Guide to applying the Rural Urban Classification to data

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All maps

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No. 100022861

Rural Statistics Unit, Defra

rural.statistics@defra.gsi.gov.uk

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Do you know if there is a difference between rural and urban within your data?

There might be. Over nine million people in England (18% of the population) live in rural areas and over half a million businesses in England (33% of registered businesses) are registered in rural areas.

A **person** living, working or studying in a rural area; a **business** located in a rural area; a **service** accessed or delivered in a rural area can all have different characteristics compared with those in urban areas. These differences could be hidden if you do not break down your data.

Why is this?

- **demography** – in rural areas there are proportionately more older people and fewer younger people, poverty is less geographically concentrated and hence more difficult to identify, there are proportionately more small businesses.

- **accessibility, quality of services and infrastructure** – there are fewer services within easy reach in rural areas, there can be less choice, it can be more difficult to provide the service.

- **opportunity** – there can be greater challenges in accessing customers in rural areas, engaging with other businesses, pursuing social and leisure activities.

- **expectations and outlook** – people can have different perceptions and behave differently, for example trust in neighbours and sense of community are higher in rural areas; businesses can find it more difficult to find people with the right skills.

So how do you split your data to identify differences?

You should determine the lowest (most detailed) level of geography for which your data are available. This will be ordinarily the level at which it would be best to undertake rural-urban comparisons as it will give you the most robust rural urban break down.

Your data should be coded with the standard statistical codes that are maintained by the Office for National Statistics for a wide range of geographies. These codes have nine characters, for example E06000044 (the local authority district of Portsmouth).

You can then attach the appropriate rural-urban classification, by matching the codes in your data with the codes in the classification. The classification is available for a selection
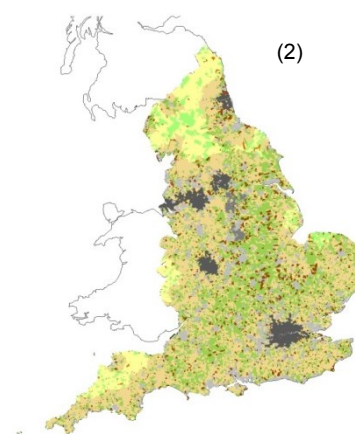
of geographies – more details below – and can be downloaded from the ONS Geoportal (//geoportal.statistics.gov.uk/geoportal/catalog/main/home.page).

If your data do not contain the standard statistical codes, it might be possible to match geographical units by name, although this can be less reliable. If using this approach, it is recommended to permanently attach the standard codes, rather than continue to match by name (geography codes and look-up tables to support this work are available for download from the ONS Geoportal). The rural-urban classification can then be attached.
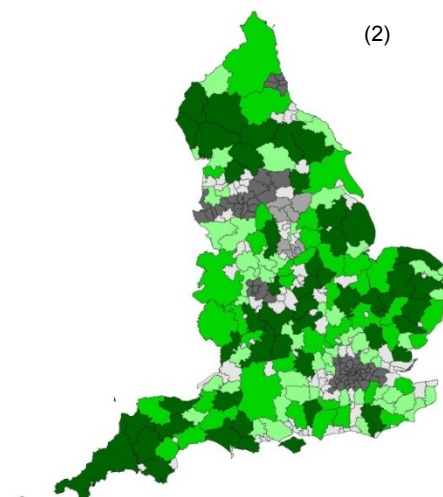
Available rural-urban classifications

There is an official statistical rural-urban classification[1] which is available for the following Census geographies:

- **Output Areas (OAs)** – *the smallest geography for which 2011 Census data are available, with an average resident population of approximately 300 people.*

- **Lower Super Output Areas (LSOAs)** - *groups of OAs, with an average resident population of approximately 1,600 people*

- **Middle Super Output Areas (MSOAs)** – *groups of LSOAs, with an average resident population of approximately 7,800 people*

