

Scotland's Census 2011

Outputs Prospectus

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edition highlighted over-page)

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Main change from September 2014 edition:

[1.10 Origin-destination/
flow data: migration &
travel to workplace/
place of study](#)

To provide further detail about our plans to publish origin-destination data from 2011 Census.

Background

Scotland's Census is the official count of every person and household and takes place every 10 years. On 27 March 2011, all households in Scotland were asked to complete a [census questionnaire](#) (PDF document). The census covers topics such as households, health, migration, ethnic group, national identity, religion, qualifications, employment, transport and visitors.

From the public's responses to those questions, the National Records of Scotland (NRS) produce a range of anonymised statistics to provide an accurate snapshot of Scotland's population and reveal changes in Scotland's society since the last census in 2001. The results are used extensively across a number of different sectors to support the development of policy, planning and the delivery of services in Scotland.

This prospectus outlines the plans for the release of Scotland's Census 2011 results. It describes what results are now available and what is due within the remaining releases, setting out indicative timings for each. The prospectus is divided into three main sections:

1. [Release plans for Scotland's Census results](#)
2. [About Scotland's Census – methods and reference material](#)
3. [Censuses across the UK](#)

Further information and background can be found on [Scotland's Census website](#) including a range of frequently asked questions.

What's happening in England, Wales and Northern Ireland

Details on the releases of census results specific to England & Wales can be found on the [census section of Office for National Statistics' \(ONS\) website](#). Details about the releases specific to Northern Ireland can be found on the [Northern Ireland Statistics and Research Agency \(NISRA\) website](#). There are also plans for more UK harmonised tables, and these will be available from a single point of access on the [ONS Website](#).

How the results were specified

The scope and content for Scotland's Census 2011 results were agreed through formal consultations with users. They are broadly consistent with those released for the [2001 Census](#) found on the NRS website, primarily to allow analysis of how Scotland has changed over time. A number of new statistical tables, requested by users, have been added, mainly reflecting the new questions that were asked in 2011. The results will generally be made available for the same set of output geographies as provided in 2001. Summaries of the [formal consultations](#) can be found on the NRS website.

Updates to this prospectus

This prospectus is regularly updated as more information becomes available and arrangements are confirmed. A summary of key changes from the previous version is

provided on the contents page. To register for email notifications of updates to the prospectus please use the [subscribe form](#) on the [Scotland's Census website](#).

To discuss any aspect of our plans for release of Scotland's census results, contact us at: Scotlandscensus@gro-scotland.gsi.gov.uk

1. Release of Scotland's Census results

1.1 Summary of data released so far

Information and data is available via the [Scotland's Census website](#).

Release 1

Release 1 was published as a number of sub-releases between December 2012 and August 2013 and comprised:

- usually resident census population estimates for Scotland, Council Areas, Health Boards, Postcodes, Output Areas, Data Zones and Scotland's Islands by single year of age and sex;
- estimates of the number of households for Scotland, Council Areas, Health Boards, Postcodes, Output Areas, Data Zones and Scotland's Islands;
- [geography products](#) including digitised boundaries for Output Areas, a postcode to Output Area index and an Output Area to higher geography look up table;
- additional quality assurance and methods material.

Detail about the [quality assurance processes and methodology](#) that NRS has followed was provided along with the releases on the Scotland Census website.

Equivalent census [population estimates for the whole of the UK](#) can be found on the ONS website.

Release 2

The bulk of Release 2 was published as a number of sub-releases between September 2013 and December 2013 and comprised:

Key and Quick Statistics tables for the following topics:

- Ethnicity, Identity, Language and Religion
- Population and Households
- Health
- Labour Market
- Education
- Housing and Accommodation
- Transport

In addition, three outstanding Release 2 tables (QS119SC – 'Household by deprivation dimensions', QS304 – 'Long-term health conditions' and QS415SC – 'Central heating') were published on 9 April as [Release 2D](#).

These have been published at all levels of [census geography](#).

