

**The 2011 Census of Population in
Northern Ireland**

Proposals

March 2010

CONTENTS		Page
Foreword - Sammy Wilson, MP MLA, Minister of Finance and Personnel		5
EXECUTIVE SUMMARY		7
1	INTRODUCTION	18
	The decision on the Census	18
	Role of the Census in meeting the need for information for decisions on major issues	18
	Separate consideration of the proposals for the Censuses in England and Wales, and in Scotland	21
	International perspective and EU Regulations	21
	Recommendations from the 2001 Census and the strategic aims for 2011	22
	Summary of the key 2011 Census design features	23
	Costs and financial control	24
2	CONSULTATIONS AND CENSUS TESTS	25
	Consultation process	25
	Liaison with community groups	26
	Census tests	26
	Census Rehearsal	29
3	POPULATION AND TOPICS TO BE COVERED BY THE CENSUS	30
	The population base	30
	Revised definition of a 'household'	31
	Requirements for topics	31
	Selected topics	34
	Questions to be asked at all addresses	36

	Questions to be asked of each household	37
	Questions about housing	37
	Questions to be asked of residents in households	39
	Questions to be asked of visitors	47
	Arrangements for communal establishments	48
	Topics considered but not included in these proposals	48
4	COLLECTING THE INFORMATION AND ENSURING FULL PARTICIPATION IN THE CENSUS	53
	Introduction	53
	Operational objectives	53
	Temporary field staff	54
	Recruitment, training and payment of field force	54
	Post-out and the development of a 2011 Census Address Register	54
	Address checking	55
	Census questionnaire delivery	55
	Collection of completed questionnaires	56
	Follow-up	57
	Communal establishments	58
	Special enumeration procedures	58
	Community liaison and ensuring full participation in the Census	59
	Enforcing the legal requirement to complete a census form	60
	Coverage and data quality	61
	Publicity	62

5	PROCESSING THE DATA AND PUBLISHING THE RESULTS OF THE CENSUS	64
	Introduction	64
	Outsourcing parts of the census operation	64
	Data processing	65
	Data capture operations	66
	‘Downstream’ processing	66
	Quality assurance	68
	Output production	68
	Planning output geography	71
6	CONFIDENTIALITY, PRIVACY AND SECURITY	73
	Confidentiality principles	73
	Statistical confidentiality and disclosure control	74
	Wider use of census data	74
	Data security	75
	Reviews of confidentiality and computer security	77
	Privacy and the Human Rights Act	77
7	THE LEGISLATIVE PROCESS	78
	Primary Census legislation	78
	Secondary legislation	78
	REFERENCES	80

Foreword – Sammy Wilson, MP MLA, Minister of Finance and Personnel

This document sets out the Department of Finance and Personnel (DFP)'s proposals for the 2011 Census in Northern Ireland. The Census provides a once-in-a decade opportunity to get an accurate, comprehensive and consistent picture of the most valuable resource of Northern Ireland – its population – and a rich array of facts about it. The results are invaluable for policy formation, and the planning and effective targeting of resources. The Census provides the only source of directly comparable statistics for both small areas and small population groups, which are consistent across Northern Ireland and the rest of the United Kingdom. It is used as a reference base for many statistical series such as population estimates and projections and sample surveys.

In planning the design for the 2011 Census and in seeking the means to improve coverage and quality, officials have consulted widely with users and other stakeholders, and have developed working partnerships with key users, contracted suppliers and colleagues in the other two United Kingdom (UK) Census Offices – and continue to do so. Many of the recommendations that were made following extensive reviews of the 2001 Census have helped to shape the design of the 2011 Census. The result is that the Census design proposals set out in this document are those that DFP believes are the best and most cost-effective means of collecting the required information.

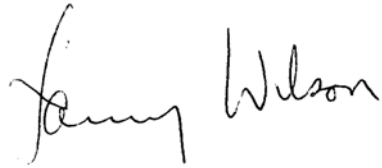
Modern times demand modern approaches, and whilst a traditional census remains currently the only practicable way of collecting the range of inter-related information required, it also needs to adapt its methodologies to reflect both up-to-date technologies and changing public attitudes. Consequently, a number of major changes are proposed in the design for 2011 compared with previous censuses:

- in the majority of cases, census questionnaires will be delivered to households by post;
- there will be the facility to return the completed information online; and
- new questions are proposed on: national identity; citizenship; language; civil partnership status; voluntary work; nature of long-term health conditions; and date of entry into Northern Ireland (for those who have lived outside NI for a year or more) and length of intended stay (for those who have arrived in the UK within the last year).

As in 2001, all standard outputs will be publicly accessible online, and free of charge, from the Northern Ireland Statistics and Research Agency (NISRA) website – www.nisra.gov.uk.

These proposals relate to the Census in Northern Ireland only, since the Census is a devolved matter and is subject to separate legislative processes and arrangements in Great Britain. There, Ministers have presented proposals to the Westminster Parliament and the National Assembly for Wales, in respect of England and Wales, and to the Scottish Parliament in respect of Scotland. However, the production of harmonised UK Census statistics to meet the requirements of not only the European Union but also a wide range of domestic users remains of great importance.

It is hoped that these proposals will receive as wide an acceptance as possible and that, in particular, the Assembly will support, in due course, the secondary legislation necessary to enable the Census to be carried out.

A handwritten signature in black ink, reading "James Wilson". The signature is written in a cursive style with a large initial 'J' and 'W'.

Executive Summary

Introduction – the decision on the next Census (Chapter 1)

Subject to the approval of the Northern Ireland Assembly, the next Census will take place on 27 March 2011. It is planned that censuses will also be taken on the same day in the rest of the United Kingdom (UK). Since 1951, censuses in Northern Ireland have been held at ten yearly intervals, with the exception of the additional 1966 mid-term Census. The last census took place on 29 April 2001.

The purpose of the Census (Chapter 1)

The Census is the largest single statistical exercise undertaken by government, and remains the most important source of information on the size and nature of the population. Around 200 countries worldwide carry out a regular census under the auspices of the United Nations. The information from the Census is used widely and underpins national and local decision making. Central government, local authorities, the health and education services, the academic community, commercial businesses, professional organisations and the public at large all need reliable information on the number and characteristics of people and households if they are to conduct their activities effectively. This need is currently best met by conducting a census every ten years covering the whole of the population, and by updating the population estimates each year benchmarked on the preceding census.

Key strategic aims (Chapter 1)

Taking account of the comments, evaluations and recommendations arising from the 2001 Census, the following high-level strategic aims underpin the development and design of the 2011 Census:

- to provide high quality, value for money statistics that are fit for purpose and meet the needs of users;
- to maximise response rates by actively encouraging public participation in the Census and raising awareness of its important role;
- to protect, and be seen to protect, the confidential personal information collected through the Census; and
- to secure public and user confidence in the final results and deliver them in a timely manner.

Summary of the key 2011 Census design features (Chapter 1)

In summary, and subject to the approval of the Northern Ireland Assembly:

- the 2011 Census will cover everyone usually resident in Northern Ireland on census night, with a subset of information also collected from visitors who are present that night. Information will also be collected from residents in communal establishments and individuals or households with no usual or physical address;
- census questionnaires will be delivered by post to addresses on the Census Address Register (CAR). Additionally, field staff will focus delivery on addresses not on the CAR (i.e. newly built or re-developed properties);

- the public will be able to return completed questionnaires either by post, online (for the first time), or exceptionally by doorstep collection; help will be available to anyone who has difficulty in completing a census questionnaire;
- there will be a slight increase in the number of questions compared with the 2001 Census, and the questionnaire has been designed to facilitate ease of completion;
- there will be a high degree of continuity with the 2001 Census, and most questions will be asked in common across the UK;
- each proposed question meets a demonstrated need and is suitable for a self-completed questionnaire; previous censuses or tests have shown the questions to be generally acceptable to the public;
- significant changes and additions from 2001 in the questions proposed for Northern Ireland are:
 - Adaptations to accommodation for health conditions;
 - Questions on national identity and citizenship;
 - A question on main language;
 - A question on ability in English;
 - An extension to the 2001 question on language;
 - Questions on the most recent date of entry into Northern Ireland and country of previous residence for those who have lived outside Northern Ireland for a continuous period of one year or more;
 - Intended length of stay for migrants to the UK in the year before the Census;
 - A question on nature of long-term health conditions;
 - Voluntary work in the past year;
 - Extension of the travel to place of work question to cover place of study; and
 - Extension of the marital status question to cover civil partnerships.
- stringent confidentiality and security procedures will protect the information gathered in the Census and will conform to the requirements of census confidentiality, Data Protection and Freedom of Information legislation;
- there will be publicity to inform the public of the purpose and value of the Census and to give assurances about the confidentiality with which census information is treated;
- initiatives will be implemented to maximise, and measure effectively, the quality of the information collected; in particular, census coverage and quality surveys will be carried out to measure the number of people not counted by the Census and the quality of the responses given; and
- the statistical outputs from the Census for Northern Ireland will be designed to meet user requirements, and dissemination will be to a pre-arranged timetable. These will take account of the outcomes of the Review of Public Administration (RPA), and in particular the 2008/2009 Review of the Local Government Boundaries Commissioner.

Costs (Chapter 1)

On the basis of present planning assumptions, the Census is expected to cost £13.3m in the current CSR period (2008-09 to 2010-11), which will run through to census day. Additional resources will be required in the next CSR period (2011-12 to 2013-14).

Consultations and tests (Chapter 2)

The content of the 2011 Census has been informed by an ongoing programme of consultation. This began in December 2004 with the issue of a formal consultation paper on – “The Future Provision of Demographic Statistics in Northern Ireland – (Towards the 2011 Census)”¹, and four public meetings were subsequently held in March 2006. The consultation was designed to inform understanding of potential user requirements and played a central role in the design of the Census Test in May 2007. A further Information Day was held in June 2007, to which the main political parties and all Members of the Legislative Assembly (MLAs) were again invited. In addition, there has been ongoing consultation on the Census through three separate bodies; the Northern Ireland Census Advisory Group (CAG) which includes members from academia, the business and voluntary sectors, the Equality Commission and local government; the Northern Ireland Statistics Advisory Committee (SAC) – a statutory body which advises the Northern Ireland Statistics and Research Agency (NISRA), which undertakes the Census; and the Northern Ireland Statistics Coordinating Group (SCG) – an inter-departmental group with representation from all central government departments.

The proposals for the 2011 Census also take account of the results of a programme of research and testing aimed at better understanding the public’s comprehension and perception of census-related concepts, and of tests, both small and large-scale, of census question wording, questionnaire design and delivery methods. These have included a major Census Test carried out in the Belfast, Coleraine, Craigavon, Magherafelt and Fermanagh Local Government District areas on 13 May 2007. A Census Rehearsal was also conducted on 11 October 2009 in parts of Derriaghy and Moy & Benburb.

The population base (Chapter 3)

Each household will be given a 2011 Census questionnaire to complete containing questions relating to each person usually resident in the household in addition to the household as a whole. Additionally, a census questionnaire will provide space for the householder to record the number of visitors present at the address on census night and certain basic demographic characteristics such as age, sex and usual address. However, if any such visitors are normally resident elsewhere in the UK, they will also be required to supply full information at their usual residence.

Students and boarding school children will be regarded as being resident at their term-time address irrespective of where they are present on census day, thus making the Census consistent with the base for the mid-year population estimates.

All Northern Ireland residents will be enumerated at the address where they are resident at the time of the Census; the return for a household will include anyone normally resident there who happens to be away on census night.

The Census questions (Chapter 3)

The topics proposed for the Census are those that have been shown to be most needed by the major users of census information and for which questions have been devised that can be expected to produce reliable and accurate data. In each case, no other comparable and

accessible source of the information is available in combination with other items in the Census.

Consultation on the topic content for the 2011 Census has resulted in a much larger demand for questions than would be possible to accommodate on a census questionnaire that households could reasonably be expected to complete. Consequently a number of difficult decisions have had to be made in assessing the different requirements for information and balancing the needs for change against continuity.

In assessing which topics should be included in the Census, it was necessary to consider a number of criteria for evaluating the strength of users' requirements for information. These were:

- there should be a clearly demonstrated and significant need;
- the information collected was of major national importance but that data was required for small population groups and/or at detailed geographical levels;
- users' requirements could not adequately be met by information from other sources;
- there should be a requirement for multivariate analysis (that is the ability to cross-analyse one variable against the other); and
- there should be consideration of the ability for comparison with the 2001 Census wherever possible.

In addition, other factors were taken into consideration in assessing the priorities for topics. These were:

- that the inclusion of particular questions should be shown, in tests, to have had no significantly adverse effect on the Census as a whole, particularly the level of public response;
- that practicable questions could be devised to collect data which are of sufficient quality to meet users' requirements;
- the constraints of size and design imposed by a self-completion questionnaire in respect of respondent burden and accuracy of response;
- that the Census should not be used to collect data that would deliberately promote political or sectarian groups or sponsor particular causes; and
- legal constraints and/or demands imposed by domestic and European legislation.

In summary, it is proposed that information on the following topics should be collected in the 2011 Census:

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

- Address, including the postcode.

For properties from which a Census return is not received (information collected by enumerator):

- Type of accommodation and whether or not it is self-contained; and
- Estimated number of usual residents

For households:

- Type, number and names of all usual residents whether present or temporarily absent on census night;
- Type of accommodation and whether or not it is self-contained;
- Number of rooms;
- Adaptations to accommodation for health conditions*;
- Type of central heating*;
- Tenure of accommodation*;
- Type of landlord (for households in rented accommodation); and
- Number of cars and vans owned or available.

For residents in households

- Name, sex, and date of birth;
- Civil status (now includes both marital and civil partnership status*);
- Relationship to others within the household;
- Student status;
- Whether or not students live at enumerated address during term-time;
- Country of birth;
- Intended length of stay in the United Kingdom (asked of those born outside the UK and who have arrived in the UK within the year prior to census day*);
- Country last lived in and month/year of coming or last returning to live in Northern Ireland (asked of those who have lived outside Northern Ireland for a continuous period of one year or more*);
- Usual address one year ago;
- Citizenship (asked through a question on passports held*);
- National identity*;
- Ethnic group;
- Religion and religion brought up in;
- Main language*;
- Ability in English*;
- Ability in Irish and Ulster Scots*;
- Limitations due to a long-term health problem or disability*;
- Nature of long-term health conditions*;
- General health*;
- Provision of unpaid personal care;
- Educational and vocational qualifications*;
- Voluntary work*;
- Economic activity in the week(s) before the Census*;
- Actively looking for work;
- Available for work;
- Waiting to start a job;
- Non-economic activity in the week before the Census;
- Time since last employment;
- Employment status;
- Job title and description of occupation;
- Supervisor status;

- Name of employer and nature of employer's business;
- Hours worked*;
- Workplace or place of study address*; and
- Means of travel to work or place of study*.

For visitors in households

- Type and number of visitors staying on census night;
- 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 of persons within the establishment.

For communal establishments

- Nature of the establishment;
- Age group of establishment;
- Groups catered for in the establishment; and
- Management of establishment.

Topics marked * are proposed for inclusion in the Northern Ireland Census for the first time, although some of the indicated questions are extensions or developments of previous questions.

A number of other topics have been considered and evaluated but are not included in the proposals for the 2011 Census. Some topics were rejected at an early stage in planning but many were subjected to both small and large-scale-testing and were subsequently eliminated.

Data collection (Chapter 4)

Experience has shown that it is increasingly difficult to make contact with households, and this has been a major influence in shaping data collection plans for the 2011 Census. These difficulties can be attributed to: population and household growth; an ageing population; growing numbers of one-person households; changing work patterns; increase in access security control systems; a less compliant society; growing numbers of migrants; and certain groups and communities within the population who, for whatever reason, may feel outside the mainstream.

The 2011 Census enumeration will be conducted in a way that is primarily designed to achieve completeness of coverage with an efficient use of resources while, at the same time, maintaining the public's acceptance and confidence in the importance and security of the Census. Although many aspects of the Census will follow well-established and proven methodologies, changes have been introduced that will improve the efficiency of the Census operation and will provide better help to the public. For example, the use of a postal service provider to facilitate the delivery and return of completed questionnaires by post, will help

alleviate the difficulties of recruiting a large number of temporary enumerators to deliver questionnaires, and of accessing accommodation protected by security systems. Together with the option of making a return online, this will enable field staff to be more flexibly deployed, wherever necessary, in order to improve coverage, particularly in areas where households are less compliant and/or need more assistance in completing a return.

Address Register

The pre-requisite for a successful post-out strategy is the availability of a comprehensive, high quality address register for all areas of Northern Ireland. A Census Address Register (CAR) is being developed that will meet census requirements in terms of quality and coverage. This address register will be drawn from the POINTER address database which is being developed by Land and Property Services, in conjunction with local district councils and Royal Mail. Address checks will be carried out by census enumerators in their Enumeration Districts in the weeks preceding census day to validate the CAR.

Field force

A temporary field force staff, consisting of enumerators and area managers, will be employed to carry out the Census.

Questionnaire delivery and collection

Post-out by a postal service provider will be the means of delivering pre-addressed census questionnaires to households in Northern Ireland.

The option of two principal response routes will be available to enable the public to complete their census questionnaire:

- paper completion and post-back; or
- completion (for the first time in Northern Ireland and the rest of the UK) using an online questionnaire.

Field staff will undertake follow-up visits to addresses from where no response has been received.

Special enumeration procedures

The methodologies developed generally to enumerate households and communal establishments will not be successful for everyone, and it is accepted that additional procedures will have to be adopted for some special populations. These will include people with no settled place of residence, such as travelling fairs and persons sleeping rough. In addition there are other identifiable groups, dispersed throughout the population, who will require modified enumeration procedures. These include:

- those unable to understand the census questionnaire, such as non-English speakers and people with reading difficulties;
- those likely to have difficulty completing or returning a standard paper questionnaire, including the visually impaired or physically disabled; and
- those able, but unwilling, to complete a questionnaire.

Particular arrangements will be made to enable blind or partially sighted people and non-English speakers to make a census return.

In all cases, whether response to the Census is to be by postal return, online, or exceptionally by doorstep collection, the statutory obligation to make a return will not be discharged until a completed questionnaire is received. Persons refusing to comply with the statutory requirement to make a census return will be liable to prosecution and a fine. Specially trained field staff will be deployed to follow-up cases where there has been a clear indication of a householder's refusal to make a return.

Data quality and coverage (Chapter 4)

Quality is at the heart of planning the 2011 Census, and many of the innovations that were trialled in the 2007 Census Test were about improving the quality of census processes and, thus, the information collected. A census, by its nature, is designed to cover the whole population, but errors inevitably arise. A good census design will recognise this and take account of them.