- **Wards** – administrative boundaries at 2011 Census, *with an average resident population of 6,500*

(2)

It is also so far available for the following higher level geographies:

- **Local Authorities Districts**

- **Unitary Authorities and Counties**

- **Parliamentary Constituencies**

- **NUTS 3 statistical regions** (Nomenclature of Territorial Units) – upper tier authorities or groups of lower tier authorities (unitary authorities or districts)

- **Clinical Commissioning Groups** - clinically-led statutory NHS bodies responsible for the planning and commissioning of health care services for their local area.
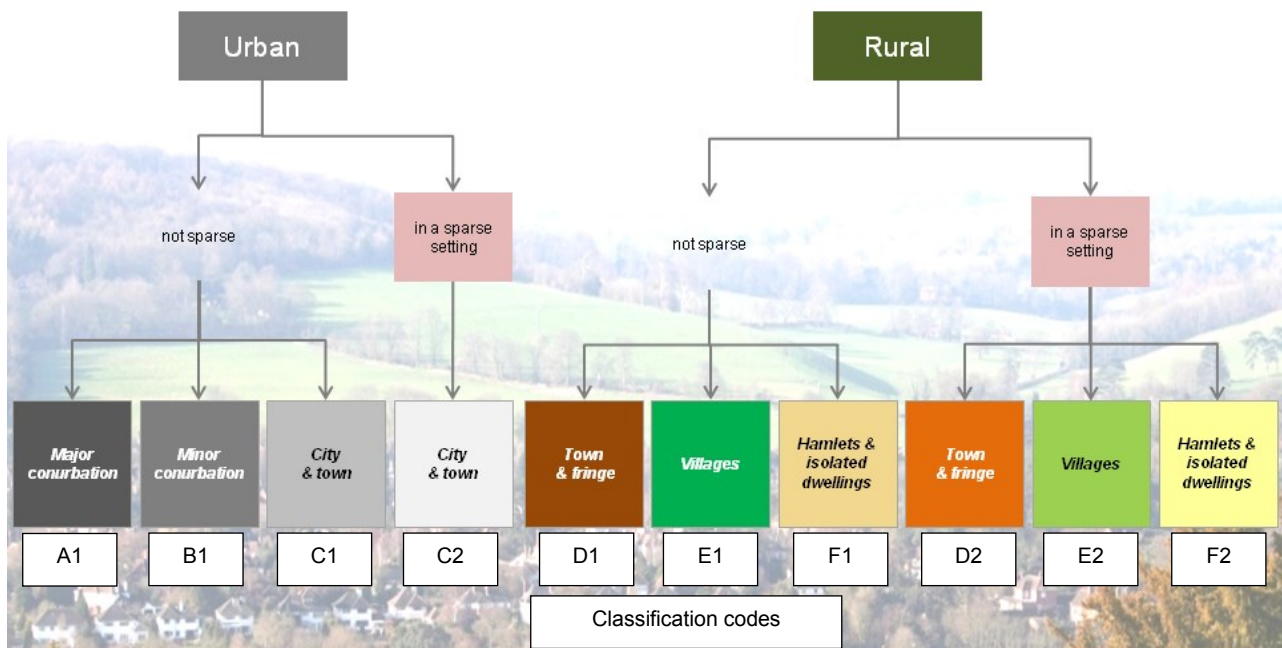
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[1] Commissioned by the Office for National Statistics, Department for Environment, Food and Rural Affairs, Department for Communities and Local Government, Welsh Assembly Government, 2014
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It might be possible to create the classification for other geographies. If this is required please contact rural.statistics@defra.gsi.gov.uk

How is the classification determined?

