

# 2011 Census Microdata Individual Safeguarded Samples – User Guide

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## 1. Introduction

### 1.1 Census Microdata

The 2011 Census Microdata products provide an alternative source of data to the standard 2011 Census releases, which consist of tables containing counts of how many people in one area have a certain attribute or attributes.

In contrast, Microdata contain information from the individual respondents and households, this means that census Microdata contain a rich source of data for researchers to use their own analyses.

These data have been treated to protect the confidentiality of the respondents. Rather than data being delivered as tables of counts, data are stored in the same way as if the data had been collected by conducting an anonymous sample survey. Only a sample of cases are made available and individual records contain information on a limited number of topics.

### 1.2 Individual Safeguarded Microdata Samples

A Variety of Microdata products are available, balancing the level of detail in the data, the sample size and data access restrictions. Full details of all Microdata products can be found via the [Scotland Census Microdata webpage](#).

The Individual Safeguarded Microdata products represent an intermediate level of detail and a moderate sample size. As a result, access limitations are less restrictive than for the more detailed, larger sample [Secure Microdata](#) products but more restrictive than for the very limited small sample size [Teaching File](#). There are two individual safeguarded Microdata samples, each of which consists of a random sample of five per cent of people in the 2011 Census output database for Scotland:

- Regional individual safeguarded Microdata sample: The geography for this file is Scotland. The lower level of detail in the geography for this file allows for a higher level of detail in the variables.
- Grouped Local Authority individual safeguarded Microdata sample: This sample is a higher level of geographic detail than the regional sample and thus provides a little less detail in the variables. The geography in this file contains groups of local authorities, or single local authorities where the population reaches at least 120,000 persons.

Both samples include usual residents and Schoolchildren and full-time students living away from home during term time. Records in both samples also include residents in households and communal establishments.

## 2. About census Microdata and the Safeguarded Samples

### 2.1 2011 Census

Census data are collected every ten years in Scotland, as governed by the 1920 Census Act. Census day for the 2011 Census was the 27<sup>th</sup> of March 2011. Full information on how the 2011 Census in Scotland was conducted is available on the [Scotland Census website](#).

The 2011 Census is the most complete available source of information on the population. However, despite efforts to reach everyone and obtain the most accurate information possible, no census is perfect and some people are inevitably missed. Further information on how the 2011 Census was conducted and the treatment of missing data is available in the Census methodology section of the [Scotland Census website](#).

### 2.2 UK Censuses and Microdata products

The National Records of Scotland (NRS) is responsible for carrying out the census in Scotland. Simultaneous but separate censuses took place in England and Wales & Northern Ireland. These were run by the Office of National Statistics (ONS) and the Northern Ireland Statistics & Research Agency (NISRA) respectively.

The 2011 Census Microdata Secure Files released by NRS cover Scotland only. Similar products for [England & Wales](#) and [Northern Ireland](#) are available.

### 2.3 Population Base

The Secure Files include data from the total Scottish population, which includes Schoolchildren and full-time students living away from home during term time (categorised in the 'term-time address indicator' variable).

The main population base for published statistical tables from the 2011 Census is the usual resident population as at census data, 27<sup>th</sup> March 2011. For 2011 Census purposes, a usual resident of the UK is anyone who, on census data, was in the UK and had stayed or intended to stay in the UK for a period of 12 months or more, or had a permanent UK address and was outside the UK and intended to be outside the UK for less than 12 months.

If the data from the Secure Files are not filtered to include only usual residents, results may differ from published statistical tables. Many of the variables included in the dataset, however, contain values only for usual residents.

Schoolchildren and full-time students studying away from the family home were counted as usually resident at their term-time address. Basic demographic information only (name, sex, age, marital status and relationship) was collected at their non-term time address. In the Secure Files, information collected their non-term time address is available by filtering the term time address indicator variable to include only 'At another address'. Datasets including both 'students living away from home during term-time' and 'usual residents' could thus include duplicate information on basic demographic variables for some individuals. Therefore careful consideration should be given when choosing the appropriate population base for data exploration, and when comparing findings from the Secure Files with published reports.

Residents in communal establishments are included in the Individual Safeguarded samples.

## 2.4 Geography

The lowest level of geography for the Individual Safeguarded Microdata (Regional) sample is Scotland. The lowest level of geography for the Individual Safeguarded Microdata (Grouped LA) product is Council Area with populations of at least 120,000 persons. Council Areas with populations below the 120,000 threshold have been aggregated with neighbouring Council Areas. For details on how the Council Areas have been aggregated see Table 1 in the appendix. A list of all Council area groups is also available in the accompanying code book.

