

# 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 in 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 [ONS 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 [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 England and Wales:

- Regional individual safeguarded microdata sample: The geography for this file is government office region (with London split into Inner London and Outer London). The lower level of detail in the geography in this file allows for a higher level of detail in the variables.
- Grouped local authority individual safeguarded microdata sample: This sample is at 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, short-term residents and students/school children enumerated at their non-term-time address. 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 England and Wales, 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 England and Wales was conducted is available on the 2011 Census page on the [ONS 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 [Quality and Methods](#) section of the [2011 Census User Guide](#).

### 2.2 UK Censuses and Microdata Products

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

The 2011 Census Microdata Individual Safeguarded Samples released by ONS covers the countries of England and Wales only. NISRA and NRS have plans to produce similar products for Northern Ireland and Scotland.

### 2.3 Population Base

The 2011 Census Microdata products include data from the total England and Wales population, which includes usual residents, short-term residents and students living away from home during term-time (categorised in the 'population base' variable).

The main population base for published statistical tables from the 2011 Census is the usual resident population as at census day, 27 March 2011. For 2011 Census purposes, a usual resident of the UK is anyone who, on census day, 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 in microdata samples are not filtered to include only usual residents, results may differ from published statistical tables. Many of the variables included in the Individual Safeguarded samples, however, contain values only for usual residents.

Students and schoolchildren in full-time education 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 ('home' or vacation) address. In this product, information collected at their non-term time address is available by filtering the Population Base variable to include only 'students living away from home during term-time'.

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 2011 Census Microdata products 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 Government Office Region, with London split into Inner and Outer London. A list of the regions is available in the accompanying [code book](#).

The lowest level of geography for the Individual Safeguarded Microdata (Grouped LA) product is Local Authority (district/unitary) with populations of at least 120,000 persons. Local Authorities with populations below the 120,000 threshold have been aggregated with neighbouring local authorities. For details on how the local authorities have been aggregated see [Table 1](#) in the appendix. A list of all local authority groups is also available in the accompanying [code book](#). For consistency with the 1991 individual sample of anonymised records, where possible, groupings of local authorities are based on 1991 geographies and groupings.

## 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 Census variable and classification information document](#).

## 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 [comparability over time](#) section of the [2011 Census User Guide](#).

Information on the 2001 Census Samples of Anonymised Records (SARS), the equivalent products to the 2011 Census Microdata, can be found on the [UK Data Service website](#).

### **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 Local Authority. 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 selection, ensuring for instance that an entire output area is not selected at random.

### **4. Confidentiality & 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, date 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 Licence.

### **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 Licence 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 [2011 Census website](#).

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

[Census ad hoc tables](#) contain combinations of data that are not available in standard publications. They have been requested by the media or other user. Once created, ad hoc tables are published for all to use. Ad hoc tables will be constrained by the data that are available at each stage, by the similarity to what ONS plans to release, and by statistical disclosure control. Tables can be pre-ordered from [Census Customer Services](#).

