics such as age, sex and usual address. However, any such visitors who were usually resident elsewhere in the United Kingdom were also required to supply full information at their usual residence
- 2.74 As in previous censuses, students and children at boarding school were regarded as being resident at their term-time address irrespective of where they were present on census day, making the census consistent with the base for the mid-year population estimates.

Revised definition of a 'household'

- 2.75 For the 2011 Census ONS adopted a revised definition of what constituted a household, with the aim of improving response rates, particularly at addresses with multi-occupancy where the previous definition was likely to be misunderstood.
- 2.76 In the 2001 Census (and the 1991 Census), enumerators had been instructed to deliver a census questionnaire to each individual household, which was defined as: either 'one person living alone' or 'a group of people (not necessarily related) living at the same address with common housekeeping'. For this purpose 'common housekeeping' had been defined as: 'sharing at least one meal a day or sharing a living room or sitting room'. However, householders had difficulty interpreting this definition, and with the proposed move to a predominantly post-out methodology in 2011 (see chapter 3) with its resulting loss of door-step contact, it was felt that a more intuitive definition of a household was required for the 2011 Census.
- 2.77 ONS consulted data users, and did research and testing with the public, to produce a more readily understood definition that reflected social change and modern living

conditions, while also being consistent with the harmonised definition that was recommended for government surveys. The following definition was adopted in the 2007 Census Test:

'A household is: one person living alone; or a group of people (not necessarily related) living at the same address, who share cooking facilities and share a living room, sitting room, dining room or kitchen.'

- 2.78 Cognitive research and post-test evaluation showed that respondents did not have difficulty in understanding the definition of a household. The new definition was entirely consistent with the Conference of European Statisticians' *Recommendations for the 2010 Censuses of Population and Housing*⁷. However, to avoid any ambiguity about what elements of living accommodation are 'shared', the following revised definition was adopted in the 2011 Census:

'A household is: one person living alone; or a group of people (not necessarily related) living at the same address and sharing cooking facilities and who also share a living room or sitting room or dining area.'

- 2.79 This change also made it easier for respondents to understand, because the definition was based on a physical concept (shared facilities) rather than a social concept (shared housekeeping).

The census topics

- 2.80 The topics included in the census were those most needed by the major users, and for which questions could be expected to produce reliable and accurate data. In each case no other comparable and or accessible source of the information was available in combination with other items in the census.
- 2.81 As noted in paragraph 2.38 above, an initial view of the 2011 Census's content was published in May 2005 to promote discussion and encourage the development of strong cases for topics to be included in the questionnaire. The consultation resulted in a demand for many more questions than could be accommodated on a census questionnaire.
- 2.82 Users initially indicated a need for all the topics covered in the 2001 Census and a range of additional topics covering national identity, income, language, nature of disability, second residences, year of entry into the UK and sexual identity. Subsequently cases were made for further topics such as number of bedrooms and intention to stay in the UK. In making the final selection of questions some difficult decisions had to be made, assessing the different requirements for information and balancing the needs for change against continuity. So ONS used a number of criteria to help evaluate the strength of each topic's case for inclusion. If a robust case could not be made for gathering particular information, a topic would not be included.
- 2.83 Topics had to meet a significant and clearly demonstrated user need. Users' needs could be justified in terms of, for example, assisting the allocation of significant resources, improving service provision, and developing or monitoring policies. It was essential, therefore, that every question included had a specific purpose, and that the data collected were of major national importance.
- 2.84 The census is particularly appropriate for topics yielding detailed information for small geographic areas and/or information about small population sub-groups that cannot be sufficiently identified by other means, such as administrative records. Information

required for broad geographic areas only (such as at local authority or regional level), may be better obtained by other means, such as sample surveys. Equally, if the need is restricted to information about a few specific small areas, other methods of data collection might be more appropriate.

- 2.85 A key benefit of census data is the ability to analyse particular variables against one another, so a proven need for multivariate analysis strengthened the case for a topic's inclusion in the census. Census topics are mutually supporting - each one provides information that makes the other topics more useful. This is particularly valuable where information on a range of topics is collected simultaneously for the whole population to form a single source from which important inter-relationships between topics can be analysed. Answers from individuals forming households and families can be combined to provide valuable information on the number and characteristics of households and families of different types, such as the number of single-parent families where the parent is employed and the children are under school age.
- 2.86 Statistical comparability with previous censuses is an important requirement for new census topics. Wherever possible, careful consideration was given to the comparability of new questions with the content of earlier censuses.
- 2.87 Other factors which ONS considered in evaluating priorities for topics included:
- new questions, which had to be tested to show they had no significantly adverse effect on the census as a whole – particularly the level of public response
 - new questions, which needed to be capable of collecting data of sufficient and measurable statistical quality to meet users' requirements
- 2.88 Because the census requires each householder to complete all relevant questions (excepting religion), the questions it asks have to be designed to encourage high quality and accurate answers. So in general the census should not:
- ask sensitive or potentially intrusive questions that could result in an unacceptable level of non-response
 - ask questions that require a lengthy explanation or instruction to ensure an accurate answer (people often do not read such instructions) and
 - seek information that a householder will not readily know or is unlikely to remember accurately (their answers are unlikely to be reliable)
- 2.89 It is also important that the census collects only information for which there is no other viable source. So ONS had to consider whether the new data being requested were available from other sources. For example, similar data may have already been collected by another government department, or by ONS surveys, or the data may be available from existing administrative records. The National Statistics Code of Practice Protocol on Managing Respondent Load²¹ states that 'National Statistics will, where appropriate, be derived from information supplied for the administration of government business and public services'.
- 2.90 To minimise the burden on census respondents the length of the questionnaire also has to be limited. Although the 2011 Census questionnaire was one page-per-person longer than the 2001 questionnaire, test results suggested that this increase would not affect response because the extra space was used to improve the questionnaire design.

- 2.91 In addition to these factors, the census should be seen to be an exercise carried out purely for statistical purposes, and should not be perceived as collecting data that would promote political or sectarian groups, or sponsor particular causes.
- 2.92 Finally, ONS had to consider legal and statutory requirements. The Census Act 1920 (as amended by the Census (Amendment) Act 2000) restricts, to some degree, what information can be collected. ONS also had to consider the potential requirements of the EU's recently adopted Regulation on censuses of population and housing and current international guidelines relating to census content, which are made to facilitate international comparisons of statistical outputs. Recommendations made by the United Nations, the UN Economic Commission for Europe, and Eurostat were also taken into account in shaping the content of the 2011 Census questionnaire.
- 2.93 In the event the 2011 Census collected information on the following topics. Those marked * were included in the census in England and Wales for the first time.

At all properties occupied by households and for all unoccupied household accommodation

- address, including the postcode

For households

- number and names of all residents whether present or temporarily absent on census night
- tenure of accommodation
- type of accommodation and whether or not it is self-contained
- type of landlord (for households in rented accommodation)
- number of rooms and bedrooms*
- type of central heating*, and
- number of cars and vans owned or available

For all residents in households

- name, sex, and date of birth
- marital status (including civil partnership status*)
- relationship to others within the household
- student status
- whether or not students live at enumerated address during term-time
- usual address one year ago
- country of birth
- passports held (as a proxy for country of citizenship)*
- year of entry into the UK* and intended length of stay* (for non-UK born)
- national identity* and ethnic group
- religion
- language*
- Welsh language proficiency (in Wales only)
- general health
- long-standing illness or disability
- provision of unpaid personal care
- educational and vocational qualifications
- second address*
- economic activity in the week before the census

- time since last employment
- employment status
- supervisor status
- hours worked
- job title and description of occupation
- name of employer and nature of employer's business at place of work (industry)
- workplace address, and
- means of travel to work

For visitors in households

- name, sex, and date of birth, and
- usual address (or country of usual residence if a non-UK resident)

For residents in communal establishments

- as for residents in households except for the relationship to others within the household, and
- status within the establishment

For communal establishments

- type of establishment (including age group and population catered for, and management responsibility)

2.94 Topics marked* were in the England and Wales census for the first time. All other topics had been included in the 2001 Census, in one form or another. The format of the question on ethnic group in England and Wales was more detailed than the question asked in 2001, to reflect the changing needs and dynamic profile of the ethnic minority population. Details of all the questions and the reasons for their inclusion are given below. A copy of the household questionnaires showing all the questions are in Annex A and B.

Questions asked at all addresses

Name and address

2.95 All census questionnaires were pre-printed with the full address of each household to aid delivery and tracking through the postal system (see chapter 3). The householder (or manager of the communal establishment) was asked to check that the address information was correct and to amend it if necessary.

2.96 Recording the name of each household resident to be included on the questionnaire helped to ensure that the enumeration was complete and enabled a measurement of under-coverage to be made (see chapter 5), and also ensured that queries were directed to the right people if it was necessary to check for missing information.

Questions asked of each household

- 2.97 Some questions were asked about each household as a whole. Information on the number of households is used in the planning, funding and management of services. In addition, a wider range of census statistics about people, households and housing, aids decisions on rural development, urban and inner city policies, in particular the development of brown field sites. Statistics derived from the census also help to define areas of deprivation and enable policies and resources to be directed to areas with special needs.
- 2.98 Where accommodation was unoccupied on census night and no questionnaire returned, a few basic facts about the property were recorded by field staff and were used to complement the information collected from occupied accommodation. Households which were entirely absent from their usual address on census night were, however, required to complete a census questionnaire on their return, if this was within six months of census night.

Questions about housing

- 2.99 The census provides information about the accommodation occupied by each household. It also provides a count of dwellings, including vacant dwellings, and of dwellings shared by two or more households. This shows the extent to which the housing stock is being used and provides a firm basis for assessing current and future requirements as the number and type of households change. No other data source gives such comprehensive information on housing stock at both national and local level.
- 2.100 At the local area level the census is the only source of nationally comparable information on housing, and so is used widely in calculations of grant entitlements to local authorities. Measures of inadequate housing and overcrowding are used in deciding on levels of housing investment and in targeting programmes which address social and economic needs in urban and rural areas. The following questions were included.

Type of accommodation and self-contained accommodation

- 2.101 Information was collected from questions on the type of accommodation occupied by the household and whether or not that accommodation was self-contained. This is used to identify separate dwellings and the characteristics of the accommodation in dwellings shared by two or more households. Households living in caravans and other temporary structures were also identified. Central government, local authorities and other users had confirmed the ongoing importance of collecting data to help analyse changes in housing supply and demand, to understand variations in multi-occupancy, and to identify deprived areas. The availability of such information provides a sound basis for comparing household and dwelling counts and establishing the distribution of vacant dwellings in small areas.

Tenure of accommodation and type of landlord

- 2.102 Questions on the tenure of accommodation and type of landlord (where the accommodation is rented) show how much of the housing stock in each area is in owner-occupation and whether or not it is mortgaged, or is local authority housing, privately let, provided by housing associations, or held by other types of tenure. This information helps central and local government to assess changes in housing

demand, to allocate resources, and to review and develop housing plans and policies. It is also used by the housing industry in analysing the housing market and assessing possible mis-matches between housing supply and demand.

Number of rooms and bedrooms

2.103 A question on the number of rooms within the accommodation, together with the number and characteristics of people in each household, helps to show the degree to which accommodation may be overcrowded or under-utilised. Shortage of space is seen as a fundamental indicator of housing deprivation and as such constitutes an integral part of deprivation indices. Furthermore, living in overcrowded conditions is associated with adverse personal, social and health effects. For example, shortage of space is seen as detrimental to children's development. An additional question, new for the 2011 Census, identified the number of bedrooms, which is a measure of overcrowding.

Type of central heating

2.104 The previous long-standing census question on whether or not households have exclusive use of either a bath/shower or toilet, or both, was no longer regarded as providing a sufficiently discriminative indicator in allocating resources for housing development and regeneration. Consequently this question was dropped from the 2011 Census. Instead, the enquiry into central heating was expanded to collect information on the type of central heating in order to provide a more useful indicator of basic housing standards. It also enabled consistency across the UK for a question from which information was primarily required in Scotland to facilitate work on rural fuel poverty. These long standing requirements were reinforced by the need for better information on renewable energy and energy efficiency.

Household transport

2.105 A question, included in the census since 1971, asked how many cars or vans are owned or available for use by the household. This information is widely used to support work on transport policy and planning. In particular it helps to identify areas where private transport makes the most demand on road space, and to assess the demand for public transport and the need for new or improved roads to better manage traffic congestion. The statistics are also used in making projections of future levels of car ownership, studies of road use and appraisals of the need for future investment in public transport. The information is widely used, for example, by local authorities in putting together local strategic and transport plans.

Questions asked of residents in households

2.106 Questions relating to qualifications, economic activity, occupation and industry were not asked of children aged under 16.

Basic population characteristics

2.107 The primary purpose of the census is to give an accurate and authoritative estimate of the number of people in England and Wales and the area where they usually live, and provide a new and up-to-date benchmark for annual mid-year population estimates. Census-based population estimates are central to every national system of official statistics; they are used in statistical formulae that allocate large sums of

public money to the devolved administrations, local government and the health service.

- 2.108 In the years between censuses the annual population estimates are updated (from the previous census base) by using data from registrations of births and deaths, and estimates of inward and outward migration (based on sources such as GP patient registrations and information from the International Passenger Survey). Without the periodic corrective effect of a census count these estimates, particularly at the local area level, would become progressively less reliable.
- 2.109 The classification of the population by sex, age and marital status provides a basis for actuarial tables, which allow trends in life expectancy to be monitored and which are used for purposes such as planning provisions for state pensions and life assurance. Analyses of persons in households by combinations of age, sex, marital status and relationship provide information on different types of household, such as those comprising lone-parent families or two persons of pensionable age, and enable statistics to be produced on separate family units. The following questions were asked.

Sex, date of birth and marital status

- 2.110 Apart from serving the essential needs for national and local population statistics described above, information on sex, age (determined by date of birth) and marital status is important in estimating the demand for local authority services, such as facilities for the young and elderly. The data are fundamental to the major statistical series, allowing age and sex-specific rates for morbidity, mortality, fertility, marriage and divorce to be calculated. They are used to cross-analyse all other census variables by sex, age and marital status or to estimate, for example, the numbers and ages of those married women who are employed in particular occupations or industries.
- 2.111 Following the Civil Partnership Act 2004, the traditional question on marital status was expanded to include response categories for civil partnership status.

Relationship in household

- 2.112 In households of two or more people, a question asked about the relationship between each person in the household. This information provides statistics of households analysed by family composition, and is used by, for example, authorities and organisations providing services to families who need to know how many families there are and what changes in family size have been taking place over time. Applications include planning accommodation and services for the elderly and assessment of the potential demand for housing from young families and multi-family households. The combination of the information from this question with that on sex provides statistics on the number of same-sex couple households.

Migration

- 2.113 A question included in the census since 1961 asked for the usual address of each person one year before the census. Where this is different from the current usual address, statistics can be compiled to give the numbers and characteristics of people and households who have moved from one area to another. The number of moves by type of person and household between areas and regions of the country can also be derived. The figures show arrivals from outside the United Kingdom, but not those

leaving, in the year before the census. Additional questions new to the census in 2011 asked about month and year of entry in to the UK and intended length of stay for all persons born outside UK, as a means of estimating short-term, as well as usual residents.

- 2.114 This information is particularly important because migration accounts for much of the growth or decline of the population of areas between censuses. The information collected in the census allows inferences to be made about the level and pattern of migration in other years. The universal coverage of the census ensures that there is as complete a count as possible to enable a better understanding of the number of people and households moving in the year prior to the census. The census is the only current source of reliable migration data for small areas, and analysis of migrants by their demographic characteristics and type of move provides more information on this important group of people, for planning purposes, than is available from any other source.
- 2.115 Information from the traditional question on country of birth provides information on people resident in the UK born in England, Wales, Scotland, Northern Ireland or elsewhere. Together with a new question on passports held (as a proxy for country of citizenship), this information allows estimates to be made of the numbers and circumstances of (sometimes small) immigrant communities from various countries, who may have particular needs, supporting resource allocation and policy development.

Second residence

- 2.116 One way of better understanding the reasons for under-coverage was to introduce more questions on residence arrangements, particularly multiple residence. To that end, new questions asking about second address and the reasons for staying at such an address were included in the census.
- 2.117 Understanding of under-coverage is assisted by better measurement of the societal changes that affect the public's traditional concept of 'usual residence'. These changes include the increasing tendency towards: weekly commuting; children of divorced or separated parents having more than one home; second homes; and global living patterns. This information is particularly useful, for housing and transport planning, and to local authorities that want to know the numbers of people who stay in their area and use local services during the week but who have a usual residence elsewhere.

Cultural characteristics

Ethnic group and national identity

- 2.118 A question on ethnic group was first included in a census in England and Wales in 1991. This information has enabled national and local government and health authorities to allocate resources, and to allow for the special needs of ethnic minority groups when planning programmes. In particular, response to this question has provided baseline figures against which the Government can monitor possible racial disadvantage within minority groups. The question worked well in 1991 and also in 2001, when it was revised to meet user needs for additional information about people of mixed origin and sub-groups within the 'White' population (particularly the 'Irish') and to be as acceptable as possible to respondents. The classification of ethnic

groups used in the census is now widely regarded as a standard for intercensal surveys and ethnic monitoring.

2.119 The inclusion of an ethnic group question in the 2011 Census met a wide range of needs for ethnicity data:

- to enable organisations to meet their statutory obligations under race relation and equal opportunities legislation (where other sources of data do not adequately provide accurate data for small, geographically dispersed ethnic minority populations)
- in the formulae for grant allocation by central and local government
- to inform policy development and monitoring, and
- to provide public bodies with a better understanding of the communities they serve, and hence inform service provision

2.120 The response categories were developed from the 2001 Census question to meet changing user requirements. The question continued to adopt the mix of geographic origin and colour characteristics that was shown to be publicly most acceptable in testing in the 1980s and 1990s, and from which the most useable statistics could be obtained.

2.121 While ethnicity is a dynamic characteristic, data about it must be comparable from one census to another, so the 2011 Census question had to retain a degree of stability. Consequently a new, additional and separate part of this question asked about national identity, enabling people to indicate their identity as being British, English or Welsh (or Scottish or Northern Irish, ETC).

2.122 The form and content of the ethnicity and national identity questions resulted from extensive testing and consultation with users and other key stakeholders. In particular there was a formal consultation exercise on census topics in 2005, and a further consultation from November 2006 to March 2007 focused on ethnicity, identity, language and religion, including a round of public meetings (see paragraphs 2.45 to 2.46). This consultation aimed to determine not only requirements for information but also changing public attitudes towards the acceptability of the question among particular ethnic minority communities.

2.123 The questions included in the census in England are shown at figure 2.1. New response categories for 'Gypsy and Irish Traveller' and 'Arab' were introduced. (For the question used in Wales the wording of the first tick box under 'White' put 'Welsh' first.)

