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# Welcome!

Census update webinar will be starting at 3:00pm

You can use the menu (top right corner – expand by clicking the red button with the arrow) to:

- Type questions as you go
- Change your audio settings
- Put your hand up

UK Data Service  
Census Support



# UK Data Service Introduction to Census

Jo Wathan (University of Manchester)

Richard Wiseman (Jisc, Manchester)

Webinar

17 November 2016

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# What is a census?

- Main function to count the ***population***
  - At one or more location
- Obtain some characteristics about the population
- Outputs at small geographies
- Informs public spending
- Used as a basis for other statistical systems



**The United Kingdom**



National  
Records of  
Scotland



Scotland's  
Census 2011  
Shaping our future



Northern Ireland  
Statistics &  
Research  
Agency



Office for  
National Statistics



Help tomorrow take shape

# How were the data collected?



The image shows a 'Household Questionnaire England' for the 2011 Census, issued by the Office for National Statistics. The form is purple and white. It includes the Royal Coat of Arms, the ONS logo, and a '2011 Census' graphic. The form is divided into several sections: 'Return to: FREEPOST 2011 Census, Processing Centre, UK', 'A message to everyone - act now' (explaining the census's purpose and confidentiality), 'Complete online' (with a URL and a field for a personal internet access code), 'Declaration' (with a signature line, date, and telephone number), and 'Where can you get help?' (with a URL). There are also fields for address and postcode.

**Household Questionnaire**  
England

Office for National Statistics

2011 Census

**Return to:**  
**FREEPOST 2011 Census,**  
**Processing Centre, UK**

**A message to everyone - act now**

Everyone should be included in the census - all people, households and overnight visitors.

It is used to help plan and fund services for your community - services like transport, education and health.

Please complete your census questionnaire on 27 March 2011, or as soon as possible afterwards. You can fill it in online or on paper.

Taking part in the census is very important and it's also compulsory. You could face a fine if you don't participate or if you supply false information.

Your personal information is protected by law. Census information is kept confidential for 100 years.

So help tomorrow take shape and be part of the 2011 Census.

*J. N. Matheson*  
Jill Matheson  
National Statistician

**Where can you get help?**

 [www.census.gov.uk](http://www.census.gov.uk)

**Complete online**

 [www.census.gov.uk](http://www.census.gov.uk)

Your personal internet access code is:

OR fill in this paper questionnaire and post it back using the pre-paid envelope supplied.

If your address is incorrect or missing, enter your correct address here:

Postcode

**Declaration**

This questionnaire has been completed to the best of my knowledge and belief.

Signature

Date Telephone number

We may contact you if we need to collect missing information.

If you have lost your envelope, please return to:  
FREEPOST 2011 Census, Processing Centre, UK

Self-completion

Post-out post back

Internet option

Census offices could focus resources on follow-up and hard to count areas

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# What questions were asked?

## Demographics

Age  
Sex  
Country of Birth  
Short-term residence  
Ethnicity  
Religion  
Passports  
Language  
National identity  
Household relationships  
Marital status  
Second residence  
Migration

## Household

Tenure  
Accommodation  
type  
Cars  
Central heating  
No. of bedrooms

## Socio-economic

Health  
Unpaid care  
Qualifications  
Economic activity  
Occupation  
Industry  
Supervision  
Travel to work  
FT / PT



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# Getting a complete count

- Establishing a high quality address register
- Focusing resources on hard to count areas
- Target response rate of 94% achieved – no local authority below 80%
- Lower response rates for young men, those born overseas, those who live alone
- Coverage survey used to estimate undercounts, to enable imputation





# The promise of confidentiality

The information you provided to us in the 2011 Census is confidential and protected by law.

The confidentiality of personal information is a top priority for the census. Your personal census information is not shared with any other government department, local councils or marketing companies.

Information collected in the 2011 Census will be used solely to produce statistics and for statistical research. These statistics will not reveal any personal information.

The paper questionnaires are scanned, then shredded, pulped and recycled. Census records are kept confidential for 100 years before being made available to the public. Census records remain closed while they are in the custody of the census offices. Records from the 2011 Census for England and Wales are not scheduled for public release before January 2112