1.2 Release 3

On completion of Release 3, we will have published in excess of 250 Local Characteristics and Detailed Characteristics tables. These are being published on a topic by topic basis and, given the number of tables involved, most topics are being split into multiple releases. We are publishing by broad topics throughout 2014 in the following order:

- Ethnicity, Identity, Language and Religion
- Population and Households
- Health
- Labour Market & Education
- Housing and Accommodation
- Transport

For the most up to date information about our Release 3 plans, please see the [Outputs Prospectus page](#) of our website. Details and layouts for all Release 3 tables are provided in our 'Table layouts for Release 3' document are also available from that page. The layouts remain subject to change until publication of the tables.

It should be noted that the availability of tables remains subject to our quality assurance and disclosure control processes. Where a table becomes unavailable for one of the phased releases, we will endeavour to make it available at the time of the next release.

Details of the tables in each release will be provided as far in advance of each release as possible.

The table in [Annex A](#) shows the set of geographies for which each set of tables will be available, subject to successful disclosure control testing.

1.3 2011 Census results by geography

Guided by feedback from users, NRS has taken the same general approach to output geographies for the 2011 Census as was adopted for Scotland's previous census in 2001. This consultation feedback was published on the NRS website in the [Spring 2010 Consultation on Statistical Outputs: Analysis of Responses](#) PDF document (consultation points 5-8).

Census Output Areas (averaging around 50 households in size, with minimum thresholds for confidentiality set at 20 households and 50 individuals) will continue to be the smallest geography for which census results will be produced and will form the building bricks for census outputs for all higher geographies. With the exception of Council Areas, which will be produced on an 'exact fit' basis, all higher geographies will be generated as aggregations of output areas on a 'best fit' basis. Further background information on census output geography can be found in section 4 of the [February 2011 Census Outputs Consultation](#) (PDF) document on the NRS website.

The matrix showing which set of pre-defined statistical tables will be produced for each output geography is provided at [Annex A](#).

The availability of results at all of these geographies across all topics and tables will be dependent on successful disclosure control testing. To support and enhance the use and understanding of the census results, a range of geography products have

been made available and are available from the [Geography section on the NRS website](#). These include digitised boundaries for output areas, a postcode to output area index and an output area to higher geography look up table.

1.4 Supporting information

Each release will be accompanied by supporting information to help explain the statistics and how they were derived. A Statistical Bulletin (containing summary analysis) will be provided for each topic-based release as well as, where appropriate, information on comparability to the 2001 Census outputs. Detailed information on the quality of the census population estimates, for example on question non-response rates, will be published in conjunction with the later releases of census data.

1.5 Dissemination

The key dissemination route is our [Census Data Explorer](#) which provides access to census results in a variety of formats, including:

Area profiles - A snapshot of census results for a range of areas, comparing up to three areas at once. Profiles on all census topics are provided.

Maps and charts - A selection of interactive maps and charts for all census topics are provided.

Standard outputs - Allows users to select tables and geographies on an individual basis and present and download the results in tabular format.

Data warehouse - (primarily aimed at users of bulk data) – All data for each Release in downloadable csv format. Users can choose to download all published data for a single release or select any combination of releases. See ['Bulk data'](#) for more information.

1.6 Naming convention for tables

The naming convention for the various types of pre-defined statistical tables is different from that used in 2001. It is consistent with that adopted by ONS and NISRA and follows research into the naming conventions applied by other statistical offices including New Zealand, Canada, Australia and the Netherlands. The 2011 naming convention (with the names of the equivalent table types in 2001) is as follows:

- **Key Statistics** – KS (same as in 2001)
- **Quick Statistics** – QS (formerly Univariate (UV) tables)
- **Local Characteristics** – LC (formerly Census Area Statistics (CAS))
- **Detailed Characteristics** – DC (formerly Standard (S) tables)
- **Themes** – T (formerly Standard Themes (T) tables)

- **Local Themes** – LT (formerly Census Area Statistics Themes (CAST) tables)

The table numbering for the pre-defined statistical tables has been completed and a look-up file between the 2011 tables and the corresponding 2001 tables (where they exist) will be provided to help users make comparisons.

1.7 Bulk data

Bulk data (all standard output tables for all associated geographies) is provided via the Data Warehouse section of the new Census Data Explorer.