All the classifications have as their basic building block the rural urban classification of Output Areas (OAs). The OA level classification contains 10 classes (shown above) with OAs allocated in a three stage process:
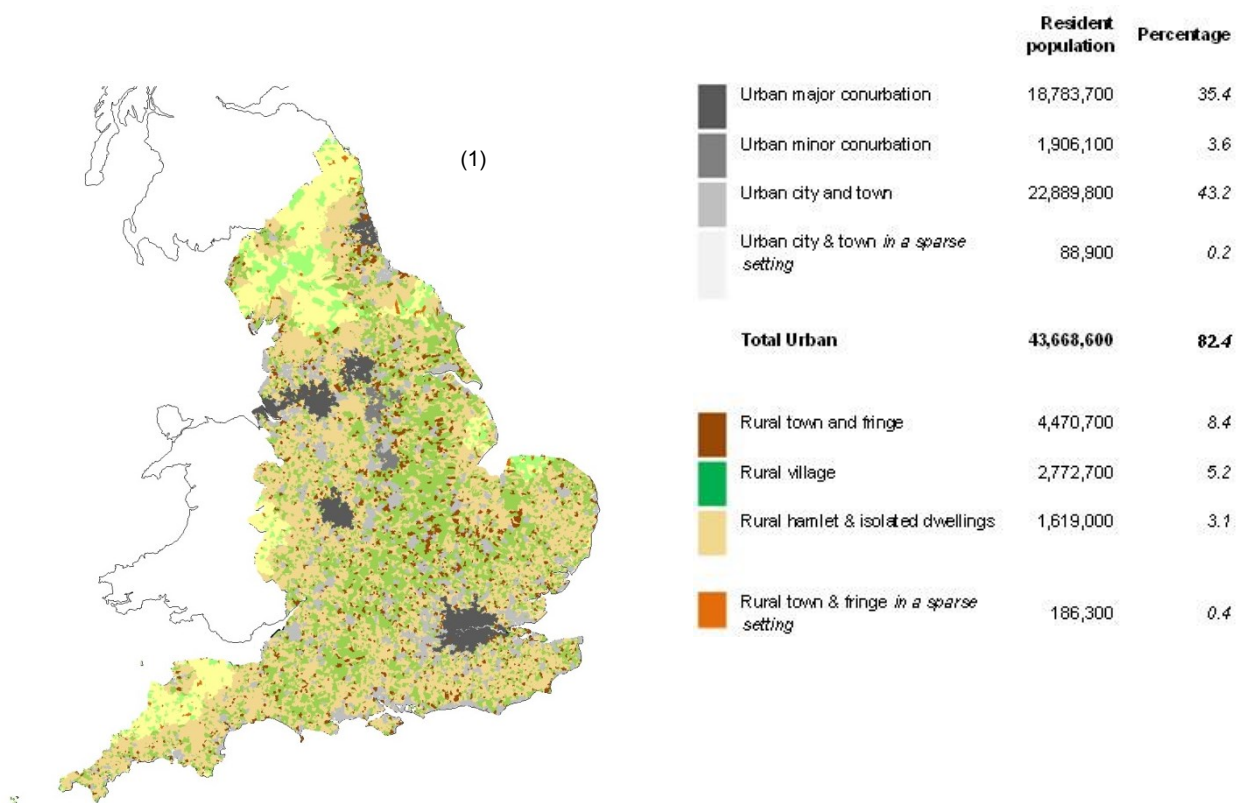
- OAs belonging to settlements with populations of 10,000 or more are classed as **urban**, while all remaining OAs classed as **rural**.

- The urban and rural categories are then refined by settlement type. OAs classed as urban are allocated into one of three settlement types: **major conurbation**; **minor conurbation** or **city and town**. For OAs classed as rural are allocated into one of three settlement types: **town and fringe**; **village**; or **hamlet and isolated dwelling**. The allocation of rural settlement type is determined by population density profiles.

- The OAs are then additionally determined in terms of whether they are located in a **sparse setting** or not, based on density profiles in the surrounding area. This distinction is made because the more remote settlements may have more extreme characteristics in terms of population and business demography, the availability of services, how they are delivered etc.