## 2.5 Variables

A separate code book is available for each product with details of all variable names and codes, the category names and codes for each variable, and the proportions represented in the sample by each variable category.

Further details on how these variables were derived from the 2011 Census questionnaire, including definitions and derivations, can be found in the [2011 Scotland Census variables and classifications page](#).

## 2.6 Continuity between 2001 and 2011

There are some differences between the 2001 and 2011 censuses, which may have implications for users. Full information on differences between the census questions and definitions can be found in the census comparability report.

Information on the 2011 Census Samples of Anonymised Records (SARS), the equivalent products to the 2011 Census Microdata, can be found on the NRS website.

Additionally, there will be a report made available which will compare the 2011 Scotland Census with the 2011 Census in England & Wales, and Northern Ireland.

### **3. How were the samples drawn?**

#### **3.1 Sample size**

The sample size was chosen to be consistent with statistical disclosure control considerations and user requirements. The number of records that are within the sample and unique within the census database was measured as a proportion of the number of records that are unique within the sample. The level for this proportion was set in order to determine sufficient uncertainty. The sample composition chosen will remain confidential, as was the case for the 2001 Census Microdata.

#### **3.2 Stratification**

Stratification enables the characteristics of a sample to be proportionally representative of the population by dividing the population into strata based on key characteristics. Random samples taken from each stratum are then pooled to form the final sample.

The 2011 Census Microdata samples are stratified by census output area within Council Area. This method ensures good representation of data, the sample is more evenly spread, and is consistent with the user requirement for a multipurpose product that can be used for a wide variety of analyses. It also controls against extreme sample selecting, ensuring for instance that an entire output area is not selected at random.

### **4. Confidentiality and Protection of Personal Data**

Preserving the confidentiality of personal information provided by the public on their census questionnaires remains a top priority for the census (see more detail on [data confidentiality in the 2011 Census outputs](#)).

Statistical disclosure control applied to 2011 Census data, including targeted record swapping and restriction of detail, additionally protects the attributes of individuals and ensures that there is always uncertainty surrounding any apparent attribute disclosure.

The Microdata Individual Safeguarded Samples contain a sample of five per cent of people and no personal identifiers (name, address, data of birth) have been included in any 2011 Census Microdata products. To further protect against risk of disclosure, this product is only available to users who have registered with the UK Data Service and who have agreed to the terms and conditions of the UK Data Service End User License.

### **5. How to gain access to a Safeguarded Microdata Sample**

Both Individual Safeguarded Samples are available via download from the UK Data Service. Researchers wishing to use the UK Data Service will need to register and accept terms and conditions before accessing and downloading data.

All users must agree to the terms and conditions of the UK Data Service End User License before data can be accessed and downloaded.

Find out [how to register at the UK Data Service](#).

## **6. Other Census products and getting more information**

Further information from the 2011 Census on output products already published or planned for publication in the future can be found on the [Scotland Census Website](#).

For further information about census products please contact [Census Customer Services](#).

### **Census Customer Services**

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## 7. Appendix

Table 1 groupings of Council areas in the Microdata individual Safeguarded Sample (Grouped CA).

<b>CA group Number<sup>1</sup></b>	<b>Council Area name</b>	<b>Geography</b>
1	Aberdeen City	2011 Council area
2	Aberdeenshire	2011 Council area
	Moray	2011 Council area
3	Highland	2011 Council area
	Eilean Siar	2011 Council area
	Orkney Islands	2011 Council area
	Shetland Islands	2011 Council area
4	Edinburgh, City of	2011 Council area
5	East Lothian	2011 Council area
	Midlothian	2011 Council area
6	West Lothian	2011 Council area
7	Fife	2011 Council area
8	Clackmannanshire	2011 Council area
	Stirling	2011 Council area
9	Falkirk	2011 Council area
10	East Ayrshire	2011 Council area
11	North Ayrshire	2011 Council area
12	Scottish Borders	2011 Council area
	Dumfries & Galloway	2011 Council area
	South Ayrshire	2011 Council area
13	East Dunbartonshire	2011 Council area
	East Renfrewshire	2011 Council area
14	Glasgow City	2011 Council area
15	South Lanarkshire	2011 Council area
16	North Lanarkshire	2011 Council area
17	Perth & Kinross	2011 Council area
	Angus	2011 Council area
18	Dundee City	2011 Council area
19	Inverclyde	2011 Council area
	Argyll & Bute	2011 Council area
20	Renfrewshire	2011 Council area
	West Dunbartonshire	2011 Council area

<sup>1</sup> The group number refers to the code given to the LA group in the sample. These codes are available with the name of each LA group in the codebook accompanying this product.