In planning for the 2011 Census, the goals are to maximise the overall level of quality of data and to minimise the differences in quality between areas. A strategy will be developed for assuring the quality of the 2011 Census database before any release of output. The quality assurance process will compare the Census data against a wide range of sources both during the operation and prior to the release of the full dataset.

The output database itself will be fully adjusted using information collected from a post-enumeration Census Coverage Survey to be conducted around six weeks after census day. In addition, a small, separate Quality Survey will be undertaken after the Census to measure the accuracy of responses to individual questions.

Publicity (Chapter 4)

The Northern Ireland Statistics and Research Agency (NISRA), in close co-operation with the Office for National Statistics (ONS) and the General Register Office for Scotland (GROS) and supported by a dedicated Contact Centre, will arrange nationwide and local publicity to explain the purpose and value of the Census, to encourage householders to return completed questionnaires and to ensure that they know when and how to do so, and to give assurances about confidentiality and data security.

Special assistance will be available to anyone who, for language or infirmity reasons, has difficulty in completing a census questionnaire. Furthermore, field staff will have access to interpretation services for non-English speakers, supported by translations of a general information leaflet in a number of the languages most commonly used in Northern Ireland. These will also be available via a dedicated Census help website.

Outsourcing (Chapter 5)

A census procurement strategy, which mirrors the approach taken for the 2001 Census and is subject to the Gateway Review process, has been developed to realise efficiency savings that can accrue through outsourcing the delivery of a range of common services for the Census taking authorities. The work in this area started earlier than for the 2001 Census to allow

robust end-to-end testing of key final systems such as the data capture system. A working prototype of systems was in place for the 2009 Census Rehearsal and will be developed further for 2011. External suppliers bring with them considerable technical experience and expertise which would otherwise be unavailable to the Census Offices.

The activities that are being outsourced will include:

- the printing of census questionnaires;
- delivery of census questionnaires and the collection of completed returns via a postal service provider;
- the capture and coding of census data in electronic format;
- the design of Questionnaire Tracking systems;
- the translation, printing and distribution of supporting material and field supplies;
- the provision of online response facilities for questionnaire completion;
- a dedicated Contact Centre and supporting web-based help facility; and
- the publicity campaign.

Data processing (Chapter 5)

It is recognised that the investment of time and resources in a census is only justified if the results are made accessible to users speedily and in a clear and usable form. In keeping with the aims of the 2001 Census, it is intended that technological developments should be maximised in order to improve the accuracy, timeliness, accessibility and user-friendliness of published output from the 2011 Census.

In particular, in the area of data capture, for the first time there will be the opportunity to submit census returns online via a secure internet connection; while the Internet will be further developed as the prime means of disseminating census outputs. Census outputs will be integrated with other statistical information through the Northern Ireland Neighbourhood Information Service (NINIS).

The 2011 Census will be processed in three main phases. *Input processing* (which comprises the main *data capture and coding* stage); *'downstream' processing* (which encompasses a suite of systems to edit and adjust the data so that a fully consistent database can be prepared as the basis for output dissemination); and *output processing* (which comprises the creation of statistically protected tables and other products from an output database, and the dissemination of these products to users).

Coverage assessment and adjustment (Chapter 5)

Whilst every effort is made to ensure that everyone is counted in the Census, inevitably some households and individuals are missed. This under-enumeration does not usually occur uniformly across all geographical areas or across sub-groups of the population. A necessary process of coverage assessment and adjustment is undertaken to provide reliable estimates of the population. In the 2001 Census, this process was called the One Number Census, which adjusted the results of the Census to take account of people who were missed. For 2011, a similar approach will be undertaken but with developments focusing on a number of areas to improve the methodology.

Output dissemination (Chapter 5)

In disseminating the results of the Census much emphasis will be put on responsiveness to users' requirements on content, format and means of access, and on high standards in the production of statistics. It is proposed that outputs should be in such a form, and at varying levels of statistical and geographical detail, so as to meet the changing requirements of users, subject to the overriding requirement to protect statistical confidentiality. The structure of the geography for outputs will be similar to 2001, with Output Areas located within wards themselves located within Local Government Districts. Specific proposals will be brought forward in the light of the outcome of the Review of Public Administration (RPA) and, in particular, the 2008/2009 Review of the Local Government Boundaries Commissioner.

Confidentiality (Chapter 6)

The importance of achieving maximum coverage in a census necessitates that public participation should be mandatory. This, in turn leads to an obligation to ensure that the personal and sometimes sensitive information given in confidence by the public is treated with the strictest confidentiality.

It is recognised that the public need to be confident that their personal census records will be held securely. As in previous censuses, assurances will be given to the public that all the information provided will be treated in strictest confidence throughout all stages of the Census.

The information collected in the 2011 Census will be used solely for the production of statistics and research. Usage will comply fully with the Census Act (Northern Ireland) 1969. There are legal penalties for the unlawful disclosure of personal information collected in the Census.

Privacy and human rights (Chapter 6)

The statutory authority to require information to be provided from each of the questions to be included in the 2011 Census is considered fully compliant with both the European Convention on Human Rights and the Human Rights Act 1998 in respect to the individual's right to privacy.

The legislative process (Chapter 7)

The primary legislation that provides for the taking of a census in Northern Ireland is the Census Act (Northern Ireland) 1969. The Act prescribes that the First Minister and deputy First Minister acting jointly may direct that a census of population shall be taken.

The Census Act (Northern Ireland) 1969, provides for the conduct and reporting of a census subsequent to the laying and approval of a Census Order and Census Regulations that detail the procedures to be followed. The laying of the Census Order is currently scheduled for the 2009-2010 Assembly session, and will be subject to the approval by affirmative resolution of the Northern Ireland Assembly. Under the terms of the Act, the Census Order will prescribe:

- the date on which the Census is to be taken;

- the persons by whom, and with respect to whom, the census returns for the purpose of the Census are to be made; and
- the particulars to be stated in the returns.

Following the approval of the Census Order, Census Regulations will be laid before the Northern Ireland Assembly. These will make detailed provision for the conduct of the Census in Northern Ireland and will contain specimens of the questionnaires to be used. The Regulations require the approval, by negative resolution, of the Northern Ireland Assembly.

Legislative arrangements for the Census in England and Wales, and Scotland (Chapter 7)

Whilst separate legislative arrangements apply to the Censuses in England and Wales and Scotland, UK harmonisation will be achieved through close liaison and co-operation between NISRA, the Office for National Statistics (ONS) and the General Register Office for Scotland (GROS). The National Statistician for England and Wales and the Registrars General for Northern Ireland and Scotland have, subject to the need for approval where appropriate by their relevant legislatures, agreed to work together to achieve consistent and comparable census outputs both to meet users' requirements and to fulfil the UK's international obligations.

THE 2011 CENSUS OF POPULATION

1 INTRODUCTION

The decision on the Census

- 1.1 The Census of Population is the largest and most complex statistical exercise undertaken in Northern Ireland. Since 1951, censuses in Northern Ireland have been held simultaneously with the rest of the United Kingdom (UK) at ten yearly intervals, with the exception of the additional 1966 mid-term Census. The last Northern Ireland Census was taken on 29 April 2001 and was reported upon by the Registrar General for Northern Ireland².
- 1.2 It is proposed that, subject to the appropriate legislative approval of the Assembly, the next Census of Population for Northern Ireland should be taken on 27 March 2011. The Census will be conducted through the provisions of The Census Act (Northern Ireland) 1969, which will require Assembly approval, in the 2009-2010 Assembly session, of a Census Order and Census Regulations. It is planned that censuses will also be taken on the same day in the rest of the UK, subject to parallel legislative procedures in England and Wales and in Scotland. The purpose of this paper is to outline the content and procedures planned for the 2011 Census in Northern Ireland.

The choice of the date

- 1.3 Although the Census does not have to relate to 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 be chosen to maximise the number of households present and to ensure minimum interruptions to the delivery and collection of the questionnaires. In selecting the date a number of factors were taken into consideration:
- maximising the number of people present at their usual residence (by, for example, avoiding holiday periods);
 - maximising the number of students present at their term-time address;
 - avoiding elections (when the publicity messages may get confused);
 - harmonising the date of the Censuses across the UK;
 - allowing sufficient hours of daylight for field work; and
 - avoiding holiday periods in order to maximise recruitment/retention of field staff.

The planned Assembly elections, and similar elections in Great Britain, in May 2011 were a major consideration in proposing a date in March 2011.

Role of the Census in meeting the need for information for decisions on major issues

- 1.4 The Census, which is the largest single statistical exercise undertaken by government, remains the most important source of information on the size and nature of the population. For many years, the Census has been relied upon to underpin national and

local decision making. Some 200 countries world-wide now carry out a regular census under the auspices of the United Nations Census Programme.

Shaping Government policy

- 1.5 The Census is widely acknowledged as playing a fundamental and unique role in the provision of comprehensive and robust population statistics. Census information is needed to form policy, to plan services for specific groups of people and, especially, to make effective use of resources through the spatial distribution of resources to where they are needed. The information must be authoritative, accurate and comparable for all parts of Northern Ireland. Currently, only a census can provide the range of such information on a uniform basis both about the country as a whole and about individual small areas and sub-groups of the population in relation to one another.
- 1.6 Basic information on the population size, age, sex and location are fundamental to many government policies including those in respect of:
- ageing and pensions;
 - migration both into and out of the country, and internally;
 - long-term sustainability of Gross Domestic Product (GDP) growth and thus long-term sustainability of government revenues; and
 - labour supply and, thus, inflationary pressures.
- 1.7 Information on housing, household size and family make-up is key for:
- redressing inadequate accommodation and over-crowding; and
 - estimating local housing demand.

While other information collected as part of the Census:

- provides a better understanding of pressures on transport systems and the planning of roads and public transport using information collected on travel to and from work, and on car ownership;
- enables the identification of areas of deprivation for targeting initiatives such as Neighbourhood Renewal;
- provides information on ethnicity, qualifications and labour market status for instance, to explore the causes of deprivation and appropriate policy interventions;
- shows how many people work in different occupations and industries throughout the country, helping government and businesses to plan jobs and training policies and to make informed investment decisions.

Benchmarking

- 1.8 Importantly, the Census provides the basis for deriving many social and economic indicators such as:
- population estimates;

- employment and unemployment rates;
- birth, death, mortality and fertility rates;
- equality monitoring, in particular census information on age, sex, ethnicity, religion, and disability help to identify the extent and nature of disadvantage and to measure the success of equal opportunities policies;
- grossing-up sample survey data, in particular the Census underpins socio-economic surveys carried out by government and the private sector, as many survey results are grossed to census population counts.

Without the Census such surveys would be less reliable or would need to be larger and more costly.

Allocation of resources

- 1.9 All government departments and many other organisations, both in the public and private sectors, allocate resources on the basis of population statistics based on census estimates. For example, the Department of Health, Social Services and Public Safety (DHSSPS) allocates about £2.5bn annually to Health Service Trusts to ensure that access to services reflects real needs. Without a census, substantial funds to a range of services would be misallocated annually.

Local investment and monitoring

- 1.10 The Census drives the targeting of local services such as:
- local health for which census questions on illness are good predictors of the likely demand on the Health Service;
 - local education needs, with the Census providing information that can assist the siting of new schools;
 - local transport planning and traffic modelling;
 - development plans to ensure that development happens at the right locations; and
 - community support services, such as home help and home care.

Use by businesses

- 1.11 As part of the business case for the Census in England and Wales, the Office for National Statistics has estimated the value of census data to businesses in the UK, counted over the 10-year cycle, to be in the region of £250m. A pro-rata population based allocation of this implies a value for Northern Ireland of around £7m.

Research

- 1.12 The Census is an excellent source of data for important research purposes. The Northern Ireland Longitudinal Study is based on a large sample of census records linked together from the 1991 and 2001 Censuses, combined with other sources such as vital event data (births and deaths) and health service registrations. This provides an unrivalled source for the examination of change over time. Such studies increase our understanding of social conditions and can shed light on the impact of policies. For example, this data set has enabled the mortality rates of different socio-economic

groups to be compared. In conducting all such research, personal details are separated from census responses so that no identifiable information can be linked to the name and address of individuals. In addition, when data are published, great care is taken to ensure that reports are anonymised so that no individual data can be identified.

Alternative data sources

- 1.13 The business case for the 2011 Census included a review, undertaken in consultation with users, of alternative ways of collecting such information. The key conclusion was that the Census was still the most authoritative source of information for a wide range of uses. It provides a snapshot of the country, with consistent and comparable information for small areas and sub-populations, and allows multivariate analyses that are not feasible using any other data source.
- 1.14 Accordingly, in the absence of any sufficiently comprehensive alternative sources of information, and in order to be assured of meeting the wide range of users' needs for information, it was concluded that plans for a census in 2011 should be taken forward.

Separate consideration of the proposals for the Censuses in England and Wales, and in Scotland

- 1.15 Separate legislative arrangements provide for the Censuses in England and Wales, and in Scotland. The arrangements described in this paper, where they refer to the conduct of the Census in England and Wales, and in Scotland, whether in common with the approach taken in Northern Ireland or in its references to proposals particular to England and Wales or Scotland, will be subject to the consideration of the respective legislatures and administrations.
- 1.16 The detailed planning and preparations that are taking place regarding the conduct of the Censuses in England and Wales and in Scotland, which are proceeding on a similar timetable to that for Northern Ireland, will permit harmonisation of 2011 Census results across the UK in line with user demand. They will also provide the basis for the Censuses to be carried out efficiently while remaining sensitive to different circumstances and user needs in Northern Ireland. Continued close co-operation and joint working on the Census is also consonant with the aim of the concordat on statistics between the UK administrations.

International perspective and EU Regulations

- 1.17 In addition to being used to allocate resources within Northern Ireland and the UK, census statistics are also used by the European Commission to allocate funding to European Union member states. The European Commission needs to be in possession of sufficiently reliable and comparable data on population and housing in order to fulfil the tasks assigned to it, notably by Articles 2 and 3 of the Treaty establishing the European Community³. To this end a Regulation of the European Parliament and the Council on Population and Housing Censuses⁴ requiring Member States to provide the Statistical Office of the European Communities (Eurostat) with census-derived statistical information, or equivalent data, relating to the reference year 2011 came into force in July 2008. Whilst the method of collection of the data is not specified, there is a requirement to provide data at the level of Local Area Unit 2 (LAU2) which

in Northern Ireland equates to electoral ward. Sample surveys cannot provide robust information at this level of geography.

- 1.18 In order to meet European obligations, it will be necessary for the UK to produce census-type information relating to 2011. Aggregated statistics, agreed by the National Statistical Institutes of Member States, and to be prescribed by a subsequent Commission Regulation, will be supplied to Eurostat for use by the European Commission in support of the European Parliament. Arrangements will be made to ensure that statistical disclosure controls are in place to protect the confidentiality of any statistical data to be made accessible to Eurostat under this obligation (see also Chapter 6).
- 1.19 The UK is playing a full part in discussions to ensure harmonisation of the statistics produced by the different EU Member States. The concepts and definitions to be adopted by the EU will adhere to the Conference of European Statisticians *Recommendations for the 2010 Censuses of Population and Housing*⁵ prepared by a joint Eurostat and UN Economic Commission for Europe Working Group, to which the UK made a significant contribution.
- 1.20 The UK will also comply, as far as possible, with any statistical requirements identified by the United Nations (UN). A set of principles and recommendations for the next round of censuses throughout the world has been adopted⁶, following a meeting of the UN Statistical Commission in New York in February 2008, and all countries have been asked to produce core outputs which will be incorporated into a UN demographic publication.

Recommendations from the 2001 Census and the strategic aims for 2011

- 1.21 These proposals for the 2011 Census are based on a number of high level strategic aims. These are:
- to provide high quality, value-for-money statistics that are fit for purpose and meet the needs of users;
 - to maximise overall response rates by actively encouraging public participation in the Census and raising awareness of its important role;
 - to protect, and be seen to protect, the confidential personal information collected through the Census; and
 - to secure public and user confidence in the final results and deliver them in a timely manner.
- 1.22 These proposals take account of the important lessons learned from the review and evaluation of key processes that underpinned the 2001 Census and take cognisance of the development work that is ongoing in the rest of the UK and further afield. In addition, the efficiencies and experience that can be secured through joint working will be exploited where it is appropriate, and in Northern Ireland's best interest to do so. In its planning and development phase, account has been taken of key issues raised following reviews of the 2001 Census. In summary, these include the need to:
- agree earlier those contractual arrangements with external suppliers for aspects of the census operation that are to be outsourced, and ensure that all such

- suppliers are selected through rigorous procurement procedures, and early enough so that systems are able to be fully tested before the Census;
- develop a high quality and up-to-date Census Address Register to increase the efficiency of the delivery of census questionnaires;
 - develop robust field management and questionnaire tracking systems to enable better central control of field processes and activities;
 - undertake detailed engagement with stakeholders, and to review consultation processes to ensure that the needs of all parts of the community are taken into account; and
 - review the mechanisms to protect statistical confidentiality without eroding the utility of the data.

Summary of the key 2011 Census design features

1.23 In summary it is proposed that:

- the 2011 Census will cover everyone usually resident in Northern Ireland on census night, with a subset of information also collected from visitors present on census night. Information will also be collected from residents in communal establishments and individuals or households with no usual or physical address;
- in the majority of cases, census questionnaires will be delivered by post. Field staff will undertake follow-up visits to addresses from where no response has been received;
- the public will be able to return completed questionnaires either by post or online. Special arrangements will be made to collect questionnaires from households who are otherwise unable to complete returns in these ways;
- help will be available to anyone who has difficulty in completing the Census questionnaire;
- there will be a slight increase in the number of questions compared with the 2001 Census, but the questionnaire has been re-designed to make it easier to complete;
- there will be some differences in the questions proposed for the 2011 Census in Northern Ireland compared to the 2001 Census, (and some further differences compared with the questions proposed for inclusion in the Censuses in the rest of the UK);
- significant changes from 2001 in the questions proposed are:
 - adaptations to accommodation for health conditions;
 - questions on national identity and citizenship;
 - a question on main language;
 - a question on ability in English;
 - an extension to the 2001 question on language;
 - questions on the most recent date of entry into Northern Ireland and country of previous residence for those who have lived outside Northern Ireland for a continuous period of one year or more;
 - intended length of stay for migrants to the UK in the year before the Census;
 - a question on nature of long-term health conditions;

- voluntary work in the past year;
- extension of the travel to place of work question to cover place of study; and
- extension of the marital status question to cover civil partnerships.