Office for National Statistics,

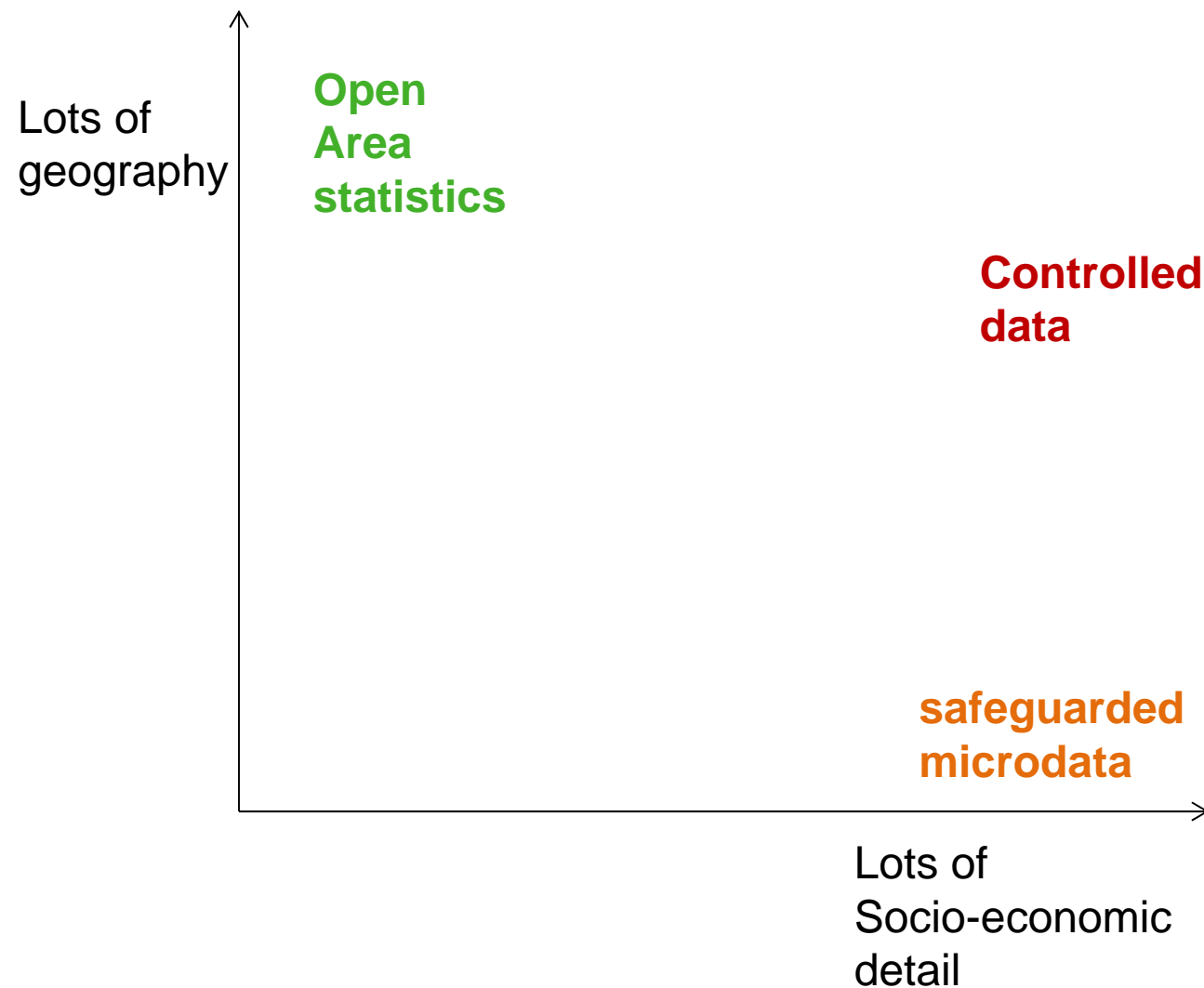
<http://www.ons.gov.uk/ons/guide-method/census/2011/confidentiality/index.html>

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# Reflecting confidentiality in output planning



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# Census output types

Supported by the UK Data Service

- Microdata
  - Samples of census records
  - Detail limited to protect confidentiality
- Census area statistics
  - Counts of combinations of characteristics for areas
- Flow data
  - Counts of migrants from origin to destination
  - Or, between first and second address
  - Or home and place of work
- Shape files to enable these to be mapped

Supported by CALLS <http://calls.ac.uk/>

- Longitudinal microdata for each country

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# Individual level detail

- Individual records contain person and household characteristics
- Sample data only

	agegpt	aprxsocgr	cofbt	econacit	ethewit	famcomp	healthi	indusit	marstatit	numhrs	occupat
1	55 to 6	DE	UK	Economi	White	Married	Good he	Mining/	Married	No code	Proce
2	35 to 4	C2	UK	Economi	White	Lone pa	Very go	Transpo	Single	Full-ti	Proce
3	35 to 4	DE	UK	Economi	White	Cohabit	Very go	Human h	Single	Full-ti	Carir
4	16 to 2	C1	UK	Economi	White	Cohabit	Good he	Financi	Single	Full-ti	Sales
5	45 to 5	C1	UK	Economi	White	Cohabit	Very go	Wholesa	Divorce	Full-ti	Manag
6	55 to 6	C2	UK	Economi	White	Married	Good he	Mining/	Married	Full-ti	Elem
7	35 to 4	C2	UK	Economi	White	Lone pa	Good he	Human h	Separat	Part-ti	Carir
8	0 to 15	No code	UK	No code	White	Cohabit	Good he	No code	Single	No code	No co
9	65 to 7	C1	UK	Economi	White	Married	Very go	Mining/	Married	No code	Proce
10	55 to 6	DE	UK	Economi	White	Not in	Fair he	Accommo	Divorce	No code	Elem
11	25 to 3	DE	UK	Economi	White	Not in	Fair he	Mining/	Single	Full-ti	Proce
12	0 to 15	No code	UK	No code	White	Married	Very go	No code	Single	No code	No co
13	16 to 2	C1	UK	Economi	White	Not in	Very go	Mining/	Single	Full-ti	Sales
14	16 to 2	C1	UK	Economi	White	Not in	Good he	No code	Single	No code	No co
15	16 to 2	DE	UK	Economi	White	Lone pa	Good he	Wholesa	Single	Part-ti	Sales
16	16 to 2	C1	UK	Economi	White	Not in	Good he	Transpo	Single	No code	Sales
17	16 to 2	DE	UK	Economi	White	Cohabit	Very go	Constru	Single	Full-ti	Proce
18	16 to 2	C1	UK	Economi	White	Cohabit	Very go	No code	Single	No code	No co
19	35 to 4	DE	UK	Economi	White	Not in	Fair he	Mining/	Single	Full-ti	Proce
20	0 to 15	No code	UK	No code	White	Married	Very go	No code	Single	No code	No co
21	65 to 7	DE	UK	Economi	White	Married	Fair he	Mining/	Married	No code	Elem