Religion

2.124 A question on religion was included in the census in England and Wales for the first time in 2001, following the Census (Amendment) Act 2000. Responses to the question provided information which supplemented the output from the ethnicity question by identifying ethnic minority sub-groups in terms of their religion, particularly those originating from the Indian sub-continent. This information is used to improve understanding of local populations and markets for service planning and to promote legal obligations under equality legislation and to prevent discrimination.

2.125 The question was repeated in 2011 and was one of a suite of questions that allowed respondents to indicate their identity in the way they considered appropriate. As was the case in 2001, response to the question was voluntary (in accordance with the

provisions of the Census Act and international recommendations). The question asked in England is shown at figure 2.2. In Wales, the reference to ‘including Church of England, Catholic, Protestant and all other Christian denominations’ was replaced simply with ‘all denominations’. This ensured the question was asked consistently in English and Welsh, because listing denominations was problematic in Welsh, and testing had found this wording worked better in Welsh.

Figure 2.1 The 2011 Census questions on ethnicity and identity, England

15 How would you describe your national identity?

➔ Tick all that apply

- English
- Welsh
- Scottish
- Northern Irish
- British
- Other, write in

16 What is your ethnic group?

➔ Choose **one** section from A to E, then tick **one** box to best describe your ethnic group or background

A White

- English/Welsh/Scottish/Northern Irish/British
- Irish
- Gypsy or Irish Traveller
- Any other White background, write in

B Mixed/multiple ethnic groups

- White and Black Caribbean
- White and Black African
- White and Asian
- Any other Mixed/multiple ethnic background, write in

C Asian/Asian British

- Indian
- Pakistani
- Bangladeshi
- Chinese
- Any other Asian background, write in

D Black/African/Caribbean/Black British

- African
- Caribbean
- Any other Black/African/Caribbean background, write in

E Other ethnic group

- Arab
- Any other ethnic group, write in

Figure 2.2 The 2011 Census question on religion, England

20 What is your religion?

➔ This question is voluntary

- No religion
- Christian (including Church of England, Catholic, Protestant and all other Christian denominations)
- Buddhist
- Hindu
- Jewish
- Muslim
- Sikh
- Any other religion, write in

- 2.126 Consultation with users had suggested that the form of the 2001 question would not meet all their requirements. In particular they argued that:
- (a) the Christian and Muslim categories were too broad
 - (b) there was a need for information on additional religions and specific non-religious beliefs; and
 - (c) the concept of 'religious practice' should be distinguished from 'affiliation/identity'
- 2.127 Regarding points (a) and (b), space constraints on the questionnaire meant that ONS could not provide additional tick boxes for other religions, or break down existing categories further. ONS did explore whether the question could be reworded to reflect the wording used in the Equalities Act, and tested the question: 'What is your religion or belief?' Testing indicated that – regardless of the form of the question – respondents tended to report their 'religious identity'. On that basis it was better to retain continuity with the 2001 question rather than break it and still not be able to quantify the concepts of 'belief' or 'practise'. Also, religious identity or culture is seen as important when monitoring discrimination.
- 2.128 In response to (c), ONS did not believe that a single question about religion could be reworded in a way that would capture this information suitably, and in a way that would justify losing comparability with the 2001 question. However, ONS acknowledged that the question would not measure religious practice and that for some user needs (particularly for service planning) a measure of practice might have been useful. Instead ONS suggested that a revised question incorporated into social surveys would be the best way to capture such information. ONS also argued that the proposed question would meet other user needs such as understanding populations and monitoring inequalities.

Language

- 2.129 A question on Welsh language was again asked in Wales – as has been done in one form or other since the 1891 Census. Responses provide information that is used to measure the change in Welsh language proficiency to inform policy development and monitoring. The information is also used to inform local resource allocation, (similar questions about the use of Gaelic and Irish languages were asked in Scotland and Northern Ireland respectively). Although a request was made by the then Welsh Language Board to include the question in England, the case to do so was not considered strong enough. Moreover, its inclusion would have necessitated a similar enquiry into the other Celtic languages. As in all previous censuses, therefore the information was collected only in Wales.
- 2.130 However, new more general questions on language were included in the 2011 Census which enquired, throughout England and Wales, into the respondents' main language used and their ability in speaking English. The question on main language enabled respondents to record their main language (including sign languages) if this was not English (or Welsh in Wales) (see figure 2.3). Responses provide an indication of areas and communities where foreign language service provision is necessary, and improve understanding of the diversity of the population – in particular the impact of English language ability (English or Welsh in Wales) on employment and other social inclusion indicators.

Figure 2.3 The 2011 Census questions on language

(a) England

18 What is your main language?

English → Go to 20

Other, write in (including British Sign Language)

19 How well can you speak English?

Very well Well Not well Not at all

(b) Wales

18 What is your main language?

English or Welsh → Go to 20

Other, write in (including British Sign Language)

19 How well can you speak English?

Very well Well Not well Not at all

Health and care

Long-standing health problem or disability

- 2.131 A question asked whether or not a person has any long-standing health problem or disability that causes difficulties in doing day-to-day activities. Problems which arose from old age were to be included (a form of this question was included for the first time in the 1991 Census, and repeated in 2001). This information is used as a measure of the need for health and personal social services at national and health/local authority level, and around particular local facilities, either existing or planned. In line with requirements arising from the Disability Discrimination Act 1995, the 2011 question covered both disability and illness.
- 2.132 Another question, inquiring into the nature of specific disabilities, was considered but not included. The case for doing so was not strong, and it was not possible to devise a self-completion question that would provide sufficiently accurate data to meet user requirements. (a question on the nature of disability was included in Northern Ireland and Scotland to inform their own equality agendas).
- 2.133 The 2011 question enabled the census to provide information on the circumstances in which the long-term ill and disabled live – for example, whether they live alone or in unsuitable accommodation. It also provided an analysis by age, which is important as the number of elderly people increases.

General health

- 2.134 In addition to the enquiry into long-standing health problems, the census also included a general health question. This asked the respondents to assess their own health over the preceding 12 months on a five-point scale ranging from 'Very good' to 'Very bad' expanding the three response categories from the 2001 Census question. This information has been demonstrated in surveys to have a good predictive power for health policy and provision of services, particularly for the elderly. Its inclusion in the census enables such information to be analysed at the local area level.

Provision of care

- 2.135 The census continued to recognise the increasing amount of unpaid personal care given to people with ill health. The inclusion of a question again in the 2011 Census helps to improve the understanding of the profile of carers (particularly young carers), the variations in the need for care, and the pressure on social services in attempting to target resources more effectively.

- 2.136 The question recorded whether or not the person provides unpaid personal help for a friend or relative with a long-term health problem or disability, and the time spent each week providing such care.
- 2.137 Census information on carers is used alongside other measures of health to identify local health inequalities. Carers often experience isolation because of their caring responsibilities and are identified as a group at risk of social exclusion. Census data support the development of policies and plans and the targeting of resources for this priority group.

Qualifications

- 2.138 The information from a question on educational, professional and vocational qualifications is used to assess educational achievement and labour market participation across the population, looking at demographic groups at a local and regional level. This helps users to understand and respond to equality and diversity issues, in order to widen participation and fair access. The census information on intermediate and higher level qualifications is used in the derivation of the National Statistics Socio-economic Classification (NS-SEC)²³ and assists the understanding of social patterns and local labour markets. Information on those people with no or low levels of qualification is used in deriving indices of deprivation which are used by central government, public and voluntary sector organisations as the primary basis for identifying deprived areas for funding allocations and applications.
- 2.139 Information was captured on the level of qualifications achieved with the primary intention of deriving the highest qualification and recognising any differences in qualifications in England and Wales. However, the separate 2001 question on whether people had specific professional qualifications such as teaching, medical, nursing and/or dental qualifications was not repeated. This was because it had been poorly answered (having the highest level of non-response of any question), so ONS was not confident that it could achieve sufficient data quality. Moreover, consultation with users suggested that there was less of a requirement for this information compared with other census topics. However, the 2011 question did enable those with professional qualifications generally to be identified.

Employment and the labour force

- 2.140 The census is a primary source of information about the socio-economic characteristics of the population, and is the most comprehensive source at the local level. It provides statistics about the ages and occupations of workers in different industries. These statistics can be presented both by place of residence and, for those in work, by place of work. The census also provides information about other economically inactive groups such as full-time students, people looking after the home and family, and the retired.
- 2.141 The census is also the most comprehensive source of labour market information about sub-groups of the population (the Labour Force Survey's sample size at the local area level is too small to provide reliable estimates). For example, the census provides detailed statistics for small areas on employment and unemployment among different ethnic and socio-economic groups.
- 2.142 Furthermore, the census provides statistics on the pool of labour and the potential reserves of labour in all areas. Particular applications include projections of the future

labour force, drawing up local authority structure plans, and private sector employers wishing to locate operations in areas where there is suitable labour.

- 2.143 The majority of labour questions referred to a person's main employment in the week before the census or, for those not currently employed, to their most recent job, if any. The questions referred only to those people aged 16 or over, and covered the following topics.

Economic activity in the week before the census

- 2.144 A number of questions were asked to determine whether the person was in employment (including paid or unpaid or work in own/family business) or was:

- retired
- a student
- looking after the family or home
- long-term sick or disabled
- looking for work
- available for work
- waiting to start a job

These categories provide the basic classification for analysis of economic activity. They are designed to be as consistent as possible with definitions recommended by the International Labour Organisation (ILO) and the Conference of European Statisticians.

Time since employment

- 2.145 Another question asked those who stated that they were not working in the week before the census to give the year in which they last worked. This helps to determine local differences in the periods of unemployment experienced and the extent of long-term unemployment. Use of this information includes assessing and monitoring disadvantage and exclusion, planning education and training, resource allocation, labour market analysis, and in studies of mortality and morbidity.

- 2.146 If a person had never worked, no further questions on employment were asked of them. For those persons in paid work, or who had previously worked, further questions covered the following.

Occupation of current main job, or last main job

- 2.147 Asking people their full job title and the main things done in their job provides detailed and important information about the very wide range of work done nationally and locally. In coding occupation data ONS used the latest revision of the Standard Occupational Classification (SOC 2010)²². These statistics are used in analyses of the labour forces of various industries and occupations, in studies of occupational mortality, and they provide the basis for the classification of people and households according to the National Statistics Socio-economic Classification (NS-SEC)²³.

- 2.148 Two further separate questions enhanced the information collected on main occupation. A question on employment status asked if the person works, or worked, as an employee or as self-employed with, or without, employees; a second question, on supervisor status, asked if the person has or had any supervisory responsibilities

in their job. Responses to these questions help in assigning the person more accurately to the NS-SEC.

Industry of employment

- 2.149 Information on the industry of employment was determined, as in previous censuses, by asking people the nature of the business of the organisation that employs them. This information is used, for example, in labour market analyses and in the production of regional accounts and economic indicators. Additional information on industry was also obtained for those people currently working from the question asking for the name and address of their employer. This information is used solely as an aid to the accurate coding of the type of industry by reference to the Inter-Departmental Business Register (IDBR) – a list of large employers already classified by type of industry. Responses to the question are not used to produce any information on named individual employers.
- 2.150 Industry was coded to the current version of the Standard Industrial Classification (SIC 2007)²⁴.

Hours worked

- 2.151 A question on the number of hours usually worked in the person's main job distinguished those in full and part-time work. The form of the question was changed from the 2001 write-in response to a pre-banded tick-box response, making it easier for respondents to complete and easier for ONS to code. This information helps to provide a better understanding of changes in working patterns, and how these apply to particular occupations and industries. The Department for Communities and Local Government, in particular, uses this information to improve understanding of employment terms and conditions as applied in practice, particularly in relation to the children and young persons agenda. At a local government level, information on people working long hours is an indicator of deprivation and can inform neighbourhood renewal strategies. The information is also used in labour market studies, in rural policy and regeneration, and in the derivation of area and socio-economic classifications, and provides evidence for the working time directive.

Workplace and journey to work

- 2.152 From the information collected from the workplace question the census is able to show where people who live in any particular area work, and vice versa. This information is the basis for measuring commuting patterns and assessing the balance of housing and jobs.
- 2.153 The census also adds to the value and usefulness of many routine employment statistics which are generally based on area of workplace, by providing cross-analysis by area of residence. In addition, information on the number and characteristics of people working in an area is useful for planning and delivering services to the daytime population. In 2011 a new geography workplace zones was developed to support local analyses (see paragraphs 7.26 to 7.28). Two questions were asked, as follows.

Address of Place of work

- 2.154 Responses to a question on address of place of work show the destination of individual journeys to work in relation to the usual address (which is normally the

origin of the journey). This provides information on the numbers travelling to work from particular origins to particular destinations. Together with information from the question on means of transport to work, the data help to identify commuter routes that are subject to higher pressure on public and private transport.

Main means used for journey to work

2.155 This second question asked about the means of transport normally used for the longest part, by distance, of the journey to work. The detailed analyses of specific commuting flows by the main means of travel are used in planning public transport provision, and facilities for private transport.

2.156 Consideration was given to extending this question to cover journey to place of study for students and schoolchildren (as had been done in Scotland in both the 2001 and 2011 Censuses). However, user demand in England and Wales was less strong and there were concerns that the introduction of this extra dimension would affect the quality of responses on journey to workplace. Consequently, the question was not extended in England and Wales.

Questions asked of visitors

2.157 The 2011 Census included visitors on the household questionnaire. However, only limited information was collected because visitors who were resident elsewhere in the UK were also required to supply full information on the census questionnaire at their usual address. The information collected about visitors was:

- name and usual address (or country of residence if a non-UK resident)
- sex
- date of birth

2.158 The household questionnaire had space for information on up to three visitors together with a count of the total number of visitors. This information was primarily collected to ensure that everyone knew they had to complete a questionnaire and that there was no legitimate excuse to opt out.

Information collected on residents in communal establishments

2.159 The census aimed to enumerate all people resident on census night in communal establishments such as hospitals, nursing and residential homes, educational establishments and hotels (residency in such establishments was determined on the basis of a length of stay of six months or more). Full particulars were required of residents in such establishments, and statistics on these residents, separately identifying resident staff, were produced by each type of establishment. Such communal accommodation is becoming increasingly widely dispersed in small units, which are difficult to cover in sample surveys. The census, therefore, provides a comprehensive and authoritative count of the population living in these establishments that is not available from other sources.

2.160 Information was not, however, collected relating to the person's accommodation (although data about the type of communal establishment was collected separately from the manager or other person in charge of the establishment), or on the relationship to any other person within the establishment.

2.161 Nor was information collected about visitors present in a communal establishment on census night, though the number of such visitors was recorded. If such visitors were resident elsewhere in the UK then, as with visitors to households, they were required to provide full information on their census questionnaire at their usual address. Furthermore, no information was collected on any visitor who was a non-UK resident and who was staying in a communal establishment for a period of less than six months.

Topics that were considered but not included in the 2011 Census

2.162 As noted above, each topic proposed for the 2011 Census should satisfy the criteria in paragraphs 2.80 to 2.92. In addition to previous census topics several other topics were considered but not included either because:

- the case for them was not considered strong enough to displace one or more of the proposed topics or
- tests had shown that the quality of the information obtained from a census question would not be fit for purpose
- the question was too sensitive or would place too great a burden on the public, or
- a combination of these reasons

Two topics in particular were reviewed in detail: income and sexual identity.

The case for and against including a question on income

2.163 Consultations with users prior to the 2001 Census had indicated a widespread requirement for census information about the level of individual gross income. However, at that time the Government felt that this need had to be balanced against: possible public disquiet about the acceptability of such a question in a compulsory census; doubts about the reliability of the information collected; and the availability of possible alternative sources of this information. In its review of the 2001 Census the Treasury Select Committee noted that:

‘It is clear that a question on income would have been found useful by many users of census data’

and recommended that:

‘...ONS should consult further on whether a question on income should be included in any future census ...’.

2.164 As noted in paragraphs 2.38 to 2.46, ONS consulted users widely about their data needs, and again they indicated a strong requirement for an income question. Income is widely seen as a more discriminating variable than occupation or housing condition for the purposes of identifying areas of affluence or deprivation, and in economic and social research.

2.165 All main user communities had made a case for a question on income. In particular, central and local government users expressed a requirement for the information to be used to support a range of activities including resource allocation, policy development and review, the derivation of deprivation indicators, and in the assessment of inequalities and social exclusion. A question on income was

accordingly included in the 2007 Census Test, to assess whether there was any significant evidence of public disquiet about such a question possibly affecting response to the census.

- 2.166 The design of the test allowed for the effect that the inclusion of a question on income would have on response rates to be assessed. Half of the 100,000 test households received a questionnaire which included an income question, and the other half had a questionnaire without that question. The difference in response rates was, overall, 2.7 percentage points (50.6 per cent for questionnaires with the question compared with 53.3 per cent for questionnaires without). This difference was similar to that obtained in the pre-2001 Census tests and was statistically significant – particularly so given that the test was voluntary and that responses were therefore from households likely to be more compliant. Moreover, an analysis of the completed income questionnaires indicated that a further 9 per cent of responders elected not to answer the income question (the aims and scope of the 2007 Census Test more generally are described in paragraphs 2.233 to 2.241).
- 2.167 The UK Statistics Authority then considered the user demand for income information against: this evidence of public reluctance to answer such a question; other criteria assessing the public's understanding of the question; and the potential availability of income information from alternative sources. The Authority came to the conclusion that the case for including the question in the 2011 Census did not outweigh the risk of reduced response.

Collecting information on sexual identity

- 2.168 Consultation with users, particularly during 2005, indicated a strong requirement for information on sexual identity to be collected in order to provide a benchmark for equality monitoring policies. While ONS recognised the potential value of such information, it had also to take account of: concerns about individual privacy and confidentiality within a household; the quality of the resulting data; and the effect that such a question could have on the overall response to the census.
- 2.169 A small-scale postal survey carried out by the General Register Office for Scotland (GROS) (now National Records of Scotland) in Scotland in 2006, had included a question on sexual orientation. Of the 31 per cent of households that responded, one in seven did not provide useful data on sexual orientation – either because they elected to tick the 'prefer not to answer' box or declined to complete the question at all. This far outweighed the percentage of respondents who declared a non-heterosexual orientation. GROS concluded from this that the results would call into question the accuracy of any data gathered by such a question in the census and hence the utility of the data collected in this way. Furthermore, the terminology and concepts used to attempt to distinguish different sexual behaviours tended to confuse many respondents, leading to additional inaccuracies in the responses.
- 2.170 In the light of this, and of other international research into the viability of including such a question in a population census, it was decided that a census was not a suitable means of collecting sexual identity information, and that a question on sexual identity should not be included in the 2011 Census. However, in recognition of the particular importance of collecting information on this topic for equality monitoring purposes, ONS initiated a project to develop a question on sexual identity that could be used in national surveys. This was subsequently included from 2009 onwards in a large household survey – the Integrated Household Survey (IHS). Estimates from the IHS were available earlier than the 2011 Census results, and can be updated

annually, enabling regular monitoring of the size, distribution and changing social-demographic profile of the lesbian, gay, bisexual and transgender (LGBT) community.