Details of these and other changes to the topic content are set out in Chapter 3;

- each question included in the proposals meets a demonstrated need and is suitable for a self-completed questionnaire; previous censuses or tests have shown the questions to be generally acceptable to the public;
- stringent confidentiality and security procedures will protect the information gathered in the Census and will conform to the requirements of the Census (Confidentiality) (Northern Ireland) Order 1991 and Data Protection and Freedom of Information legislation;
- the Census relies on public co-operation, and to help achieve this there will be publicity to convey to the public the purpose and value of the Census and to give assurances about the confidentiality with which personal information is treated;
- initiatives have been put into place to maximise, and measure effectively, the quality of the information collected; in particular, census coverage and quality surveys will be carried out to measure the number of people not counted by the Census and the quality of the responses given; and
- the statistical outputs from the Census will be designed to meet user requirements, and dissemination will be to a pre-arranged timetable.

Cost and financial control

1.24 On the basis of present planning assumptions, the 2011 Census in Northern Ireland is expected to cost £13.3m over the current CSR period of 2008-09 to 2010-11, and further resources will be required into the next CSR period. The breakdown for this period is:

Financial year	2008-2009	2009-2010	2010-2011	Current CSR
Cost (£ millions)	1.8	2.2	9.3	13.3*

*the figures may not sum to the total due to rounding

1.25 Costs of the census operation will be closely controlled and monitored. The planning and management of the Northern Ireland Census is also being subjected to the Gateway Review process. The largest elements of the total cost are the field operation - the delivery and collection of the questionnaires - and the processing of the data. In a drive to improve the cost effectiveness of the operation, NISRA, in conjunction with ONS, is taking forward the outsourcing of these and some other aspects of the 2011 Census, building on the success of the 2001 experience (see paragraphs 5.3-5.9).

2 CONSULTATIONS AND CENSUS TESTS

Consultation process

2.1 The design and content of the 2011 Census has been shaped by three principle determinants:

- the demands and requirements of users of census statistics;
- the evaluation of the 2001 Census; and
- the advice and guidance of international census agencies and organisations with experience of similar operations.

2.2 These have been informed by extensive consultation, through international liaison, formal advisory committees, topic-related working groups and ad hoc public meetings. In December 2004, an initial Census consultation exercise on the 2011 Census, ‘The Future Provision of Demographic Statistics in Northern Ireland – (Towards the 2011 Census)’, was launched. Users’ views were sought on a number of issues which, from a strategic perspective, were fundamental to the development of the 2011 Census. These included:

- the general provision of population statistics, including where improvements should be pursued and how these might be achieved;
- the high level operational implications associated with enhancing the population base for the 2011 Census; and
- the 2011 Census question content.

Throughout the development stages of the 2011 Census, information has been disseminated through the Northern Ireland Statistics and Research Agency (NISRA) website, alongside the results of the 2001 Census.

2.3 Details of the initial consultation were issued to over 1,100 key users. Those consulted included:

- leaders of the main political parties in Northern Ireland, MPs, MEPs and MLAs;
- key advisory groups such as the Northern Ireland Census Advisory Group (CAG), the Northern Ireland Statistics Advisory Committee (SAC) and the inter-departmental Statistics Co-ordinating Group (SCG);
- the Education and Library Boards, the Health and Social Services Boards, Local District Councils and Local Strategy Partnerships;
- key officials within government departments in the Northern Ireland Civil Service; and
- other census users.

2.4 The initial consultation process ran from December 2004 until March 2005. There were 50 responses to the consultation paper from a variety of users, including central government, local government, health boards, the education sector, special needs groups including Disability Action, Sign Language Centre, the Equality Commission, the Electoral Office, the Northern Ireland Tourist Board and Save the Children. The responses were collated and included in a detailed consultation summary report that

was made publicly available via the NISRA website⁷. Among the main points to emerge from the consultation included requests for:

- a more general question on language covering Ulster Scots and Sign Language;
- better information on ethnicity providing more details on those who are white/mixed and also Country of Birth/Nationality to assist with the identification of migrants;
- enhanced information on health detailing both the nature of the illness and the impact of the illness on daily living;
- better information on religion, in particular, the need to split the ‘none/not stated’ categories; and
- information on sexual orientation.

In addition to the above, it was clear from the responses that users not only had a continuing requirement for the type of information collected in the 2001 Census, but that demand for census topics and questions to be included in the 2011 Census questionnaire gave rise to significantly more questions than there will be space for on the questionnaire. This was also the position in other parts of the UK.

2.5 The responses to the Northern Ireland consultation exercise were considered alongside those that emerged from similar consultation exercises conducted by the Office for National Statistics (ONS) and the General Register Office for Scotland (GROS) and formed the basis of the proposed content of the 2007 Census Test questionnaire. The proposals were presented publicly at three Census Information Days held in March 2006 in Belfast, Enniskillen and Limavady. In June 2007, a further User Information Day was held at the Lisburn Civic Centre, focusing on developments in the choice of topics that were proposed for inclusion in the 2011 Census questionnaire.

2.6 In addition, there has been ongoing consultation on the Census through three separate bodies; the Northern Ireland Census Advisory Group (CAG) which includes expertise from a range of backgrounds - academia, the business and voluntary sectors, the Equality Commission and local government; the Northern Ireland Statistics Advisory Committee (SAC) - a statutory body which advises NISRA, which undertakes the Census; and the Northern Ireland Statistics Coordinating Group (SCG) - an inter-departmental group with representation from all central government departments.

Liaison with community groups

2.7 Closer liaison with community groups and other bodies will aim to ensure that the Census meets not only the statistical needs of users, but that disability and other equality issues are properly addressed such that the Census is fully compliant with the obligations of equality legislation. Specific issues are referred to in more detail in Chapters 3 and 4.

Census tests

2.8 The proposals for the 2011 Census have also taken account of the results of a programme of research and testing aimed at better understanding the public's

comprehension and perception of census-related concepts, census question wording, questionnaire design and delivery methods.

2.9 Early planning, testing and evaluation are essential processes for the success of the 2011 Census. The purpose of conducting voluntary tests prior to a census is to assess the wide range of different aspects to the census operation, from public acceptability of the questions and the operational procedures, to the various stages of data processing. Census users' changing needs and developments in technology have led to innovations in the census operation that must be thoroughly tested before they are adopted, allowing time to make changes and then to re-test where necessary. In particular, the 2011 Census aims to adopt:

- a new questionnaire design;
- new delivery and collection methods;
- new outsourced technologies and operational targeting methodologies including address checking; and
- more flexible deployment of follow-up resources.

2.10 A major Census Test was held in Northern Ireland on 13 May 2007 in 96 small areas each comprising around 150 households in parts of the five Local Government Districts of Belfast, Coleraine, Craigavon, Magherafelt and Fermanagh. The areas in question covered parts of the eight Parliamentary Constituencies of East Londonderry, Fermanagh and South Tyrone, Mid Ulster, Upper Bann and the four Belfast constituencies. Northern Ireland party leaders and those Westminster Members of Parliament, whose constituencies were included in the Census Test areas were informed in advance regarding the start of the fieldwork. These areas were chosen because they exhibit specific socio-economic characteristics known to present difficulties for the enumeration process. These include evidence of poor addressing, enumerating an increased incidence of student and migrant worker accommodation and holiday homes. The Census Test was supplemented by an Evaluation Survey in which a sub-sample of approximately 1,000 households were visited by interviewers and respondents were asked for the views on issues such as the clarity of the questions and the acceptability of asking questions that some people might consider sensitive.

2.11 The evaluation of the information collated through the 2007 Census Test has played an important part in shaping the methodological approach for the 2011 Census. The Census Test also provided a useful insight into the requirements for the systems and services that will support the census operation. In addition to the general development of census processes, the Census Test was also designed to:

- provide comparative data on two design options – the use of a postal service provider to deliver census questionnaires instead of the use of census enumerators;
- examine the impact of new questions (e.g. income) and the design of census questionnaires;
- incorporate an operational test of the systems being designed to ensure a successful field operation for the 2011 Census (e.g. contact centre for helping individuals to complete a census questionnaire, how questionnaires are tracked through a Questionnaire Tracking system to ensure maximum response through the speedy follow-up of non-responders); and

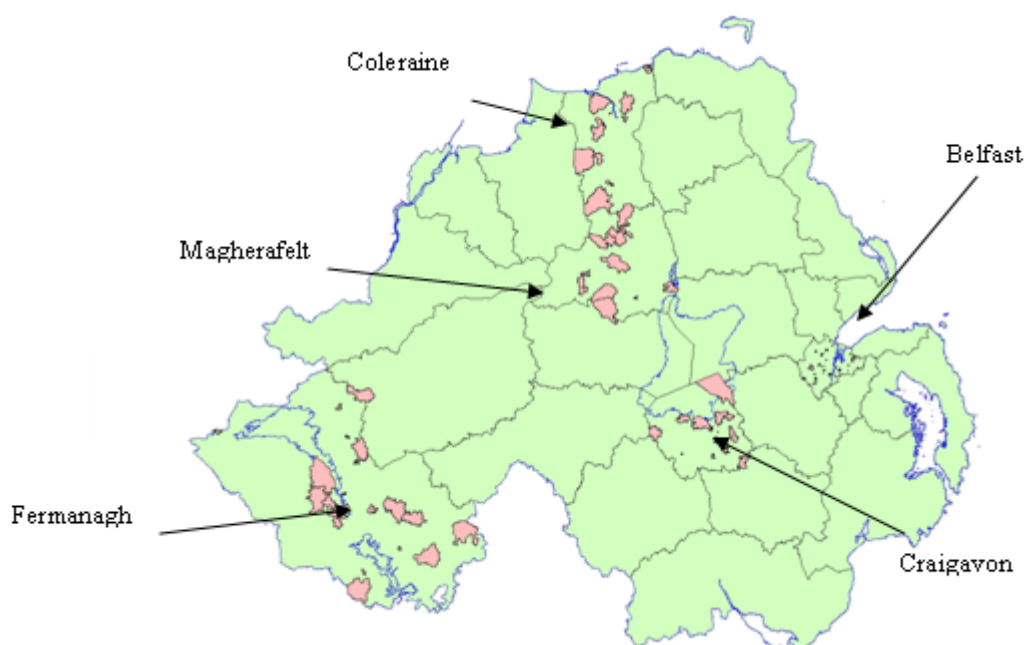
- test the recruitment, training and payment aspects of field staff that are essential to the census operation.

2.12 Evaluation Reports from the 2007 Census Test are available on the NISRA website ⁸. As a result of its findings, it is proposed to change several of the procedures followed in the 2001 Census. Key changes include:

- in the majority of cases, delivery of census questionnaires by post;
- the approach to, and the extent of, outsourcing the recruitment, training and payment of the enumeration field force; and
- using a Questionnaire Tracking system to track census questionnaire movement and monitor local area response rates.

2.13 A map of the Census Test locations is shown at Figure 1:

Figure 1 – Locations for the 2007 Census Test



2.14 In addition to the major 2007 Census Test, smaller-scale tests and research were carried out over the period 2005-2008. These ranged from establishing public acceptability of questions and terminology (conducted primarily through face-to-face consultation events, focus groups and cognitive research) to assessing the feasibility of innovative field activities and the effectiveness and coverage of existing address lists, conducted through field tests.

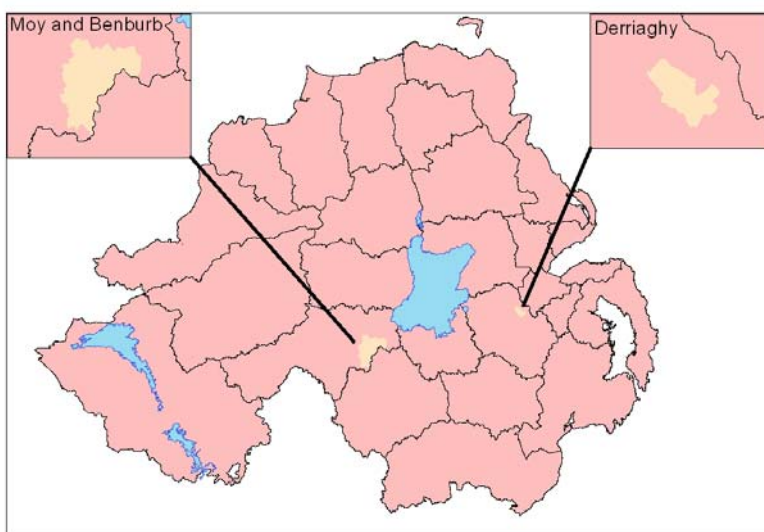
2.15 It is noted that, in particular, the inclusion or exclusion of questions in the 2007 Census Test did not in any way infer that final decisions have been made in respect of the 2011 Census questionnaire. The Census Test was specifically used to test the clarity and acceptability of potential new questions, while conversely some established questions from 2001 were not included in the 2007 Census Test. These decisions will ultimately be decided through the legislative process, in the 2009-2010 Assembly session when the Census Order and Regulations are brought forward.

Chapter 3 of this document discusses the content of the 2011 Census in more detail, and Chapter 7 describes the legislative process.

Census Rehearsal

- 2.16 A Rehearsal for the 2011 Census in Northern Ireland took place on 11 October 2009, with the aim of ensuring that all the procedures for the delivery, collection and capture of census questionnaires will be effective. In addition it aimed to ensure that the supporting public interface services (e.g. Contact Centre and Web Self Help) are fit for purpose. The Census Rehearsal covered a diverse range of addresses that adequately embraced the planned procedures for the 2011 Census. The Rehearsal covered some 5,000 households in the Derriaghy area of Lisburn Local Government District and the Benburb and Moy areas of Dungannon Local Government District. There were six urban area Enumeration Districts (EDs) each comprising around 600 households and five rural area EDs each comprising around 365 households, chosen to simulate actual census-type conditions by including a cross-section of the population and types of housing. Further information on the 2009 Census Rehearsal is available on the NISRA website (<http://www.nisranew.nisra.gov.uk/rehearsal.htm>).
- 2.17 The aim was to maximise the success of the 2011 Census field operations and supporting systems, particularly of new and innovative procedures and systems, by proving:
- the methodological approach for the field work;
 - the key field support systems;
 - data capture and coding; and
 - the communication of key messages to the public and stakeholders.
- 2.18 A Census rehearsal in England and Wales took place on the same date as the Northern Ireland rehearsal while a rehearsal was conducted in Scotland earlier in 2009. A map of the NI Census Rehearsal areas is shown at **Figure 2**:

Figure 2 - Location of 2009 Census Rehearsal



3 POPULATION AND TOPICS TO BE COVERED BY THE CENSUS

The population base

- 3.1 Traditionally each decennial census covers all the people in Northern Ireland, and this is again proposed for the 2011 Census. Prior to the 2001 Census the enumeration base was 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 before 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 count visitors in order to reduce the burden on the public.
- 3.2 There was some evidence, however, that not asking for information about visitors resulted in a lack of clarity as to where visitors should be recorded. Consequently, although it is again proposed to enumerate persons where they are usually resident, information on visitors present in households on census night - including overseas visitors - will also be collected (see paragraphs 3.91-3.92).
- 3.3 Each household will be given a 2011 Census questionnaire to complete, containing questions relating to each person usually resident in the household as well as to the household as a whole. Additionally, there will be space for the householder to record the type, number and name of visitors present at the address on census night and certain basic demographic characteristics such as age, sex and usual address. However, if any such visitors are normally resident elsewhere in the United Kingdom, they will also be required to supply full census information at their usual residence.
- 3.4 As before, students and boarding school children will be regarded as being resident at their term-time address irrespective of where they are present on census day, thus making the Census consistent with the base for the mid-year population estimates.
- 3.5 People resident in some types of communal establishments, such as hotels and hospitals, will be given individual questionnaires for completion. Separate arrangements will be made for the enumeration of other types of establishment such as prisons and military camps (see Chapter 4).
- 3.6 Hence all Northern Ireland residents will be enumerated at the address where they are usually resident at the time of the Census; the return for a household will thus include anyone normally resident there who happens to be away on census night. The resulting counts of the number of people usually resident in an area will form the basis of the population figures used to inform the allocation of resources to local government and health authorities. Because of the importance of making these figures as accurate as possible, people in households where no one was present on census night will be required to complete a census questionnaire on their return to their usual residence, if this is within six months of census night. Absent households that do not complete a census questionnaire within this period are likely to be imputed as part of the coverage assessment process (see paragraph 5.22 – 5.24).

Revised definition of a ‘household’

- 3.7 It is proposed to adopt a revised definition of what constitutes a household, with the aim of improving response rates, particularly at addresses with multi-occupancy. In the 2001 Census (and the previous census) enumerators were instructed to deliver a census questionnaire to each individual household being 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’ was defined as: *sharing at least one meal a day or sharing a living room or sitting room*.
- 3.8 However, difficulties were encountered by householders in interpreting the definition of a ‘household’, and with the proposed move to a post-out methodology with its concomitant loss of door-step contact, it was felt that, for the 2011 Census, a more intuitive definition of household was required. In particular, it was felt that the term ‘common housekeeping’ was becoming increasingly outmoded and misunderstood. Further consultation with users, and a research and testing programme with the public, was undertaken. The aim was to devise a more readily understood concept that both reflected social change and modern living conditions, particularly within the circumstances of multi-occupied dwellings, and was consistent with the harmonised definition that was recommended for use in 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”.*

- 3.9 Although this definition does not provide consistency with the 2001 Census, it performed well: cognitive research and post-test evaluation showed that respondents did not have difficulty in understanding it and that no problems were encountered. Furthermore, the new definition is entirely consistent with the current Conference of European Statisticians *Recommendations for the 2010 Censuses of Population and Housing*⁵. However, in order to avoid lingering ambiguities in determining what elements of living accommodation are shared, a further revised definition is being 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 who share cooking facilities and share a living room or sitting room or dining area”.

Requirements for topics

- 3.10 The topics proposed for the 2011 Census are those that have been shown to be most needed by the major users of census information and for which questions have been devised that can be expected to produce reliable and accurate data. In each case, no other comparable and accessible source of the information is available in combination with other items in the Census.
- 3.11 As indicated in paragraph 2.4, the response to the initial 2011 consultation exercise resulted in a much larger demand for questions than would be possible to accommodate on a census questionnaire that households could reasonably be expected

to complete. 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 Northern Ireland and sexual identity. Subsequently, cases were made for further topics such as: number of bedrooms, fertility and intention to stay in Northern Ireland. In coming to a final selection of questions some difficult decisions have had to be made in assessing the different requirements for information and balancing the needs for change against continuity. A number of criteria formed the basis of evaluating the strength of the case made by users for each topic.