service  
ort

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# Why use this type of data?

- Very flexible
  - Can create your own tables
  - Can combine characteristics to create new ones
  - Can define sub populations
  - Can undertake multivariate analysis
- But
  - Sample data, means that results are estimates
  - Geographical detail is limited



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# Types of 2011 census microdata

- Teaching files (Open) – available from census offices for some time
  - 1% taster file
  - Regional geography
  - England and Wales file available in Nesstar
- Safeguarded files – available from UK Data Service
  - Each file contains a 5% sample
  - Regional file for each territory (slightly more individual detail than the: )
  - Grouped local authorities for each territory (minimum LAD population threshold = 120,000)
- Controlled files – contact relevant census office
  - 10% sample
  - Very detailed with true LAD geography

More info:

<https://census.ukdataservice.ac.uk/get-data/microdata>

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# e.g. Safeguarded Regional for England and Wales:



Register / Login

1. Quick to find using discover...
2. The catalogue entry expands to give more info – can download or explore online from here
3. You will need to be registered to interrogate the data



About the UK Data Service

Guides and resources

SN 7605 2011 Census Microdata Individual Safeguarded Sample (Regional): England and Wales

Office for National Statistics

+ Full record...



Access online



Download/Order

DDI XML

Similar data collections

**Login to the UK Data Service**

Existing users

[Login to the UK Data Service](#)

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# Population Base – Short term migrants

(STR in England and Wales and NI files only)

“A STR was defined in the 2011 Census as anyone living in England and Wales who was born outside the UK and who intended to stay in the UK for a period of between three and 12 months, for any reason.” [ONS 2013](#)

## Full-time students/schoolchildren by population base and age

Census Microdata Teaching File for England and Wales 2011

Population Base			Age group			
			Less than 16	16-24	25-34	35+
Usual resident	Student	Yes	81737	31166	3608	2204
		No	23993	35122	71608	311602
	Total		105730	66288	75216	313806
Student living away from home during term-time	Student	Yes	944	5572	185	29
	Total		944	5572	185	29
Short-term resident	Student	Yes	115	711	233	33
		No	43	214	314	308
	Total		158	925	547	341
Total	Total		106832	72785	75948	314176

---

# Working with the microdata

- Statistics package
- Work with single characteristics first
- Limit your population base

## Example

- Usual residents only (popbasesec=1)
- Select age>69
- Recode (70 thru 80 = 70)(85 thru highest = 85) into olderage
- Tabulate health, olderage, residtype
- Tabulate olderage by residtype
- Tabulate health by olderage



# Older age groups by residence type

Household or communal establishment \* olderage Crosstabulation

			olderage		Total
			70.00	85.00	
Household or communal establishment	Communal establishment	Count	6268	9586	15854
		% within olderage	2.4%	15.3%	4.8%
	Household	Count	258344	53001	311345
		% within olderage	97.6%	84.7%	95.2%
Total		Count	264612	62587	327199
		% within olderage	100.0%	100.0%	100.0%

Usual residents aged 70+  
England and Wales 2011

Office for National Statistics, *2011 Census Microdata Individual Safeguarded Sample (Regional)* [computer file]. Colchester, Essex: UK Data Archive [distributor], December 2014. SN: 7605, <http://dx.doi.org/10.5255/UKDA-SN-7605-1>

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# Health by older age groups

General health \* olderage Crosstabulation

			olderage		Total
			70.00	85.00	
General health	Very good health	Count	28739	2765	31504
		% within olderage	10.9%	4.4%	9.6%
	Good health	Count	96728	14218	110946
		% within olderage	36.6%	22.7%	33.9%
	Fair health	Count	97832	29798	127630
		% within olderage	37.0%	47.6%	39.0%
	Bad health	Count	31948	11728	43676
		% within olderage	12.1%	18.7%	13.3%
	Very bad health	Count	9365	4078	13443
		% within olderage	3.5%	6.5%	4.1%
Total	Count		264612	62587	327199
	% within olderage		100.0%	100.0%	100.0%



# Data about areas

- known as aggregate data
- counts of people, households, etc. with particular combinations characteristics for an area
- areas vary from large to very small
- example:  
number of females aged 30-34 who are married and live in private rented accommodation in the county of Devon