Although other thresholds can be applicable for particular circumstances, the 10,000 population threshold has been established in England and Wales since 1981 and was reviewed and reinforced in 2001. The same threshold is used in Scotland and Northern Ireland – ensuring compatibility of definitions both over time and between countries.

Users should be aware that OAs classed as urban can also include areas of open countryside (and any dwellings located there) that surround settlements of over 10,000 people. This is because OAs, which were designed for the output of Census data, have to cover the whole county and require a certain population size. Where urban OAs include areas of open countryside, the bulk of the OAs' population will always be located within the urban area.

Similarly an OA being classed as rural does not mean that it is exclusively open countryside, as rural output areas will include settlements with up to 9,999 population.

The classification should be therefore regarded as a statistical classification based on population and dwelling density, not one based on landscape or the nature of a place. It is also not taking into account how people may regard their settlement. For example, a settlement that local people consider to be a village may meet a density profile for a rural town and hence be classified as such. So the classification is a statistical construct, which is very useful for distinguishing different characteristics within data sets.

	Resident population	Percentage
Urban major conurbation	18,783,700	35.4
Urban minor conurbation	1,906,100	3.6
Urban city and town	22,889,800	43.2
Urban city & town *in a sparse setting*	88,900	0.2
Total Urban	**43,668,600**	**82.4**
Rural town and fringe	4,470,700	8.4
Rural village	2,772,700	5.2
Rural hamlet & isolated dwellings	1,619,000	3.1
Rural town & fringe *in a sparse setting*	186,300	0.4

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For Census geographies larger than OAs, the classification is based on the majority of the OAs within the larger geographies. So for a LSOA made up of 6 OAs, if 3 or more of the output areas are classed as urban then the LSOA is classed as urban, even though there are some rural OAs within it.

Using the Census geographies classification

If your data are available for Census geographies and the area codes are attached then you can use the rural-urban classification for that geography. These are available via the Office for National Statistics Geoportal.

You can find the rural urban classifications by searching for "rural urban classification".

This will produce a list of the classifications available and supporting material.

The example below is for Lower Super Output Areas.

The portal will give details of the classification and the attributes.

To see the classification click on Download Dataset.

If you download the spreadsheet it will appear as below, though you may need to widen the columns.

	A	B	C	D	E
1	LSOA11CD	LSOA11NM	RUC11CD	RUC11	OBJECTID
2	E01000001	City of London 001A	A1	Urban major conurbation	0
3	E01000002	City of London 001B	A1	Urban major conurbation	1
4	E01000003	City of London 001C	A1	Urban major conurbation	2
5	E0	London 001E	A1	conurbation	3
6	E0	g and Dagenham 016A	A1	conurbation	4
7	E0	g and Dagenham 015A	A1	conurbation	5
8	E01000008	Barking and Dagenham 015B	A1	conurbation	6
9	E01000009	Barking and Dagenham 016B	A1	urban major conurbation	7
10	E01000010	Barking and Dagenham 015C	A1	Urban major conurbation	8

(Lower super output area)

(Rural urban classification code and)

16207	E01016690	Wokingham 017C	E1	Rural village and dispersed	16205
16208	E01016691	Wokingham 017D	E1	Rural village and dispersed	16206
16209	E01016692	Wokingham 002C	D1	Rural town and fringe	16207
16210	E01016693	Wokingham 002D	D1	Rural town and fringe	16208
16211	E01016694	Wokingham 002E	D1	Rural town and fringe	16209
16212	E01016695	Wokingham 002F	D1	Rural town and fringe	16210
16213	E01016696	Wokingham 013E	C1	Urban city and town	16211

To attach the classification to your data the safest way to avoid mismatching is to use a look-up function. In Microsoft Excel this is the vertical look-up function VLOOKUP, other spreadsheet software will have similar functions. This allows you to take the geography code for each row of your data and 'look up' the code or description automatically. Instructions on how to use this function can be found on-line or via the help function in your spreadsheet software. The matching could be also done within a database by matching fields.