For each release of census results, the Data Warehouse will provide:

- a series of geography specific folders (e.g. Council Areas) containing csv data files specific to that level of geography;
- csv data files that contain a unique 'S number' geocode for all areas within that level of geography. (The exceptions are Civil Parishes and Inhabited Islands which do not have a unique 'S number'. These csv data files are kept separate by the use of geography specific folders);
- an Excel file containing header and footer information; and
- an Excel file containing cell reference information.

The [2011 Census Index](#) provides a lookup for users to access and cross-match geocode and geolabel relationships (e.g. S12000033 is the S number for Aberdeen City council area).

1.8 Analytical reports

Following the 2001 Census, a number of analytical topic reports were produced including Gaelic, Inhabited Islands, Migration and Travel to Work or Study and Key Statistics for Settlements and Localities. Depending on demand and resources available, a similar set may be produced for the 2011 Census.

A range of potential new specialist reports is under consideration. NRS would be happy to hear views on the need for such reports and others that we should consider. We will also consult further with analytical colleagues in the Scottish Government and key census data users about the scope and priorities for what should be covered in a programme of census analytical work for Scotland.

1.9 Microdata

NRS will also provide microdata products intended to help meet user needs more effectively and follow good practice set out in the [Code of Practice for Official Statistics](#) published on the UK Statistics Authority website.

On 25 June 2014, we published [‘Teaching File’](#) for public use which provides anonymised, individual-level files available for download by users. In addition, we plan to make two other levels of 2011 Census microdata available:

Safeguarded files – These will be more detailed than public use files and will be downloaded only under special user agreement. The files will contain a similar level of detail to the 2001 small area microdata and individual small area record files. A household file is also being considered at this level.

Secure/Virtual Microdata Laboratory (VML) files – Available under Approved Researcher Licence only, through a secure environment. These files will be generally similar to the 2001 Controlled Access Microdata Sample (CAMS) with a possible increase in sample size.

We will confirm access arrangements to these files in early 2015.

1.10 Origin-destination/ flow data: migration & travel to workplace/ place of study

Statistics on origin-destination/ flow data comprise the migration and travel to place of work or study patterns of individuals on a regular basis. These flows can be cross-tabulated by variables of interest: for example, by occupation or method of travel.

Similar to the microdata products, the 2011 Census origin–destination tables are classified in three ways:

- Public tables - available under Open Government Licence,
- Safeguarded tables - slightly more detail not available to the public and can only be accessed by data analysts under terms and conditions,
- Secure tables - greater detail and only accessible through a secure environment equivalent to the ONS Virtual Microdata Laboratory.

Much of the origin-destination data from 2011 Census will be published at the UK level, providing migration and travel to work flows for usual residents of Scotland, England, Wales and Northern Ireland. The first batch the data was published on 25 July 2014, more information on this is available from the [Origin-destination page](#) on Scotland's Census website.

Further information on publication plans and access arrangements for the UK-wide origination-destination statistics can be found on the [ONS website](#).

Scotland-specific tables on travel to study flows will be published in 2015.

1.11 Alternative population bases

The main set of statistical outputs from the 2011 Census will relate to the usual resident population base, i.e. where people usually live. Two other bases will be provided in 2015 – Workplace and Daytime, as noted below:

Workplace:

For a given geography the estimate of people who work there, for example people who travel into a city to work. It will be a geographic redistribution of the usual resident population who are in work, allocated to their place of work.

Daytime:

This is a population estimate of all people who are working or studying in the area plus all people who are not working or studying but are resident in the area.

1.12 Commissioned tables

NRS will provide a commissioned table service for Scotland's Census 2011 statistics. Release 3 type requests (i.e. cross tabulations) will be available for the 2011 Census following the completion of Release 3 by the end of the year. This is available for customer requirements that are not met by the data provided in the published tables. The availability of commissioned tables will be determined by: the data available; whether or not NRS already intends to release the data later; statistical disclosure control policies; and available resource.

Commissioned tables will be issued to the requesting customer under [Open Government Licence](#), and then made available free to all other users.

The cost of commissioned tables in Scotland will reflect the amount of time taken to develop the tables and to apply statistical disclosure checking and associated processes. The charges for commissioned tables will be based on an hourly rate of £25. This reflects the economic costs of delivering this service and will be subject to a minimum cost. All charges will be subject to VAT at the standard rate. Requests for delivery of information via portable media (CD/DVD) may incur additional charges to cover administration, production and delivery of these items.