Criteria to meet user need

- 3.12 *Topics must meet a significant and clearly demonstrated user need.* Users' needs could be justified in terms of, for example, significant resource allocation, improved service provision, policy development or policy monitoring. It is essential, therefore, that every question asked has a specific purpose, and that the data collected are of major importance.
- 3.13 The Census is particularly appropriate for topics about which users require *detailed information for small geographic areas and/or information about small population sub-groups* that cannot be sufficiently identified through other means, such as administrative records or sample surveys. Information required for broad geographic areas only (such as at the local government district or regional level) may be better obtained by other means (for example, sample surveys) depending on the detail of the cross-classification required. Equally, if the need is restricted to information about a few specific small areas, other methods of data collection might be more appropriate.
- 3.14 A key benefit of census data is the *ability to analyse particular variables against one another*. A requirement to undertake such multivariate analysis will strengthen the case for inclusion of a topic in the Census. The topics proposed in this paper are mutually supporting; that is, each one will provide information that will make the others more useful. This is a particularly valuable aspect of a census, 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 two or more topics can be analysed. Answers from the individual people forming households and families can thus 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.
- 3.15 Finally, *statistical comparison with previous censuses* is an important aspect of census analysis. Wherever possible, close attention has been given to comparability with the content of the 2001 Census questionnaire.

Additional criteria

- 3.16 There were some additional factors taken into consideration in evaluating what information could be collected from the Census and assessing the priorities for topics, namely:

- the inclusion of particular questions should be shown, in tests, to have had no significantly adverse effect on the Census as a whole, particularly the level of public response; and
 - the ability to devise practicable questions to collect data which are of sufficient and measurable statistical quality to meet users' requirements for information.
- 3.17 Moreover, the Census is compulsory and is carried out on a self-enumeration basis. Under current Northern Ireland legislation, each householder is required to complete all relevant questions on the questionnaire. This imposes constraints on the types of data that can be collected if high quality and accurate outputs are to be produced. Therefore the Census should not, in general:
- ask sensitive or potentially intrusive questions that would result in an unacceptable level of non-response;
 - ask questions that require a lengthy explanation or instruction to ensure an accurate answer (since research has shown that people often do not read such instructions); or
 - seek information not readily known or that people are unlikely to remember accurately and which, as a consequence, is likely to be unreliable.
- 3.18 Consideration has also been given as to whether or not data are available from other sources. Similar or surrogate data may, for example, be collected by another government department or organisation, or there may have been surveys already conducted (or planned to be conducted) that will provide the data, or the data may be available from administrative records. In keeping with the Code of Practice for Official Statistics 2009⁹, the 2011 Census should, therefore, generally only seek to collect information for which there is no other viable source.
- 3.19 An extensive range of information is currently produced from economic censuses and surveys, administrative sources and a comprehensive programme of population and household surveys. Whilst surveys are not able to collect the detailed information that can be obtained from the Census for small population sub-groups or small areas, there are general benefits associated with interviewers collecting the data rather than the self-enumeration methodology used in the Census (for example, the ability to probe into more detail and to resolve uncertainties). Surveys may also hold an advantage over the Census in terms of timeliness of outputs.
- 3.20 The *burden on the respondent* is also something which has to be considered when designing a census questionnaire. Therefore the length of, and the available space on, the questionnaire has to be limited and the design and size of a question is an important factor in deciding whether or not particular information can be collected by the Census. Although the 2011 Census questionnaire is one page-per-person longer than the 2001 questionnaire, evidence from tests suggests that this increase is not expected to affect response unduly.
- 3.21 In addition to these factors, the Census should be seen to be an exercise *carried out purely for statistical purposes*. Therefore, the Census should not be used to collect data that will deliberately promote particular groups, or sponsor particular causes.

- 3.22 Finally, consideration has been given to *the legal and statutory requirements*. The Census (Northern Ireland) Act 1969, restricts – to some degree – what information can be collected from the Census. The potential requirements arising from the European Union’s recently adopted (July 2008) Regulation on censuses of population and housing⁴ and current international guidelines relating to census content, which are made to facilitate international comparisons of statistical outputs, have also been considered. Recommendations made by the United Nations, the UN Economic Commission for Europe, and Eurostat have also been taken into account in shaping the content of the 2011 Census questionnaire.

Selected topics

- 3.23 In summary, it is proposed that information on the topics listed below should be collected in the 2011 Census.

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

- Address, including the postcode.

For properties from which a Census return is not received (information collected by enumerator):

- Type of accommodation and whether or not it is self-contained; and
- Estimated number of usual residents

For households:

- Type, number and names of all usual residents whether present or temporarily absent on census night;
- Type of accommodation and whether or not it is self-contained;
- Number of rooms;
- Adaptations to accommodation for health conditions*;
- Type of central heating*;
- Tenure of accommodation*;
- Type of landlord (for households in rented accommodation); and
- Number of cars and vans owned or available.

For residents in households

- Name, sex, and date of birth;
- Civil status (now includes both marital and civil partnership status*);
- Relationship to others within the household;
- Student status;
- Whether or not students live at enumerated address during term-time;
- Country of birth;
- Intended length of stay in the United Kingdom (asked of those born outside the UK and who have arrived in the UK within the year prior to census day*);

- Country last lived in and month/year of coming or last returning to live in Northern Ireland (asked of those who have lived outside Northern Ireland for a continuous period of one year or more*);
- Usual address one year ago;
- Citizenship (asked through a question on passports held)*;
- National identity*;
- Ethnic group;
- Religion and religion brought up in;
- Main language*;
- Ability in English*;
- Ability in Irish and Ulster Scots*;
- Limitations due to a long-term health problem or disability*;
- Nature of long-term health conditions*;
- General health*;
- Provision of unpaid personal care;
- Educational and vocational qualifications*;
- Voluntary work*;
- Economic activity in the week(s) before the Census*;
- Actively looking for work;
- Available for work;
- Waiting to start a job;
- Non-economic activity in the week before the Census;
- Time since last employment;
- Employment status;
- Job title and description of occupation;
- Supervisor status;
- Name of employer and nature of employer's business;
- Hours worked*;
- Workplace or place of study address*;
- Means of travel to work or place of study*.

For visitors in households

- Type and number of visitors staying on census night
- 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 of persons within the establishment.

For communal establishments

- Nature of the establishment;
- Age group of establishment;
- Groups catered for in the establishment; and

- Management of establishment

3.24 Topics marked * are mostly proposed for inclusion in the Census in Northern Ireland for the first time, although some of the marked questions are extensions or developments of previous questions. All other topics were included, in one form or other, in the 2001 Census.

3.25 The 2009 Census Rehearsal was carried out as a full dry-run of the 2011 Census and, accordingly, included all the topics listed in paragraph 3.23. The questions that are being proposed are described in more detail in the following paragraphs. Subsequently, the questions to be included in the Census itself will be set out in subordinate legislation (the Census Order and Census Regulations) to be laid before the Northern Ireland Assembly in the 2009-2010 session (see paragraph 7.3).

Questions to be asked at all addresses

Address and postcode

3.26 The first field activity of the Census to be undertaken by census enumerators in the weeks preceding census day will be to validate the Census Address Register (CAR) listings pertinent to their Enumeration District. This will ensure the comprehensiveness of the Census delivery exercise. (A post-out methodology, together with the development of a CAR, are innovations for the Census in Northern Ireland, and are described more fully in paragraphs 4.9-4.14). The full postal address including postcode will be automatically printed onto each census questionnaire making it unique to that household (or communal establishment). The householder (or manager of the establishment) will be asked to check that the address information is correct and to amend it if it is not.

3.27 As well as facilitating delivery of census questionnaires, the address helps ensure the correct handling of the questionnaire by the field staff, and allows a check to be made on the receipt of those questionnaires that are returned by mail.

3.28 In 2001, the Output Areas used for the presentation of census statistics (see paragraphs 5.42-5.43), were defined in terms of postcodes – each Output Area was the aggregation of a number of unit postcodes. In order to preserve the confidentiality of 2001 Census data for individual people and households, statistics – other than simple headcounts – were released only for sufficiently large aggregates of postcodes (see paragraph 6.4). With the recent advances in Geographic Information Systems (GIS), postcodes may no longer remain as a constraint in the construction of Output Areas. Whichever method is used to define Output Areas, the confidentiality of census respondents will be a key consideration in the release of any census outputs.

3.29 The person responsible for completing each census questionnaire will enter the name of each household resident to be included on the questionnaire. This helps to ensure that the enumeration is complete and enables any queries to be directed to the right people if it is necessary to check for any missing information.

Questions to be asked of each household

- 3.30 Some questions will be asked about each household as a whole. Information on the **number of households** is used in the planning, funding and management of services supplied to households generally. In addition, a wider range of census statistics about people and information on households and housing will aid decisions on rural and urban development policies. Statistics derived from the Census will also help define areas with problems of deprivation and enable policies and resources to be directed to areas with special needs.
- 3.31 Where accommodation is unoccupied on census night and no questionnaire is returned, a few basic facts about the property will be recorded and used to complement the information collected from occupied accommodation. Households which are entirely absent from their usual address on census night will be required to complete a census questionnaire on their return, if this is within six months of census night.

Questions about housing

- 3.32 The Census will provide information about the accommodation occupied by each household. It will also provide a count of dwellings, including vacant dwellings, and of dwellings shared by two or more households. This will show the way in which the housing stock is being used and will provide 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.
- 3.33 It is planned to ask only a small number of census questions on the household accommodation as listed in section 3.23 and detailed in paragraphs 3.35 to 3.40.
- 3.34 At the small area level, the Census is the only source of nationally comparable information on housing. 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 will be asked.

Type of accommodation and self-contained accommodation

- 3.35 Questions on the **type of accommodation** occupied by the household and whether or not that accommodation is **self-contained** will be used to identify separate dwellings and the characteristics of the accommodation in dwellings shared by two or more households. Households accommodated in caravans and other temporary structures will be identified. Central government, local district councils and other users have confirmed the ongoing importance of collecting this data to facilitate analysis of changes in housing supply and demand, to understand variations in multi-occupancy and to identify deprived areas.

Number of rooms

- 3.36 A question on the **number of rooms** within the accommodation will help show, together with the number and characteristics of people in each household, 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 indices of deprivation. 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.

Adaptations to accommodation for health conditions

- 3.37 Questions on household facilities (bath, shower, toilet) have a long history in the Census, but household access to such facilities is becoming virtually universal and there was general agreement in the consultation that the need for such a question was declining. Users did however note that accessibility was an issue for many people, for example people with disabilities. Work has been undertaken with, among others, the Equality Commission to develop a simple question that looks at adaptations to accommodation for health conditions.

Type of central heating

- 3.38 A question on the **type of central heating** will continue to provide a useful indicator of basic housing standards and the information will be used by central government, local district councils and other users to facilitate work on fuel poverty and deprivation.

Tenure of accommodation and type of landlord

- 3.39 Questions on the **tenure of accommodation** and **type of landlord** (where the accommodation is rented) will show how much of the housing stock in each area is in owner-occupation and whether or not it is subject to purchase by mortgage, or is Northern Ireland Housing Executive housing, privately let, provided by housing associations or held by other types of tenure. The information will help central and local government to assess changes in housing demand to allocate resources and to review and develop housing plans and policies. It will also be used by the housing industry in analysing the housing market and assessing possible mismatches between housing supply and demand. Evaluation of the 2001 Census showed that the use of the phrase 'rent-free' caused confusion for some people whose rent was paid through housing benefit, and therefore (incorrectly) classified their household as living rent-free. The question wording has been modified to clarify this.

Household transport

- 3.40 A question, included in the Census since 1971, will ask 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 and will in particular help 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 will also be 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, in informing local strategic and transport plans.

Questions to be asked of residents in households

- 3.41 About a half of the questions addressed to residents in households will apply to everyone; the questions relating to qualifications, voluntary work, economic activity, occupation and industry will not be asked of children aged under 16.

Basic population characteristics

- 3.42 The primary purpose of the Census is to give an accurate and authoritative count of the **number of people** in Northern Ireland and to show where they usually live, and so provide a new and up-to-date benchmark for annual mid-year population estimates for local areas. It is widely accepted that population estimates are central to every national system of official statistics; they are used in statistical formulae that inform the spatial allocation of large sums of public money.
- 3.43 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 migration based on sources such as patient registrations with doctors and information from other survey sources. Without the periodic corrective effect of a census count, these estimates, particularly at the local area level, would become progressively less reliable.
- 3.44 Long-term policies need to take account of future populations. Population estimates revised in the light of the Census will be the basis for making projections of the number of people and households in future years, and will be used to assess likely demand for goods and services in both the public and private sectors.
- 3.45 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 a variety of purposes such as planning provisions for state pensions and life assurance¹⁰. Analyses of persons in households by combinations of age, sex, marital status and **relationship** will give information on different types of household, such as those comprising lone-parent families or two persons of pensionable age, and will enable statistics to be produced on separate family units. The following questions will be asked.

Sex, date of birth and civil status

- 3.46 Apart from serving the essential needs for national and local population statistics described above, information on **sex, age** (determined by **date of birth**) and **civil status** is key for 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 will be used to cross-analyse all other census variables by sex, age and marital status, for example to estimate the numbers and ages of those married women who are employed in particular occupations or industries.

- 3.47 Following the enactment of Civil Partnership legislation in 2004, the 2001 census question on marital status has been changed to provide information on wider **civil status** including same-sex civil partnership status.

Relationship in household

- 3.48 In households of two or more people, a question will ask about the **relationship between each person in the household**. This information will provide statistics of households analysed by family composition, and will be 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.

Migration

- 3.49 A question, included in the Census since 1961, will ask the **usual address of each person one year before the Census**. Where this is different from the current usual address, statistics will 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 will also be derived. The figures will show arrivals from outside Northern Ireland, but not those leaving, in the year before the Census. The other UK Census Offices will be able to provide information on those who moved from Northern Ireland to Great Britain in the year before the Census.
- 3.50 Migration patterns have changed greatly in Northern Ireland in recent years. Historically, Northern Ireland experienced a net population loss to migration, when the number of emigrants exceeded the number of immigrants. In the 1970s, this net loss was of the order of 10,000 people in some years. In the 1990s and the early part of this decade, the numbers of immigrants and emigrants were broadly in balance. In recent years, the number of immigrants has increased while emigrant numbers have stabilised leading to net population growth from migration. There are policy interests in establishing more information about immigrants and, in particular, the numbers of recent immigrants who are people returning to Northern Ireland. Accordingly, additional migration questions are proposed. Firstly, in order to distinguish short-term migrants from usual residents, those who were not born in the UK and have arrived to live in the UK in the year prior to census day will be asked about their **intended length of stay in the United Kingdom**. Next, all respondents will be asked if they have **ever lived outside Northern Ireland for a continuous period of one year or more**, and those who have (which will by definition include nearly all people born outside Northern Ireland) will be asked for the **country they last lived in** and the **month and year of their most recent entry to Northern Ireland** to live.
- 3.51 This information is particularly important since migration accounts for much of the growth or decline of the population of areas between censuses. The information collected in the Census will allow inferences to be made about the level and pattern of migration in other years. It is most important, for this purpose, that there is a complete count, and a better understanding of, the number of people and households moving in

the year prior to the Census. Estimation of the number of short-term migrants is currently a focus of particular concern. 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, although it is acknowledged that the Census can provide information for one point in time.

- 3.52 The traditional question on **country of birth** will provide information on people resident in Northern Ireland but born in England, Wales, Scotland, the Republic of Ireland or elsewhere. The Regulation of the European Parliament and of the Council (No. 763/2008)⁴ names ‘country of citizenship’ as one of the required outputs from the Census. It is proposed to meet this requirement through a question on passports. The proposed questions on **citizenship** and **country of birth** will provide information on the numbers and circumstances of (sometimes small) immigrant communities from various countries, who may have particular needs, in order to support resource allocation and policy development.

Cultural characteristics

Ethnic group and national identity

- 3.53 A question on **ethnic group** was first included in a census in Northern Ireland in 2001. The information has enabled central and local government and health authorities to allocate resources and plan programmes taking account of the special needs of ethnic minority groups. In particular, response to the question has provided baseline figures against which the Government can monitor possible racial disadvantage within minority groups. The classification of ethnic groups used in the Census is now widely regarded as a standard for inter-censal surveys and ethnic monitoring.
- 3.54 NISRA proposes to include a question again in the 2011 Census to meet a wide range of uses of ethnicity group data, including:
- to enable organisations to meet their statutory obligations under Section 75 of the Northern Ireland Act 1998 (where other sources of data do not adequately provide accurate data for small and geographically dispersed ethnic minority populations);
 - 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.
- 3.55 The categories proposed for the Northern Ireland 2011 Census question on ethnic group are the same as those included in the 2001 Census questionnaire. The question continues to adopt that mix of geographic origin and colour characteristics that testing in the 1990s had shown to be publicly most acceptable and from which the most useable statistics could be obtained. Whilst ethnicity is clearly a dynamic characteristic when considered nationally – and the Census must seek to reflect this – an equally important criterion is the ability to compare the results from one census to another. To that end the question must retain a degree of stability over time.

- 3.56 In order to make provision for those people, regardless of their broad ethnic group, to indicate their identity as being British, Irish, Northern Irish, English, Scottish, Welsh or 'other', a new additional and separate question will ask about **national identity**.
- 3.57 Although different forms of the ethnic and national identity question are being proposed in the rest of the UK (to reflect different information requirements there), the variants will allow statistics to be produced which will be broadly comparable both throughout the UK and, for ethnicity, with statistics from the 2001 Census.

Religion

- 3.58 A question on **religion** has traditionally been included in the Census in Northern Ireland. A second question was introduced in the 2001 Census on 'religion brought up in' (asked only of those with no current religion) and was used with the long-standing religion question to provide information of use in equality monitoring. The intention is to incorporate similar questions in the 2011 Census which will again allow respondents to record themselves as having no religion.
- 3.59 As with ethnicity/identity, the formats of the religion questions proposed in the rest of the UK are different, reflecting local requirements and populations. However, they are sufficiently comparable for the purposes of providing broad UK statistics.

Language

- 3.60 It is proposed to introduce new questions in the 2011 Census on **language** which will enquire into main language used and ability in speaking English. The question on main language will enable respondents to record their main language (including sign languages) if it is not English. Responses will provide an indication of areas and communities where foreign language service provision is necessary, and to better understand the diversity of the population and in particular the impact of English language ability on employment and other social inclusion indicators. A question on the ability to understand, speak, read or write Irish has been included in the Census since 1991 and it is proposed to augment this to collect similar information on Ulster Scots.