- 2.171 The main advantage of collecting these data in a household survey is the superior quality of the estimates produced. In a survey environment information is supplied by the person to whom it pertains and is not shared with other householders. Privacy and confidentiality were the key concerns expressed in the focus groups by both LGBT and heterosexual groups.
- 2.172 A paper that provides further background information and summarises the reasons why ONS felt that a question should not be asked in the 2011 Census is available on the National Statistics website²⁷.
- 2.173 In addition to income and sexual identity, the other topics which were considered but not included on the 2011 Census questionnaire are listed in box 1. ONS carefully evaluated all the suggestions submitted. Some topics were rejected at an early stage in planning but many were subjected to both small and large-scale testing. The Welsh Government similarly prioritised the cases made to inform the topic content of the census questionnaire in Wales.

Box 1 Topics considered but not included in the proposals for the 2011 Census

- access to a garden or yard
- access to bank account
- access to bath/shower
- accommodation on more than one floor level
- address five years before the census
- age of dwelling
- asylum or immigration status
- commuting address
- Cornish language and identity
- country of previous usual residence
- duration of residence at current address
- duration of residence in UK
- educational attainment
- fertility
- frequency of use of Welsh language in Wales
- furnished accommodation
- income
- internet access
- lifestyle
- means of travel to, and location of, place of education
- National Insurance number
- nature of long-term illness or disability
- number of current jobs
- number of miles travelled per year
- occupation group and industry using a closed (tick box) question approach
- parents' country of birth
- place of birth
- presence of smoke alarms
- proficiency in foreign languages
- qualification or training required for occupation
- receipt of unpaid personal care
- sexual identity

- Sikh and Kashmiri ethnicity
- size of workplace
- state of repair of accommodation
- taught languages
- type of disability
- type of tenancy agreement
- use of childcare facilities
- use of renewable energy resources
- use of wheelchair
- value of the home

Moving to a four-page-per-person questionnaire

2.174 The original working assumption for the 2011 Census had been for a 24-page household questionnaire with three pages of individual questions accommodating up to six usual residents, together with an additional six pages to record household members, visitors, a matrix of relationships between household members, and the housing questions. This had formed the basis of the ONS bid for census funding from Treasury.

2.175 However, it became clear from consultations with users that there was significant and justified demand for more topics than could be accommodated within three pages of individual questions. The new topics that were at risk of being excluded from the shorter questionnaire were:

- civil partnership categories – included in the marital status question
- second address – to identify and avoid double-counting in the census, and to reconcile population estimates with administrative sources
- month and year of entry into UK – to enable new migrants to be identified and their characteristics to be analysed
- intended length of stay in UK – to enable identification of different population bases (by identifying those who qualified under the internationally agreed definition of short-term migrants)
- citizenship – to identify those eligible to vote and receive services from the Government
- national identity – to allow the indigenous and migrant population to state their identity as English, Welsh, British EtC, and make the ethnicity question more acceptable to ethnic minority communities; and
- language – to improve targeting and provision of services for minority groups

Some of the established topics were also at risk because of the strength of the requirement for new ones or because they were either lengthy (such as qualifications) or expensive to code (industry).

2.176 Work was therefore undertaken to inform decision making on the length of the questionnaire, including:

- research into the effects of questionnaire length on response rates (including international experience)
- costings for 2011 on the difference between a 24-page and a 32-page questionnaire

- a split-sample postal test in April 2007, where half the sample of 10,400 households received a 24-page questionnaire and the other half a 32-page questionnaire (see paragraphs 2.60 to 2.61)

- 2.177 The postal test in April 2007 showed that increasing the length of the questionnaire from 24 pages to 32 pages did not have a significant effect on overall response rates. The response rates were 31.1 per cent for the 24-page questionnaires and 31.5 per cent for the longer questionnaires. There were also no obvious effects on the level of item response. The conclusion from this research was that there was no evidence that a longer questionnaire by itself would reduce response rates. Other factors such as a cluttered design or the choice of topics had been shown to have more of an impact on response rates. Indeed, there is a significant and consistent body of international research which shows that a long, clearly laid out questionnaire will always receive a better response than a short, congested one. However, the cost of an extra page of individual questions was estimated to be in the region of £22 million.
- 2.178 The then current funding allowed only for a questionnaire with three pages of questions per person. However, additional funding was provided via a new cross-government funding mechanism which enabled ONS to accommodate more user demands for information from the 2011 Census than would have otherwise been possible.

Quality review of questions and equality impact assessment

- 2.179 The census questionnaires used in both the 2007 Test questionnaires and the 2009 Rehearsal were subject to quality review by international experts in questionnaire design. The findings from these reviews informed the final questionnaire design and content and helped to ensure that the questions were clear and understandable.
- 2.180 Furthermore, an equality impact assessment was carried out on the development of the ethnicity, identity, language, and religion questions for the 2011 Census. This is a systematic way of finding out whether or not a function, such as a policy or practice, has a differential impact on particular communities or groups within communities, and the results were published in August 2008²⁵.

Creating and quality assuring the 2011 Census address register

The need for an address register

- 2.181 Following the successful trial of posting out census questionnaires in the 2007 Census Test, the decision was made to adopt post-out as the prime means of questionnaire delivery for the 2011 Census.
- 2.182 The rationale for this strategy was that, even with hand delivery of questionnaires in the 2001 Census, enumerators had failed to make doorstep contact with households at more than a third of addresses, and had resorted to delivering the form through the letter box. The use of an established postal service provider to perform this activity was seen as an opportunity to direct field resources to those areas where a more focused approach to follow-up activities was necessary to improve response rates. ONS expected to post out census forms to as many as 95 per cent of households.
- 2.183 The availability of a comprehensive, high quality address register for all areas of England and Wales was a crucial pre-requisite to this strategy (in fact, two registers

were required: one for households and one for communal establishments, because these were to be enumerated in different ways). However, none of the three national address products available at that time met ONS quality targets and it was therefore necessary for ONS to construct an address register specifically for the census. In order to build this register parts of the national lists were pulled together from Royal Mail's Postcode Address File (PAF) and the National Land and Property Gazetteer (NLPG, maintained by local government). Data obtained from Ordnance Survey and the Valuation Office Agency were also used. This was made possible only by the willingness of address suppliers to co-operate (Royal Mail, Ordnance Survey and Local Government Information House). Arrangements were formalised in a data sharing agreement in 2009. ONS gratefully acknowledges the trust and partnership shown by all parties to this agreement, without which the address register – and hence the census itself – would not have been so successful.

Development

2.184 ONS was committed to working closely with local authorities throughout the development of the address register, using their knowledge and expertise and seeking their support. Their input was very valuable and ONS was pleased that most local authorities felt that the address register met or exceeded their expectations, and that they felt involved in its development.

2.185 The specific needs of an address register in order for it to serve as the basis for enumeration were that:

- there should be consistency across England and Wales
- there should be minimal under-coverage
- the definition of addresses should be down to the household level
- there should be coverage of, and distinction between, residential household addresses and communal establishments

2.186 The development of the register consisted of three distinct phases:

- the pilot phase – which involved address matching of 24 local authorities and selected field checking exercises (July to December 2008)
- the rehearsal phase – which involved three local authorities and a complete field checking exercise (March to May 2009)
- the national address matching and checking phase – across all of England and Wales (May to September 2010)

2.187 The residential household address register was developed in five stages.

1 - Matching the addresses from the three leading national products

2.188 This involved merging Ordnance Survey's Address Layer 2 (AL2) product and Royal Mail's Postcode Address File, and then matching to the National Land and Property Gazetteer using textual and spatial matching. This process was done some 16 times to enable the matching algorithms to be improved. This resulted in a core of addresses that were consistent between the national products and amounted to more than 94 per cent of the addresses included on the final address list.

2 - Reviewing the remaining, unmatched, addresses

2.189 More than 500,000 addresses remained unmatched after the first stage, and these were sent to local authorities or Royal Mail for checking and resolution. More than 90 per cent of local authorities helped in this exercise, as did Royal Mail staff across England and Wales. This work ultimately led to around 40 per cent of these addresses being identified as invalid and excluded from the list.

3 - Conducting a field check of 3.6 million addresses

2.190 ONS targeted postcodes that contained the highest numbers of unmatched addresses or two or more multi-occupancy addresses (a particular concern for the census). This exercise provided some missing addresses, and also identified nearly half a million addresses to be removed from the list.

4 - Collating information from the address check into evidence base for each address

2.191 This led to difficult decisions on which addresses to include and exclude. To make these decisions consistent, the ONS formulated and applied a set of 'business rules': For example, if Royal Mail's list showed an address as non-residential, but ONS field staff's visit suggested it was residential, then that address was sent a questionnaire. ONS took a cautious approach: wherever there was doubt the addresses were included. Minimising under-coverage was the over-riding objective.

5 - Integrating this work to form the final list

2.192 Most addresses (25.1 million) were supplied in October 2010 for printing directly onto the census questionnaires. A second list of nearly 300,000 addresses was compiled in January 2011, adding late changes and addresses likely to be built and occupied between then and census day (27 March 2011).

2.193 In addition to the household address register a separate list of communal establishments (CEs – places which provide managed residential accommodation such as care homes and prisons) was needed because these were to be enumerated using different methods. Various sources were used to develop the list of communal establishments and ONS used some 50 specialist source lists. However, the same checking approach for the final list was used: assessing evidence for each address to determine which ones were included. Again a cautious approach was taken, including any addresses where there was doubt about their existence and/or whether or not they had any residents.

Cost

2.194 The total cost of the address register project was £7.93 million, made up as follows:

- ONS staff (£2.80 million)
- field address check (£1.56 million)
- address source licence fees, contract costs and consultancy (£3.32 million)
- other miscellaneous costs (£0.25 million)

However, the address register enabled the use of post-out, saving an estimated £24-£35 million and therefore delivered value for money. The savings achieved through post-out allowed ONS to allocate increased funds to the follow up of non-responders, increasing response rates and so improving the quality of the census outputs.

2.195 It is important to note that the production of the address register was to meet the specific needs of the 2011 Census. Any future requirements and goals may be different and require different processes. Options for providing population statistics in the future have been reviewed as part of the ONS Beyond 2011 programme, which concluded that there should be a census carried out in 2021 primarily via an online questionnaire (see chapter 11).

2.196 It is also significant that most of this work was necessitated at the time by the lack of any single definitive national addresses product. The subsequent launch of GeoPlace – a joint venture partnership between Ordnance Survey and the Local Government Group – changes this picture. This is because GeoPlace is developing its AddressBase database. This aims to provide one definitive source of accurate spatial address data, combining the best features of the National Land and Property Gazetteer and Address Layer 2.

2.197 ONS welcomes this initiative, and is working with Ordnance Survey and GeoPlace to improve the quality of AddressBase, ensuring that this new service meets the address requirements of the Beyond 2011 programme.

2.198 A full evaluation of the development and function of the Census Address Register is available on the ONS website²⁶. A summary of the evaluation is given in chapter 10.

Local authority liaison programme

2.199 The need for improved engagement with local authorities (LAs) was one of the key lessons learned from the 2001 Census. The Office for National Statistics recognised at an early planning stage that local authorities would be key to the success of the 2011 Census, because of their intimate knowledge and understanding of their areas and communities. In particular, working in partnership with local government would help ONS to:

- provide the most accurate census population estimates for different areas across England and Wales, by partnering with stakeholders who can provide information and operational support
- ensure the widest awareness of census outputs and tools, working with their users, and consulting and communicating effectively; and
- maintain user confidence in the results, consulting widely and working in partnership to verify key steps in census processes

2.200 Local government's interest in the census is high because:

- census data describe the characteristics of local areas and communities and their changes over time and thereby inform local policy and resource decisions and helps local authorities to prioritise their activities
- the census provides rich detail about small geographical areas (such as wards)
- census-based population estimates influence the financial settlement for local councils
- census data are used by other organisations such as central government and business to make investment and planning decisions that affect local authorities

2.201 Following the 2001 Census, some local authorities challenged the census population estimates. In response to this, ONS carried out additional local research and analysis in 30 local authorities to assess the accuracy of the 2001 Census population estimates. A subsequent report in 2004 concluded that, for 15 of these LAs, the 2001 and 2002 mid-year population estimates should be adjusted to account for additional people missing from the 2001 Census²⁷. So a major aim of the 2011 Census local authority engagement programme was to work closely with all local authorities to build their confidence in the local estimates and help avoid such challenges.

2.202 The main aims of this programme were: to raise awareness and understanding of the 2011 Census; explain the role that LAs could play in participating in, and supporting, the census; and to build confidence and trust in census methodology and outputs.

2.203 The programme of local authority liaison for the 2011 Census started in 2005 and stepped up significantly from 2008. Liaison with LAs began initially at chief executive level through the Society of Local Authority Chief Executives (SOLACE). A census sub-group met on a number of occasions during 2006-2008, and at this forum ONS proposed the role of census regional champions, either by asking SOLACE for a chief executive to be a regional champion, or to build on the work of the Electoral Leadership Forum (ELF), and use its existing network of regional returning officers.

2.204 The returning officer (RO) for Wales and the nine regional returning officers (RROs) in England were subsequently appointed in 2008 as census regional champions (CRCs) to act as senior ambassadors to create awareness and promote the 2011 Census within the LAs in their region. The role was to:

- assist ONS in creating effective partnerships with all local authorities
- generate a mutual understanding of what constitutes a successful census
- advise ONS on communication strategies and engagement plans
- share best practice with other regional leads and, through advice and intervention, help resolve any difficulties; and
- provide assurance to local government generally that the results of the census are robust

2.205 In broader terms, these regional leads would encourage LAs to work in conjunction with ONS to deliver a successful census in the following aspects:

Operational and enumeration intelligence

- increasing awareness and understanding of census operations and areas for partnership working among LAs

- encouraging LAs to use local intelligence to provide ONS with information on hard-to-enumerate areas
- providing input into strategies for enumeration of hard-to-count population sub-groups such as young males, non-English speakers, those living in houses of multi-occupancy or the politically disaffected; and
- using LA networks to identify those localities with little previous history of receiving international migrants

Field staff and logistical support

- tailoring the approach to enumeration in hard-to-enumerate areas
- encouraging the appointment of census liaison managers within
- publicising job opportunities within LAs during the recruitment of local field staff
- assisting in the resourcing of office accommodation and administrative support; and
- exploring the potential for use of existing LA contact routes (especially call centres) to supplement the ONS process of answering queries from the public

Building assurance and confidence in the census

Through involvement in the review of key processes such as:

- general and special enumeration procedures
- the adjustment methodology, in order to better understand and support the approach and process for estimating and adjusting for under-coverage

2.206 Census regional champions proved to be highly effective in obtaining the commitment and resources of local authorities. They engaged directly with council chief executives and senior managers to persuade them of the importance of the census and why local authorities should help. They provided additional gravitas to the local authority engagement programme. A number of stakeholders subsequently commented on the value of the regional champions. The Greater London Authority (GLA) believed that the 2011 Census local authority engagement was a success and an excellent model for partnership working with local government.

2.207 Seven activities were identified where ONS could work in partnership with LAs:

- address register development
- provision of enumeration intelligence to identify and target local challenges
- identifying and developing community liaison contacts
- support for recruitment of field staff
- support for local publicity and media relations
- provision of logistical support for field staff; and
- provision of local administrative data to support quality assurance of results

2.208 ONS planned two phases of partnership working with local authorities: phase 1 was development and planning (from January 2009 to July 2010), and phase 2 was local implementation (from August 2010 to mid-2011).

Phase 1: Development and planning

2.209 The aims of this phase were to:

- develop a strong partnership with LAs, to gain their trust
- increase their understanding of 2011 Census methodology, to raise confidence in processes and outputs
- encourage LA support and participation in the census, in particular for those areas facing the greatest enumeration challenges
- receive LA feedback to help refine and improve 2011 Census plans, preparations and methodology
- communicate the scope and timing of those partnership activities critical to a successful census; and
- focus LAs' engagement where it was most needed, by working through influential third parties such as the Local Government Association (in both England and Wales), the Greater London Authority, London Councils, and the Local Area Research and Information Association (LARIA)

Phase 2: Local implementation

2.210 This phase would ensure that ONS had effective, fully tested systems and resources ready to deliver the 2011 Census. A rehearsal and small-scale test in 2009 yielded important lessons, and ONS fine tuned its operations. These included the introduction of specialist community advisors to liaise with specific black and minority population groups, and the development of a census local partnership plan (CLPP) for every local authority area. Census local partnership plans identified and recorded local census priorities and challenges. This information was set out in a separate plan for every unitary and district council. They provided the framework for discussions between the area manager and the local authority to identify any groups requiring additional help to complete their questionnaires.

2.211 Feedback from LAs was that these CLPPs were useful in enabling them to structure their involvement and agree priorities and actions. CLPPs helped to promote greater local authority ownership and partnership working, and provided a clear focus on those activities and areas where LAs could provide significant added value, such as an understanding of likely enumeration challenges.

2.212 ONS asked all LAs to nominate officers to the roles of census liaison manager (CLM) and assistant census liaison manager (ACLM). These officers were asked to co-ordinate census engagement within their authority. ONS aimed to engage with all local authorities, including county councils, through national, regional and local organisations – though the level of effective engagement achieved varied across the country.

2.213 More than 98 per cent of local authorities appointed a CLM and/or an ACLM. ONS estimated that more than 95 per cent of LAs provided local intelligence to support the census and 92 per cent provided feedback on address anomalies. Local authorities also contributed significant resources to support the 2011 Census, estimated to be worth more than £10 million. This included staff costs (CLM/ACLM posts, address anomaly resolution and feedback, completion events, and so on), and budgets for local publicity and media coverage. Their media and publicity activity helped to raise awareness and understanding of the census in communities that ONS would have struggled to reach.