The table below gives a guide to how much a commissioned table will cost. However, NRS will consider each request on a case-by-case basis, and will agree the final cost with the customer prior to any work commencing.

Description	Indicative cost
A table which takes under half a day to produce	~£100
A table which takes between half a day and a day & a half to produce	£100 - £300
A table which takes between a day & a half and two & a half days to produce	£300 - £500
A table which takes more than two & a half days to produce	Price on application

Commissioned tables will be subject to the terms and conditions of use of Scottish Census statistics. Information on these is available from the [NRS website](#).

ONS are responsible for providing commissioned tables on UK Census outputs. These can be ordered once all three UK Census Offices have released their 2011 statistics. ONS have published information on commissioned tables in their [prospectus](#) (available on the ONS website).

2. About Scotland's Census – methods and reference material

2.1 Why we take a census

Scotland's Census took place on the 27th March, 2011. Its purpose is to provide a detailed snapshot of the size and characteristics of the population of Scotland, and through comparison, will reveal changes in society since previous censuses.

All households in Scotland were issued with a questionnaire that asked questions on topics such as households, health, migration, ethnic group, national identity, religion, qualifications, employment, transport and visitors. This information is used extensively across a number of different sectors to support the development of policy, planning and delivery of services. Further information, including case studies of how the census information is used can be found on the [Scotland's Census](#) website.

The questions asked in 2011 evolved from those asked in previous censuses. Based on consultations with users, new questions were researched and developed and other questions removed. For the 2011 Census, each question was assessed to ensure that it met certain criteria e.g. high user demand; the answers would provide reliable data of high quality; that there were no alternative sources of getting the information; and that the question would be acceptable to the public.

Further information on user consultations and other work carried out in preparation for the 2011 Census is available within the [Formal Consultations and Supplementary Work](#) section of the National Records of Scotland (NRS) website.

For the 2011 Census, there were seven new questions on:

- long-term health conditions;
- visitors – two new questions;
- language – two new questions;
- national identity; and
- month/year of arrival in the UK.

In designing the census operation, NRS recognised the need to ensure that the burden on the public was kept to a minimum and also the impact on public privacy. A paper on [Considerations of the Impact on Public Privacy of Scotland's Census](#) (PDF) can be found on the NRS website.

The 2011 Census residential address register was developed specifically to ensure that every household and managed accommodation in Scotland received a census questionnaire. More information on the quality and development of this register can be found on the NRS website, in Appendix 4 of the [Considerations of the Impact on Public Privacy of Scotland's Census](#) PDF publication.

2.2 Processing the data

The information from completed census questionnaires is currently being cleaned, validated and run through statistical estimation processes to provide the robust statistics required by users.

The [Policy and Methodology](#) section of the NRS website contains information on the strategies and methods of planning and conducting the 2011 Census, as well as on quality assurance procedures and statistical disclosure control methods. Further commentary on data quality will be published alongside the releases.

A methodological strategy was developed in order to identify and adjust for the number of people and households not counted in the census, counted more than once, or counted in the wrong location. This was to ensure that the census results provide accurate population estimates. More complete information on the Census Coverage Survey and on Quality Assurance can be found in the [Data Quality Assurance Strategy](#) (PDF document) on the [NRS website](#).

NRS continues to place particular importance on protecting the confidentiality of information collected in the census on individual people and households. The Statistical Disclosure Control (SDC) procedures being adopted for the 2011 Census build on those used in Scotland for the 2001 Census. They include the use of targeted record swapping, imposing minimum size thresholds for statistical output areas and restricting the level of detail that is available in the statistics for lower level geographies. A consistent SDC methodology is being applied throughout the UK for the 2011 Census; further background information on its general principles can be found on the [Office for National Statistics \(ONS\)](#) website.

3. Censuses across the UK

3.1 Harmonisation

A co-ordinated effort was made by the three UK census offices to conduct a census simultaneously (27 March 2011 was census day across the UK). In England and Wales, the census is run by the Office for National Statistics (ONS) and in Northern Ireland by the Northern Ireland Statistics and Research Agency (NISRA).