### Census Customer Services

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## 7. Appendix

**Table 1** Groupings of local authorities in the Microdata Individual Safeguarded Sample (Grouped LA).

LA Group Number <sup>1</sup>	Local Authority Name	Geography
1	Hartlepool	2011 Local Authority
	Stockton-on-Tees	2011 Local Authority
2	Middlesbrough	2011 Local Authority
3	Redcar and Cleveland	2011 Local Authority
4	Chester-le-Street	1991 Local Authority District
	Durham	1991 Local Authority District
5	Darlington	1991 Local Authority District
	Teesdale	1991 Local Authority District
6	Wear Valley	1991 Local Authority District
	Derwentside	1991 Local Authority District
7	Easington	1991 Local Authority District
	Sedgefield	1991 Local Authority District
8	Halton	2011 Local Authority
9	Warrington	2011 Local Authority
10	Blackburn with Darwen	2011 Local Authority
11	Blackpool	2011 Local Authority
12	Kingston upon Hull	2011 Local Authority
13	East Riding of Yorkshire	2011 Local Authority
14	North East Lincolnshire	2011 Local Authority
15	North Lincolnshire	2011 Local Authority
16	York	2011 Local Authority
	Selby	2011 Local Authority
17	Derby	2011 Local Authority
18	Leicester	2011 Local Authority
19	Rutland	2011 Local Authority
	Harborough	2011 Local Authority
	Melton	2011 Local Authority
20	Nottingham	2011 Local Authority
21	Herefordshire	2011 Local Authority
22	Telford and Wrekin	2011 Local Authority
23	Stoke-on-Trent	2011 Local Authority
24	Bath and North East Somerset	2011 Local Authority
25	Bristol	2011 Local Authority
26	North Somerset	2011 Local Authority
27	South Gloucestershire	2011 Local Authority
28	Plymouth	2011 Local Authority
29	Torbay	2011 Local Authority
30	Bournemouth	2011 Local Authority

31	Poole	2011 Local Authority
32	Swindon	2011 Local Authority
33	Peterborough	2011 Local Authority
34	Luton	2011 Local Authority
35	Southend-on-Sea	2011 Local Authority
36	Thurrock	2011 Local Authority
37	Medway	2011 Local Authority
38	Bracknell Forest	2011 Local Authority
	Slough	2011 Local Authority
39	West Berkshire	2011 Local Authority
40	Reading	2011 Local Authority
41	Windsor and Maidenhead	2011 Local Authority
42	Wokingham	2011 Local Authority
43	Milton Keynes	2011 Local Authority
44	Brighton and Hove	2011 Local Authority
45	Portsmouth	2011 Local Authority
46	Southampton	2011 Local Authority
47	Isle of Wight	2011 Local Authority
48	Alnwick	1991 Local Authority District
	Berwick-upon-Tweed	1991 Local Authority District
	Castle Morpeth	1991 Local Authority District
	Tynedale	1991 Local Authority District
49	Blyth Valley	1991 Local Authority District
	Wansbeck	1991 Local Authority District
50	Chester	1991 Local Authority District
	Ellesmere Port & Neston	1991 Local Authority District
51	Vale Royal	1991 Local Authority District
52	Congleton	1991 Local Authority District
	Crewe & Nantwich	1991 Local Authority District
53	Macclesfield	1991 Local Authority District
54	Bridgnorth	1991 Local Authority District
	Shrewsbury and Atcham	1991 Local Authority District
55	North Shropshire	1991 Local Authority District
	South Shropshire	1991 Local Authority District
	Oswestry	1991 Local Authority District
56	North Cornwall	1991 Local Authority District
	Caradon	1991 Local Authority District
57	Carrick	1991 Local Authority District
	Restormel	1991 Local Authority District
58	Penwith	1991 Local Authority District
	Kerrier	1991 Local Authority District
	Isles of Scilly	2011 Local Authority
59	Kennet	1991 Local Authority District
	Salisbury	1991 Local Authority District
60	North Wiltshire	1991 Local Authority District