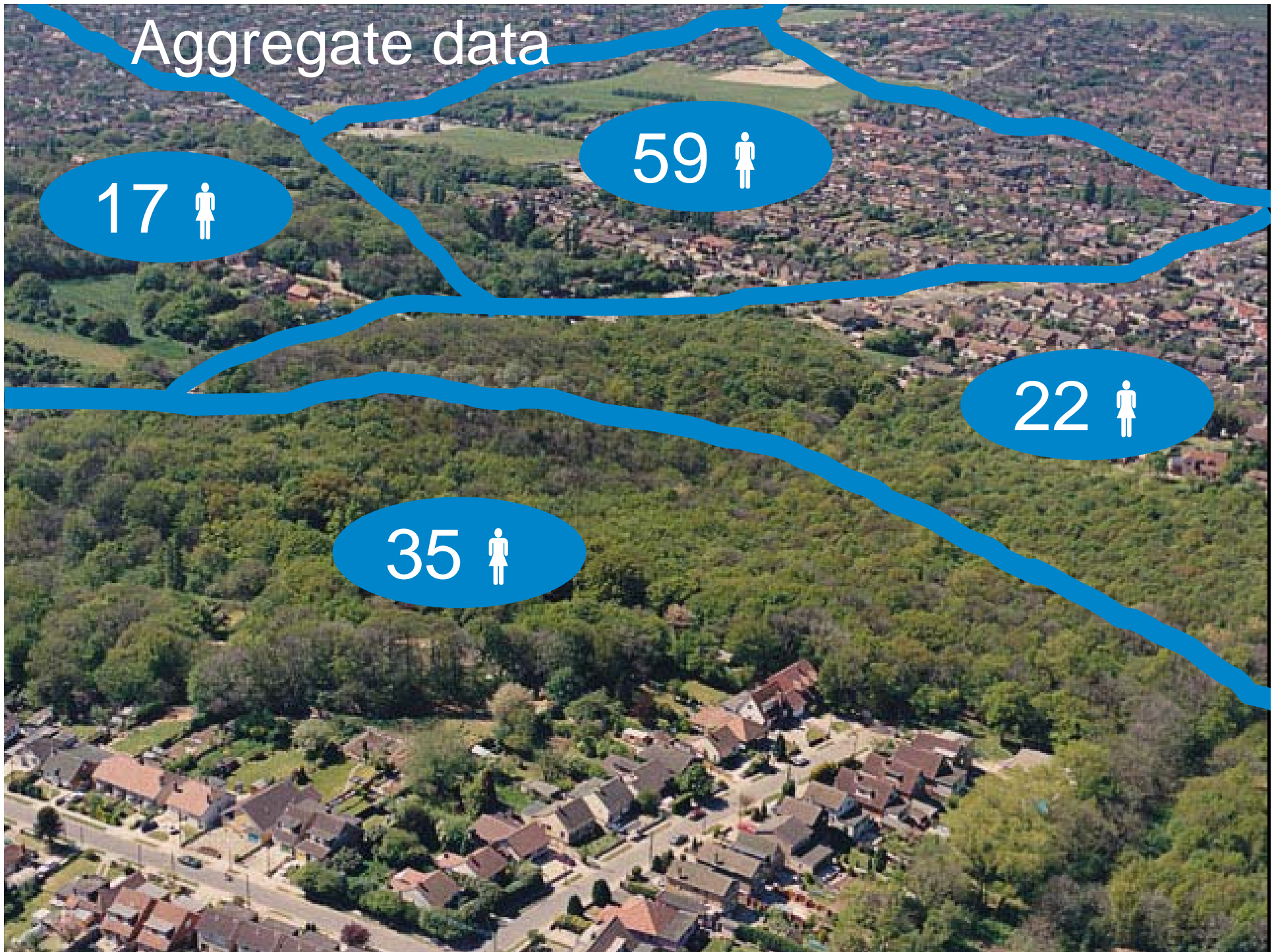
Aggregate data

17 ♀

59 ♀

22 ♀

35 ♀





# Example data

Age : 16 to 24 years old - Religion (England and Wales) :  
Muslim - Unit : People

CDU_ID	GEOGRAPHY	GEOGRAPHY LABEL	GEOGRAPHY TYPE	F79175	F79176	F79177	F79178	F79179	F79180	F79181	F79182	F79183
				Age : 16 to 24 years old - Religion (England and Wales) : Muslim - Unit : People	Age : 16 to 24 years old - Religion (England and Wales) : Muslim - Unit : People	Age : 16 to 24 years old - Religion (England and Wales) : Muslim - Unit : People	Age : 16 to 24 years old - Religion (England and Wales) : Muslim - Unit : People	Age : 16 to 24 years old - Religion (England and Wales) : Muslim - Unit : People	Age : 16 to 24 years old - Religion (England and Wales) : Muslim - Unit : People	Age : 16 to 24 years old - Religion (England and Wales) : Muslim - Unit : People	Age : 16 to 24 years old - Religion (England and Wales) : Muslim - Unit : People	Age : 16 to 24 years old - Religion (England and Wales) : Muslim - Unit : People
10251	16UB	16UB : Allerdale	Districts	6803	0	6	0	10	0	15	1038	504
10252	16UC	16UC : Barrow-in-Furness	Districts	4972	3	0	3	23	0	10	1131	500
10253	16UD	16UD : Carlisle	Districts	7395	14	3	3	48	6	15	1857	827
10254	16UE	16UE : Copeland	Districts	5514	6	9	3	12	0	3	684	424
10255	16UF	16UF : Eden	Districts	3142	5	3	0	6	0	3	729	274
10256	16UG	16UG : South Lakeland	Districts	6073	17	6	3	3	3	13	1810	648