- 2.214 Census liaison managers and ACLMs were the principal local authority audience for ONS, so almost all newsletters, updates, and online content were channelled through them. They were particularly important, and highly effective, in co-ordinating census communications within their councils, working with ONS census area managers to ensure an integrated approach and successful delivery of the census locally.
- 2.215 A number of CLMs/ACLMs worked more directly with ONS as members of a Local Authority Operational Management Advisory Group, established in 2009 to provide a forum for sharing knowledge, plans and progress of the census field operation. The group was developed from an earlier Local Authority Census Steering Group that had advised on, and supported, the creation of the LA liaison programme in 2006/07. The group focused its attention on:
- plans for general enumeration and enumeration of target population groups
 - methods of resource allocation
 - effective LA liaison mechanisms
 - local authority concerns
 - onward communication to other local authorities, and
 - interactions with other LA groups and forums
- 2.216 As noted at paragraph 2.183, the ONS address register was a vital part of the 2011 Census. More than 4.7 million pieces of evidence were collected about addresses, from a number of sources. Almost all LAs helped with this work, and the majority later reported they had themselves benefited from the address register development process. Local authorities contributed a significant amount of time and effort – though many were disappointed that ONS could not share more address information (this was either because of data confidentiality, or because of the provisions of the data sharing agreement between the address suppliers). Some 92 per cent of LAs contributed to the address anomaly resolution process, and almost as many commented on the communal establishment lists. The various information channels used by ONS helped to keep LAs informed and secured their buy-in and ownership.
- 2.217 Thanks in no small part to the working partnership with local authorities, ONS achieved its 2011 Census targets of an estimated response rate of at least 94 per cent overall and at least 80 per cent in all local authority areas. In addition, more than 90 per cent of local authority areas had an estimated census response rate of 90 per cent or more. This performance indicated the success of local engagement and field operations, and was an excellent foundation for the coverage estimation and quality assurance activity that were to follow (see paragraphs 5.52 to 5.80).
- 2.218 Local authority knowledge and intelligence greatly assisted ONS with the cross-checking of address lists and helped to target and tailor census engagement and publicity, enabling ONS to reach diverse and challenging communities and encourage their participation. ONS acknowledges the significant contribution made by local authorities and community organisations to the success of the 2011 Census.
- 2.219 A fuller description and evaluation of the activities of the local authority liaison programme is available on the ONS website and a summary evaluation is given in chapter 10.

Community liaison programme

- 2.220 The 2011 Census community liaison strategy built on the success of the innovative community liaison activities which had been carried out for the 2001 Census. This time, however, liaison began at a much earlier stage – with the active phase starting some three years earlier than it had for the 2001 Census – and was much more focused.
- 2.221 Previous censuses have shown that certain population groups are less likely to complete and return their questionnaires. These included young men, certain black and minority ethnic groups, the very elderly, low-income families, non-English speakers, and disabled people. The reasons vary from concerns or misunderstandings about how the information is used to potential cultural barriers such as a lack of English language skills.
- 2.222 For the 2011 Census, national engagement activities started in 2008 and were carried out by census HQ staff. A large amount of preliminary work was carried out on mapping the requirements for each key population group, and consulting with relevant representative organisations to gain a better understanding of issues and how they could be addressed. This process also opened up important communication channels to key representative groups, so that principal census messages could be disseminated effectively.
- 2.223 Many national and local groups became motivated to help once the benefits of the census for their communities were understood. Support ranged from the production of leaflets in community languages to organising and resourcing open events that provided practical help with questionnaire completion.
- 2.224 Local engagement activity was carried out by ONS field staff; specifically the 157 census area managers and 41 specially appointed community advisors working across England and Wales. This started in August 2010 and continued until the end of the field operation in May 2011. Area managers and community advisors engaged with local intermediary organisations, such as community and faith groups, to promote the census. This included encouraging local applications for field staff jobs, offers of support and practical help in the completion of questionnaires particularly where there were language barriers.
- 2.225 Community engagement was undertaken across all population groups by area managers, who worked in partnership with local authorities to identify and prioritise population groups. Community advisors worked part-time and were recruited for their experience and understanding of the population groups, together with relevant language skills.
- 2.226 The introduction of community advisors was an important initiative and their end of employment feedback indicated that:
- their role had been well received by communities
 - they had helped community groups be better informed about the census and why it was carried out
 - they had reached out to community groups and made it clear that ONS considered them to be important
 - being able to speak a specific language had been essential in gaining the trust of individuals within a community; and
 - language skills showed their awareness of a community's culture

2.227 It was important that the 2011 Census was accessible to all people across England and Wales. With this in mind, great care was taken in developing a range of tools and help materials to support the aim of enabling people to complete their census questionnaire independently.

2.228 Accessibility partnerships with national representative and stakeholder organisations began in 2009, and the following national organisations were consulted in the production of accessible materials:

- Royal National Institute of Blind People (RNIB)
- Action on Hearing Loss (formally RNID)
- British Deaf Association (BDA)
- Deaf Connections
- National Literacy Trust
- People First
- Equality 2025
- Age UK
- Welsh Government; and
- General Register Office for Scotland (GRO(S)) – now National Records of Scotland

These partnerships, combined with work with community groups, central government and local authorities (as well as other specialist and generic consultation groups) proved instrumental in designing the accessibility tools for the census.

2.229 The community liaison team worked with national and local representatives to ensure that those with special difficulties or specific concerns were given appropriate advice and aids to enable them to complete their census questionnaires. In particular, a range of information providing guidance and support was prepared including:

- an information document using large print comprising questions and instructions from the census questionnaire
- an Easy Read information booklet
- Braille versions of census information leaflets and questionnaires
- audio tapes providing information on the census, the census questions and associated instructions in the 10 most widely spoken foreign languages
- a video recording using British Sign Language with subtitles for use by community groups
- a helpline with a dedicated Minicom facility
- British Sign Language interpreters

2.230 In addition, translation leaflets, the census questions and instructions from the census questionnaire (but not the questionnaire itself) were available in the following 56 languages (compared with 26 in 2001 that are identified by*):

- | | |
|----------------------|--------------------|
| • Akan | • Malayalam |
| • Albanian* | • Mandarin Chinese |
| • Amharic | • Nepalese |
| • Arabic* | • Pahari |
| • Bengali (Sylheti)* | • Pashto |
| • Bosnian/Croatian* | • Persian/Farsi* |
| • Bulgarian | • Polish* |

- Cantonese Chinese*
- Czech
- Dutch
- Filipino (Tagalog)
- French*
- German*
- Greek*
- Gujarati*
- Hindi*
- Hungarian
- Igbo
- Italian*
- Japanese*
- Korean*
- Kurdish (Kurmanji)
- Kurdish (Sorani)
- Latvian
- Lingala
- Lithuanian
- Luganda
- Malay
- Portuguese*
- Punjabi (Gurmukhi)*
- Punjabi (Shahmukhi)
- Romanian
- Russian*
- Serbian*
- Shona
- Sinhala
- Slovak
- Somali*
- Spanish*
- Swahili*
- Swedish
- Tamil*
- Thai
- Tigrinya
- Turkish*
- Urdu*
- Vietnamese*
- Yiddish
- Yoruba

2.231 Where preferred, or required, assistance in completing and returning the 2011 Census questionnaire included:

- an online help centre
- online questionnaire completion
- a telephone helpline
- field visits

The census website itself was designed to be receptive to screen readers, and a Text Relay service (English only) was also provided.

2.232 Getting a full picture of the impact of the community liaison programme for the 2011 Census is difficult because many of the effects were intangible. However, its benefits were visible through census articles in specialist media; interviews on local radio and TV; the number of completion events held (more than 6,000), and applications for field jobs from many population groups. Another indicator was the support and motivation achieved among community leaders and networks with access to the hardest-to-reach communities. This programme can have only improved response, particularly among the key population groups.

The 2007 Census Test

Aims and design

2.233 The purpose of conducting tests prior to a census is to assess different aspects of the wide range of census operations, from public acceptability of the questionnaires, through the enumeration procedures, to the various stages of data processing.

The changing needs of census users, and developments in computing technology, necessarily lead to innovations in census operations, and these in particular must be thoroughly tested before use.

2.234 As noted in paragraph 2.57, a major census test took place in England and Wales on 13 May 2007. Its main aims were to:

- evaluate the effect on response of (i) the use of post-out to deliver questionnaires, and (ii) the inclusion of a question on income
- assess the feasibility of some major innovations in operational procedures, such as the development of an address register and the outsourcing of field staff recruitment, training and payment
- assess the performances of alternative suppliers as part of the procurement of a number of contracted services

2.235 The 2007 Test was a large-scale test in five local authority areas (four in England and one in Wales) selected to reflect a range of field conditions. The five local authorities represented a range of area types according to the ONS 2001 area classification²⁸ They were:

- Liverpool (Services and Cities)
- Camden (London centre)
- Bath and North East Somerset (Prospering UK)
- Stoke-on-Trent (Mining and Manufacturing); and
- Carmarthenshire (Coastal and Countryside)

2.236 These areas provided a varied cross-section of the population – a mix of students, the elderly, ethnic communities – and the types of housing that would be covered in a full census.

2.237 The test was designed to enable a statistical comparison between response rates for these categories: post-out/ hand delivery and income/no income. The sample of 100,000 households selected from within the five LAs was divided into five equal strata (approximately 20,000 households) according to an enumeration targeting categorisation (ETC). This assigned a difficulty level of 1 to 5 to each enumeration district (ED), where 5 represents the very hardest households to enumerate. Using 2001 Census EDs which contained between 100 and 300 households, the ETC for the test was developed using factors identified from the 2001 Census found to be most associated with household non-response.

2.238 As a result of an equal apportionment of the test sample to the five ETCs, the hardest-to-count areas (ETC 4 and 5) accounted for about 40 per cent of the test areas, compared with only 10 per cent in England and Wales as a whole. This oversampling in the hardest to count areas was done to allow statistical comparison of the test treatments between ETCs, and to ensure that the operational procedures were sufficiently tested. Within each ETC or stratum:

- half the population received a questionnaire by post, half by hand delivery, and
- half the population received a questionnaire which included the income question, half excluding

Table 2.1 Sample sizes for the 2007 Test (thousands)

Post-out	Income	
	Yes	No
Yes	25	25
No	25	25

2.239 Almost 44,000 questionnaires were delivered by hand, compared with an expectation of 50,668 questionnaires. The reason for this disparity related to derelict and vacant properties and a small proportion of refusals. Post-out via Royal Mail was used to deliver questionnaires to the other half of the sample households. The numbers of questionnaires delivered within each test area were:

Bath and NE Somerset	9,749
Camden	30,273
Carmarthenshire	8,983
Liverpool	37,932
Stoke	14,859
Total	101,796

2.240 Because the 2011 Census design relied heavily on an accurate and up to date address list, a separate address check exercise was conducted during September and October 2006. Some 26 address checkers managed by five team managers checked 100,000 addresses in the five test local authorities. Address checkers were given extracts from the Ordnance Survey MasterMap Address Layer 2 product (extract May 2006). Address checkers validated the list by checking the existence of each address, recording additional addresses found (and those not found), and addresses which had changed status (residential to commercial) or were demolished. These changes were updated on the list and supplied to the printers for pre-addressing the questionnaires.

2.241 In those enumeration districts (EDs) selected for hand delivery enumerators delivered the questionnaires over the 15 days before census test day (13 May 2007). This delivery schedule was co-ordinated with the timing of the postal delivery. Up to three attempts at making contact to deliver the questionnaire packs were made at each address. Delivery enumerators were asked to put the pack through the letter box if no contact was achieved during the third visit. Properties that appeared vacant, derelict, or demolished were recorded and excluded from the follow-up in the non-response list. New addresses that were identified received a questionnaire with that address, and enumerators recorded the new address.

Overall response

2.242 Overall response to this voluntary test was 48 per cent, ranging from 35 per cent in Camden to 66 per cent in Carmarthenshire. Response was lower than in the equivalent 1997 Test prior to the 2001 Census. This partly reflected the trend in pre-census tests over the past 30 years for declining public participation, and partly the fact that the areas chosen were biased towards those expected to be particularly hard to enumerate. Nevertheless the response was sufficiently high for valid statistical evaluations to be made.

Method of delivery

2.243 The test was designed to assess whether people are less likely to respond in areas where they received their questionnaire through the post rather than by hand from an enumerator. Based on the likelihood that the delivery method would impact on people's behaviour, the test assessed whether the decline in responses could be recovered with a more intensive follow-up by looking at the success rates between the two delivery methods at follow-up stage.

2.244 Posting questionnaires, rather than the traditional hand delivery approach, was under consideration for the 2011 Census for the following reasons:

- to reduce serious risks experienced in the 2001 Census, in particular the failure to recruit a large number of enumerators
- to provide savings for investment in improving responses from population groups and areas through more targeted follow-up and support processes
- the limited success of making contact at delivery, and
- to enable a re-structuring of the enumerator's role in order to focus on follow-up rather than delivery, with the size of follow-up areas being dependent on expected response rates

2.245 The move to consider postal delivery also followed a key recommendation from the evaluation of the 2001 Census and the Treasury Select Committee that more must be done to improve coverage among target population groups. Although postal delivery had not been applied on a large scale in previous censuses in England and Wales, it had been used in other countries. In particular, it was used successfully in the 2006 Canadian Census, which is closest to the England and Wales census in terms of design. It had also been used in the US Census.

2.246 An assessment of postal delivery considered the results for two key questions:

- can an address list of sufficient quality to support post-out be obtained?
- does post-out have an impact on return rates?

In addition, ONS assessed the costs for post-out and hand delivery for the same overall response. This included the additional follow-up costs necessary to recover from a lower initial response resulting from delivering by post.

2.247 To assess the propensity to respond between hand delivery and post-out, the test was designed so that each of the delivery methods had a maximum of three attempts at follow-up. As a result, more contact was made in areas where the questionnaire was delivered by hand, resulting in a higher response than in post-out areas. Table 2.2 shows the household response rates after follow-up by LA and ETC.

Table 2.2 Response rates and differences in response by delivery method

LA/ETC	Response rates (percentages)			Standard error
	Hand delivery	Post-out	Difference	
<i>LA</i>	62.3	61.0	1.3	2.9
Bath and NE Somerset	35.7	34.6	1.2	1.7
Camden	67.5	62.5	5.1	2.9
Carmarthen	50.8	46.6	4.2	1.4
Liverpool	59.6	56.1	3.5	2.3
Stoke				
<i>ETC</i>				
1	66.9	63.4	3.6	1.5
2	55.7	51.2	4.5	2.5
3	47.8	44.7	3.1	2.2
4	36.8	37.0	-0.2	1.7
5	33.8	29.3	4.5	2.0
All areas	53.4	50.6	2.8	1.0

2.248 From this it was concluded that there was a clear, statistically significant difference in the response rates between post-out and hand delivery methods. This represented an overall statistically significant difference in the test areas of 2.8 per cent. However, the differences between post-out and hand delivery did not differ noticeably across ETC categories, apart from ETC category 4. This suggested that, although post-out had an impact on response rates, the difference between the two methods was not affected by the target population characteristics of an area.

2.249 But could a difference in initial response rates (the rates at the start of follow-up) be redressed by more intensive methods of follow-up? Table 2.3 shows the success of follow-up in each EtC category by delivery method, for the initial non-responders who were converted to responders. Some 25.8 per cent of the initial non-responders in post-out areas were converted by field follow-up into responders.

Table 2.3 Percentage improvement in return rates due to follow-up by delivery method

EtC	Percentage improvement		Difference (percentage points)
	Hand delivery	Post-out	
<i>EtC</i>			
1	37.1	35.4	1.8
2	27.0	26.9	0.1
3	23.6	22.2	1.5
4	16.5	17.6	-1.0
5	14.9	13.6	1.3
All areas	26.0	25.8	0.2

2.250 Overall there was a small (and statistically non-significant) difference of 0.2 per cent in follow-up effectiveness when broadly equal levels of follow-up were applied to both post-out and hand delivery areas. Because the differences were very small, the

results supported the assumption that the success of follow-up was not affected by the delivery method, and that a small reduction in response rates associated with posting out questionnaires could potentially be recoverable with more follow-up, although this would increase costs.

2.251 ONS therefore developed a model to estimate the costs for different mixes of delivery method. It used the initial response rates to estimate the number of follow-up visits required to achieve an overall response of 94 per cent, the same rate as in the 2001 Census when the questionnaires were hand delivered. The estimated savings would be due to the significant reduction in the number of field staff required. Hidden within these, however, would be an increased follow-up cost resulting from the expected small increase of non-responders. The cost model indicated that:

- to achieve an overall response rate of 94 per cent, opting for 100 per cent post-out rather than 100 per cent hand delivery would save between £28 - £35 million, depending on the success of follow-up. This assumed a difference in initial response rates of 5 per cent; and
- a difference in initial response rates of more than 10 per cent would be needed before the cost of post-out started to equal, or exceed, the cost of hand delivery.

Including an income question

2.252 As noted in paragraph 2.166, the design of the test allowed for an assessment of the effect on income question would have on response rates. The decision to include income questions in the 2007 Census Test arose from demands from many users for information on income to be collected in the 2011 Census. This was driven by a widely held belief that asking about income is the best method for identifying areas of deprivation and affluence at various levels of geography. For this purpose, previous censuses had used proxy information from questions such as accommodation type, tenure, occupation, and car availability. Users now felt that this method would no longer meet their requirements.

2.253 However, user requirements had to be carefully weighed against the effects that including such income questions would have on response rates and the coverage of individuals within households, other aspects of the field operation, and the public's view of the census generally. In addition, the quality of the data obtained and the availability of alternative sources of information about income were also taken into account.

2.254 Paragraph 2.166 noted that the test had a split sample of just over 100,000 households: half received census questionnaires that included income questions and half did not. The proportions were balanced by the questionnaire delivery method, by LA and by ETC. Income question inclusion was assigned at the enumeration district (ED) level. The questions asked for details of the sources and level of each individual's income, and were designed to encourage individuals to reflect on their various sources of income before answering the income level question, which was the primary focus of interest.

2.255 To determine whether or not the inclusion of income questions resulted in a significant drop in response rates, ONS analysed the response in those EDs with or without the income questions by both ETC and delivery method. Table 2.4 shows that overall there was a drop of 2.7 percentage points in the response rates in those areas that had received questionnaires with the income questions. This was

statistically significant overall, but because of the sample sizes only so in ETC 3 areas. The inclusion of income questions and using post-out delivery had a greater statistically significant drop in responses of 3.3 percentage points.

Table 2.4 Response rates and differences in response by ETC and delivery method

ETC	Response rates (percentages)			
	No income question	Income question	Difference	Standard error
1	66.9	63.4	3.6	1.5
2	55.7	51.2	4.5	2.5
3	47.8	44.7	3.1	2.2
4	36.8	37.0	-0.2	1.7
5	33.8	29.3	4.5	2.0
Hand delivery	54.5	52.3	2.2	1.4
Post-out	52.3	49.0	3.3	1.3
All cases	53.4	50.6	2.8	1.0

- 2.256 The test also assessed what impact the inclusion of the income questions had on the quality of the response. Around 91 per cent of individuals who returned a valid questionnaire had completed the income level question. This response rate appeared, on the face of it, to be acceptably high given that this question was the last to be asked on a voluntary test questionnaire. However, the income level question did have one of the lowest response rates of all the questions asked. Moreover, there was evidence that certain population groups who tend to have low incomes (the very groups for whom the information was particularly required) were less likely to answer the question.
- 2.257 There was no evidence that the presence of income questions either impacted on the response rates for the other questions asked or resulted in household members being missed from completed returns. The most negative aspect of the test arose from the public's reactions to the inclusion of the income questions, as reported in a subsequent Census Test Evaluation Survey (CTES).
- 2.258 The CTES was conducted to assess the public's views of the census in relation to specific questions and the quality of responses given during the test. The CTES interviewed about 1,200 households who had responded to the test and about 250 non-responding households.
- 2.259 The test respondents were asked if they had found any questions difficult to answer or were unhappy about answering. Of those respondents who had returned an income questionnaire, 12 per cent said that they had found at least one question difficult to answer and, of these, 19 per cent cited the income level question. Of the 15 per cent who reported that they were unhappy about answering at least one question more than half (58 per cent) referred to the income questions.
- 2.260 Non-respondents who had received a questionnaire including income questions were asked why they did not make a return and just over half (52 per cent) said that it was because they were too busy, or they did not feel it was important, or they just forgot; only 5 per cent said it was because the income questions were intrusive. However, the accompanying press coverage of the test was generally negative, with many

stating that the income questions were intrusive and that the information might be used in the calculation of tax increases.