Health

Limitations due to a long-term health problem or disability

- 3.61 This question, forms of which were included in the 1991 and 2001 Censuses, will ask whether a person's **day-to-day activities are limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months**. Problems which are related to old age will be included. The information will be used as a measure of the need for health and personal social services at all levels of geography, and particular local facilities, either existing or planned.
- 3.62 The question will enable the Census to provide information on the circumstances in which the long-term sick and disabled live - for example, whether they live alone or in unsuitable accommodation. It will also provide analysis by age, which will be important as the number of elderly people increases. The information will be of value

both to the public and private sectors in providing services to sick and disabled people.

Nature of long-term health conditions

- 3.63 A new question is proposed that will examine the nature of respondents' long-term health conditions.
- 3.64 A major survey of disability (The Northern Ireland Survey of Activity Limitation and Disability, NISALD) was conducted in 2006-2007. It is not possible to replicate the assessment protocol used in that survey in a single census question. However, it is intended to align the response categories in a census question, as far as possible, with the list of activity limitations and disabilities used in NISALD. Together with further methodological work it should therefore be possible to use NISALD and census results to model the spatial distribution of people with particular activity limitations and disabilities.

General health

- 3.65 In addition to the **long-term health or disability** questions, it is proposed to include a **general health** question which will ask the respondents to assess their own health 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 in 2001 for the first time enabled such information to be applied at the local area level.

Provision of care

- 3.66 A question on the provision of **unpaid personal help** given to people with long-term ill-health/disability problems or because of problems related to old age was introduced in the 2001 Census. A continuing user requirement for this information has clearly been identified, and it is proposed to include the topic again. This will help to improve the understanding of variations in the need for care and the pressure on social services in an attempt to target resources more effectively.
- 3.67 The 2001 Census information on carers has helped to identify key policy issues affecting carers and resulted in the development of policy initiatives in relation to better support for carers from health professionals, delivery of health care, assessment of progress towards better population health and reduction of health inequalities. The data is also used to develop and monitor policies to promote equality of opportunity, to analyse the possible burden that could be placed on social care services if unpaid carers were not available, and to identify the number of people with caring responsibilities who are not in contact with a carers support network. Carers also often experience isolation because of their caring responsibilities and are identified as a group at risk of social exclusion.
- 3.68 The question will record whether or not the person **provides help or support** to family members, friends, neighbours or others because of either a long-term physical or mental ill-health/disability or problems related to old age, and the **time spent each**

week providing such care. The question will specifically exclude anything done as part of paid employment.

Qualifications

- 3.69 The information from a question on **educational and vocational qualifications** will be used to assess educational achievement and labour market participation across the population, looking at demographic groups at a local and regional level and the particular barriers faced. This will help users to understand and respond to equality and diversity issues, in order to widen participation and fair access. Information on intermediate and higher level qualifications is used in the derivation of the National Statistics Socio-economic Classification (NS-SEC)¹¹ and, in particular, assists the understanding of social patterns and local labour markets. Information on those people with no or low levels of qualifications are used in deriving indices of deprivation which are used across central government and by public and voluntary sector organisations as the primary basis for identifying deprived areas for funding allocations and applications.
- 3.70 Information will be sought on the level of qualifications achieved with the primary intention of deriving the highest qualification. There is an increasing diversity of qualifications available, and the Census question must also reflect, as far as possible, qualifications that are no longer available (for example, O levels) and qualifications from outside Northern Ireland. The question will be similar in structure to that asked in 2001, but will differ in detail.

Voluntary work

- 3.71 The labour market questions in the Census refer solely to paid work. During consultation in Northern Ireland, user demand for information on the number, and nature, of people engaged in voluntary work was identified. Accordingly, it is proposed to ask a further separate question on **whether in the past year a person has helped with or carried out any voluntary work without pay**. This will quantify the number of people engaged in voluntary work, along with their characteristics.

Employment and labour force

- 3.72 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.
- 3.73 The Census is also the most comprehensive source of labour market information about sub-groups of the population, for which sample sizes at the local area level in the Labour Force Survey are 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.

- 3.74 The Census further 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, use by private sector employers wishing to locate operations in areas where there is suitable labour, in addition to use by central and local government.
- 3.75 The majority of questions refer 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 refer only to those people aged 16 or over, and cover:

Economic activity in the week(s) before the Census

- 3.76 A number of questions will be asked in order to determine whether or not the person was in employment or was:
- retired;
 - a student;
 - looking after the home or family;
 - long-term sick or disabled;
 - looking for work;
 - available for work; or
 - waiting to start a job.
- 3.77 These categories will provide the basic classification for analysis of economic activity designed to be as consistent as possible with definitions recommended by the International Labour Organisation¹² and the Conference of European Statisticians⁵.

Time since employment

- 3.78 The question, new to the Census in 2001, asking those persons who stated that they were not working in the week before the Census for **the year in which they last worked**, will be included again. This will help determine local differences in the periods of unemployment experienced and the extent of long-term unemployment. Use of the information includes assessing and monitoring disadvantage and exclusion, planning education and training, resource allocation, labour market analysis, and in studies of mortality and morbidity.
- 3.79 If a person has never worked, no further questions on employment will be asked. For those persons in paid work, or who have previously worked, further questions will cover:

Occupation of current main job, or last main job

- 3.80 Asking people their **full job title** and the **main things done in their job**, will provide detailed and important information about the very wide range of work both nationally and locally. A revision to the current (2000) Standard Occupational Classification (SOC)¹³ is being prepared and it is intended that this will be applied in the coding of the 2011 Census data.
- 3.81 The statistics will be used in analyses of the labour forces of various industries and occupations, in studies of occupational mortality, and will provide the basis for the

classification of people and households according to the National Statistics Socio-economic Classification (NS-SEC)¹¹.

- 3.82 Two further separate questions will enhance the information collected on main occupation. A question on **employment status** will ask if the person works, or worked, as an employee or as self-employed with, or without, employees. A second question, on **supervisor status**, will ask if the person has or had any supervisory responsibilities in their job. Responses to this question will help in assigning the person more accurately to the NS-SEC.

Industry of employment

- 3.83 This will primarily be determined by asking people the **main activity of their employer or business**. The information will be used, for example, in labour market analyses and in the production of regional accounts and economic indicators. Additional information on industry may be obtained for those people currently working, from the **name and address of their employer**. Industry will be coded to the current version of the Standard Industrial Classification (SIC 2007)¹⁴. No further revision of this classification is planned before the next census.

Hours worked

- 3.84 A question on the number of hours usually worked in the person's main job will distinguish those in full-time and part-time work. The information will help to provide a better understanding of changes in working patterns, and how these apply to particular occupations and industries. At a local government level, information on people working long hours is an indicator of deprivation and can inform neighbourhood renewal strategies. Use of the information will also be made in labour market studies, in rural policy and regeneration, and in the derivation of area and socio-economic classifications. This information will also provide evidence for the working time directive.

Workplace and journey to work/place of study

- 3.85 From the responses to the questions on **workplace**, the Census is able to show where people who live in any area work, and *vice versa*. This information is the basis for measuring commuting patterns and assessing the balance of housing and jobs. The Census also adds to the value and usefulness of many routine employment statistics which are generally based on area of workplace, by providing analysis by area of residence.
- 3.86 Census statistics on where employed people live and work are used by government departments in defining 'Travel to Work Areas'. These areas represent approximations of self-contained labour markets and are generally the smallest for which unemployment rates are published. The Government uses unemployment information for small areas, such as wards, in identifying areas within the major cities to which additional resources should be directed.
- 3.87 It is planned to augment the information on travel to work, collected in previous censuses, by asking school-children and students to provide the address of their

school or college. This will enable the travel to work information to be expanded to include travel to place of study. Statistics restricted to travel to work, required to examine travel to work areas and, consistent with previous censuses, will still be available. The following questions will be asked:

Address of main place of work or study (including school)

- 3.88 Responses to a question on **address of place of work/study** will show the destination of individual journeys to work or place of study in relation to the usual address (which will normally be the origin of the journey) and will provide information on the numbers travelling to work and places of study from particular origins to particular destinations. Together with information from the question on means of transport to work or place of study (see below), the data will help to identify commuter routes that are subject to higher loads of public and private transport.
- 3.89 Additionally, the **name of the organisation** at which a person is currently working will be requested. This information is used solely as a further aid to accurate outputs, including in this context the location of the workplace and the coding of the type of industry (see paragraph 3.83) by reference to the Inter-Departmental Business Register (IDBR) – a list of large employers already classified by type of industry. Responses to the question will not be used to produce information on named individual employers.

Means used for travel to main place of work or study (including school)

- 3.90 This will show the **mode of transport** normally used for the longest part, by distance, of the journey to work. Similarly to the address of workplace, it is proposed to extend this question in the Northern Ireland Census to include, additionally, ‘travel to place of study’. The detailed analyses of specific commuting flows by the main means of travel will be used in the planning for public transport provision and of facilities for private transport.

Questions to be asked of visitors

- 3.91 Whereas the 2001 Census did not seek to collect information of persons who were present on census night at an address where they were not usually resident, the 2011 Census will include such ‘visitors’ on the questionnaire. However, only limited information will be collected since visitors who are resident elsewhere in the UK will also be required to supply full information on the Census questionnaire at their usual address.
- 3.92 In addition to the number of visitors at this address, information will be collected on their:
- name;
 - sex;
 - date of birth; and
 - usual address (or country of usual residence if a non-UK resident).

The Household questionnaire will have space for information on up to three visitors together with a count of the total number of visitors. This information will enable more accurate counts of visitors and usual residents to be made at the local area level. Linking information provided by respondents as visitors to that provided as residents at their usual address will provide additional information to inform estimates of census undercount and/or overcount.

Arrangements for communal establishments

- 3.93 The Census will enumerate all people resident on census night in communal establishments such as hospitals, nursing and residential homes, educational establishments and hotels, etc. (Residents in such establishments will be determined on the basis of a length of stay of six months or more). Full particulars will be required of residents in such establishments, and statistics on these residents, separately identifying resident staff, will be prepared for 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 provides a comprehensive and authoritative count of the population living in these establishments that is not available from other sources.
- 3.94 Information will not be collected relating to the person's accommodation (although data about the **type of communal establishment** will be collected separately from the manager or other person in charge of the establishment). Nor will information on relationship to any other person within the establishment be collected.
- 3.95 Special arrangements will be made to enumerate residents in prison service establishments and asylum refuges, on ships in ports and on military camps. Special arrangements will also be made to enumerate other population sub-groups not resident in private households, such as persons sleeping rough.
- 3.96 Information will not be collected on visitors present in a communal establishment on census night. If resident elsewhere in Northern Ireland, such visitors - as for visitors to households - will be required to provide full information on the questionnaire to be completed at their usual address. Any such non-Northern Ireland resident visitors who are staying for a period of three months or more will be enumerated in the same way as residents.

Topics considered but not included in these proposals

- 3.97 It is considered that each topic included in the proposals for the 2011 Census satisfies the criteria set out earlier in this Chapter. In addition to the questions on income and sexual identity (see paragraphs 3.100-3.114) several other topics were considered but are not proposed for inclusion, because either:
- 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 likely to be obtained would not be fit for purpose; or
 - the questions would place too great a burden on the public; or
 - a combination of these reasons.

3.98 The topics which have been considered but are not included in the proposals are listed below. All the suggestions submitted were considered carefully. Some topics were rejected at an early stage in planning but many were subjected to both small and large-scale testing.

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

- access to bath/shower/toilet;
- access to services (e.g. doctors, libraries);
- accessible transport (to work);
- accommodation on more than one floor level;
- accommodation (lowest floor level of);
- child specific topics such as:
 - o child poverty;
 - o children with disabilities;
 - o offences against 16 year olds;
 - o traveller specific information;
 - o children of homeless families;
 - o homelessness among young people;
 - o child refugees and unaccompanied minors;
 - o child health;
 - o children affected by domestic violence;
 - o children sexually exploited; and
 - o substance abuse among young people.
- duration of residence in UK;
- educational attainment;
- extended family networks (e.g. grandparents and other relatives in local area);
- fertility;
- household income;
- income (individual);
- intention to return to the labour market;
- Irish (main language of the home);
- Irish (how often is language spoken in the home);
- language spoken at home/principal language of the household;
- medicine usage (prescribed and non - prescribed);
- parents' country of birth;
- political opinion;
- second address;
- sexual identity;
- sewer connection;
- sign language;
- size of workplace;
- state of repair of accommodation;
- tenure of previous accommodation;
- travel to work specific topics such as:
 - o time a person leaves to go to work/school/college;
 - o distance travelled to work/school/college;
 - o how long does journey to work/school/college take; and

- if you dropped someone off at school before going on to work; where was the school or drop off point;
- tourism travel within NI;
- use of wheelchair; and
- work related illness.

Second address

3.99 In England and Wales, ONS are planning a question on second addresses. However, it is considered that this is more appropriate for a larger geographical area such as England and Wales where there is more scope for people to have family homes in one place and a second address somewhere else, possibly used during the working week.

The case for and against including a question on income

3.100 Consultations with users prior to the 2001 Census indicated interest in information on the level of individual gross income. Income was 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. A number of user communities made a strong case for a question on income in their business cases for census topics. Users expressed requirements 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.

3.101 However, the strength of the requirement for census information about income had to be balanced against the possible public disquiet about the acceptability of such a question in a compulsory census, the doubts about the reliability of the information collected and the availability of possible alternative sources of the information.

3.102 Account was taken of evidence from:

- small-scale testing of various versions of an income question, that respondents tend not to answer questions on income with accuracy; and
- the 1997 Census Test and 1999 Census Rehearsal, which suggested that a question on income would adversely affect the response to the Census as a whole.

3.103 Consequently, the Government, while recognising the widespread need for information on income, took the view at that time that the risks to the conduct of the 2001 Census as a whole of including such a question was too great and research was undertaken into whether or not needs could be met by alternative sources of data. A number of alternative sources exist for income, both from administrative and sample survey sources. However, these sources all have certain strengths and weaknesses. In general, administrative sources provide good coverage, enabling analyses for small geographic areas, but the definition of income is naturally defined by the administrative system and may not match that required by the user. Conversely, sample surveys give more flexible definitions of income, but generally cannot provide analyses by small geographic areas.

- 3.104 While recognising the limitations of alternative sources, it was clear from the initial public consultation phase in the run up to the 2007 Census Test in Northern Ireland that some users wished to have an income question included in the 2011 Census as a proxy indicator of deprivation. As such, an individual banded income question was developed for the 2007 Census Test in conjunction with ONS. GROS opted to pilot a banded household income question for the Scottish Census Test in 2006.
- 3.105 In Northern Ireland, the average response rate to Census Test questionnaires that included an income question was 42.6 per cent compared to 45.2 per cent for questionnaires without an income question. Perhaps more importantly, the inclusion of an income question raised most concerns from respondents regarding its sensitivity and their willingness to answer such a question. Of those who expressed concerns about census questions in the Evaluation Survey for the Census Test, almost half expressed concerns about the income question.
- 3.106 In parallel to the work on developing and testing potential questions on income, research has been commissioned on estimating income at small area level using sources such as the Family Resources Survey (FRS). This work has been published (NISRA Occasional Paper Number 27, 2008) and the methodology is considered to hold promise.
- 3.107 In balancing user demand for information on income against:
- the public's reluctance to answer questions on income;
 - the evaluation of a number of other criteria aimed at assessing the public's understanding of the question; and
 - the potential availability of information from alternative sources (in particular, modelled estimates),

it has been concluded that the case for including the question in the 2011 Census is insufficient to outweigh the risk of reduced response.

Collecting information on sexual identity

- 3.108 Consultation with users indicated a user requirement for the Census to seek to collect information on sexual identity in order to provide a benchmark against which equality monitoring policies could be better assessed. In a Northern Ireland context, Section 75 of the Northern Ireland Act 1998 promotes equality of opportunity between persons of different sexual orientation, and there is limited statistical information by which this can be evaluated. Whilst there is potential value in such information, account must be taken of particular concerns about individual privacy and public acceptability within the context of a compulsory household survey, the quality of the resulting data, and the effect that such a question could have on the overall response to the Census.
- 3.109 In a small-scale postal survey carried out by GROS in 2006¹⁵, which 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, and it was 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 behaviour tend to confuse many respondents leading to additional inaccuracies in the responses.

- 3.110 In the light of this, and of other international research into the viability of including such a question in a population census¹⁶⁻¹⁷, the view has been taken that a compulsory census is not a suitable means to collect sexual identity information and that a question on sexual identity should not be included in the 2011 Census.
- 3.111 However, in recognition of the particular importance of collecting information on this topic for equality monitoring purposes, ONS has initiated a project which is seeking to develop a question on sexual identity which will be both acceptable and ensure that high quality data is collected, and which can be used in national surveys.
- 3.112 The main advantage of collecting this data in a household survey is the superior quality of the estimates produced. In a survey environment, information will be supplied by the person to whom it pertains and will not be shared by other householders.
- 3.113 In England and Wales, ONS are planning to introduce questions on sexual orientation in large-scale household surveys that will enable the publication of survey-based estimates in advance of the results of the 2011 Census. Survey estimates can be updated annually, enabling regular monitoring of the size, distribution and changing social-demographic profile of the Lesbian Gay Bisexual and Transgender population. Consideration will be given to the implementation of any such developments in Northern Ireland.
- 3.114 A paper that provides further background information and summarises the reasons why it is considered a question should not be asked in the 2011 Census, is available on the National Statistics website¹⁸.

4. COLLECTING THE INFORMATION AND ENSURING FULL PARTICIPATION IN THE CENSUS

Introduction

- 4.1 The data collection operation – always the public face of the Census – covers a wide range of activities in addition to delivering the questionnaires and collecting the completed returns. These include field force recruitment, legal, financial and technological issues, and contractual arrangements with suppliers. For the 2001 Census, more focus was given to the data collection activities, compared with previous censuses, since there was a need to count a population that was undergoing greater societal change. This strategic approach is again being followed for the 2011 Census.
- 4.2 Experience has shown that it is increasingly difficult to make contact with households. This has been a major influence in shaping data collection plans for the 2011 Census. These difficulties can be attributed to: an ageing population, growing numbers of one-person households; changing work patterns; an increase in access security control systems; growing numbers of migrant populations, particularly from relatively new origins such as Eastern Europe; and certain groups and communities within the population feeling increasingly disconnected with society. Ensuring that every household gets a census questionnaire and is motivated to fill it in is, therefore, more than ever a key driver in the strategy and planning for data collection. To this end an effective publicity strategy is vital to the success of the Census. Such publicity arrangements are described at paragraphs 4.51-4.56.
- 4.3 The enumeration will be conducted in a way that is primarily designed to achieve completeness of coverage with an efficient use of resources while, at the same time, maintaining the public's acceptance and confidence in the importance and security of the Census. Although many aspects of the Census will follow well-established and proven methodologies, changes have been introduced to improve the efficiency of the census operation and provide better help to the public. For example, the use of a postal service provider for the delivery and return of the majority of questionnaires will help overcome the difficulties of recruiting large numbers of temporary enumerators to deliver census questionnaires to every address, and of accessing accommodation protected by security systems. Together with the option of making a return online, this will free-up field staff to be used more efficiently. There will be continuous monitoring of the progress of the enumeration in the field so that extra assistance can be quickly re-directed to wherever necessary.