Harmonisation of census questions and the results derived from those questions was a key objective for the census offices. Therefore most of the census results produced for Scotland will be comparable with the results produced for England & Wales and for Northern Ireland.

3.2 UK products

UK population estimates from the census can be found on the [ONS website](#). These cover both UK and individual country estimates.

ONS produce detailed UK-wide census statistics including those required by Eurostat, the statistical office of the European Union. All UK releases are supported by a statistical bulletin, and related commentary to help users understand the statistics and their potential uses.

'2011 Census - European Commission Census Regulation Statistics' was released on 31 March 2014. This provides data covering a range of census variables including Household Status, Economic Activity, Occupation, Country of Citizenship and Educational Attainment. The release includes data at NUTS 1, NUTS 2 and LAU 2 geography levels.

3.3 Differences in publication dates across the UK

The operational model for collecting data differed in Scotland to that in England & Wales and Northern Ireland. The NRS model relied heavily on the use of 6,000 field staff deployed across Scotland to hand deliver, check, follow-up and reconcile all census questionnaires prior to the start of our data capture and statistical processing operations. This model reflected lessons learned from the 2001 Census and our successful 2009 Census Rehearsal, and was considered the best method for delivering a high quality census in Scotland.

The model developed for England & Wales and Northern Ireland reflected their own past experiences and how best to achieve a high quality census in their respective countries.

As a consequence, the timetable for data capture and processing of census questionnaires in Scotland differs from that in England & Wales and Northern Ireland and, subsequently, so does the release timetable for census results.

Annex A – Geographies and table coverage

The table below shows the set of geographies for which standard outputs will be made available via the [Census Data Explorer](#). The availability of tables at each geography will be subject to successful disclosure control testing. Please note that Output Areas are created so that they fit exactly within Council Area boundaries. All other output geographies will be created from best-fit aggregations of Output Areas.

Area	Key & Quick Statistics	Census Profiles	Local Characteristics	Local Themes	Detailed Characteristics	Themes
Scotland	Yes	Yes	Yes	Yes	Yes	Yes
Council Area ⁽¹⁾	Yes	Yes	Yes	Yes	Yes	Yes
Scottish Parliamentary Region	Yes	Yes	Yes	Yes	Yes	Yes
Scottish Parliamentary Constituency	Yes	Yes	Yes	Yes	Yes	Yes
UK Parliament Constituency	Yes	No	Yes	Yes	Yes	Yes
Health Board (1)	Yes	Yes	Yes	Yes	Yes	Yes
Community Health Care Partnership	Yes	No	Yes	Yes	Yes	Yes
Multi-member Electoral Ward	Yes	No	Yes	Yes	Yes	Yes
National Park	Yes	No	Yes	Yes	No	No
Postcode Sector ⁽²⁾	Yes	No	Yes	Yes	Yes	Yes
Settlement ⁽³⁾	Yes	No	Yes	Yes	No	No
Locality ⁽³⁾	Yes	Yes	Yes	Yes	No	No
Civil Parish	Yes	No	Yes	Yes	No	No
Inhabited Islands	Yes	No	Yes	Yes	No	No
SNS Data Zone ⁽⁴⁾	Yes	No	Yes	Yes	No	No
Output Area	Yes	Yes	Yes	Yes	No	No

Footnotes

1. Council Areas and Health Boards as at 1 April 2011.
2. True postcode sectors overlap Council Area boundaries so bespoke postcode sectors are created for census outputs which respect Council Area boundaries. Two versions have been created (Local Characteristic – LC sector and Detailed Characteristic - DC sector) so that the additional detail included in the Detailed Characteristics and Theme tables can be made available. Further background information on this can be found in the [2011 Census - Geography Classifications](#) (PDF document) on National Records of Scotland (NRS) website.
3. Based on the [Mid-2010 based Settlement and Localities boundaries](#) available on the NRS website.
4. Tables are being published initially by SNS Data Zones, which are based on 2001 census data are being created using 2011 census data. New Data Zones are being created using 2011 census data. We will publish standard tables using the new Data Zones in due course.