- 2.261 In light of negative comments, ONS took the view that if income questions were to be included in the 2011 Census, there would need to be a sustained national publicity campaign to explain how the information collected would be beneficial and exactly how it would be used. The justification for the wording of the questions would also need to be included in order to prevent misconceptions arising. Any such publicity campaign would have added substantially to the cost of delivering a successful 2011 Census.
- 2.262 In balancing the user demand for information on income against the evidence gained from the test it was decided not to include a question on income in the census.

Address checking

- 2.263 Address checking was included in the 2007 Census Test because the design of the 2011 Census demanded an accurate and up to date list of household addresses (see paragraphs 2.181 to 2.193) in order to:
- facilitate the delivery of the questionnaires by post with a unique link between pre-printed questionnaires and addresses
 - underpin a questionnaire tracking (QT) system which would monitor the progress of every census questionnaire in the field and provide the necessary control to manage and target field operations most effectively
 - support a post-out strategy, because there would be less opportunity at the onset of the census period to identify new households

As noted at paragraph 2.183, the address products currently available at that time did not fully meet census requirements, so the intention was to check and update address lists in the field prior to the 2011 Census.

- 2.264 The address list used in the test was developed from an address register product updated with an address check during September and October 2006 in the test areas. Address checkers were given extracts from the Ordnance Survey MasterMap Layer 2 for each ED and validated the list by verifying the existence and accuracy of each address, as well as recording any additional addresses found.
- 2.265 The number of additional households found was an indicator of the quality of the address register. Households found in the hand delivery areas could be used to estimate the numbers that might be identified as missing if postal delivery was adopted for the 2011 Census and therefore not receive a questionnaire.
- 2.266 Table 2.5 shows the number and percentage of additional households that were found in hand delivery areas during the test within each ETC. The proportion of additional addresses found during hand delivery was 1.1 per cent, and it was estimated that 1.3 per cent of households would be missed on the address register in the 2011 Census, given the same levels of hand delivery coverage across England and Wales. A sixth of the additional addresses found in hand delivery areas were found at follow-up, suggesting that enumerators would still miss some addresses.
- 2.267 To understand the quality of the register used during enumeration, ONS looked at a sample of just over half of the additional addresses found and discovered that, of the 540 new addresses examined, two thirds (68 per cent) were sub-premise addresses.

It is likely that most of these addresses were present at the time of address checking and should have been identified earlier. Also a fifth of the addresses found during enumeration were actually included in a subsequent version of the Ordnance Survey address list. It was believed, therefore, that some reduction in the number of additional addresses found could be achieved in the 2011 Census by carrying out an update from the address register list before census day.

Table 2.5 New addresses found during the test in hand delivery areas within each ETC, by enumeration phase

ETC	Enumeration phase					
	Found during delivery		Found during follow-up		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
1	88	1.0	26	0.3	114	1.3
2	48	0.5	22	0.2	70	0.7
3	125	1.3	17	0.2	142	1.5
4	138	1.2	36	0.3	174	1.5
5	165	1.5	15	0.1	180	1.6
All areas	564	1.1	116	0.2	680	1.3

2.268 The main conclusions drawn from the address checking exercise were that:

- the quantity of addresses found demonstrated the need for address checking
- the address check did not produce an address list of sufficiently high quality, but the method used in the test was appropriate for address checking in principle
- the main type of addresses found were multi-occupancy sub-divisions, the majority of which were long-standing; an address check would pick these up, but there would be subsequent change between the check and census
- the address checkers did not follow the procedures for full contact address checking in many cases – contact levels recorded were far higher than in any other similar activities conducted by census or other parts of ONS; and
- the keying and quality assurance (QA) of the addresses found was more time consuming and difficult than had been anticipated

2.269 The main recommendations coming out of the address checking were that:

- address checking was likely to be required ahead of the 2011 Census, and further research was needed to identify the amount and location of coverage and quality issues
- the main aim of the check should be to deal with long-standing deficiencies in the address list; there were many operational advantages to conducting an address check over a longer period of six months
- the use of controlled errors, for example fictitious addresses should be used in 2011; this had provided a useful tool for team managers to monitor their staff and helped to ensure a higher quality address check
- progress reporting arrangements from field to managers and from managers to headquarters (HQ) needed to be revised to meet the information requirements of both the field and census HQ, and

- timescales and resources allocated for the keying and geographical matching of addresses after the field exercise needed to be properly planned

Recruitment, training and pay of field staff

2.270 A major element of the test was to assess the effectiveness of outsourcing the recruitment, payroll and training activities of a large temporary field force. As these were not core business of ONS, these functions were to be fully outsourced for the first time (see paragraphs 2.336 to 2.341).

2.271 Recruitment and training had previously been conducted through a cascade system. Census personnel recruited and trained area managers, who in turn recruited and trained the next level of field staff. For the recruitment and payroll in 2011 the main areas of interest were whether or not:

- outsourcing the services through a lead contractor would work, and to identify issues that could arise from such an approach
- the use of a contracted supplier would provide access to a pool of ready applicants, thus enabling quicker recruitment of field staff
- using such a supplier made the team manager's job easier and improved the quality of enumeration, allowing them to focus almost entirely on performance, and
- the public would raise any issues about confidentiality if the field staff were not ONS employees

Transferring the risk regarding the application of employment law and health and safety requirements to a third party was also seen as important.

2.272 For training, the specific areas of interest were:

- to test a combined approach using e-learning to support classroom-based training
- to provide a consistent approach across all areas and to inform any decision on the use of e-learning for 2011; and
- to identify any lessons to improve the quality and effectiveness of training for 2011

2.273 It would be important to see how well a supplier's infrastructure, with office space already in place around the country, could serve ONS. But the test could provide information only about how well the supplier managed recruitment, pay and training for a relatively small field force. It was important to acknowledge that it was not feasible to test the high volumes of staff associated with the actual census.

2.274 However, the 2007 Test provided evidence that outsourcing recruitment, pay and training was feasible and provided significant benefits. The test showed that:

- combining the recruitment and payroll activities removed a significant amount of risk and workload from the ONS team
- linking recruitment and training, while not essential, added significant benefits to managing the recruitment and training timetable

- the operational issues that emerged, such as communication and management information, could be resolved by refining the statement of requirements and enhancing procedures within ONS; and
- the recommendation, on the basis of the test and further analysis of options, was that recruitment, pay and training should be bundled together as one outsourcing package for the 2009 Rehearsal, 2011 Census itself, and the Census Coverage Survey (see chapter 4)

The performance of other operational activities

Field work (follow-up)

2.275 During the test the follow-up procedures were applied equally across all areas to preserve statistical integrity. This constraint meant that the field procedures employed in the test were necessarily different to those that would be designed for the 2011 Census. The main conclusions drawn were:

- the organisation and management of field staff worked well, but continued development of doorstep interaction would be needed in the census to persuade reluctant respondents to participate
- it was important to get a good start to follow-up to ensure that field staff ‘hit the ground running’
- to maximise response in assigned areas there was a need to shift field staff culture away from having ‘ownership’ of an area to having a more corporate ‘responsibility’ for that area
- the use of management information needed to be improved in order to fully utilise field staff resources (particularly in areas with the lowest response); a review of field procedures, training and position profiles was required before the 2009 Rehearsal, and
- although the deployment of IT equipment was hampered in the test, the take-up and use of the systems provided was variable; recruitment and training needed to be reviewed to ensure census managers had applicable IT skills

2.276 ONS recognised that follow-up was crucial to maximising response rates and as a result of the test further development of the follow-up procedures was required. In particular ONS developed and improved methods for persuading households to respond and for allocating and moving field staff to other areas during the field operation.

Local authority liaison

2.277 The principles and benefits of the local authority liaison programme (see paragraphs 2.199 to 2.218) were clearly proven. This is evidenced by the overall commitment shown by LAs in supporting the census test (including the provision of supporting information and assistance). It was however, clear that the LA liaison approach used for the 2007 Test could not be replicated across all of England and Wales for the 2011 Census, and that ONS would need to continue working with the LAs to develop a process for seeking their assistance in a number of significant activities. These included address register development, local intelligence and community contact, recruitment of LA staff, logistical support, and publicity.

Questionnaire tracking

- 2.278 Questionnaire tracking (QT) was new for the 2011 Census. Each questionnaire was uniquely linked to an address in the QT system which then logged subsequent activities associated with a questionnaire, such as the issue of replacement questionnaires and recording questionnaires received at the processing site. It provided up to date information on response levels, enabling field resources to be targeted to the poorest responding areas (see paragraph 3.126 to 3.140 for more details).
- 2.279 For the 2007 Test, information recorded on the QT system reflected status changes associated with, addresses, questionnaires, and requests for further information or support. This gave the census management team at HQ a far better picture of the progress of field activities. It effectively supported the principles of a flexible field force. The QT provided a clear picture of where response rates were below expectations, enabling targeted follow-up through either the use of extra staff or by extension of the follow-up window.

Conclusions

- 2.280 As a result of the evaluation of the test, several of the design changes from the 2001 Census were endorsed, notably:
- the delivery of the majority of questionnaires by post
 - the outsourcing of the recruitment, training and payment of the field force
 - the central role that e-learning should play in the delivery of field training, augmented by instructions and classroom-based sessions
 - the need to develop a comprehensive and up to date address register to facilitate the delivery of questionnaires; however, conducting a full address check everywhere was an unnecessary use of resources
 - closer liaison with local authorities, and
 - reliance on a field management system to track questionnaire movement and monitor local area response rates
- 2.281 In addition, the decision was made not to include any question on income.

The 2009 Census Rehearsal

- 2.282 A census rehearsal is an essential part of the planning and testing programme in the run-up to any census, and serves as final simulation of all methods, procedures and systems. The rehearsal for the 2011 Census in England and Wales was held on 11 October 2009 and comprised some 135,000 households in Ynys Môn Isle of Anglesey, Lancaster and Newham (at the same time the opportunity was taken to test two field management strategies in a separate small-scale field test of 17,000 households and two large communal establishments in Birmingham).
- 2.283 The overall objective of the rehearsal was to confirm the viability of the final 2011 Census field procedures and supporting systems. Integrating and running the procedures and systems in the same timescale to be used for the 2011 Census would minimise the risk of failure in 2011 – particularly by rehearsing the new procedures and systems. The main operational activities needing to be proved efficient and effective were:

- the quality of the address register
 - the field procedures for delivery and collection of questionnaires to both households and communal establishments, particularly the introduction for the first time of the facility to return a completed questionnaire online
 - the management structures for the field operation
 - the recruitment, pay and training of the field staff
 - the key systems to support the field and public, questionnaire tracking and online response, and
 - engagement with local authorities and communities
- 2.284 In addition, the rehearsal gave ONS, its partners and suppliers experience of a ‘live’ operation. The 2009 Rehearsal was the first chance to work with near-to-final systems and with the suppliers chosen for the census itself. The 2011 design was more complicated and more reliant on the integration of IT systems than in any previous census. It was important, therefore, to ensure the rehearsal systems were as close as possible to those for the census and that all the interfaces were sufficiently rehearsed.
- 2.285 It also provided a final opportunity, before the laying of the draft Census Order to assess the reaction of the public to the census questions that had been proposed in the Government’s White Paper, published in December 2008.
- 2.286 The rehearsal was deliberately delayed six months from original plans so that better developed systems could be rehearsed. Ideally the rehearsal would have taken place at the same time in the year that the census itself was to be carried out, but a lesson learned from the timing of the rehearsal prior to 2001 Census was that many of the final systems had not been built and ONS had had less time to work with its contracted suppliers. This had proved to be very challenging during the main census operation.
- 2.287 Delaying to a date in October meant, however, not only that the time of year did not reflect that of the census (which impacted on the field operation), but also reduced the time needed to make any significant system and design changes without seriously risking delivery for 2011.
- 2.288 There are, though, some aspects of any full census which cannot be replicated in a rehearsal, most significantly:
- the small scale and localised nature of the rehearsal, which particularly limits publicity options and media coverage, and
 - the compulsory nature of the census - a rehearsal is voluntary and relies on public co-operation, and processes for enforcing non-compliance cannot be trialled

Geographic scope and size of rehearsal

- 2.289 As with 2007 Test, the rehearsal areas were selected to represent a range of area types that would be encountered in the census, and specifically to include:
- a large contiguous area
 - areas with both one and two-tier local government structures
 - an area in London with a multi-cultural population

- an area in North Wales with a high population of Welsh speakers, and
- areas that included particular communal establishment types (namely a military base, a large hospital, university halls of residence, a prison and traveller sites, as well as a good number of care homes and hotels)

2.290 The areas selected were across three local authorities: all of Ynys Môn Isle of Anglesey (33,547 households), Lancaster (61,735 households) and parts of Newham (38,618 households). In Newham, areas were selected that were considered to be representative of the borough as a whole. As noted in paragraph 2.282, in parallel with the rehearsal, a small-scale test was undertaken in Birmingham that included an area with a large homogenous ethnic minority population (Pakistani). While this did not formally sit within the rehearsal scope it utilised most of the procedures and processes delivered within the rehearsal.

Return rates

2.291 The overall return rate for the rehearsal was 41 per cent (again, as with the 2007 Test, this was lower than the 53 per cent achieved in the 1999 rehearsal for the 2001 Census). The individual area return rates were:

- Ynys Môn Isle of Anglesey 49 per cent
- Lancaster 48 per cent
- Newham 28 per cent

2.292 ONS had stratified enumeration districts throughout the country into five area types according to estimated response levels. The 40 per cent predicted best responding areas were designated as hard to count HtC1, the next 40 per cent HtC2, the next 10 per cent HtC3, the next 8 per cent HtC4 and the remaining 2 per cent (where the lowest return rates were expected) HtC5. The rehearsal return rates for each of these strata were

HtC1	52 per cent
HtC2	42 per cent
HtC3	37 per cent
HtC4	28 per cent
HtC5	25 per cent

All areas 41 per cent

2.293 This pattern was what was expected, and demonstrated that the HtC classifications were accurate. The rehearsal areas did not, however, reflect the make-up of the country in terms of the overall proportions of each hard to count stratum. For example, the EDs in Newham made up 29 per cent of the rehearsal population but were exclusively in HtC4 and HtC5 areas, which constitute only 10 per cent of England and Wales as a whole. Weighting the return rates to reflect the national make-up gave an overall return rate of 44 per cent.

2.294 Table 2.6 identifies the main reasons cited for non-response, as assessed in a follow-up survey of non-responding households. The majority of non-responders reported that they did not return their questionnaire solely because the rehearsal was voluntary. Despite some breaches of government security publicised in the media at that time, it appeared that worries about the confidentiality of information given were fewer.

Table 2.6 Reasons for not responding to the 2009 Census Rehearsal

Reason	Number	Percentage
Voluntary exercise/apathy	552	56
Personal reasons (health/age)	157	16
Privacy confidentiality	124	12
Lack of understanding/ language barriers	70	7
Other reasons	91	9
Total	994	100

Delivery of questionnaires

2.295 Questionnaires were delivered through two different methods: mostly postal (via Royal Mail) and some hand delivery (by field staff). Questionnaires to communal establishments were hand delivered by field staff, as were around five per cent of all household questionnaires (in a sample of areas in Newham, where hand delivery was expected to offer the most benefit).

2.296 The rehearsal post-out operation was completed on time, finishing one week before rehearsal day with no significant problems encountered. A little over 2 per cent of questionnaires were returned from Royal Mail marked 'undeliverable'. The accuracy of the address register would have had an impact on the number of undelivered addresses. However, a sample of addresses with undelivered questionnaires was checked and 13 per cent were found to be valid addresses. A questionnaire returned as 'undeliverable' by Royal Mail did not necessarily mean a non-existent address.

2.297 As noted in paragraph 2.250, the conclusion from the 2007 Census Test had been that the lower initial return rate from postal delivery could be more than made up through the extra follow-up. Such follow-up was affordable from the savings achieved by post-out, which resulted in the decision to post-out to at least 95 per cent of households. For 2011 it had originally been planned to retain a small proportion of hand delivery in areas where there was evidence of large households, or where contact at delivery may have a greater impact on response, or where there were concerns about the quality of the address register. Accordingly, questionnaires were hand delivered to five per cent of households in the rehearsal. Although hand delivery worked and contact rates were 63 per cent, it did not have the anticipated positive impact on return rates.

2.298 Indeed, the postal and hand delivery return rates were very similar and called into question the benefit of hand delivery given the extra cost involved. The rehearsal experience suggested that even five per cent hand delivery was not cost effective for the returns gained. Dropping hand delivery to households in 2011 would enable more effective use of resources through targeted follow-up.

Collection

2.299 It was possible to identify quickly which questionnaires had been returned for each method of return:

- postal returns - the envelope was designed so that Royal Mail scanners could read the barcode through the window while the envelope was in the postal system. This information was then uploaded daily to the

- questionnaire tracking system, and
- online returns - the householder entered a unique internet access code which was associated with their address. Once the householder had submitted their questionnaire the information was uploaded onto the questionnaire tracking system

Field staff were therefore quickly and accurately informed of returns and so knew which households did not need follow-up visits.

Postal returns

- 2.300 From both a technical perspective in terms of questionnaire receipting, and from a security and confidentiality perspective, the postal process worked well. There were some problems due to questionnaires being inserted into the envelopes the wrong way around so that the barcode was not visible. The design of the questionnaire, envelope and instructions was subsequently improved.
- 2.301 Also, during the postal return period, there were seven days of industrial action. Royal Mail had contingency plans to reduce disruption (for example, redirecting census mail elsewhere for sorting) and the impact of the strike action was minimised. The strike action was also an opportunity to assess Royal Mail's contingency plans and to make changes for 2011.