Operational objectives

- 4.4 A number of key objectives of the data collection operation underpin the broad strategic aims of the Census set out in Chapter 1; these are to:
- develop an effective enumeration methodology that targets resources and procedures to maximise response;
 - track delivery and receipt of census questionnaires to target non-response;

- encourage a high level of online response (which has the potential to reduce costs in other areas);
- overcome the problems associated with the recruitment, retention and payment of a large field force;
- manage public participation and co-operation through informative publicity; and
- work with the postal service provider and others in planning and executing the enumeration, in particular to make best use of their knowledge of local addresses and residence arrangements and ways of contacting hard-to-count groups.

Temporary field staff

- 4.5 Current plans are that around 1,900 temporary field staff will be employed to carry out the 2011 Census in Northern Ireland. There will be a hierarchical management structure to this field force similar to that in 2001, headed by 20 Census Area Managers employed for a period of approximately eight months before and four months after the Census. Each will be responsible for the enumeration of about 40,000 households (fewer in less densely populated areas). They will have the responsibility of managing approximately 300 local supervisors known as Census Team Co-ordinators. Each Census Team Co-ordinator will supervise 5 or 6 Census Enumerators. Additionally, a team of specially trained field staff will be deployed to follow-up cases where there has been a clear indication of intent of a householder's refusal to make a return. Two Regional Managers will be appointed to co-ordinate operations at a higher strategic level.
- 4.6 The reduction in field staff from just under 3,000 in 2001 has been achieved mainly by moving to a post-out methodology for questionnaire delivery (see paragraphs 4.9-4.16). Savings from adopting this approach will allow for resources to be targeted at validating the Census Address Register (CAR), providing assistance to the public and follow-up activities.

Recruitment, training and payment of field force

- 4.7 The strategy for the recruitment, training and payment of the 2011 Census field force will be similar to that followed in 2001 and previous censuses. Census Office is currently in discussion with departmental personnel to consider arrangements for this element of the Census. Census Office will ensure that all field staff appointed are recruited in accordance with NICS recruitment policies and are paid correctly and on time.
- 4.8 The statutory obligation for persons employed on the Census to adhere to strict confidentiality undertakings will apply equally to any temporary field staff (see paragraphs 6.11-6.13).

Post-out and the development of a 2011 Census Address Register

- 4.9 Following the successful trialling of post-out as a delivery mechanism for census questionnaires in the 2007 Census Test⁸, a decision was made to adopt this methodology as the main means of questionnaire delivery for the 2011 Census (see

paragraph 4.15). The rationale for adopting this strategy is that even with hand delivery in the 2001 Census, enumerators failed to make doorstep contact with a significant number of households and resorted to delivering the questionnaire through the letter box. The use of an established postal service provider to perform this activity is seen as an opportunity to direct field resources to those areas where a more focused approach to follow-up activities is necessary in order to improve response rates.

- 4.10 Consequently, post-out and post-back services for the 2011 Census will be procured. As there are many potential providers the post-out service will be secured through a competitive procurement whereas the post-back service must be provided by Royal Mail.
- 4.11 Clearly the pre-requisite for a successful post-out strategy is the availability of a comprehensive, high quality address register for all areas of Northern Ireland. To this end a 2011 Census Address Register is being developed that will meet census requirements in terms of quality and coverage and will effectively underpin census enumeration and outputs. This address register will be drawn from the POINTER address database which is being developed for Northern Ireland by Land and Property Services, in conjunction with local district councils and Royal Mail.
- 4.12 The resulting CAR will contain a list of addresses linked to higher level geographic areas for management, reporting and output purposes. This will require associating every address with an accurate positional reference, which will be used during the planning of field operations, the printing of questionnaires and the production of outputs.

Address checking

- 4.13 It is proposed that pre-addressed census questionnaires, with a unique identifier and machine readable barcode associated with every address would be posted out to most households using the CAR referred to above. Printing and despatch will be recorded on a questionnaire tracking system.
- 4.14 It is currently planned that enumerators will have responsibility for a fixed geographical area and list of addresses. They will carry out a check of their area of responsibility (Enumeration District) using the CAR. Enumerators will check for possible omissions from the register which could include newly built properties and older properties that have been re-developed. A check prior to the 2007 Census Test, for example, revealed that a number of households within the sampled areas were not on the register at that time. These were found, for example, at multi-occupied addresses where houses had been converted into flats. Additionally, enumerators will try to identify those addresses on the register from which a questionnaire would not be expected to be returned, e.g. a derelict building.

Census questionnaire delivery

- 4.15 Post-out will be the means of questionnaire delivery to the majority of households. However, some questionnaires will be hand delivered to new addresses which are not

on the CAR, to Communal Establishments and to addresses in areas where it may be more appropriate to do so.

Postal delivery

- 4.16 Postal delivery is currently planned to start on Monday 14 March 2011, and is scheduled to be completed by Saturday 19 March 2011. This will leave one week before census day as a contingency to resolve any delivery issues. It will also provide time to receive feedback on addresses missed and any undelivered questionnaires, which can be investigated by enumerators before census day if necessary.

Contact Centre

- 4.17 National and local publicity, supported by a dedicated UK-based Contact Centre, will initially focus on addressing the lack of face-to-face contact in the delivery phase, giving a clear message about what the public should expect and when, and what to do if it does not happen. In particular, the Contact Centre will take details from householders who have not received a census questionnaire updating address list information and the questionnaire tracking system in the process. (See paragraphs 4.54-4.56 about publicity more generally).

Collection of completed questionnaires

- 4.18 The option of two principal response routes will be available to enable the public to complete their census questionnaire:
- paper completion and post-back; or
 - online completion (for the first time).

Householders unable to make a return in these ways may, exceptionally, request a doorstep collection. Arrangements for the collection of completed returns from communal establishments are described in paragraphs 4.30-4.31.

- 4.19 It is not proposed to have any areas specifically designated for doorstep collection.
- 4.20 Special assistance will be available to anyone who has difficulty in completing the Census questionnaire, particularly through language difficulties or infirmity. Field staff will have access to interpretation services to assist those unable to speak English.

Post-back response

- 4.21 Households will, in all cases, be provided with a pre-addressed, pre-paid envelope for the return of their completed questionnaire within a required time period (to be prescribed by secondary legislation – see Chapter 7). Any adult member of a household who does not wish other people in the household to see his or her answers to census questions may ask for a separate (Individual) questionnaire and an envelope in which to seal it for return by mail. In these circumstances, the householder will be required to enter on the main household questionnaire only the name and relationship in the household of anyone making a separate return.

- 4.22 In households with more than six residents, or more than three visitors present on census night, additional (Continuation) questionnaires will be provided, on request, to enable a return for any such additional persons to be made.

Internet (online) completion

- 4.23 It is estimated from international census experience that up to 25 per cent of households will respond online, equating to, potentially, over 190,000 responses altogether in Northern Ireland. There will therefore be an option of making a census return online. However, because its use is untried in the Censuses of the UK, the actual take-up of this option is uncertain and the capacity planning for the response system must allow for flexibility. Such a facility will afford the possibility of both encouraging response among particular sub-groups of the population who may otherwise be hard to reach, and of achieving some data processing cost savings if overall response levels are sufficiently high. Furthermore, such an option meets the aim of seeking to increase the provision of public services online, and will provide an opportunity to assess the efficacy of collecting information in such a way for any future censuses and other statistical surveys.
- 4.24 The online questionnaire will have the same question set as the paper questionnaire and will allow for any number of household members and visitors. Individual returns will also be possible for use by households who choose to complete the household questionnaire on paper but may wish to use the Internet to include additional household members who cannot be accommodated on the paper questionnaire, or to allow an individual household member to make a return online separately from the rest of the household's return.
- 4.25 All households will receive a paper questionnaire whether or not they choose to make their return online. A unique reference on each paper questionnaire will form the basic security code for accessing and completing an online return. The address may also be checked at the start of the completion process to confirm identification. The questionnaire tracking system will be updated whenever an online questionnaire has been submitted and a completion code given to the respondent.

Follow-up

Non-response follow-up

- 4.26 In cases where a completed questionnaire is not returned, a member of field staff will call to encourage a response, offer any assistance where required, and collect the questionnaire, if necessary. In such circumstances, a householder may return their completed questionnaire in the postal return envelope if they do not want it to be seen by the field staff member. Field staff will carry out such follow-up activities at all addresses from which no response has been received via any means. It is planned that this activity will start on day 10 after census day.
- 4.27 The questionnaire tracking system will be updated either when a completed return is received by post, or when an online return is submitted. The system will then provide the lists of addresses that Census Team Co-ordinators will allocate to enumerators for follow up activities.

- 4.28 If no contact is made at follow-up, a card will be left explaining why the enumerator has visited. Subsequent visits will be made at different times of the day or day of the week in order to improve the chance of contact.

Follow-up of blank or incomplete responses

- 4.29 Blank or incomplete responses will be identified during the data capture operation (described in Chapter 5) and followed-up while the field operation is still ongoing.

Communal Establishments

- 4.30 There will be a number of different methods of enumerating communal establishments depending on their size and the varying levels of difficulty involved in making contact and ensuring that residents complete their returns. Generally, the enumeration of large communal establishments (with 100 or more usual residents), military barracks, and prisons, will be carried out by Census Office staff. All other communal establishments will be enumerated by Enumerators or by Census Team Co-ordinators.

- 4.31 Generally, in communal establishments an Individual questionnaire will be issued to each resident. Each resident will have the option to complete the Individual questionnaire and return it to the manager or person-in-charge of the establishment for collection by the enumerator, or make an individual return online.

Special enumeration procedures

- 4.32 The strategies developed to enumerate households and communal establishments will not be successful for everyone, and it is recognised that additional procedures will have to be adopted for some special populations. These will include people with no settled place of residence, such as Travellers, travelling fairs and persons sleeping rough. Further analysis and changing social conditions may identify new populations beyond the traditional groups, such as asylum seekers and refugees, for whom special enumeration strategies will be necessary.

- 4.33 In addition there are other identifiable groups, dispersed throughout the population, who will require modified enumeration procedures. These include, but are not limited to:

- those unable to understand the census questionnaire, such as non-English speakers and people with reading difficulties;
- those likely to have difficulty completing or returning a standard paper questionnaire, including the visually impaired or physically disabled; and
- those able, but unwilling, to complete a questionnaire.

- 4.34 Consultation with representative organisations through the Community Liaison Initiative (see paragraphs 4.36-4.38) will inform the development of effective strategies to target and accommodate these groups, with the aim of ensuring that no community or individual is disenfranchised. Arrangements will be made to enable blind or partially sighted people and non-English speakers to make a census return.

This includes the provision, on request, of a copy of the census questions and the accompanying explanatory material in:

- Braille, large print and audio/visual formats; and
- a range of other language versions.

4.35 Such explanatory leaflets and translations of census questions (also available online) produced in a number of languages will assist individuals whose first language is not English or who may wish to read census questions in another language. Special assistance will be available to anyone who has difficulty completing a census questionnaire, particularly through language difficulties or infirmity. Field staff will have access to translation services to assist those who have difficulty with, or cannot speak, English. Further details are set out in paragraphs (4.55-4.56).

Community Liaison and ensuring full participation in the Census

4.36 One of the biggest challenges to overcome in the 2011 Census will be reaching population groups that are traditionally undercounted – the so-called ‘hard to count’. Research into the types of people missed in the 2001 Census, changing demographic profiles and the nature of assistance that particular population sub-groups need in order to ensure full participation in the Census has helped to inform the type of initiatives needed and the way in which they should be implemented in order to optimise their effectiveness. Accordingly, the 2011 Census is building on the positive initiatives that were successfully deployed in the 2001 Census to ensure that the 2011 Census is equally accessible to everyone in Northern Ireland, irrespective of their circumstances.

4.37 The innovative 2001 Census Community Liaison initiative is being further developed with an emphasis on active collaboration with the various agencies and community wide organisations involved to ensure that the support mechanisms put in place for the 2011 Census accord with best practice. Links are being established with key organisations such as statutory bodies (e.g. Equality Commission for Northern Ireland), the NI Council for Voluntary Action (NICVA), NI Council for Ethnic Minorities (NICEM), Age Concern, Help the Aged, the Royal National Institutes for the Blind and the Deaf, the Simon Community, the Citizen’s Advice Bureau (CAB) and others representing minority populations and special interest groups. The Census questionnaire and all accompanying information leaflets will make it clear to the general public how they can get help with the completion of their Census questionnaire, should they need to do so. For example, the general public will have access to a dedicated Contact Centre and will be able to speak directly to personnel specifically trained to assist them on Census matters and, if necessary, arrange for a member of the field staff to provide them with the assistance that they need at their own home. Such key messages will also be echoed through a tailored publicity and media campaign in the run up to and during the Census operation. Specific objectives of the 2011 initiative are to:

- remind the general public of their legal obligation to complete their Census questionnaire;
- encourage participation in the Census by actively publicising the Census and underlining its important use and value;

- recognise the difficulties that certain population groups may experience in seeking to participate in the Census and put the necessary support mechanisms in place to ensure that the 2011 Census is equally accessible to everyone in Northern Ireland, irrespective of their circumstances (for example, see 4.34 and 4.35 above);
- ensure that the general public are informed about the tailored assistance that is available should they need help with completing their Census questionnaire and that they know how to access it; and
- raise awareness of the field staff role and encourage all population groups to apply for the field staff positions.

4.38 Additionally, the initiative will seek to help provide field staff with information, guidance and support at the local area level.

Enforcing the legal requirement to complete a census form

4.39 The value of the Census compared with any other statistical data source, is that it should aim to cover the entire population without exception. It is thus necessary, in order to emphasise the importance of obtaining a response from all households, to continue to adopt a clear policy of prosecuting offenders.

4.40 In all cases, whether response to the Census is to be by postal return, online, or exceptionally by doorstep collection, the statutory obligation to make a return will not be discharged until a completed questionnaire is received centrally or by local field staff. The statutory requirement to make a return rests at all times with the householder (or joint householder) or an individual making an individual return. Persons refusing to comply with the statutory requirement to make a census return will be liable to prosecution and a fine, the maximum level of which is currently £1,000.

4.41 Information available from the 2011 Census questionnaire tracking system will enable every questionnaire to be monitored, and will provide more robust evidence of the failure to make a return than was the case in the 2001 Census, when particular difficulties with local postal services, and an outbreak of foot and mouth disease at the time, affected the ability to track questionnaire movement precisely.

4.42 Where householders may claim, either legitimately or otherwise, that a completed questionnaire has already been posted back, Census Office will be equipped (through the questionnaire tracking system) to verify this in real time and to issue replacement questionnaires where necessary if there is no record of such a return having been made. Refusal to complete a questionnaire in these circumstances will attract the same penalty.

4.43 Reflecting the particularly onerous character of the duty previously imposed on enumeration field staff in conducting formal interviews under caution as required by the ‘Police and Criminal Evidence (NI) Order 1989: Code of Practice’, specially trained staff will be deployed to follow-up cases where there has been a clear indication of a householder’s refusal to make a return. In this way, evidence may be gathered that is sufficiently robust to satisfy the courts whenever prosecution action is taken.

Coverage and data quality

- 4.44 Quality is at the heart of planning the 2011 Census, and many of the innovations that were trialled in the 2007 Census Test were about improving the quality of census processes and, thus, the data. A census, by its nature, is designed to cover the whole population, but errors inevitably arise. A good census design will recognise this and take account of them. For example, the CAR – no matter how up to date – may fail to record all residential accommodation in an area at the time of the Census; field staff may fail to identify all households within a multi-occupied dwelling; not all members of a recorded household may be included; non-response bias occurs when people do not complete a census questionnaire or do not answer all the questions; and there may also be system or processing errors.
- 4.45 The improvements which are being introduced for the 2011 Census have been designed to minimise these errors; for example:
- the creation of an up-to-date CAR, verified by enumerators during the postal delivery phase together with a questionnaire tracking system functioning in real time, will provide a reference to ensure that census questionnaires are delivered to, and returns received from, all residential addresses and that monitoring of return rates can be done in real time;
 - the re-design of the questionnaire and the facility to return it online will make it easier for respondents to complete a return and for the data to be processed; and
 - the more efficient and effective use of field staff resources is aimed at improving the overall coverage.
- 4.46 Non-response or under-enumeration can potentially give rise to error. While the estimated overall under-coverage in the 2001 Census (5 per cent in Northern Ireland) was small compared with national government surveys, it was greater than in 1991 (2 per cent) reflecting an international pattern of increasing census non-response.
- 4.47 The goals for 2011 are to maximise the overall level of quality of data and to minimise the differences in quality between areas. A strategy will be developed for assuring the quality of the 2011 Census database before any release of output (see paragraphs 5.25-5.26).

Census Coverage and Quality Surveys

- 4.48 The Census Coverage Survey (CCS) will be the key source of information on the extent and distribution of the Census undercount. The CCS will be a separate sample survey to be carried out around 5-6 weeks after census day and will take the form of a short interview to:
- (i) check on the coverage of households and people within households; and
 - (ii) to collect basic demographic characteristics (such as age, sex, marital status, and economic activity).

The information obtained from the survey will be used, in conjunction with the Census data itself, to help produce a consistent set of census-based estimates, which

in turn will form the new base for the series of annual mid-year population estimates for local district councils and health authorities.

- 4.49 This approach will develop and improve the methodology used for the 2001 Census. Users will be consulted and informed on the methodological approaches to be adopted, and the quality of the Census outputs will be assessed and reported on.
- 4.50 A smaller, separate Census Quality Survey will be undertaken after the 2011 Census to measure the accuracy of responses to individual questions.