# Casweb

- casweb.ukdataservice.ac.uk
- 1971-2001 aggregate data
- select by table
- open to everyone



The screenshot shows the Casweb website interface. At the top left, it says "UK Data Service Census Support" with a logo. The main heading is "Casweb". To the right of the heading is a decorative graphic of several parallel diagonal lines in yellow, orange, red, and pink, followed by horizontal bars in blue, purple, and pink. Below the heading, there is a sidebar on the left with a link "Casweb Home Guide". The main content area has the heading "Casweb provides access to UK census aggregate data" and a paragraph: "We provides access to England, Wales, and Scotland 2001, 1991, 1981, 1971 data and 2001 and 1991 Northern Ireland data." Below this, it states "Casweb will NOT provide access to 2011 Census data." and lists two bullet points: "England and Wales 2011 data is available via [InFuse](#)" and "Take a look at our [2011 Census plans](#) page for more information". At the bottom, there is a red button labeled "Start Casweb".

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## Casweb

• Casweb Home Guide

### Casweb provides access to UK census aggregate data

We provides access to England, Wales, and Scotland 2001, 1991, 1981, 1971 data and 2001 and 1991 Northern Ireland data.

**Casweb will NOT provide access to 2011 Census data.**

- England and Wales 2011 data is available via [InFuse](#)
- Take a look at our [2011 Census plans](#) page for more information

**Start Casweb**

# InFuse

- [infuse.ukdataservice.ac.uk](http://infuse.ukdataservice.ac.uk)
- 2011 and 2001 aggregate data
- UK wide coverage (still working on some Scottish and Northern Ireland data)
- integrated metadata
- select by topic
- makes it easy
- open to everyone

The screenshot displays the InFuse 2011 web interface. At the top, the header includes the UK Data Service logo, the text 'Census Support', and the title 'InFuse 2011'. Below the header, there are navigation steps (1, 2, 3, 4) and a 'Start A' button. The main section is titled 'Topics' and includes a 'Show Guidance' button. Below this, the 'Filters' section is visible, showing a list of filter categories on the left and a grid of topic combinations on the right. The grid displays 277 topic combinations across 18 pages. The filters listed include Ethnic group, Family status, General health, Hours worked, Household composition, and Household spaces. The topic combinations include Accommodation type, Age, Sex, and Main language (detailed).

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## InFuse 2011

Steps: 1 2 3 4

Show Guidance

Showing 277 topic combinations  
Page 1 of 18

First < 1 2 3 > Last

**Filters**

- ☐ Ethnic group (write-in responses)
- ☐ Ethnic group of Household reference person
- ☐ Ethnic group UK
- ☐ Ethnic groups, multiple
- ☐ Family reference person, age of
- ☐ Family status
- ☐ General health
- ☐ Hours worked
- ☐ Household composition
- ☐ Household composition (alternative child and adult definitions)