Online returns

- 2.302 The rehearsal provided the first opportunity to trial online completion. The overall user experience was good, evidenced by the low level of users dropping out, with 89 per cent of people who started the online questionnaire subsequently making a submission. The average length of time for an average sized household (of 2.5 people) to complete an online return was 27 minutes.
- 2.303 The rehearsal identified a number of small improvements needed to the website design and underlying validation and routing. For example, in some instances when users went back to correct previous answers, the route through the questionnaire did not change appropriately.
- 2.304 The proportion of people responding online in the rehearsal was, however, less than expected (8 per cent). This low proportion may have been due to the types of areas chosen for the rehearsal, with preference for the online option being higher amongst students and in city areas. But it was also evident that there was a general lack of awareness of the online option, with respondent surveys showing that awareness was relatively low at 45 per cent. It was also reported that the questionnaire and follow-up literature did not make the online response facility sufficiently prominent. As a result this was changed for the 2011 Census, with the online option being promoted more prominently.
- 2.305 Links through to the website from other sites and search engines were not as high profile for the rehearsal as they would be for the census. The limited scope of the rehearsal had meant that it was not worth paying for promotion that could not be geographically contained. A strategy for making the website more prominent on search engines was developed for 2011 and many local authorities and key stakeholders put links to the census website on their own websites.

Follow-up of non-responding households

- 2.306 Census collectors (the new name for enumerators) were scheduled to begin visiting non-responding households on 21 October 2009, 10 days after census rehearsal day. The enumeration design and the size of the follow-up field force was based around evidence that most of the population would return their questionnaire without any prompting.
- 2.307 The receipting process identified responding households and updated the questionnaire tracking system. Follow-up lists of non-responding households were printed from the tracking system by the co-ordinator. These lists were given to collectors who were instructed on the number of hours to spend in each area. Areas with low return rates were prioritised ahead of those with (comparatively) high return rates.

Communal establishment enumeration

- 2.308 Few changes were made from the 2001 Census in the enumeration of communal establishments (CEs). In simple terms, the process for enumerating CEs in the rehearsal was that:
- questionnaires were delivered to the manager or person in charge of the establishment by a special enumerators (special enumerators cover only CEs, not households, and so are trained for the different procedures required)
 - the CE questionnaire (which asked questions about the type of establishment) was completed by the CE manager
 - individual questionnaires were delivered to individual residents by the CE manager
 - residents completed a paper questionnaire or an online return, and
 - the special enumerator returned to collect the completed questionnaires after census day and to help resolve any queries
- 2.309 This process varied for larger establishments. In these there was a degree of liaison before the operation and/or the enumeration was handled by the census co-ordinator rather than a special enumerator. Also, the contact and interaction between residents and the special enumerator varied depending on the nature of the establishment and the level of involvement of the CE management.
- 2.310 Overall, the processes for enumerating CEs worked well, in particular:
- the use of specific staff
 - the distribution and collection of questionnaires, and
 - the estimation of staff numbers required and workload planning
- 2.311 In general, procedures worked for encouraging participation from CE managers but were less effective for obtaining responses from individuals within CEs. The overall return rate from CEs was lower than expected, even when the return rates of the universities were excluded. A range of generic issues was encountered in enumerating CEs:
- management information on progress was lacking. The QT system, which worked effectively for households (being based on receipting

questionnaires returned through the postal system) did not apply to questionnaires from CEs. Replacement manual processes did not work or were not scalable for 2011. The need for action to address return rate problems was not identified, or was identified too late

- the collection phase clashed with the preparation and start of household follow-up, and co-ordinators did not have sufficient time to manage both effectively, and
- a number of large CEs were incorrectly identified from the address check as having usual residents and/or the estimated number of usual residents was inaccurate

2.312 The rehearsal return rates from students in university halls of residence were very disappointing. The level of support from universities was mixed. Many accommodation managers said they were too busy, though some did assist with delivery. Some university managers were helpful in sending out emails to students as a method of publicity, and to remind students to complete questionnaires online. Other halls of residence did not have a manager or warden to take responsibility for enumeration of residents, and some field staff were not given access to halls of residence to deliver or collect questionnaires.

2.313 A variety of tracking methods for questionnaires was used in universities in the rehearsal. None of these proved particularly effective. In light of this, the processes for enumerating student halls in 2011 were improved by:

- liaising with each university to determine the best way to enumerate their student halls to take into account variations in term times and access arrangements, and
- associating questionnaires with individual rooms within student halls to enable more effective follow-up of non-responders

Public engagement

2.314 Public engagement activities for the rehearsal were designed to raise awareness among the general population and were also directed at specific segments of the population.

2.315 The rehearsal publicity campaign was designed to trial what would be done in 2011. Inevitably this could not be a complete prototype because certain media – TV, many radio stations and newspapers – were ruled out because their geographical reach was wider than the rehearsal areas and could potentially have caused public confusion. Instead, a number of different media were used:

- local radio
- local press
- billboards and posters
- internet advertising, and
- advertising on pizza boxes, beer mats and take-away lids

2.316 The main messages were:

- the census is coming soon
- the rehearsal is happening and why
- the value of the census in planning services for the future

- the need to make a return
- the online option, and
- the confidential nature of the census

2.317 The impact of the publicity campaign was assessed using surveys carried out before and after the campaign. The main findings were that:

- a high proportion of people recalled seeing promotional advertisements
- there was higher awareness of publicity using traditional media (press, posters and radio) than online media (though these worked with students), and
- positive media coverage had as much impact as advertising

2.318 Interviews were conducted in rehearsal areas before and after the publicity campaign, and showed that over the period of the rehearsal:

- awareness of both the census and rehearsal increased
- awareness of online completion increased from 16 to 45 per cent
- understanding of the purpose of the census increased but was still comparatively low, and
- trust in ONS and the confidentiality of the census increased

2.319 The research showed that, although publicity did improve awareness of the census and attitudes to it generally, the level of likelihood to complete a return differed by age and ethnicity. Analysis of the rehearsal suggested that for 2011 more resource would be needed for advertising and publicity, the messaging should be clearer, simpler and bolder, and that there was a need for targeting messages at particular population groups.

Telephone helpline and online help

2.320 A telephone helpline for the public to call was available and the rehearsal also had extensive online support. The online help offered great opportunities to provide much more information to the public than is practical on paper (for example extensive notes about the census and why there is a need for it, advice on completing the questionnaire and available translation support).

2.321 The service provided to the public by the telephone helpline was efficient, so little change to the services planned for 2011 was needed apart from scaling up. The online help website received over 9,000 visits during the rehearsal operation. The most popular queries/visits related to:

- how to complete a return online (10 per cent)
- what is a household (7 per cent)
- who to include on the questionnaire (7 per cent)
- who should complete the questionnaire (7 per cent), and
- what to do if away on rehearsal day (6 per cent)

2.322 Online help was clearly going to be valuable to the public for the 2011 Census, and the rehearsal showed that, with much more information on the website, it would need to be easy to find and navigate.

Conclusions

2.323 Overall the rehearsal was deemed a success and provided a good opportunity to rehearse systems and procedures. Return rates were considerably lower than expected, showing that more promotion would be needed for the census itself.

2.324 The main conclusions and lessons learned from the rehearsal were that:

- the address register was of sufficient quality for the rehearsal but not for the 2011 Census
- the printing process worked well, but due to the complexity and scale of the task more time was needed for quality assurance
- the post-out and post-back operations worked smoothly
- hand delivery to households did not improve return rates, nor reduce the follow-up workload
- online completion worked well technically and was easy to use, but return rates were low and more promotion would be needed
- the questionnaire tracking system worked effectively and enabled the identification of addresses for follow-up
- field staff with the required skills in the required numbers were recruited and trained (and paid accurately, and on time)
- the follow-up procedures needed tightening to ensure the field staff call at appropriate times, are effective at converting contact into returns, and that workloads are planned to reduce variability
- the procedures for the enumeration of student halls were not effective and would need to be redesigned
- more time was needed for area managers and co-ordinators (the senior levels of field staff) to carry out their roles effectively
- the publicity campaign did reach people, but more advocacy was needed and messaging should be clearer and better targeted
- more community engagement would be needed
- the online help and telephone helpline supported the public effectively, and
- reminder letters were found to be particularly effective, increasing return rates by nearly 4 per cent

Improvements for 2011 arising from the rehearsal

2.325 In response to these findings, a number of improvements to the 2011 plans were made. Most of the changes implemented were designed to improve return rates, particularly in the most difficult geographic areas. These included:

- an increase in the resources put into follow-up by approximately half a million extra man-hours
- putting a greater proportion of resources into areas where achieving high return rates was more challenging
- increasing the resources put into managing the field operation, particularly in challenging areas, by increasing the number of area managers from 118 to 157 and reducing the average number of staff that a co-ordinator managed from 15 to 12 in the more challenging areas
- increasing community engagement activities and appointing community advisors to work with target population groups to raise their awareness, understanding and trust
- extra publicity, sending out replacement questionnaires, and sending

reminder letters

Some other minor changes to processes and systems were needed but no major re-designs.

- 2.326 In order to fund these additional initiatives and resources, the design was reviewed to ensure it made the most effective use of resources. As a result the most significant change was to reduce hand delivery of census questionnaires to communal establishments only. Initial plans had been to hand deliver questionnaires to 5 per cent of households, but it was found to have a minimal effect on return rates and that resource would be better spent on follow-up.
- 2.327 For more information about the rehearsal see the published report *Evaluation of the 2009 Rehearsal*²⁹ and also an article in *ONS Population Trends*³⁰.

Outsourcing and contract management

Background

- 2.328 As it had done in the 2001 Census, ONS again contracted out a number of services as a major part of ensuring a value-for-money census in 2011. External suppliers bring with them considerable technical experience and expertise. Furthermore, given the 10-year cycle for the census and the relatively short processing timetable (requiring a large temporary workforce) it is not appropriate for ONS to recruit and train such personnel itself.
- 2.329 The activities that were outsourced covered:
- the recruitment, training and payment of field staff*
 - the printing of the questionnaires
 - the delivery of questionnaires*, and the collection of completed returns via a postal service
 - the provision of a questionnaire-tracking system*
 - the provision of an online questionnaire completion system
 - a contact centre
 - the translation, printing and distribution of non-questionnaire material and other field logistics services
 - the publicity campaign
 - the capture and coding of census data in electronic format
 - the production of the archival records, and
 - the development of a web data access (WDA) system* (though this was not a function that was exclusive to the census)
- 2.330 Those activities marked with (*) were new to the 2011 Census. The recruitment, training and payment of field staff were outsourced early on to a contractor with particular expertise in field operations. This was done in response to the National Audit Office (NAO)⁸ report to the Public Accounts Committee on *Outsourcing the 2001 Census* in the light of the difficulties encountered at that time. It was recognised that such services are clearly a non-core activity for ONS and cannot be provided internally, to this scale, without significant additional investment.

2.331 The NAO's report on the 2001 Census also noted a number of deficiencies in the management of the procurement process and made recommendations on procuring services for future census operations. Noting the NAO's concerns, ONS imposed much tighter contract management, training and budgetary controls on the procurement processes than was the case for the 2001 Census, and these were subjected to rigorous external scrutiny through the Office of Government Commerce Gateway Review procedures.

The main contract

2.332 As a result, the procurement phase of the operation was completed at a much earlier stage in the programme than was the case for the 2001 Census. The process to select a supplier for the major part of the data processing operation began in September 2005. Following an extensive evaluation of candidates, two companies – Lockheed Martin UK and T-Systems Ltd – were short-listed in September 2006, and both worked together with ONS to deliver different components of the 2007 Census Test. The tendering process for support services for the 2011 Census covered the technical ability to provide the services, the cost and the assessment of risks associated with such services. Following refinement of the 2011 Census requirements and further evaluation a single supplier, Lockheed Martin UK, was selected and the decision announced on 28 August 2008.

2.333 The five operational areas within the scope of the contract were:

- questionnaire tracking (QT)
- printing of census questionnaires and related information leaflets
- paper questionnaire data capture and coding
- internet response and coding, and
- public interface, consisting of a contact centre and online help (formerly referred to as 'web self-help')

2.334 As required by law, the procurement was conducted in line with EU and UK Public Procurement Directives and Regulations. The law requires that any organisation with the correct technical capability, financial stability and experience can compete openly for government business throughout the European Union without discrimination. Though Lockheed Martin UK won the contract as the main provider of a number of support services it was not directly responsible for the delivery and collection of questionnaires and did not have any access to any personal census data. Indeed, Lockheed Martin UK subcontracted a number of support services to a consortium of British and European companies, including bss, Steria, Royal Mail, and Cable and Wireless. A company called UK Data Capture received, scanned and processed questionnaires at a specially commissioned site in Manchester.

2.335 For added assurance, and in response to some public concern about the award of such a contract to a supplier whose parent company was a United States-based arms manufacturer, ONS put in place additional contractual and operational arrangements to ensure that United States authorities could not gain access to census data under the US Patriot Act (see paragraph 6.27 to 6.28). These included assurances that only ONS's own staff would analyse the data to produce census statistics, and that no processing of any census data would be carried out overseas.

Recruitment, training and payment of field staff

2.336 ONS recognised that its core skill was not in mass recruitment and training, nor in operating major short-term payroll systems. In the 2001 Census recruitment and training had been carried out by census HQ for the top two tiers of field staff, who in turn recruited and trained the higher-volume roles ('cascade' recruitment and training). While effective in some areas, this approach was considered unsuccessful. There had been inconsistency in training, poor communication, and conflicts in the appointment process, with some field managers employing friends and family members. Additionally, in 2001 the payroll had been outsourced as a stand-alone service. Significant issues had been experienced and the supplier had been unable to deliver the requirements, resulting in field staff payment delays and under and over-payments. The shortcomings of the 2001 payroll were well documented, both in the press at the time and later by the National Audit Office and House of Commons Committee of Public Accounts.

2.337 So the recruitment, pay and training (RPT) of field staff was outsourced as a package for the first time to one supplier. The contract to provide integrated nationwide personnel services for the 2011 Census was awarded to Capita Business Services. It provided services to help recruit, train and pay the 35,000 staff needed to deliver both the 2009 Rehearsal and the 2011 Census itself.

2.338 The Capita contract ran from 16 March 2009 (to include recruitment for the rehearsal) and closed on 15 September 2012. This was the second largest procurement for the 2011 Census and the first time the entire RPT service had been outsourced. It is worth noting that while Capita had strong experience in the individual service streams of recruitment, pay, training and human resources (HR), this was the first time they had combined all four services to form a cohesive end-to-end solution for the recruitment, engagement, training, payment and retention of temporary field staff. The service included:

- recruiting the required number of field staff, and security vetting them in line with HMG Baseline Personnel Security Standard (BPSS)
- providing adequate contingency to cover field staff attrition
- providing an HR service
- registering recruits on the payroll, processing and paying timesheets/expenses
- operating a payroll helpdesk for all field staff
- delivering instructions to candidates receiving a conditional offer of employment
- developing e-learning materials, running and hosting an e-learning site
- delivering classroom training and supplying qualified trainers (excluding the Census Coverage Survey (CCS))
- producing DVDs for each recruit to support census and CCS training

2.339 The role of ONS was to:

- ensure these solutions were fit for purpose, robust and would deliver the service
- develop terms and conditions of employment for the large temporary field force
- manage delivery of the Capita HR service and any complex HR cases, and
- develop and deliver field staff training instructions to Capita

2.340 Field staff were recruited from local communities across England and Wales to carry out census field roles. Posts included area managers, local team co-ordinators and census delivery and collection staff. Recruitment for the rehearsal started in the rehearsal areas in May 2009, and nationwide recruitment for the 2011 Census itself in June 2010.

2.341 ONS worked with the Welsh Government and the then Welsh Language Board (WLB) to develop a Welsh recruitment strategy for the 2,000 census field staff needed in Wales. Recruitment campaigns in Wales were bilingual and application forms could be completed in Welsh. All interviews were available bilingually, and candidates applying for 'Welsh speaking essential' areas had a short interview in Welsh. The target for 17 per cent of field staff in Wales to be Welsh speaking was met.

Other contracts

2.342 The scope and outcome of a number of other key outsourced services are described in the relevant sections later in this report.

The Parliamentary and legislative process

The Government's White Paper

2.343 Since the 1981 Census the government of the day has announced its plans for each forthcoming census several years in advance in the form of a White Paper. Such a document provides the opportunity for informed public and parliamentary debate on those issues that affect every household and person in the country, and before the UK Parliament and the respective legislatures for Wales, Scotland and Northern Ireland consider and approve the legislation which is necessary before it is possible to take any census.

2.344 The White Paper on the 2011 Census in England and Wales, '*Helping to shape tomorrow*', published as a Command Paper in December 2008 (CM7513)¹, set out the UK Statistics Authority's proposals for the census, and covered (among other issues):

- the date of the census
- strategic aims
- the population base
- questions to be included
- those questions considered but not included
- the field operation (delivering the questionnaires and collected the completed returns)
- processing the data
- disseminating the results
- confidentiality and disclosure control
- the legislative process

2.345 The White Paper reflected the outcome of consultation with government departments and other users of census data on their requirements for information from the census

and the results of a programme of both small and large-scale question tests (see paragraphs 2.53 to 2.56).

- 2.346 Particular attention was given to ensuring that the White Paper presented the right balance between making clear, on the one hand, that the proposals for the census should be clearly seen to be those of the newly-created UK Statistics Authority, and as such be independent of Government, while on the other, the same statement should be seen equally as representing the Government's endorsement of proposals that would require legislative support in Parliament. Equivalent, but separate documents, were published in Scotland and Northern Ireland.
- 2.347 The value of having a White Paper as a clear statement of intent, put into the public domain, was evident by the extent to which it was subsequently referred to in correspondence and other literature in the lead up to the census.

Primary legislation

- 2.348 The Census Act 1920 is the statutory authority for taking a census of population in England and Wales (it covers the census in Scotland also). The Act gives powers for taking a census in any year which is at least five years from the year of the previous census, and provides for information to be collected on specific topics, or generally, in order to ascertain the social and civil condition of the population. It was amended in 2000 to provide for information on religion to be collected on a voluntary basis, and further amended (in respect of England and Wales), when the provisions covering the confidentiality and protection of personal information collected in the census (previously set out in section 8 of the Act), were subsumed by the confidentiality provisions of the Statistics and Registration Service Act 2007 (SRSA).
- 2.349 The SRSA, which came into effect on 1 April 2008, also transferred the statutory responsibility for carrying out the census from the Registrar General to the Statistics Board (UK Statistics Authority), and transferred ministerial responsibility for the census from the Chancellor of the Exchequer to the Minister for the Cabinet Office.
- 2.350 The Census Act 1920 requires that every time a census is to be taken, two pieces of additional secondary legislation first have to be approved by Parliament: these are a Census Order (see paragraphs 2.355 to 2.365) followed by Census Regulations (paragraphs 2.366 to 2.374).