Publicity

- 4.51 While every household and each resident in a communal establishment in Northern Ireland is obliged by law to make a census return, it would be impossible to carry out a census without the co-operation of the public. The three UK census taking authorities are taking forward a common approach to publicity tailored to local needs. In Northern Ireland, specialised support for the 2011 Census publicity will be procured locally.
- 4.52 The publicity campaign will focus upon, and explain, the purpose and value of the Census, to encourage householders to return completed questionnaires and to ensure that they know when and how to do so, to give assurances about confidentiality and data security, and to deal with other particular matters of public concern as and when they may arise. Reminders will also be given about the legal requirement to complete a census questionnaire.
- 4.53 One of the communication objectives for the Census is the need to create a powerful 2011 Census brand that conveys to the public that they are engaging with something important, inclusive and beneficial to the population as a whole. With this in mind, the services of a branding design agency have been procured to plan and deliver the Census brand project. A census brand has been developed to be the identifiable face of the Census to the general public, and will be promoted at every appropriate opportunity. The 2011 Census brand should build awareness, trust and confidence in the Census through a range of communication activities. Use of the 2011 Census brand began at the earliest opportunity and was used to promote awareness of the 2009 Census Rehearsal in the areas selected.
- 4.54 The basis of good public relations is to make sure that field staff are briefed and trained to be as helpful as possible when engaging with the public, and that there is informative liaison with local community groups and special needs groups. The prime objectives of a phased national and local publicity campaign will be to:
- *educate* – by increasing the awareness and understanding about the 2011 Census among the general public, in key geographic areas and in hard-to-count groups;
 - *enlist* – by publicising and supporting the recruitment of field staff, and informing the public, (particularly in hard-to-count areas and among hard-to-count groups), that they will be required to participate;

- *engage* – by publicising and supporting the delivery, completion and return of census questionnaires from the general public and hard-to-count groups, and giving clear assurances about confidentiality and security;
- *enforce* – by ensuring that as many people as possible, from all population groups, are aware of the legal obligations to complete and return their census questionnaires; and
- *explain* – the results and promote the value of the 2011 Census.

4.55 Publicity will generally increase as census day approaches. In particular, a leaflet drop is planned a few weeks in advance of census day informing the public of how their census questionnaire will be delivered. An explanatory leaflet will then be delivered with each census questionnaire, at least one week prior to census day. Just after census day, a further leaflet drop will remind non-responders of their duty to make a census return. A Contact Centre, providing a telephone help-line with the availability of translation services for non-English speakers, to answer queries from the public while the Census is being taken, will be available. In addition, a Census help website will be provided during the Census Rehearsal and 2011 Census operational periods.

4.56 In the 2001 Census in Northern Ireland, translation leaflets were produced in eight languages: Cantonese, Hindi, Urdu, Arabic, Punjabi, Bengali, Irish and Ulster Scots. In the 2011 Census, the range of languages in which such translation leaflets or translations online will be available will be at least as comprehensive as in 2001, and augmented by languages used by recent immigrants.

5 PROCESSING THE DATA AND PUBLISHING THE RESULTS OF THE CENSUS

Introduction

- 5.1 It is recognised that the investment of time and resources in a census is only justified if the results are made accessible to users speedily and in a clear and usable form. It is intended that the innovative and technological advancements, tried and tested in the 2001 Census, should be harnessed and built upon in the design for 2011. This is to ensure the delivery of a successful census in Northern Ireland in 2011 with improvements in accuracy, timeliness, accessibility and user-friendliness of published outputs.
- 5.2 In particular, as noted earlier, it is proposed to introduce a major innovation in the area of data capture by providing the opportunity for online completion of census questionnaires via a secure internet connection. On data dissemination, it is planned to develop the 2001 innovation whereby all standard output will be free to users at the point of delivery and integrate census outputs more fully with NISRA's Northern Ireland Neighbourhood Information System (NINIS).

Outsourcing parts of the census operation

- 5.3 In the Statement of Agreement between the National Statistician for England and Wales and the two Registrars General (for Scotland and Northern Ireland), it was recognised that the different scale of the three census taking operations may dictate different procurement solutions. However it was agreed that a common strategy should be adopted and a common approach generally taken where such an approach maximises value for money, operational effectiveness and consistency of outputs. A single procurement, with core elements and variations for each census taking authority is being used for the key operational services for Northern Ireland and England and Wales. The Department of Finance and Personnel's Central Procurement Directorate (CPD) has provided advice and support throughout the procurement to ensure that, as in 2001, the approach meets all Northern Ireland procurement rule requirements and is consistent with the Gateway Review process.
- 5.4 For the 2001 Census, for example, the following areas of work were contracted out for the first time:
- the administration of the field staff payment;
 - the management of a contact centre to run a census helpline;
 - the collection of completed census questionnaires via a postal service;
 - the capture and coding of census data in electronic format; and
 - the production of the archival records.
- 5.5 The aim of the procurement strategy, which builds on the approach taken for the 2001 Census, is to realise the efficiency savings that can be achieved through the delivery of common services. Experience from the last census shows that outsourcing introduced important improvements in its delivery. The value of doing so again is that not only do external suppliers bring with them considerable technical experience and

expertise, but there are economies of scale which would otherwise be unavailable. It also allows the Northern Ireland Census Office to focus on its main task of conducting the Census rather than developing in-house procedures and skills that are not part of its core competences. Furthermore, the 10-year cycle for the Census, coupled with the short processing timetable and extensive data systems required, mean that outsourcing provides efficiencies and value for money.

5.6 For 2011, the UK Census taking authorities are again contracting out a number of services as a major part of ensuring a value-for-money census in 2011, but have completed the procurement phase of the operation at a much earlier stage in the planning 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, and following an extensive evaluation of candidates, two companies – Lockheed Martin UK Ltd and T-Systems Ltd – were short-listed in September 2006. Both worked together to deliver different components for the 2007 Census Test. Following refinement of the 2011 Census requirements and further evaluation, a single supplier – Lockheed Martin UK Ltd – was selected to process the Censuses in England and Wales and Northern Ireland; the decision was announced in August 2008. Other providers will be appointed after similar procurement exercises to carry out additional and complementary services.

5.7 In addition to all the services that were outsourced in the 2001 Census, the various procurements will cover:

- the delivery of census questionnaires via a postal service provider;
- questionnaire tracking systems;
- the translation, printing and distribution of non-questionnaire material; and
- the provision of online response facilities for questionnaire completion and public self-help.

5.8 The 2011 Census procurement process has been subject to the tightest contract management, training and budgetary controls and rigorous external scrutiny through the Gateway Review procedures.

5.9 Other contracts will be awarded in due course, to cover activities such as managing the publicity and advertising campaign.

Data processing

5.10 As with previous censuses, the 2011 Census will be processed in three main phases. *Input processing* (which comprises the main *data capture and coding* stage), *'downstream' processing* (which encompasses the edit and imputation stage conducted in parallel with coverage assessment and adjustment and statistical disclosure processes). Then *output processing* (will comprise the creation of statistical tables and other products from an outputs database, and the dissemination of these products to users).

5.11 The vast amount of information to be processed once the completed census questionnaires have been returned – estimated to have been around 50 million output tabulation cells in 2001 in Northern Ireland – and the short time available to do it, has

traditionally demanded the employment of a large number of temporary clerical staff, and a computer processing system that has been fully tested to avoid errors, breakdowns and delays. Prior to 2001, census questionnaires had always been processed in-house, but following the 1997 Census Test it was decided that better value for money could be obtained from contracting-out the main scanning, data capture and coding services for the 2001 Census. A similar outsourcing approach is being adopted for the processing of the 2011 Census data (see paragraph 5.3-5.9).

Data capture operations

- 5.12 Respondents who wish to complete their census questionnaire online, will be able to do so via a dedicated 2011 Census website. The online questionnaire will resemble the paper based questionnaire in respect of question ordering and wording, but will also include routing dependent on the responses to specific questions and, possibly, some online validation of specific fields.

Scanning and data capture

- 5.13 Completed questionnaires will be scanned and the data captured and coded. Data from all response routes will be captured and amalgamated into one data stream. Validation and edit rules will be applied to all fields captured. These will be carried out during the data capture process, before text responses are passed to the coding system.
- 5.14 Text responses to questions such as those relating to occupation and industry will be coded by a combination of automatic and computer-assisted manual coding. The automatic coding system will be supported by classifications and indexes with an interactive coding system for operators to access this information and other reference material.
- 5.15 Processed data will be delivered, to a specification yet to be defined, but Census Office staff will have access to captured and coded data during the processing operation for progress monitoring and data quality analysis.
- 5.16 When all the data and images have been received and the electronic archive has been created, paper questionnaires will be destroyed in line with Government security guidelines, whilst both maintaining the particular requirement for security of census information and meeting recycling policies. All systems and storage media will be securely erased in accordance with Government security standards.

'Downstream' processing

- 5.17 As part of the 2001 Census operation, ONS in conjunction with an outside contractor, designed and implemented a downstream processing system that was applied to census data from the three UK Census authorities. It has been agreed that this broad approach will be used again for 2011 Census data. The data, once captured and coded, will require careful checking and modification before credible and reliable outputs that meet users' needs can be produced. Modification is required to complete any missing responses on the census questionnaire; to correct data captured erroneously during the data capture operations phase; and to prepare the data for dissemination to users. The suite of systems developed to clean and adjust the data so that a fully

consistent database of census records can be prepared as the basis for output dissemination is collectively known as ‘downstream’ processing (since they are carried out ‘downstream’ of the main data capture and coding operations). These processes will be carried out at a secure location, and will begin on delivery of data from the supplier after the data capture and data coding processes described above.

Data load

- 5.18 The load process will take the data files from the processing contractor and carry out a series of validation and quality checks when loading the data onto the databases. The validation and quality checks will ensure that the structural integrity of the data meets expectations and that no systematic error has been introduced during the data capture and coding stage. Additionally, the checks will confirm whether the minimum information exists for the response to be considered as valid.

Edit and imputation

- 5.19 Edit and imputation is the process that corrects inconsistent or partially completed responses. Such responses are edited according to pre-set rules if the answer is incompatible with the rest of the responses on the questionnaire. For example, a person recorded as being aged under 16 should not be answering questions relating to economic activity.
- 5.20 For partially complete responses, that is, for questionnaires where a number of questions have not been completed, a response will be generated which is consistent with other answers on the questionnaire based on responses to the same question by people living in similar properties or households. This edit and imputation process ensures that the results of the Census are complete and consistent. This mirrors the standard statistical process that was used in the 2001 Census and is used more widely across other outputs, albeit on a smaller scale.
- 5.21 Complete and consistent results mean that statistical tables will have no gaps arising from ‘not known’ or ‘not stated’ responses (other than for those relating to the questions on religion) and that users will not then have to make their own estimates for missing values. The Census Offices are in a better position than the user to correct for incomplete or invalid responses, or to estimate accurately values for derived variables that were based on more than one item (such as the National Statistics Socio-economic Classification NS-SEC)¹¹.

Coverage assessment and adjustment

- 5.22 Ultimately, the success of the Census relies heavily on its accuracy and how well it can estimate the population and its characteristics. The Census will never count every single household and individual. A necessary process of coverage assessment and adjustment is undertaken to provide accurate national and sub-national estimates of the population. In the 2001 Census, this process was called the One Number Census, which adjusted the results of the Census to take account of people and households which were missed. For 2011, a similar approach will be undertaken but with developments focusing on a number of areas to improve the method.

- 5.23 The strategy is relatively straightforward. A focused post-enumeration survey (the Census Coverage Survey (CCS)) will be used to measure under-enumeration by undertaking a separate enumeration of a sample of areas (see paragraphs 4.48-4.49). The results of the CCS will then be matched, at the individual level, to the corresponding 2011 Census data, identifying the number and characteristics of those missed in the Census. The combined census and CCS information, along with statistical models, will be used to produce an estimate of the numbers of people missed by the Census. The people and households estimated to have been missed will then be added to the database using similar techniques and processes to the edit and imputation stage described at paragraphs 5.19-5.21 above.
- 5.24 Although a similar approach will be taken in 2011, there are added dimensions that were not present in 2001. In particular, the intention to collect information on visitors in order to improve understanding of changing patterns of usual residency, will add complexity to the coverage assessment process. For example, through matching visitors to census and CCS records, additional information may be available to help identify residents who were recorded neither in the Census nor in the CCS. Furthermore, matching information from administrative sources to the Census so as to better inform the assessment of coverage and quality is being considered. The practicability of matching and the levels of accuracy achievable by this are still being assessed. These will inform the final design of the Census Coverage Survey and adjustment process.

Quality assurance

- 5.25 Quality assurance processes will be in place to undertake both macro and micro level quality assurance to ensure that the Northern Ireland and sub Northern Ireland estimates are feasible and to ensure that no systematic error is introduced as a result of other processes such as data capture or edit and imputation. In the context of the Census, quality refers to the output produced and whether:
- the specific output meets user requirements; and
 - the user understands the limitations of the data.

As noted by the UN Department for Economic and Social Affairs¹⁹, the strategy for improving quality is always a balance between the improvement gained and the time and resource required.

- 5.26 A Quality Report will be produced to accompany and support the release of the main statistical outputs.

Output production

- 5.27 Once the results have been quality assured, not only in terms of Northern Ireland and sub Northern Ireland population estimates but also for consistency across characteristics, the database will be ready for output processing. Simply described, output processing consists of a number of steps to create a final output database that is used to produce results for disseminating to users through a variety of channels – paper reports, web, and electronic media. Within this, there are two key processes that must be undertaken.

Application of statistical disclosure control methodology

- 5.28 Statistical disclosure control (SDC) involves a series of measures that support the 2011 Census confidentiality commitments (set out in more detail in Chapter 6) that no statistics are produced that allow the identification of an individual (or any information about an individual) with a high degree of confidence. The applications can either be to pre-tabular data when it is carried out as part of the ‘downstream’ process, or post-tabular data when it becomes part of output processing (see paragraphs 6.4-6.7).

Disseminating the results

- 5.29 In disseminating the results of the Census, much emphasis will be placed on responsiveness to users’ requirements on content, format and means of access, and on high standards in the production of statistics. It is intended that outputs should be in such a form as to meet the changing requirements of users, and made available in a range of media to provide ease of access for census users.
- 5.30 The National Statistician and the Registrars General for Northern Ireland and Scotland will present the results from the 2011 Censuses in reports to the Westminster Parliament, the National Assembly for Wales, the Northern Ireland Assembly and the Scottish Parliament respectively. In the light of the concerns of users that the 2001 Census outputs were insufficiently co-ordinated across the three Census Offices to allow for the production of fully comparable UK statistics, and in recognition of the importance of providing more harmonised and consistent outputs across the UK, the National Statistician and the Registrars General for Northern Ireland and Scotland are co-signatories to an Agreement²⁰ on the conduct of the 2011 Census in general and, in particular, on the production of harmonised statistics with specific attention being given to common questions, population bases, definitions, disclosure control methodologies and output formats.
- 5.31 While there is no statutory requirement to present such reports for the United Kingdom, the National Statistician and the Registrars General for Northern Ireland and Scotland intend that results for the UK as a whole should be made available, where the data collected permits, as a priority once the processing of the data has been completed. Indeed, the National Statistician will have the responsibility to fulfil the UK’s obligations to provide results of the UK Censuses to the European Union and the United Nations Statistical Commission. There is therefore a vital need for co-ordination and consistency in the presentation of outputs from the Censuses in Northern Ireland, England and Wales and Scotland.
- 5.32 It is intended to use the Internet as the main vehicle by which census outputs are disseminated, and to integrate census outputs with other statistical outputs through development of the Northern Ireland Neighbourhood Information Service (NINIS). There is, however, likely to be a continued demand for hard copy publications of tabulations, supplemented by outputs in CD/DVD formats, to meet users’ particular needs and the requirements of the Northern Ireland Assembly.
- 5.33 The key Northern Ireland results will be released, to a pre-announced timetable, as speedily as possible once processing is completed and the estimated population has

been determined. The geographic units for which census results will be produced are discussed further at Paragraphs 5.41-5.45 below. Concurrent release for all areas in Northern Ireland will ensure that comprehensive results are promptly available for use in resource allocation systems, and would also provide users with the ability to compare immediately any part of the country or sector of the population with any other.

- 5.34 The UK Government will fulfil its requirement under the Regulation of the European Parliament and Council on Population and Housing Censuses⁴ to provide the European Union with statistical results from the 2011 UK Censuses (or from alternative data sources) in the form of a set of pre-specified statistical cross-tabulations by the end of March 2014.
- 5.35 To meet specialist user requirements, simple, cost-effective and rapid systems and procedures for users to request non-standard statistical abstracts will be developed. The service for such bespoke or commissioned output should become available as soon as the main results are released. Where such outputs do not provide sufficient detail necessary for particular statistical research purposes, access to more detailed levels of data will be possible within strictly controlled laboratory conditions.
- 5.36 Similarly, a service for making available micro data, such as samples of anonymised records (SARs) of people and households, will be made available to approved researchers so that they may carry out their own analyses that are not possible using aggregate data. Such access will be subject to the overriding need to ensure complete confidentiality of personal data in accordance with the Census (Confidentiality) (Northern Ireland) Order 1991. The availability of such samples was a major, and successful, innovation of the 1991 Census, and these were extended in 2001.
- 5.37 It is proposed to extend the Longitudinal Study by adding data from the 2011 Census for Northern Ireland to those records already included from the 1991 and 2001 Censuses. The Longitudinal Study (a database of linked census and vital event data (births and deaths) and Health Service registrations, for a sample of the population of Northern Ireland) is covered by the same rigorous confidentiality conditions as the Census itself, and the database is held securely, with access strictly controlled and subject to the provisions of the Census (Confidentiality) (Northern Ireland) Order 1991. In addition, Northern Ireland Longitudinal Study (NILS) researchers must adhere to procedures prescribed in the NILS Security and Disclosure Agreements and to all conditions of data access set out in the NILS licence.
- 5.38 Metadata, in the form of definitions, classifications and quality indicators will also be produced for use with the statistical outputs. These will include, in particular, confidence intervals and other quality measures and information from post-census coverage and quality surveys such as local coverage rates, item non-response, and imputation rates.
- 5.39 Statistics from the Census to be provided to the Statistical Office of the European Union (Eurostat) under the provisions of the Regulation of the European Parliament and Council of Population and Housing Censuses⁴ could be made accessible through a proposed European Census Hub. By this means data would be held securely and released to Eurostat and/or Member States on request to an agreed level of statistical

and geographical breakdown. Such data would be subject to the same strict confidentiality and statistical disclosure control measures that will apply to domestic requests for information. The development of such a system is also being considered for the purpose of disseminating census outputs domestically.

- 5.40 Whatever the form of output supplied, the greatest care will be exercised to avoid the inadvertent disclosure of information about identifiable individuals through the statistical results of the Census. To ensure the protection of statistical confidentiality, various disclosure control measures will be applied (see paragraphs 6.4-6.7).