**Topic Combinations**

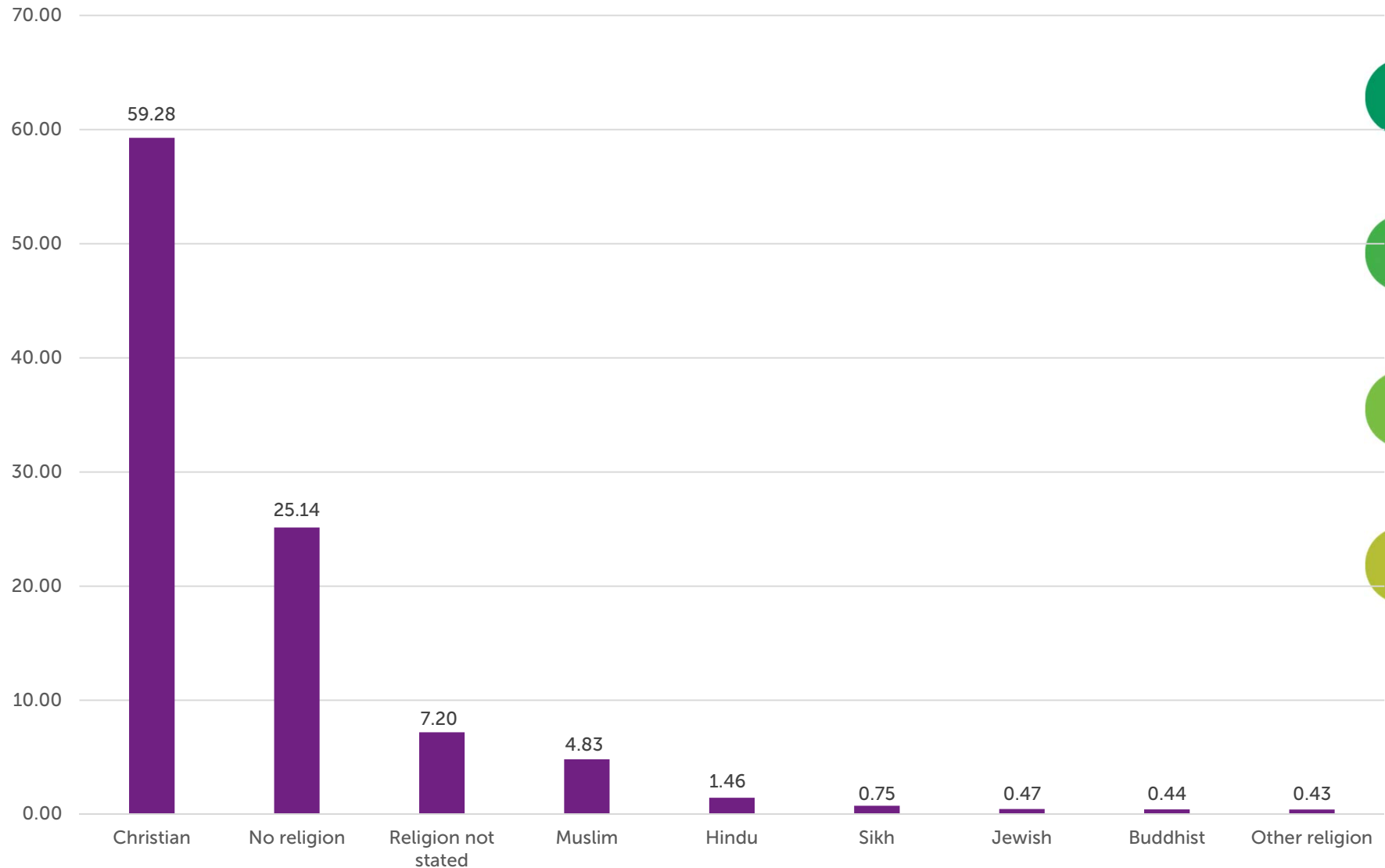
• Accommodation type	• Accommodation type • Bedrooms, number of persons per bedrooms in household • Tenure	• Age • Sex	• Age • Main language (detailed)
• Accommodation type • Household spaces	• Accommodation type • Dependent children, age of • Bedrooms, number of • Usual resident population	• Age • Care (unpaid), provision of	• Age • Marital and civil partnership status