61	West Wiltshire	1991 Local Authority District
62	Bedford	2011 Local Authority
63	Central Bedfordshire	2011 Local Authority
64	Aylesbury Vale	2011 Local Authority
65	Chiltern	2011 Local Authority
	South Bucks	2011 Local Authority
66	Wycombe	2011 Local Authority
67	Cambridge	2011 Local Authority
68	East Cambridgeshire	2011 Local Authority
	Fenland	2011 Local Authority
69	Huntingdonshire	2011 Local Authority
70	South Cambridgeshire	2011 Local Authority
71	Allerdale	2011 Local Authority
	Carlisle	2011 Local Authority
72	Barrow-in-Furness	2011 Local Authority
	Copeland	2011 Local Authority
73	Eden	2011 Local Authority
	South Lakeland	2011 Local Authority
74	Amber Valley	2011 Local Authority
	North East Derbyshire	2011 Local Authority
75	Bolsover	2011 Local Authority
	Chesterfield	2011 Local Authority
76	Derbyshire Dales	2011 Local Authority
	High Peak	2011 Local Authority
77	Erewash	2011 Local Authority
	South Derbyshire	2011 Local Authority
78	East Devon	2011 Local Authority
	Mid Devon	2011 Local Authority
79	Exeter	2011 Local Authority
80	North Devon	2011 Local Authority
	Torridge	2011 Local Authority
81	South Hams	2011 Local Authority
	West Devon	2011 Local Authority
82	Teignbridge	2011 Local Authority
83	Christchurch	2011 Local Authority
	East Dorset	2011 Local Authority
	Purbeck	2011 Local Authority
84	North Dorset	2011 Local Authority
	West Dorset	2011 Local Authority
	Weymouth and Portland	2011 Local Authority
85	Eastbourne	2011 Local Authority
	Lewes	2011 Local Authority
86	Hastings	2011 Local Authority
	Rother	2011 Local Authority
87	Wealden	2011 Local Authority



88	Basildon	2011 Local Authority
89	Braintree	2011 Local Authority
	Uttlesford	2011 Local Authority
90	Brentwood	2011 Local Authority
	Harlow	2011 Local Authority
91	Castle Point	2011 Local Authority
	Maldon	2011 Local Authority
	Rochford	2011 Local Authority
92	Chelmsford	2011 Local Authority
93	Colchester	2011 Local Authority
94	Epping Forest	2011 Local Authority
95	Tendring	2011 Local Authority
96	Cheltenham	2011 Local Authority
	Cotswold	2011 Local Authority
97	Forest of Dean	2011 Local Authority
	Stroud	2011 Local Authority
98	Gloucester	2011 Local Authority
	Tewkesbury	2011 Local Authority
99	Basingstoke and Deane	2011 Local Authority
100	East Hampshire	2011 Local Authority
	Havant	2011 Local Authority
101	Eastleigh	2011 Local Authority
102	Fareham	2011 Local Authority
	Gosport	2011 Local Authority
103	Hart	2011 Local Authority
	Rushmoor	2011 Local Authority
104	New Forest	2011 Local Authority
105	Test Valley	2011 Local Authority
	Winchester	2011 Local Authority
106	Broxbourne	2011 Local Authority
	East Hertfordshire	2011 Local Authority
107	Dacorum	2011 Local Authority
108	Hertsmere	2011 Local Authority
	Welwyn Hatfield	2011 Local Authority
109	North Hertfordshire	2011 Local Authority
	Stevenage	2011 Local Authority
110	St Albans	2011 Local Authority
111	Three Rivers	2011 Local Authority
	Watford	2011 Local Authority
112	Ashford	2011 Local Authority
	Tunbridge Wells	2011 Local Authority
113	Canterbury	2011 Local Authority
114	Dartford	2011 Local Authority
	Gravesham	2011 Local Authority
115	Dover	2011 Local Authority