Transfer of Functions Order 2006

- 2.351 During 2003-2005 the ONS and the Welsh Government discussed issues arising from the lack of a specific tick box to record 'Welsh' as an ethnic group in the 2001 Census. Subsequently the then Financial Secretary to the Treasury and the Registrar General for England and Wales agreed that the National Assembly for Wales should have a more formal role in agreeing the scope of the format, content and conduct of future censuses in Wales. Furthermore, the Treasury Select Committee's report on their enquiry into the 2001 Census endorsed the proposal that the National Assembly for Wales should have a more formal role in agreeing future census questionnaires for Wales.

2.352 After discussion and taking legal advice it was agreed that there should be devolution of secondary legislative powers, and that the vehicle for the transfer of such powers should be a Transfer of Functions Order (TFO) under the Government of Wales Act 1998. The scope of such secondary legislation would be to:

- transfer the power to make Census Regulations (required under section 3 of the Census Act) from the then Chancellor of the Exchequer to the National Assembly for Wales; and
- to provide the Assembly with the right to be consulted on the content of the Census Order

2.353 The Welsh Government also proposed that the Welsh ministers should have the opportunity to discuss a draft of any future census White Paper insofar as it related to Wales. Because this would be a purely administrative process, no specific provision for this in the TFO would be necessary.

2.354 The power to make Regulations for Wales was, accordingly, transferred from the Chancellor of the Exchequer to the National Assembly for Wales in December 2006 (by the Transfer of Functions (No 2) Order 2006³¹) and subsequently to Welsh ministers (through the Government of Wales Act 2006).

The Census Order

2.355 Section 1(1) of the Census Act 1920 requires that, for any census to be carried out, an Order in Council directing that a census shall be taken, has first to be approved by both Houses of Parliament. The Census Order is the secondary legislation which sets out:

- the date on which the census is to be taken
- who is responsible for completing the census questionnaires
- who has to be included on a census questionnaire, and
- the question topics (referred to as the 'particulars') to be included in the census

2.356 The timing of the Order was crucial to the subsequent planning of the 2011 Census because it provided the only opportunity for Parliament to debate and agree the proposed question set. Prior to its debate, the Draft Order had been sent to the UK Census Committee, the UK Statistics Authority Board, the Cabinet Office Minister and the Welsh Assembly for discussion and approval. The Draft Order was laid before both Houses of Parliament on 21 October 2009 where it lay for 40 days, during which time it was scrutinised and debated.

2.357 During this time the Draft Order was submitted to, and scrutinised by, two parliamentary committees:

- The Joint Committee on Statutory Instruments (JCSI) – which looks at all secondary legislation to ensure that it makes sense, is well drafted and will work in practice. JCSI duly approved the Draft Order, and
- The Lords Committee on the Merits of Statutory Instruments – which checks that all legislation is necessary, will not adversely affect sections of society and that proper consultation has been undertaken. The Committee requested more information on any cost benefit analysis that had been undertaken, and subsequently also approved the Draft Order

- 2.358 After submitting the Draft Order for debate in Committee, the minister tabled a motion in Parliament on 22 October 2009 seeking its approval. Under normal circumstances such motion would then be voted on in the House, which, in effect, approves the Draft Order. However, as in previous censuses, the Order's mix of *affirmative* and *negative* resolutions caused confusion among MPs and peers about which elements may or may not be discussed and voted on. The type of motion tabled proved to be incorrect: it could be used only for statutory instruments subject wholly to *affirmative resolution*, which are always debated in committee. However, because the Census Order also involved *negative resolutions* that are not debated, House of Commons officials advised that a new 'special referral' motion would have to be tabled and approved. This resulted in the scheduled committee debates being postponed.
- 2.359 All this occurred just before the State Opening of Parliament, which meant that no motion could be tabled and approved in the House of Commons for more than a week. This caused further delay before a new date for the debates could be negotiated.
- 2.360 At this point there was a danger that the debates might not be rescheduled before the December 2009 Privy Council meeting. So the timetable was revised in time for the Draft Order to be approved in the February 2010 Privy Council (leaving less time to get the subsequent Census Regulations through Parliament). Fortunately, the special referral motion was approved on 23 November 2009, and negotiations between the Cabinet Office and the Parliamentary Whips eventually secured slots for debates in both Houses of Parliament just days before the Privy Council's December deadline.
- 2.361 The Draft Order was debated by the First Delegated Legislation Commons Committee on 30 November 2009. However, this committee was only able to consider the Order but not approve it, which caused annoyance to some committee members who had wanted to amend specific elements of the provisions, and who voted to the effect that they had not considered it.
- 2.362 On 1 December, when the Order was debated in the House of Commons, an amendment was proposed to include 'Cornish' as a separate national identity category, but this was not approved. A vote was then taken to approve the Census Order as a whole with the result that the Order was approved by 298 votes to 127. The House of Lords Grand Committee subsequently considered the Order on 2 December with somewhat less controversy, and it was approved in the Lords on 3 December, and 'made in Council' on 9 December 2009. It became law the next day.
- 2.363 The unusual nature of census secondary legislation, combined with its occurrence only once every 10 years, had inevitably caused some lack of ministerial and parliamentary understanding and contributed to delays. The original timetable had proposed that the Order should be presented to the Privy Council meeting of February 2010. This would have required the draft Order to be ready to put before Parliament in December 2009, allowing Parliament sufficient time to approve it before the Privy Council meeting. This, in turn, would have given enough time to lay the Regulations before Parliament, and to get them approved prior to appointing the first tranche of field staff.
- 2.364 However, by summer 2009 it was apparent that a general election could be held in May 2010. In light of this the decision was made to bring forward the necessary legislative programme by two months, to ensure that the subsequent Regulations

would finish their parliamentary stage prior to Parliament being prorogued for the election.

- 2.365 The Census Order³³ was, despite the delays, completed two months ahead of its original schedule, and must therefore be considered a significant success and an improvement on the 2001 Census timetable.

The Census Regulations

- 2.366 For the Census Order to take effect the Minister for the Cabinet Office ‘makes’ Regulations governing the census arrangements in England. These detail the method of carrying out the census, prescribe the field activities, and authorise the duties of field staff. They also contain a copy of each questionnaire to be used in the census. The Regulations cannot be laid before Parliament until the Census Order has been made in Council.
- 2.367 Separate Regulations are required for England and for Wales, made respectively by the Minister for the Cabinet Office and the Welsh Ministers. This satisfies both the Statistics and Registration Service Act 2007 (which amended the relevant section of the Census Act concerning the Regulations), and the Transfer of Functions (No. 2) Order 2006.
- 2.368 The Regulations for England were drafted by Treasury solicitors on instruction from the ONS census legislation team, checked by Cabinet Office lawyers, further scrutinised by the lawyer for the Joint Committee on Statutory Instruments, and approved by the UK Statistics Authority. The Regulations were made (approved and signed) by the Minister for the Cabinet Office on 27 February 2010 and then laid before both Houses of Parliament on 4 March. After 21 days the Regulations came into force on 31 March 2010, because no motion to annul them had been passed by either House.
- 2.369 During these 21 days the regulations were further scrutinised and approved by the Joint Committee on Statutory Instruments (JCSI) and the Lords Committee on the Merits of Statutory Instruments (Merits Committee). Though the Regulations would come into force after 21 days, they still had to sit before Parliament for 40 days in total, allowing further time for any objections. In the event, this 40-day period was extended because of the Easter Parliamentary recess, and again when Parliament was prorogued for the general election.
- 2.370 During this extended period the Leader of the Opposition raised an objection and called for the Regulations to be annulled. However, no parliamentary time was given for a debate, the annulment motion expired when Parliament rose for the election, and the Regulations stood unchanged.
- 2.371 *The Census (England) Regulations 2010*³⁴ came into force 31 March 2010 and provided for the:
- appointment of temporary local staff to conduct the census in the field
 - obligation of prescribed persons to make a return
 - requirement of ONS to keep an electronic record of the despatch and receipt of questionnaires
 - preparation of packs of questionnaires
 - arrangements for the delivery of questionnaires by post or by census coordinator

- arrangements for the return of completed questionnaires
- procedures if an incomplete questionnaire or no questionnaire was received
- obligation of any person to provide information if required
- safe custody of questionnaires and other documentation; and
- requirement for field staff and other persons employed for the purposes of the census to make statutory declarations or undertakings

2.372 For the first time there were separate Regulations for England and for Wales. The Welsh Government prepared the Regulations for Wales but close liaison with ONS ensured that the Regulations for England and those for Wales were as similar as possible to ensure that the same processes and procedures were followed.

2.373 The procedure for laying the Regulations in the National Assembly for Wales was almost identical to that in the UK Parliament, with a scrutiny committee ensuring that the Regulations were fit for purpose. The original aim was for the Regulations to come into force on the same date as those for England. In the event they were delayed, were not laid before the Assembly until 28 April, and did not come into force until 16 June 2010. This was primarily because of:

- having to wait until the Census Order was made before a version of the Regulations could be prepared for agreement by Welsh Ministers and submission to the UK Statistics Authority; and
- the timetable to prepare and back-translate the Welsh language version of the Regulations could not readily accommodate the late decision to bring forward the date of the Regulations in England

2.374 Fortunately this was not crucial to the implementation of subsequent field activities. In addition the Welsh Government benefited from having a more direct and immediate relationship with its minister and the Assembly than was the case in England. Consequently there were no objections, and the *Census (Wales) Regulations 2010* duly became law on 16 June 2010³⁵.

Publicising the 2011 Census

2.375 The overall objective of the 2011 Census publicity campaign was to maximise overall response rates and minimise non-response in specific areas and among particular population groups. To do this, the prime aim for the campaign was to reach the entire population.

2.376 The second aim was to have inclusive messages and universal appeal. To achieve this, all elements of the 2011 Census campaign had to be inclusive, meaning 'respectful to all', and communicate the message that 'the census is for everyone'. Furthermore, it had to be enabling, meaning that it had to communicate the message that participation would help to make a positive impact on people's lives, and to have a clear call-to-action to 'Fill in your questionnaire'.

2.377 Every census presents a unique challenge in that it necessitates communicating with, and motivating, every household in England and Wales to fill in their census questionnaires. The target audience is effectively 'everyone'. However, almost by definition, most publicity campaigns are targeted to specific audiences, and, therefore, focus on those channels that deliver to that particular audience. Very few public awareness campaigns have such broad audience goals, that are required to

reach everyone but with a finite media buying budget, as the census. Furthermore, such a finite media budget necessitated the prioritisation of specific audiences.

- 2.378 The success of the census depended on communicating with every household in England and Wales. The greater diversity of households made this increasingly difficult for key population groups, such as ethnic minorities, migrants and young adults, which are the very groups for which census information is critical.
- 2.379 Low return rates from any particular population group affect the quality of census outputs for that group or area. The strategy for the 2011 Census was to acknowledge this challenge and devote more resource on those households that were difficult to engage with less resource on those households which would generally comply.
- 2.380 The census communications activities, including the paid-for advertising, were designed to reinforce this strategy. Furthermore, there were several changes (both to society and census strategy) which made the communication challenge for the 2011 Census significantly greater than in 2001.
- 2.381 Changes in society included:
- an increasingly diverse population with a particular increase in migrant communities with different cultural experiences of a census
 - an ageing population and changing lifestyles
 - a significant reduction in compliance noted in response to ONS social surveys
 - some observed hardening of attitudes towards census and government of those likely to be non-compliant
- 2.382 Changes in the census strategy included:
- running the first online census
 - measuring success not just by overall response rate but by response from key population groups and those areas that are harder to count
 - delivering questionnaires by post rather than by hand for the first time, which would reduce the opportunity for an initial explanation and face-to-face communication with the public, and where, instead, the focus would be on non-response follow-up
- 2.383 The development of the 2011 campaign was informed by findings from the 2001 Census, government communication best practice and market research insights. Furthermore, the campaign gave equal weight to Welsh issues; this was reflected in:
- bilingual census branding (English and Welsh) in Wales – approved by the Welsh Government in 2008; and
 - advertising (including TV, outdoor, radio, press, online) in Wales available in English and Welsh – every advertising version for Wales (both in English or Welsh) was quality assured and signed-off by a dedicated Welsh editorial officer who was part of the advertising development and production phases, being responsible for Welsh copy, selection of Welsh voice-over/speakers and supervision of all Welsh recordings
- 2.384 The starting point for the 2011 Census campaign development was the review of the 2001 Census campaign. Analysis of the 2001 Census and subsequent ONS

evaluations indicated that the overall target audience could be split into three broad sections:

- the willing and able – this group are already predisposed to identify with the census (provided they are made aware of it) and to complete their questionnaire. This group was estimated to comprise around 60 per cent of the population
- the undecided – this significant group are, in principle, in support of the census, but are, or could be, reluctant to participate for a variety of reasons. This group was estimated at 30 per cent of the population, and
- the hard-to-reach – this group was made up of the various population sub-groups among whom there was under-enumeration in 2001 and comprised a significant proportion of young adults (both males and females, 18 to 29), the elderly, single-person households, people living in house shares/multi-occupancy dwellings and privately rented accommodation, Black and Minority Ethnic groups (BME), students, and the unemployed/low income groups. Collectively they were estimated to comprise about 10 per cent of the population

2.385 A key finding from 2001 and subsequent research was that the majority of the population will willingly complete the census if they understand what it is and what their obligations are. The recommendation for 2011 was to allocate resource where it was most required – to some extent among the undecided, but to a much greater extent among the hard-to-reach.

2.386 The creative platform for the campaign was the ‘Help tomorrow take shape’ concept. This simple call-to-action was literally an invitation for everyone to participate in shaping the future of their local environment, in everything from key services such as health and education to local parks and facilities – the ‘planning story’. The central metaphor of the campaign took as its starting point the census folded origami logo and purple branding, and used it to create origami objects, such as schools, hospitals and buses, which in themselves are the end ‘benefit’ of the census. These life size origami objects gave the campaign relevance, impact, and a strong visual identity that was carried through from the purple questionnaire and accompanying literature to the smallest piece of campaign material at each phase of the messaging.

2.387 Qualitative message development research and findings from the 2009 Census rehearsal revealed that response levels would be influenced by three key factors:

- awareness and understanding of the census benefits
- clear direction of what people need to do and when; and
- acceptance of legal obligation as a consequence of a potential £1,000 fine

2.388 Mirroring this, a three-phase campaign was devised:

- Phase 1: Educate – census awareness and understanding of census benefits
- Phase 2: Call-to-action – clear direction to complete the questionnaire NOW
- Phase 3: Enforce – focus on the possible fine and consequences of non-completion

2.389 Integration of media channels and relevant activity, with key dates within the overall census operation, the go-live date of the website, the post-out of the census

questionnaires and the commencement of the field follow-up operations, was crucial. But the need for flexibility was also important. Any delays in printing or the distribution of the questionnaires, for example, could have meant delaying the start of Phase 2 communications. The census communications team therefore had to be able to either withdraw media, re-shape the campaign or change the messages at short notice.

2.390 After a review by the Cabinet Office Efficiency and Reform Group (ERG), the media budget was reduced to £4.7 million from the original £6.7 million. A £1 million contingency budget was set, but would not be released until the response levels had been assessed after census day. This decision was made principally on the rationale that if the budget was not necessarily required it should not be committed.

2.391 The 2011 Census employed a wide range of communications channels and activities depending on the target audience. It was impossible to reach all census audiences through one communications channel. However, particular channels were very effective in reaching specific audiences. The 2011 Census used a combination of channels and activities, including paid-for, owned and earned (free) media channels.

2.392 The paid-for media channels for the campaign approved by the ERG were:

- TV advertising (for Phase 1 and 2 only)
- outdoor/out-of-home advertising
- digital and social media
- BME radio and print advertising, and
- magazine advertising targeting young adults



2.393 The net result of the decision to withhold this budget until after census day was that the media choices at the contingency planning stage were severely limited to those that could be planned, bought and implemented at very short notice – as little as 24 hours. Crucially this denied the use of television at this stage of the campaign to drive home the hard ‘non-compliance’ message.

2.394 An additional £1 million contingency was spent where response rates were lower than anticipated; paid-for media channels approved by the ERG were:

- regional press
- regional radio
- digital out-of home advertising, and
- digital and social media

2.395 Pro-active media relations worked alongside advertising and paid-for communication, and compensated for the reduced advertising spend by generating earned (free)

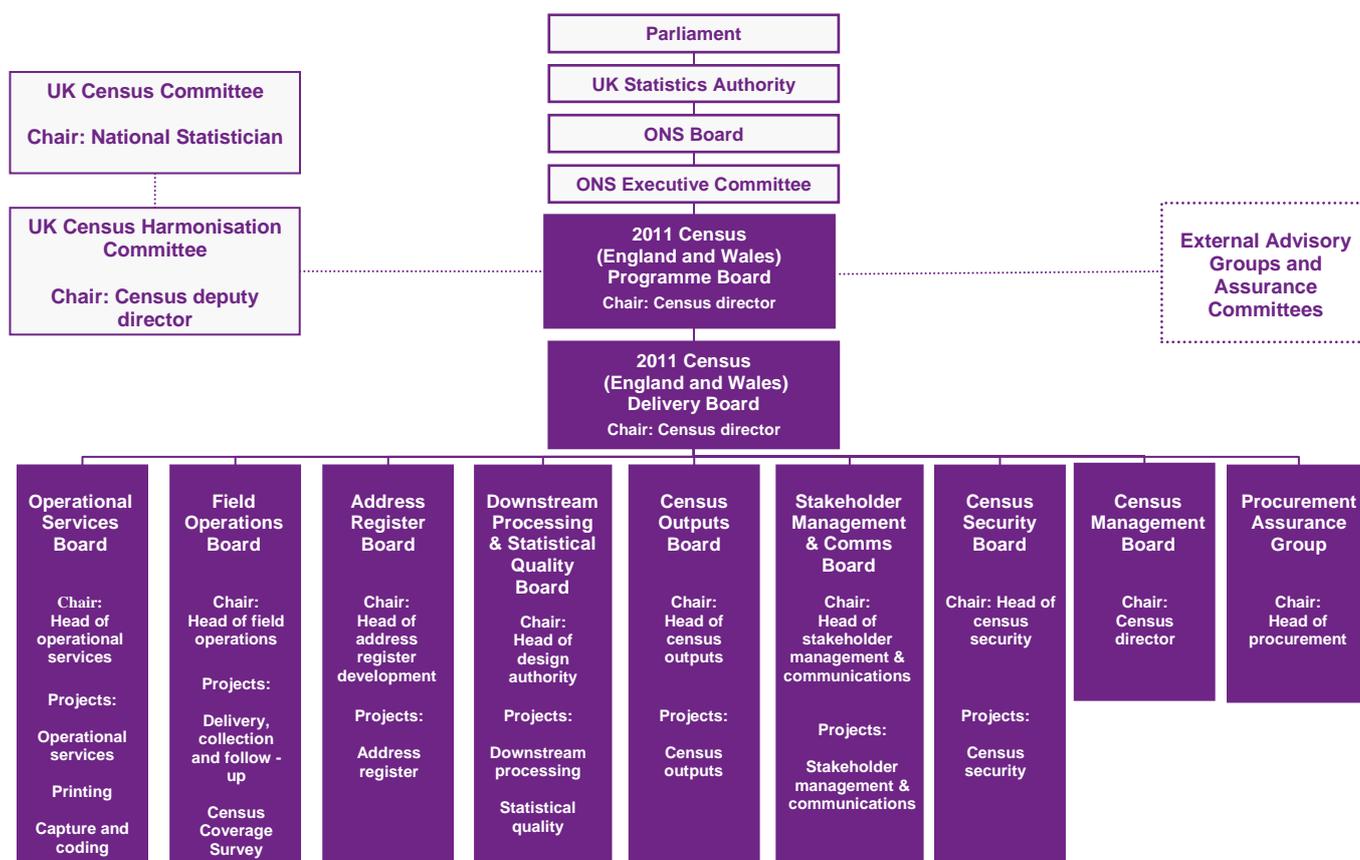
coverage on radio, TV and in print. ONS news releases, 27 in total, generated more than 4,000 items of coverage – mostly positive with an estimated advertising value equivalent of around £9 million.