---

# What percentage of people in the 2011 Census say they have no religion?



# Religion England and Wales % (2011)



---

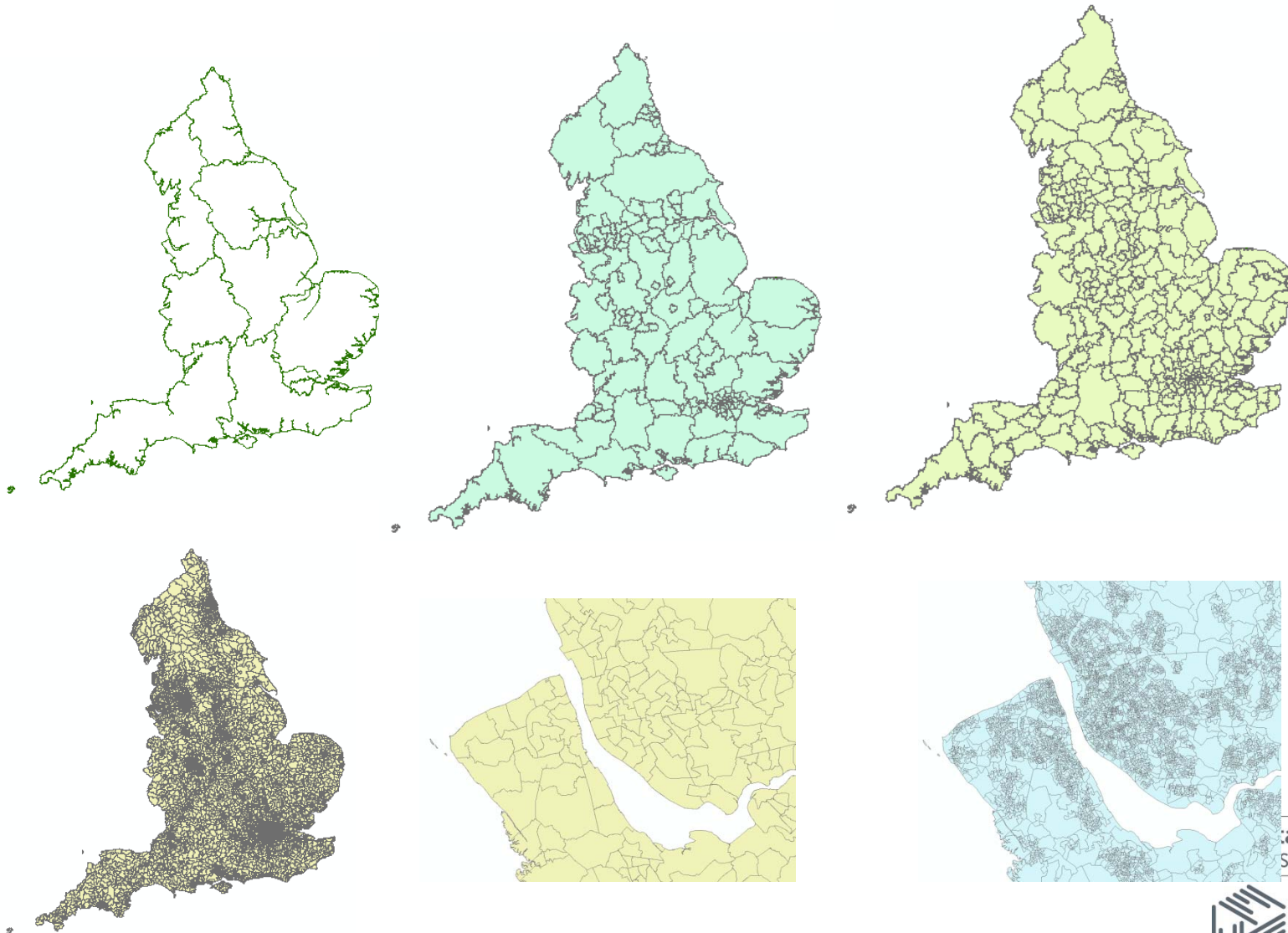
# Boundary data

- 1971-2011 (also some historical boundaries)
- most data open to all (some restricted to UK FE/HE)
- GIS formats
- delivered through:
  - Easy Download
  - Boundary Data Selector
- Thematic Mapper





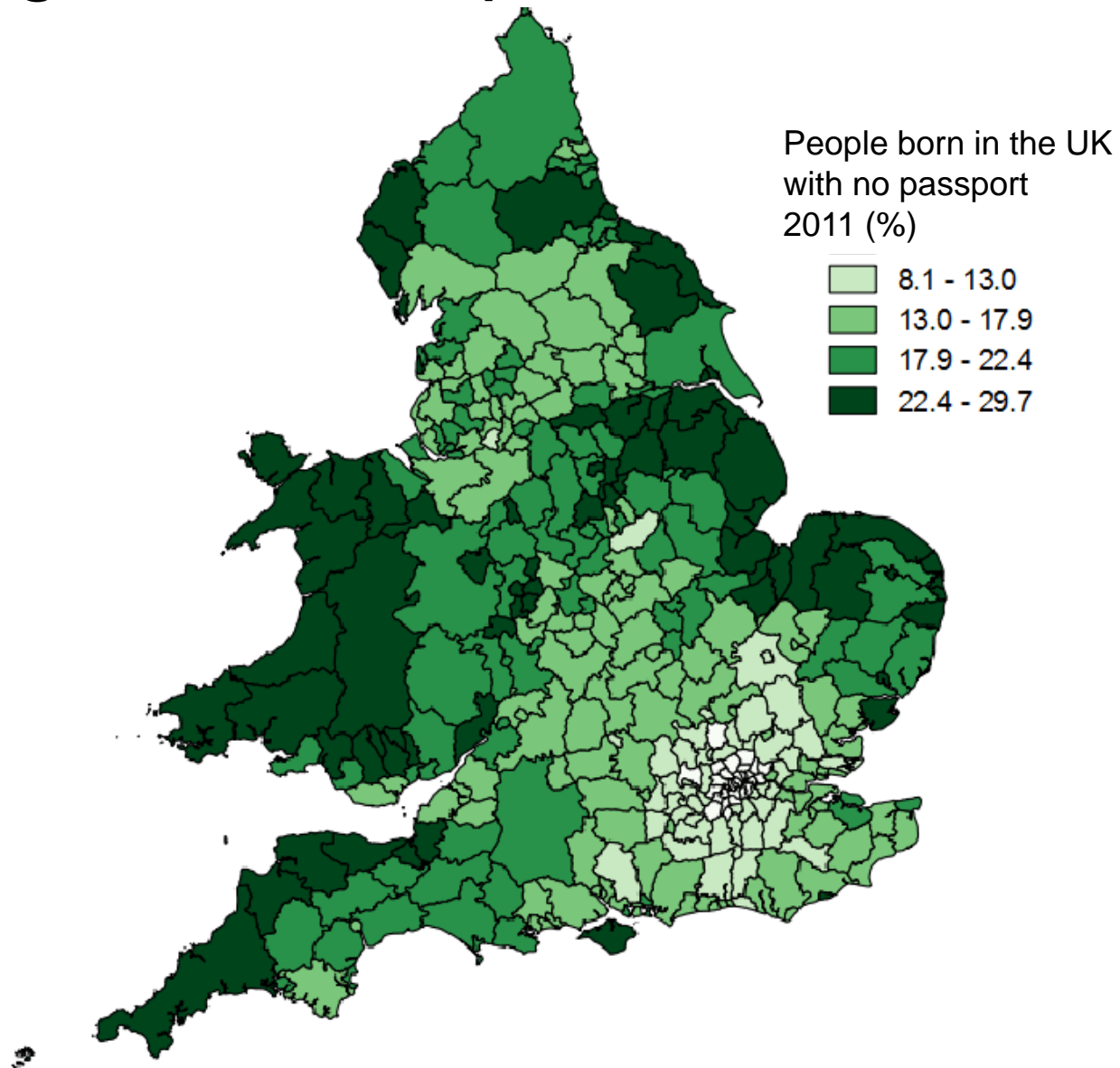
# Census boundary data



Service  
Support



# Putting data in maps



# Census flow data

- special type of aggregate data, where there is an origin and destination
- two main types
  - commuting
  - migration
- 1981-2011, and non census data
- access levels
- [wicid.ukdataservice.ac.uk](http://wicid.ukdataservice.ac.uk)