	Shepway	2011 Local Authority
116	Maidstone	2011 Local Authority
117	Sevenoaks	2011 Local Authority
	Tonbridge and Malling	2011 Local Authority
118	Swale	2011 Local Authority
119	Thanet	2011 Local Authority
120	Burnley	2011 Local Authority
	Pendle	2011 Local Authority
121	Chorley	2011 Local Authority
	West Lancashire	2011 Local Authority
122	Fylde	2011 Local Authority
	Wyre	2011 Local Authority
123	Hyndburn	2011 Local Authority
	Rossendale	2011 Local Authority
124	Lancaster	2011 Local Authority
125	Preston	2011 Local Authority
126	Ribble Valley	2011 Local Authority
	South Ribble	2011 Local Authority
127	Blaby	2011 Local Authority
	Oadby and Wigston	2011 Local Authority
128	Charnwood	2011 Local Authority
129	Hinckley and Bosworth	2011 Local Authority
	North West Leicestershire	2011 Local Authority
130	Boston	2011 Local Authority
	South Holland	2011 Local Authority
131	East Lindsey	2011 Local Authority
132	Lincoln	2011 Local Authority
	West Lindsey	2011 Local Authority
133	North Kesteven	2011 Local Authority
	South Kesteven	2011 Local Authority
134	Breckland	2011 Local Authority
135	Broadland	2011 Local Authority
136	Great Yarmouth	2011 Local Authority
	North Norfolk	2011 Local Authority
137	King's Lynn and West Norfolk	2011 Local Authority
138	Norwich	2011 Local Authority
139	South Norfolk	2011 Local Authority
140	Corby	2011 Local Authority
	Kettering	2011 Local Authority
141	Daventry	2011 Local Authority
	South Northamptonshire	2011 Local Authority
142	East Northamptonshire	2011 Local Authority
	Wellingborough	2011 Local Authority
143	Northampton	2011 Local Authority
144	Craven	2011 Local Authority

	Hambleton	2011 Local Authority
	Richmondshire	2011 Local Authority
145	Harrogate	2011 Local Authority
146	Ryedale	2011 Local Authority
	Scarborough	2011 Local Authority
147	Ashfield	2011 Local Authority
	Mansfield	2011 Local Authority
148	Bassetlaw	2011 Local Authority
	Newark and Sherwood	2011 Local Authority
149	Broxtowe	2011 Local Authority
	Gedling	2011 Local Authority
	Rushcliffe	2011 Local Authority
150	Cherwell	2011 Local Authority
151	Oxford	2011 Local Authority
152	South Oxfordshire	2011 Local Authority
153	Vale of White Horse	2011 Local Authority
	West Oxfordshire	2011 Local Authority
154	Mendip	2011 Local Authority
	Sedgemoor	2011 Local Authority
155	South Somerset	2011 Local Authority
156	Taunton Deane	2011 Local Authority
	West Somerset	2011 Local Authority
157	Cannock Chase	2011 Local Authority
	South Staffordshire	2011 Local Authority
158	East Staffordshire	2011 Local Authority
	Staffordshire Moorlands	2011 Local Authority
159	Lichfield	2011 Local Authority
	Tamworth	2011 Local Authority
160	Newcastle-under-Lyme	2011 Local Authority
161	Stafford	2011 Local Authority
162	Babergh	2011 Local Authority
	Ipswich	2011 Local Authority
163	Forest Heath	2011 Local Authority
	Mid Suffolk	2011 Local Authority
	St Edmundsbury	2011 Local Authority
164	Suffolk Coastal	2011 Local Authority
	Waveney	2011 Local Authority
165	Elmbridge	2011 Local Authority
	Epsom and Ewell	2011 Local Authority
166	Guildford	2011 Local Authority
167	Mole Valley	2011 Local Authority
	Waverley	2011 Local Authority
168	Reigate and Banstead	2011 Local Authority
	Tandridge	2011 Local Authority
169	Runnymede	2011 Local Authority