Programme governance and organisation

Committees and boards

- 2.396 ONS had been able to base its 2011 Census operation entirely at Titchfield in Hampshire for the first time. All disciplines of staff working full-time on the census, which included statisticians, researchers, information management specialists and those providing administrative support, had been brought together into one ONS Census Division. This had had the advantage of enhanced working level communications and training. However, the subsequent move of the greater part of ONS business activities to Newport in South Wales, together with the restructuring of the main ONS business areas meant that it become more difficult for the 2011 Census operation to be entirely self-contained at Titchfield - but more effective means of communication meant that this did not, in the main, diminish working efficiency.
- 2.397 The number of permanent core census staff at Titchfield was around 12 at the start of the planning period in 2003/04, rising to a maximum of around 450 in 2010/11 during the run-up to census day (27 March 2011).
- 2.398 A multi-tier governance structure was put in place to support the control and co-ordination of policy and operations both within ONS and across the three UK census offices. This ensured the greatest possible harmonisation between the three censuses, and optimum operational efficiency (see figure 2.4).

Figure 2.4 2011 Census governance structure, September 2010

2.399 Policy was co-ordinated by the long-standing United Kingdom Census Committee (UKCC). This was chaired by the National Statistician, and comprised the Registrars General for Scotland and for Northern Ireland, the chief statistician for Wales, the census director, and senior census officials across the UK. Its role was to:

- agree the scope for common strategic activity across the three UK census offices, to establish a common UK census in 2011
- ensure UK-wide outputs from the 2011 Census were coherent, with particular reference to consistent methodologies, geographic boundaries, definitions, classifications, and questions meet the need for such outputs by taking into account:
 - the functions and independent authority of the devolved administrations
 - the specific need to provide a more formal role for the Welsh Assembly in the governance of the census in Wales
 - UN-ECE/Eurostat recommendations on, and the need for statistics to be harmonised with, international censuses
- identify the areas where, in order to maximise efficiency:

- there was a benefit in adopting a common approach across the UK in line with the National Statistician's and Registrars General's Agreement (see paragraph 1.20)
 - a common approach was desirable but not necessarily achievable
 - a degree of flexibility was necessary
- resolve issues where there were conflicting views or objectives across the three census offices which could not be resolved within the lower level management board, and which had subsequently been reported and escalated through any of the three project boards, and
 - agree the cross-office funding and resourcing for shared and specific activities

2.400 The committee met every three to four months throughout the census programme and was supported by the UK Census Harmonisation Committee (UKCHC), chaired by ONS census deputy director. Its role was to achieve high quality censuses across the UK by identifying and agreeing research into issues covered by the main 2011 Census projects, where there was scope for, and benefit in, following a common approach across the three UK census offices.

2.401 UKCHC also met every three to four months to consider joint approaches to research into issues relating to:

- systems design (including operational intelligence, data capture, internet collection, and geo-referencing)
- statistical developments (population base definitions, topics and questions, questionnaire design, coverage adjustments, edit and imputation, disclosure control and output requirements), and
- outsourcing (including the use of corporate tools) for processing and other operations; and legislation

It was charged, in particular, with responding to the demand for consistent and comparable UK-wide information in 2011 on:

- population benchmarks and denominators for people, households, families and dwellings
- finely-grained information about small areas and small groups within the population, and
- household and person-based information collected on a range of common topics

2.402 The UKCHC reported in the main as a sub-group to the Census Programme Board (CPB), which managed the progress of the 2011 Census programme. The function of the CPB in England and Wales was to drive the programme forward to ensure delivery of the planned outcomes and benefits. Board members provided the necessary resource and specific commitment to support the senior responsible owner (SRO) who was accountable for the successful delivery of the programme, and who chaired the board. Each member was individually accountable to the SRO for their particular area of responsibility and delivery in the programme by:

- ensuring that the programme met its objectives and delivered the projected benefits
- providing direction and advice to the SRO

- providing overall strategic guidance for the programme
- agreeing all major plans
- authorising any deviations from the plans (beyond agreed tolerances), escalating upwards as necessary
- agreeing the delegated tolerances for time, quality and cost
- ensuring that the required resources were available
- resolving any conflicts or issues escalated by the programme, referring upwards if appropriate
- ensuring that the risk(s) associated with the programme were effectively managed
- ensuring that there was effective quality assurance
- ensuring that the programme was subject to review at appropriate stages and that recommendations or concerns were met or addressed
- ensuring arrangements were in place to manage external communications
- communicating information about the programme to the rest of the office, and
- managing the interfaces with the rest of the office in general and in particular with their own business area

2.403 At the level immediately below the CPB, a Census Delivery Board (CDB) was established. This helped to deliver the programme's outcomes and benefits by co-ordinating and managing individual project delivery according to the wider programme plan and to ensure that project outputs were harmonised. Members of the board were collectively responsible for the delivery of the programme. To achieve this purpose each of the projects reported in a standard format so that information could be consistently aggregated to the programme level. The CDB met monthly and focused on those areas that were most important to the programme, ensuring that:

- projects adhered to plans and that exceptions were reported as soon as possible
- dependencies and interfaces between projects were managed
- those risks and issues escalated from projects were managed appropriately with full mitigation/contingency plans
- the impact of any change was recognised and managed to avoid 'scope creep'
- project outputs delivered the agreed goals and quality standards, and contributed appropriately to benefits realisation, and
- costs and resources were managed

2.404 Figure 2.4 shows that, below the CDB level, there were a number of project boards responsible for the management and delivery of specific census activities within the overall programme. These included:

- operational services
- field operations
- address register
- downstream processing and statistical quality
- outputs
- stakeholder management and communications
- security
- management
- procurement assurance

2.405 Figure 2.4 also shows that a number of external groups fed into this high level governance. These encompassed a wide range of users and other stakeholders who provided vital input into the design and quality assurance of the census methodology and outputs. Most prominent of these were the several census advisory groups (see paragraph 2.34).

2.406 It should be noted however, that the governance structure shown in figure 2.4 was active during the main operational phase of, and in the run up to the census. At the earlier development phases of the census programme other boards existed to manage specific pre-census activities, such as procurement and the management of contracts for outsourced services, the 2007 Census Test, and the 2009 Rehearsal. Moreover, in the later output production phase of the census new boards were created that reported to the census delivery board to manage a range of post-census activities. These included:

- Census Operations Board
- IT Delivery Board
- Census Release Panel
- Dissemination Delivery Board
- Information Assurance Board
- Statistical Outputs Board
- Analysis Project Board
- Evaluation Board
- Benefits and Exploitation Group

2.407 Figure 2.4 also shows that the census programme board reported upwards to the ONS board through its executive committee, and thence to the UK Statistics Authority with its statutory responsibility for carrying out the census. And ultimately, the UK Statistics Authority is required to report to Parliament.

Project support

2.408 A project management office (PMO) was set up to provide programme support to the 2011 Census. Its function was, in particular, to:

- develop and maintain the project plans, control processes and tools for use throughout the project
- support the census project staff's application of project management and control through day-to-day support, training, advice and guidance, and
- provide a secretariat for the key governance boards, including the census delivery board, census programme board, UK Census Committee and UK census harmonisation committee

2.409 The 2011 Census programme used programme and project management principles based on Managing Successful Programmes (MSP) and PRINCE2. These covered a number of different management processes, including:

- planning
- risk management
- issues management
- incident management
- configuration and document database management
- change control

- decisions made
- commitment log
- lessons learned log
- programme progress reporting
- registry services
- business continuity planning
- accommodation planning

2.410 The PMO also co-ordinated the input into the regular gateway reviews that were carried out by the Office for Government Commerce at appropriate points during the programme. These provided confidence that the programme was being managed effectively.

2.411 Between 2006 and 2010 the PMO evolved from a small administrative team supporting a single project to a large business unit providing widespread project management services across the census programme. It was at this stage that many of the heads of individual projects requested more control over individual PMO resources.

2.412 The case for this requirement had merit. The centralised PMO had been finding it difficult to build relationships with the various projects, and the belief was that embedding project support staff would not only build stronger relationships, but also increase their knowledge of the specific project. Therefore, in the first quarter of 2010 it was decided that most of the project support function would be devolved from the PMO and staff were embedded in the respective project teams, leaving only a small residual central team to focus on programme-wide support tasks.

2.413 This gave the projects full control over the size and scope of their project support function, including line management responsibility, budgets for resource and training, and allowed the projects to dictate how they could best support their respective work streams. In hindsight, devolution was necessary. Because each project was structured differently the project support functions could be tailored to suit their specific projects' requirements. It would have been very difficult to retain the project support function within the PMO due to the eventual size and complexity of the census programme.

Main events of the census programme

2.414 Because the date of the census is set by legislation (see 2.1 and 2.2) many of the activities are time critical. The dates of main events of the census programme are shown in box 2.

Box 2

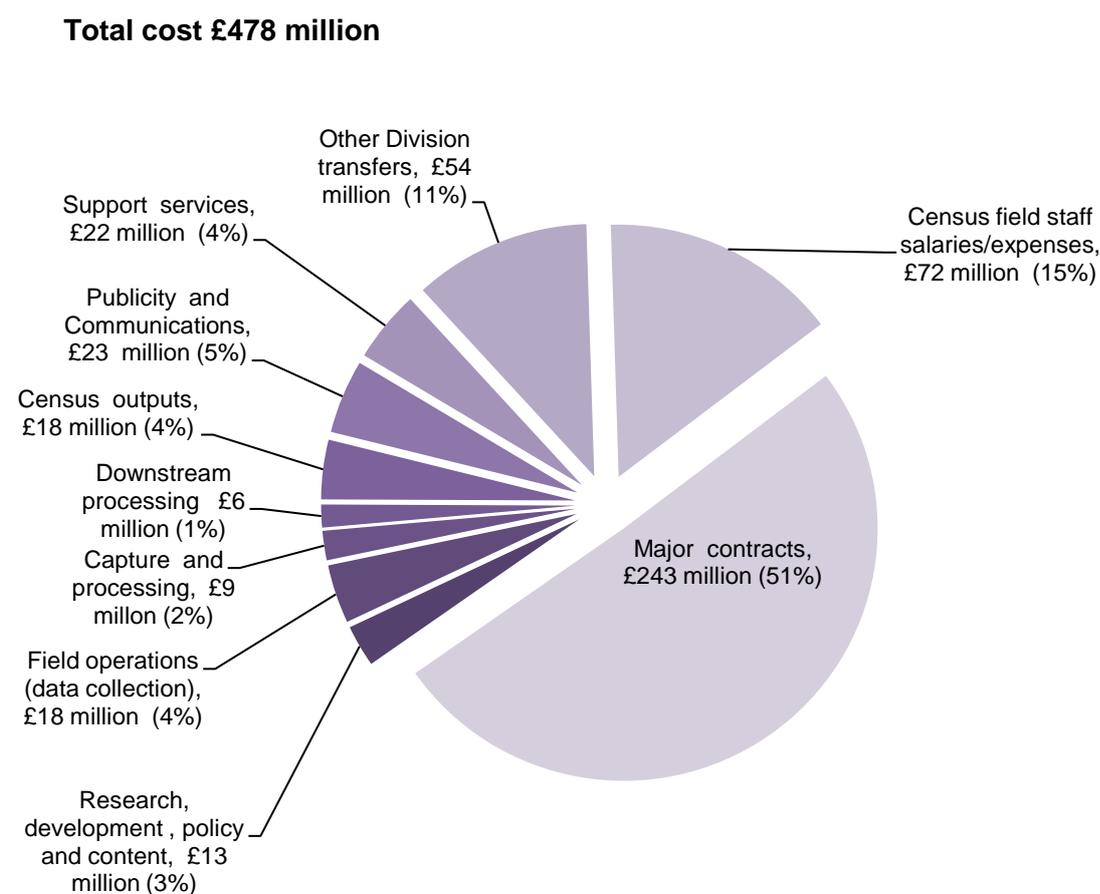
2003	
11/12 November	ONS/Royal Statistical Society (RSS) Conference "Census 2001 and beyond"
2004	
25 March	Initial design for 2011 Census published
2005	
13 May	Consultation programme launched on user need for content of 2011 Census
2006	
1 December	Consultation launched on user need for information on Ethnicity, Identity, Language and Religion
15 December	Transfer of Functions Order came into force
2007	
13 May	Census Test
19 July	Decision made on post-out methodology
2008	
1 April	Statistics and Registration Service Act 2007 came into effect
9 July	EU Census Regulations came into force
July - November	Pilot phase of address register project carried out
28 August	Contract with Lockheed Martin UK announced
11 December	Proposals for 2011 Census published in White Paper 'Helping to shape tomorrow'
2009	
16 March	Contract with Capita Business Services signed
14 September	2011 Census stakeholder website launched
11 October	Census Rehearsal
19 October	Final recommended questionnaire content published
21 October	Census Order laid
9 December	Census Order made
2010	
27 February	Census Regulations (England) made
4 March	Census Regulations (England) laid
31 March	Census Regulations (England) came into force
24 April	Census Regulations (Wales) made
28 April	Census Regulations (Wales) laid before the National Assembly for Wales
16 June	Census Regulations (Wales) came into force
June	Field recruitment started
2011	
21 February	Publicity campaign launched
4 March	Census online launched
27 March	Census Day
9 May	Census coverage survey field work started

May	Data processing began
2 June	Census coverage survey field work completed
October	Initial consultation launched on Beyond 2011
2012	
16 July	First census outputs released
2012 - 2014	Further census outputs released
2014	
27 March	National Statistician published recommendation for 2021 Census
18 July	Government's decision on 2021 Census announced

Financial management and costs

2.415 The cost of the 2011 Census over the 12-year planning and operational period 2003/04 to 2014/15 was £478 million. This was £4 million less than the budgeted figure of £482 million that was estimated in 2008 and published in the Government's White Paper. The breakdown of the total cost into its component elements is shown in figure 2.5.

Figure 2.5 2011 Census costs by component elements 2003/04 to 2014/15



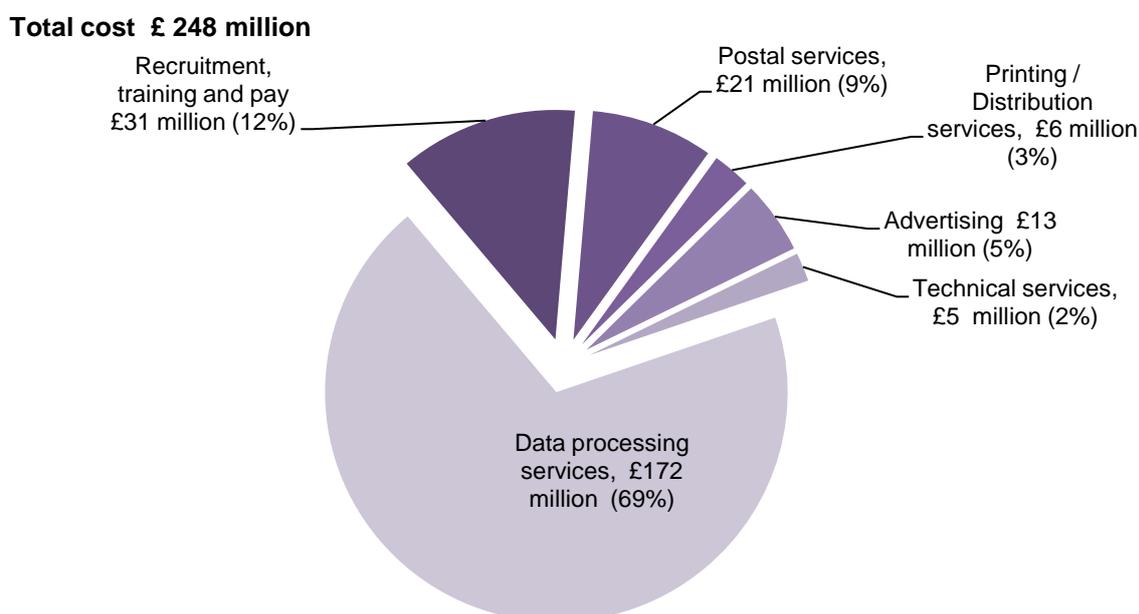
Note: figure 2.5 shows costs rounded to £million. Major contracts excludes £5 million relating to smaller technical service contracts (such as legal services and technical advice) supporting the relevant business operational costs.

2.416 Costs were closely controlled and monitored throughout the whole of the census programme. Leaving aside for the moment the costs of the major outsourced services (data capture and coding operations), the largest element of the total cost was the field operation. This included the contract for the recruitment, training and payment of the field staff (£30.9 million) and other ancillary data collection costs (£17.9 million).

2.417 Reference has already been made (see paragraphs 2.328 to 2.342) to the increased use of external suppliers for a wide range of specialist services. Consequently a little over half the total cost went towards major contracts (compared with 37 per cent in 2001). A breakdown of the proportion spent on each outsourced activity is shown in figure 2.6. More than two thirds of these costs covered services to support the main data processing operation. These included:

- printing of questionnaires
- scanning of questionnaires
- data capture and coding
- helpline services and the self-help website
- questionnaire tracking
- online data capture
- secure destruction of the questionnaires

Figure 2.6 2011 Census outsourced activity costs 2003/04 to 2014/15



Note Figure 2.6 shows costs rounded to £million.

2.418 In any census, costs are not spread evenly over the whole period of the operation; typically the year of greatest expenditure is the year in which census day falls. For the 2011 Census, however, census day was 27 March, at the very end of the financial year 2010/11. Consequently the greatest spend was spread more evenly over the two consecutive years: 2010/11 (which accounted for much of the development and

checking of the address register and the recruitment and training of field staff), and 2011/12 (in which the field operation and the whole of the outsourced data processing operation took place - figure 2.7).

Figure 2.7 2011 Census costs by year 2003/04 to 2014/15 (rounded to nearest million)