# WICID

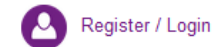
**Origin geography:** UK Government Office Regions (1999-) **Destination geography:** UK Government Office Regions (1999-)  
 Layer: Total migrants [Table MG101]

Origins	Destinations						
	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London
North East	222328	5380	8203	3238	2261	2858	4279
North West	5225	585973	17830	9527	10645	6490	11596
Yorkshire and The Humber	7977	14930	460361	15232	6177	6337	9582
East Midlands	2634	8742	14993	353045	12530	11273	9943
West Midlands	2187	10709	7480	14682	421606	6648	10592
East of England	2764	6649	8549	17004	7812	423178	28470
London	3370	9678	8267	11015	9513	53477	641404
South East	3919	11556	11125	18175	14081	25314	51487
South West	2128	6691	5674	6974	10733	8577	15404

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Explore the UK's largest collection of social, economic and population data resources.

Search data ▾



## About the UK Data Service



## Guides and resources

[Dataset guides](#)

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### Video tutorials

See our growing range of training videos

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## Data types

[Census data](#)

[International macrodata](#)

[Longitudinal studies](#)



Depositing data with the UK Data Service



## Latest data

Public Attitudes to Price Fixing in

ukdataservice.ac.uk



# Census Support

## Who we are

We provide access to and user support for 1971, 1981, 1991, 2001 and 2011 UK census data

[Read more](#)

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**DISCOVER UK DATA SERVICE**

Search and browse the UK Data Service Census Support data collection:

[GO](#)

☐ Census Data ☐ Website

Want to search wider? [Search the whole of the UK Data Service](#)

### LATEST TWEETS

RT @Jisc: Hear what the experts have to say about the legal & ethical issues around [#learninganalytics](#) in our podcast

<https://t.co/c2isDRnRkC>

RT @timeshighered: Improve research, teaching and commerce by working closer with industry, management scholars told: <https://t.co/HmKdOwOMnv>

### LATEST NEWS



Secondary Data Analysis Initiative (SDAI) - open call

The Winter 2015/2016 UK Data Service Newsletter is out!

Vacancy: Communications and Impact Manager

### UK DATA SERVICE CENSUS SUPPORT



The Census Support service is composed of data specialists who focus on making a wide range of data from the contemporary censuses from 1971 to 2011 as accessible as possible to research users.

We provide access to census counts for areas, data on migration and commuting between areas, samples of anonymised

PROGRESS TOWARDS 2021 AND BEYOND

[➤](#)

### QUICK ACCESS TO

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# Census > Get data

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## Get census data



SHARE 

We hold a range of different types of census data, such as:

- [aggregate data](#)
- [flow data](#)
- [microdata](#)
- [boundary data](#)

We also hold [data related to the census](#), such as Experian data and deprivation data.

Aggregate, flow and some of the boundary data are available to anyone. Microdata has different access conditions depending on the dataset.

We do not hold the census longitudinal data. However, these can be found at:

- England and Wales (ONS LS): [CeLSIUS](#)
- Scotland (SLS): [SLS-DSU](#)
- Northern Ireland (NILS): [NILS-RSU](#)
- information on all three census longitudinal studies at [CALLS Hub](#)

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UK Data Service key data


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# Census > Use data

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## Guides

### Citing data

#### ● About UK censuses

Census forms

Census definitions

Census agencies

Other census tools

### Use of census data

About Census Support

Get census data

Use census data

Census news and events

Census > Use data > About UK censuses

## About UK censuses

SHARE

The census in all UK countries has been undertaken in a consistent manner. However, there are differences in some of the questions asked, processing, and detailed methodology.

Before using census data you should ensure that the census covers the right topics for you.

Questions and definitions often change between censuses. You can access the [census forms](#), [definitions](#), and the [census agencies websites](#) for further information.



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Census Data Website

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Advice for new users

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Explore census data online

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# Useful resources and help

- **Help**
  - [ukdataservice.ac.uk/help/](http://ukdataservice.ac.uk/help/)



The screenshot shows the UK Data Service website's Help page. The page layout includes a top navigation bar with links for Site Search, FAQ, Help (circled in red), and Contact. Below this is a secondary navigation bar with links for About us, Get data, Use data, Manage data, Deposit data, and News and Events. The main content area is titled 'Help' and features the heading 'How can we help?' above a graphic of vertical pink bars of varying heights. On the left side, there is a sidebar with the UK Data Service logo and three links: 'Advice for new users', 'FAQ' (circled in red), and 'Get in touch' (circled in red). On the right side, there is a dark blue sidebar containing a 'LOGIN / REGISTER' section and a search bar labeled 'DISCOVER UK DATA SERVICE' with a 'GO' button and radio buttons for 'Data' and 'Website'. At the bottom of the page, there is a 'SHARE' button with a share icon and two paragraphs of text: 'If you are new to our service, you may find the [New user](#) page or our [FAQs](#) helpful.' and 'If you do need to contact us, please [get in touch](#).'

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