	Spelthorne	2011 Local Authority
170	Surrey Heath	2011 Local Authority
	Woking	2011 Local Authority
171	North Warwickshire	2011 Local Authority
	Rugby	2011 Local Authority
172	Nuneaton and Bedworth	2011 Local Authority
173	Stratford-on-Avon	2011 Local Authority
174	Warwick	2011 Local Authority
175	Adur	2011 Local Authority
	Worthing	2011 Local Authority
176	Arun	2011 Local Authority
177	Chichester	2011 Local Authority
	Horsham	2011 Local Authority
178	Crawley	2011 Local Authority
	Mid Sussex	2011 Local Authority
179	Bromsgrove	2011 Local Authority
	Wyre Forest	2011 Local Authority
180	Malvern Hills	2011 Local Authority
	Worcester	2011 Local Authority
181	Redditch	2011 Local Authority
	Wychavon	2011 Local Authority
182	Bolton	2011 Local Authority
183	Bury	2011 Local Authority
184	Manchester	2011 Local Authority
185	Oldham	2011 Local Authority
186	Rochdale	2011 Local Authority
187	Salford	2011 Local Authority
188	Stockport	2011 Local Authority
189	Tameside	2011 Local Authority
190	Trafford	2011 Local Authority
191	Wigan	2011 Local Authority
192	Knowsley	2011 Local Authority
193	Liverpool	2011 Local Authority
194	St. Helens	2011 Local Authority
195	Sefton	2011 Local Authority
196	Wirral	2011 Local Authority
197	Barnsley	2011 Local Authority
198	Doncaster	2011 Local Authority
199	Rotherham	2011 Local Authority
200	Sheffield	2011 Local Authority
201	Gateshead	2011 Local Authority
202	Newcastle upon Tyne	2011 Local Authority
203	North Tyneside	2011 Local Authority
204	South Tyneside	2011 Local Authority
205	Sunderland	2011 Local Authority

206	Birmingham	2011 Local Authority
207	Coventry	2011 Local Authority
208	Dudley	2011 Local Authority
209	Sandwell	2011 Local Authority
210	Solihull	2011 Local Authority
211	Walsall	2011 Local Authority
212	Wolverhampton	2011 Local Authority
213	Bradford	2011 Local Authority
214	Calderdale	2011 Local Authority
215	Kirklees	2011 Local Authority
216	Leeds	2011 Local Authority
217	Wakefield	2011 Local Authority
218	City of London	2011 Local Authority
	Westminster	2011 Local Authority
219	Barking and Dagenham	2011 Local Authority
220	Barnet	2011 Local Authority
221	Bexley	2011 Local Authority
222	Brent	2011 Local Authority
223	Bromley	2011 Local Authority
224	Camden	2011 Local Authority
225	Croydon	2011 Local Authority
226	Ealing	2011 Local Authority
227	Enfield	2011 Local Authority
228	Greenwich	2011 Local Authority
229	Hackney	2011 Local Authority
230	Hammersmith and Fulham	2011 Local Authority
231	Haringey	2011 Local Authority
232	Harrow	2011 Local Authority
233	Havering	2011 Local Authority
234	Hillingdon	2011 Local Authority
235	Hounslow	2011 Local Authority
236	Islington	2011 Local Authority
237	Kensington and Chelsea	2011 Local Authority
238	Kingston upon Thames	2011 Local Authority
239	Lambeth	2011 Local Authority
240	Lewisham	2011 Local Authority
241	Merton	2011 Local Authority
242	Newham	2011 Local Authority
243	Redbridge	2011 Local Authority
244	Richmond upon Thames	2011 Local Authority
245	Southwark	2011 Local Authority
246	Sutton	2011 Local Authority
247	Tower Hamlets	2011 Local Authority
248	Waltham Forest	2011 Local Authority
249	Wandsworth	2011 Local Authority

250	Isle of Anglesey	2011 Local Authority
	Gwynedd	2011 Local Authority
251	Conwy	2011 Local Authority
	Denbighshire	2011 Local Authority
252	Flintshire	2011 Local Authority
253	Wrexham	2011 Local Authority
254	Ceredigion	2011 Local Authority
	Pembrokeshire	2011 Local Authority
255	Carmarthenshire	2011 Local Authority
256	Swansea	2011 Local Authority
257	Neath Port Talbot	2011 Local Authority
258	Bridgend	2011 Local Authority
259	The Vale of Glamorgan	2011 Local Authority
260	Cardiff	2011 Local Authority
261	Rhondda Cynon Taf	2011 Local Authority
262	Caerphilly	2011 Local Authority
	Blaenau Gwent	2011 Local Authority
	Merthyr Tydfil	2011 Local Authority
263	Torfaen	2011 Local Authority
	Monmouthshire	2011 Local Authority
264	Newport	2011 Local Authority
265	Powys	2011 Local Authority

<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.