Planning output geography

- 5.41 It is aimed to meet users' requirements for statistical results to be made available, at varying levels of detail, for a number of geographies, subject to the overriding requirement to protect statistical confidentiality. Such geographies have yet to be decided and will need to be viewed in the context of the ongoing Review of Public Administration (RPA), and the outcome of the 2008-2009 Review of the Local Government Boundaries Commissioner.
- 5.42 In 2001, local government boundaries (26 Local Government Districts, composed of 582 electoral wards) formed the geographic basis of census outputs and it is proposed that a similar approach is taken for outputs from the 2011 Census. Under current proposals, new local government boundaries for Northern Ireland will be in place before the outputs from the 2011 Census are published. The Local Government (Boundaries) Act (Northern Ireland) 2008 stipulates that there will be 11 Local Government Districts composed of about 460 electoral wards. It is proposed that these electoral wards and Local Government Districts, will be the basic geographic unit for 2011 Census outputs.
- 5.43 For statistical purposes, Census Output Areas (COAs) and Super Output Areas (SOAs) were developed as geographical reporting units. COAs were first created for the 2001 Census. There are 5,022 COAs each containing, on average, about 125 households and 350 persons. SOAs are larger areas constructed from groupings of COAs and have been extensively used for deprivation measures, the publication of Neighbourhood Statistics and for a range of key statistics from the 2001 Census. While electoral wards are administrative units, they have widely differing populations ranging from about 800 for a number of wards in Moyle to over 8,000 in parts of Belfast. Some 890 SOAs – each based on an aggregate of COAs – were created, each with a population of around 2,000 and all constrained to ward boundaries. Most wards are also SOAs, with larger wards – such as those in Belfast – divided into a number of SOAs.
- 5.44 For 2011 outputs, it is proposed that a sub-ward geography structure is again developed for statistical purposes, where each unit contains a similar number of people and is constrained to ward boundaries. Proposals will be published for such a sub-ward geography after the new local government district and ward boundaries are accepted by the Assembly.
- 5.45 For each census since 1971, statistical output based on grid squares – 100m grids in built-up areas and 1km grids in other areas – have been produced. These data present

a time series of census outputs on a constant geographic base over time. It is planned to produce 2011 grid-square outputs to add to the time series.

6 CONFIDENTIALITY, PRIVACY AND SECURITY

Confidentiality principles

- 6.1 The importance of achieving maximum coverage in the Census necessitates that public participation should be mandatory. The statutory requirement to provide personal census information is prescribed by the provisions of the Census Act (Northern Ireland) 1969 and in the Order and Regulations that will be made under the Act.
- 6.2 It is recognised that the public need to be confident that their personal census records will be held securely. As in previous censuses, assurances will be given to the public that all the information provided will be treated in strictest confidence. There is a well-established reputation of maintaining census confidentiality which it is intended to uphold.
- 6.3 The information collected in the 2011 Census will be used solely for the production of statistics and statistical research. Usage will comply fully with the Census Act (Northern Ireland) 1969. There are legal penalties for the unlawful disclosure of personal information collected in the Census. Government-wide standards relating to information risk management and data security will be met. The following principles will govern the treatment of the information given in the Census returns:
- only persons under the management and/or control of the Registrar General for Northern Ireland, including those agents acting, or providing services, on his behalf for the purpose of the Census will have access to personal census information;
 - in most cases one census questionnaire will cover all members of the household and information will be returned by post, or exceptionally, by hand to the enumerator or via a secure online facility. In addition, people will, if they wish, be able to give personal information on a separate form, in a way that will not reveal it to others in their household or establishment, or to the Enumerator;
 - everyone involved in the census operation and outside agents providing services will be given strict instructions and will be required to sign undertakings in the form of declarations binding in law, to ensure their awareness of their statutory confidentiality obligations. They will be liable to prosecution for any breaches of the law;
 - the physical security of personal census information held by Census Office HQ staff, by field staff or by authorised agents will be strictly enforced;
 - the computer systems handling census data will have strict safeguards to prevent unauthorised access;
 - there will be systemic modification of the data in the preparation of the results of the Census in order to preserve statistical confidentiality (see paragraphs 6.4-6.7 below); and
 - the security and confidentiality arrangements covering the collection and processing of census questionnaires will be subject to an independent review (see paragraph 6.15).

Statistical confidentiality and disclosure control

- 6.4 In releasing statistics from the Census, precautions will be taken so that published tabulations and abstracts of statistical data do not reveal any information about identifiable individuals or households. Special precautions may apply particularly to statistical outputs for small areas. Measures to ensure disclosure control will include some, or all, of the following procedures:
- restricting the number of output categories into which a variable may be classified, such as aggregated age groups;
 - where the number of people or households in an area falls below a minimum threshold, the statistical output – except for basic headcounts – will be amalgamated with that for a sufficiently large enough neighbouring area; and/or
 - modifying some of the data before the statistics are released through one or more of a variety of means such as record swapping, over-imputation and some form of cell perturbation.
- 6.5 The National Statistician and the Registrars General for Northern Ireland and Scotland, have published a joint agreement to adopt a common UK statistical disclosure control policy as part of the move towards seeking harmonised statistical outputs from the 2011 Census across the UK. The policy position is based on the principle for protecting confidentiality set out in the Code of Practice for Official Statistics 2009⁹, which includes the guarantee that no statistics will be produced that are likely to identify an individual.
- 6.6 In the Census context, where thousands of cross-tabulations are generated from one database, the risk of disclosure occurring can be addressed by introducing uncertainty about the true value of small cells. To meet the agreed interpretation of the Code of Practice for Official Statistics 2009⁹, it has been agreed that small counts could be included in publicly disseminated census data provided that:
- uncertainty as to whether or not the small cell is a true value has been systematically created; and
 - creating that uncertainty does not significantly damage the data.
- 6.7 The exact threshold of uncertainty required has not yet been decided. The National Statistician and the Registrars General for Northern Ireland and Scotland will make this judgement, in consultation with users and other experts including the Information Commissioner, at a later stage within the context of results from research into the balance of protection afforded, and damage caused, by various disclosure control methodologies. A UK statistical disclosure control strategy for tabular outputs will be finalised prior to Census day.

Wider use of census data

- 6.8 The handling of information collected in the 2011 Census will conform entirely to the principles of fair processing of personal data and sensitive personal data demanded by the Data Protection Act 1998. This will include not only the collection and processing of data for the purposes of the Census itself, but also for other possible statistical use

of the data, for example as a base for creating linked samples for subsequent follow-up on topics that cannot be included in the Census itself. The Northern Ireland Assembly will be notified of any intention to use information from the 2011 Northern Ireland Census for any such follow-up surveys, and it will be made clear to the public.

- 6.9 The processing of data in order to extend the Northern Ireland Longitudinal Study to include 2011 Census samples (see paragraph 5.37) will also adhere to the Data Protection principles of fair processing. In addition, Northern Ireland Longitudinal Study (NILS) researchers must adhere to procedures prescribed in the NILS Security and Disclosure Agreements and to all conditions of data access set out in the NILS licence.
- 6.10 Personal census data is invaluable for research, as exemplified by the Northern Ireland Longitudinal Study (above). The 2001 Census data was used for example in published research on the extent of residential segregation in Northern Ireland and for equality analyses on the introduction of the capital value as the basis for domestic rates. The Registrar General will allow similar access to 2011 personal census data, but only where census data is the sole suitable source of information. Preferably, researchers will specify derived outputs that Census Office staff will produce. It is recognised that some projects require the researcher to access the data. In these cases, the researcher will be given access to the information in a secure environment, having signed the same confidentiality statement as the Registrar General's own staff. The researcher will not be able to remove from the secure environment any data disclosing personal census information, and their reports will be vetted by the Registrar General's staff to ensure that they do not breach the confidentiality of personal census information.

Data security

- 6.11 Temporary census field staff will be expected to have the skills to deal with the public and to be able to handle the information that they collect with complete confidentiality. Staff either employed directly by, or providing services to, the Registrar General for the purposes of the Census are, as a condition of service, bound by the confidentiality provisions of the Census (Confidentiality) (Northern Ireland) Order 1991.
- 6.12 It is particularly important to guard against inadvertent disclosure of personal information, and all staff will be warned against this and alerted to the penalties for doing so as part of their training. They will be required to sign an undertaking that they will not, without lawful authority, divulge or make use of any information acquired in the course of their duties, and will be liable on conviction under the terms of the Census (Confidentiality) (Northern Ireland) Order 1991, to imprisonment or a fine, or both, for any contravention.
- 6.13 All contractors working on the Census will be required to sign a declaration of confidentiality to guarantee their understanding and compliance with the law which makes unauthorised disclosure of personal census data an imprisonable offence. All those who have access to the full census data set in the operational area will be NISRA or ONS staff. All staff processing any personal census data will be security cleared to the UK baseline standard. This requirement has been extended to all

employees of the supplier and their sub-contractors handling any personal census data.

- 6.14 Census data is classified as RESTRICTED under the scheme of classification of government information. This classification brings in a whole set of standards and safeguards which have been put in place to ensure that the data remains secure. This includes control of physical access to any site or room where the data is kept, secure control of access to IT hardware and IT systems.
- 6.15 All security measures cover the completed questionnaires, the electronic data set, the website, the archive image system and the communications links relating to any of these items. All of the electronic communications links over which personal census information will be routed will be encrypted (scrambled) to levels recommended by the government security services. The Census security programme is being managed to the framework of ISO27001 – the internationally recognised information security management standard. An independent review of systems and procedures covering both internal systems and those of all contractors will be commissioned. These reviews will include systematic checks during the operations. The independent security auditors will be accredited by the government security services to carry out these reviews.
- 6.16 Secure systems in which to hold data, with stringent controls and procedures, will be put in place. No financial details are stored, and names and addresses are removed from the data sources used for the day to day production of statistical tables. The information in questionnaires is used only for census related publications and analyses published for geographic areas. These outputs do not attribute any of the statistics back to specific individuals. Once the analyses are complete and the information is published, electronic archive copies of the questionnaires will be securely filed away and the personal details they contain will remain closed. All handling and storage of data will comply with the Data Protection Act. Census data is owned by government and all of the legal undertakings of confidentiality of personal census information will apply to both internal staff and any contractors.
- 6.17 The prime contractor is Lockheed Martin UK Ltd. Additional specialist services will be provided by Cable & Wireless, Logica CMG, UK Data Capture, Broadcasting Support Services (bss), Steria, Polestar, Oracle and Royal Mail. Lockheed Martin UK will design the processing systems using its expertise and past experience. The day-to-day running of operational services will be provided by the consortium of specialist service providers. All of these specialist subcontractors are registered and wholly or majority owned in the UK or elsewhere in the EU. Contractual and Operational arrangements to enable the security of Census forms will include the following:-
- All Census data will be owned by NISRA, DFP;
 - All data will remain in and be processed in the UK;
 - All legal undertakings about the confidentiality of personal Census information will apply to both NISRA and any contractors;
 - Contractual arrangements ensure that only contractors registered and based in the UK and either UK or EU owned will have access to personal Census data;

- All Census employees and contractors working on the Census will sign a declaration of confidentiality to guarantee their understanding of, and obligations under, the law; and
- All staff who have access to the full Census data set in the operational data centre will be Census Office staff.

In addition, physical security procedures will be in place such that it will not be possible for unauthorised copying of data to take place. An independent data system security review will be carried out and published prior to the Census.

Reviews of confidentiality and computer security

- 6.18 An Information Systems Security Policy suitably stringent to protect census data is in place. In line with this policy, further detailed security measures specifically designed for the Census have been drawn up and implemented for the processing of data and its transmission (both in paper and electronic media) for the 2009 Census Rehearsal and the 2011 Census. Furthermore, as has become the practice prior to previous censuses, the security and confidentiality arrangements covering the collection and processing of census questionnaires will be subject to an independent review.

Privacy and the Human Rights Act

- 6.19 It is considered that the statutory authority to require information to be provided on each of the questions proposed for the 2011 Census is fully compliant with both the European Convention on Human Rights and the Human Rights Act 1998 in respect of the individual's right to privacy.
- 6.20 A Privacy Impact Assessment on the 2011 Census will be carried out prior to the subordinate legislation necessary to carry out the Census (see Chapter 7).

7 THE LEGISLATIVE PROCESS

Primary Census legislation

- 7.1 The primary legislation that provides for the taking of a census in Northern Ireland is the Census Act (Northern Ireland) 1969, which states that the First Minister and deputy First Minister acting jointly, may direct that a census of population shall be taken. The responsibility for making the necessary arrangements for planning, conducting and reporting of the Census rests with the Registrar General for Northern Ireland. The Census in Northern Ireland is conducted in close liaison with the Censuses in the rest of the United Kingdom.
- 7.2 The legal authorisation for the inclusion of ‘matters in respect of which particulars may be required’ from the Census, is contained in the Schedule to the Census Act (Northern Ireland) 1969. The following refers:
- (1) Names, sex, age.
 - (2) Occupation, profession, trade or employment.
 - (3) Nationality, birthplace, race, language.
 - (4) Place of abode and character of dwelling.
 - (5) Condition as to marriage or civil partnership, relation to head of family, issue.
 - (6) Education, professional and technical qualifications.
 - (7) Religion.
 - (8) Any other matters with respect to which it is desirable to obtain statistical information with a view to ascertaining the social condition of the population.

Secondary legislation

Census Order for Northern Ireland

- 7.3 In the 2009-2010 Assembly session, a Census Order in respect of the Census in Northern Ireland will be prepared for approval by the Northern Ireland Assembly, subject to Affirmative Resolution. The Order will be laid by the First Minister and deputy First Minister. The Census Order made in accordance with the Census Act (Northern Ireland) 1969, will prescribe:
- the date on which the Census is to be taken;
 - the persons by whom and with respect to whom, the Census returns are to be made; and
 - the particulars to be stated in the returns.

Census Regulations for the Census in Northern Ireland

- 7.4 Following the approval of the Census Order, the Minister of Finance and Personnel will lay before the Northern Ireland Assembly Census Regulations, which will make detailed provision for the conduct of the Census in Northern Ireland and will contain specimens of the questionnaires to be used.
- 7.5 The Regulations will principally cover the field activities such as:

- the appointment of field staff, including completion of form of undertaking;
- the geography of the Census – the Registrar General shall divide Northern Ireland into census districts and shall divide each census district into enumeration districts;
- the arrangements for the delivery of census questionnaires to households and communal establishments;
- the collection of completed questionnaires either by post or doorstep collection, or by online return;
- the duties of field staff and, specifically, the details of any particulars to be collected by them;
- any information relating to special arrangements for the enumeration of particular populations such as persons sleeping rough;
- follow-up procedures;
- the management of field materials and documentation; and
- security and confidentiality procedures.

7.6 UK harmonisation will be achieved through close liaison and co-operation between the three Census Offices, and through the agreement between the National Statistician and the Registrars General to work together to achieve consistent and comparable census outputs both to meet users' requirements to fulfil the UK's international obligations.

REFERENCES

- 1 Consultation Paper: The Future Provision of Demographic Statistics in Northern Ireland (Towards the 2011 Census)
http://www.nisranew.nisra.gov.uk/census/2011_info_paper.pdf
- 2 Northern Ireland Statistics and Research Agency (2005). Northern Ireland Census 2001 General Report – ISBN 0-33-708773-3
- 3 Treaty Establishing the European Union (see para 1.17) European Community (1957). *Treaty Establishing the European Union, Rome, 25 March 1957.*
<http://www.hri.org/docs/Rome57/Part1.html>
- 4 European Union (2008). Regulation of the European Parliament and Council on Population and Housing Censuses. Regulation (EC) no.763.2008 of 9 July 2008
- 5 UN Economic Commission for Europe (2006). *Conference of European Statisticians' Recommendations for the 2010 Censuses of Population and Housing.* ECE/CES/STAT/NONE/2006/4. United Nations, New York and Geneva. ISSN 0069-8458.
- 6 United Nations (2006). *Principles and Recommendations for Population and Housing Censuses, Revision 2.* Series M no.67/Rev2. United Nations, New York – ISBN 978-92-1-161505-0.
- 7 Northern Ireland Statistics and Research Agency (2005). The Future Provisions of Demographic Statistics in Northern Ireland (Towards the 2011 Census) Consultation Paper: Summary of Responses:
http://www.nisranew.nisra.gov.uk/census/Consul_Summ.pdf
- 8 *2007 Census Test: Northern Ireland Evaluation Report(s)*
<http://www.nisranew.nisra.gov.uk/census/censusevaluation/2007test.html>
- 9 UK Statistics Authority (2009). *Code of Practice for Official Statistics* – ISBN 978-1-85774-902-1. The Stationery Office.
- 10 Pensions Commission (2005). *A New Pensions Settlement for the Twenty-First Century.* The Second Report of the Pensions Commission. The Stationery Office.
- 11 Office for National Statistics (2005). *The National Statistics Socio-economic Classification: User manual* ISBN 1-4039-9647-4. Palgrave Macmillan.
- 12 International Labour Organisation (2003). *Sources and Methods Labour Statistics. Vol 5: total and economically active population, employment and unemployment (population censuses).* Third edition. ILO, Geneva.
- 13 Office for National Statistics (2000). *Standard Occupational Classification 2000. Volume 1: Structure and descriptions of unit groups* – ISBN 0-11-621388-4. *Volume 2: The Coding Index*– ISBN 0-11-621389-2. The Stationery Office.

- 14 Office for National Statistics (2007). *UK Standard Industrial Classification of Economic Activities (SIC 2007): Structure and explanatory notes*.
- 15 GROS (2006). Sexual orientation in the Census. See <http://www.gro-scotland.gov.uk/files/sexual-orientation-in-the-census.pdf>
- 16 Statistics New Zealand (2003). Sexual orientation Focus Group Research. A qualitative study. See <http://www.stats.govt.nz/reports/developments/sexual-orientation-focus-group-research.aspx>
- 17 Statistics Canada (2004). 2006 Census Content Consultation Report. See <http://www.statcan.ca/bsolc/english/bsolc?catno=92-130-X>
- 18 ONS (2006). Sexual orientation and the 2011 Census: background information. See <http://www.statistics.gov.uk/about/data/measuring-equality/sexual-identity>
- 19 United Nations Department of Economic and Social Affairs (2001) *Handbook of Census Management for Population and Housing Censuses*. [Reference no.00.xvii.15]. United Nations, New York.
- 20 Office for National Statistics, General Register Office for Scotland, Northern Ireland Statistics and Research Agency (2006). *The conduct of the 2011 Censuses in the United Kingdom: statement of agreement of the National Statistician and the Registrars General for Scotland and Northern Ireland*. Available from the National Statistics website at: <http://www.ons.gov.uk/census/2011-census/2011-census-project/index.html>