Once your data have the classification attached, you can then produce aggregate results for each type of rural or urban area via a Pivot table (again see instruction on-line or via the help function in your spreadsheet software) or via a summation query in your database.

Sometimes it might be sufficient to present the aggregate results simply for rural and urban, but there might be stark differences when looking at the more detailed categories.

Often it will be necessary to normalise the data to allow comparisons between categories, for example by head of population, per employee, or as percentages. So you may need to combine two datasets to help make the comparisons meaningful.
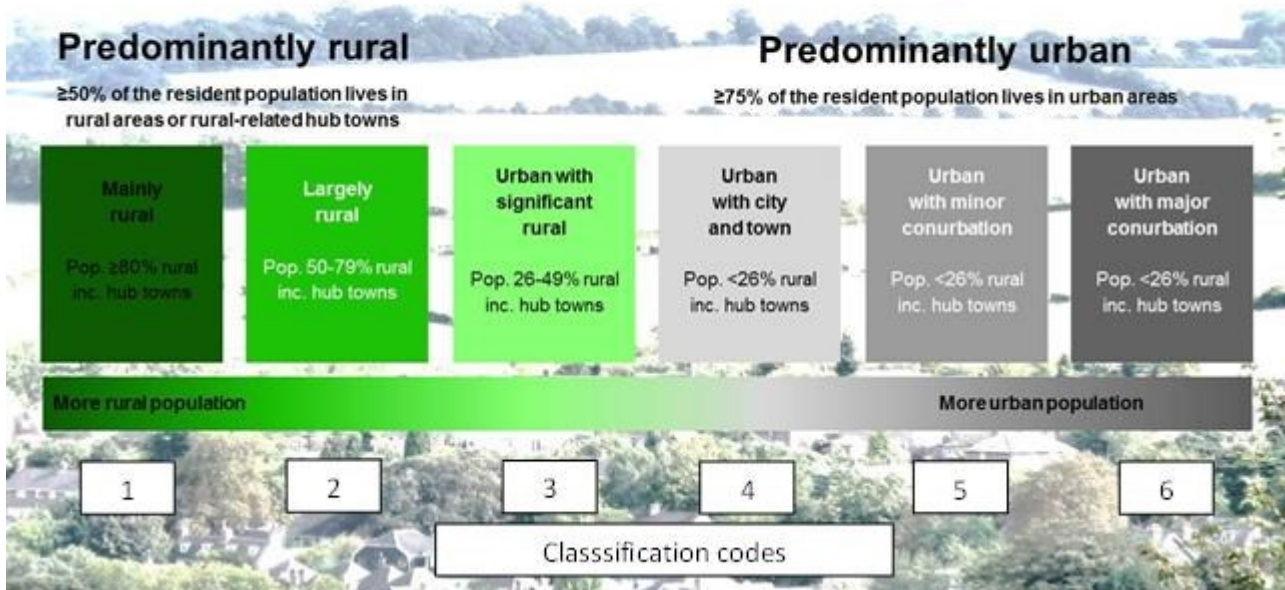
Using the higher geographies classification

If your data are available for one of the higher geographies which have been pre-classified then you should use the associated classification, again by use of the geography codes. The look-up tables are as before available on the Office for National Statistics Geoportal.

The methodology is based on that used to create the OA level classification but is adapted so that it is more appropriate for higher level geographies by taking into account settlements referred to as 'rural hub towns'.

'Rural hub towns'

An additional consideration is given to settlements that although urban can be shown to be potentially important hubs for residents and business in the wider rural area. The population threshold for an area being urban is 10,000. The upper population threshold for a settlement to be considered as one of these 'hub towns' is 30,000. For a settlement to be a hub town it needs to meet these population criteria and specified resident and business density criteria (see methodology / user guide documents that come with each of the look-up files via the Geoportal). There are 182 settlements of between 10,000 and 30,000 that have been designated as hub towns.
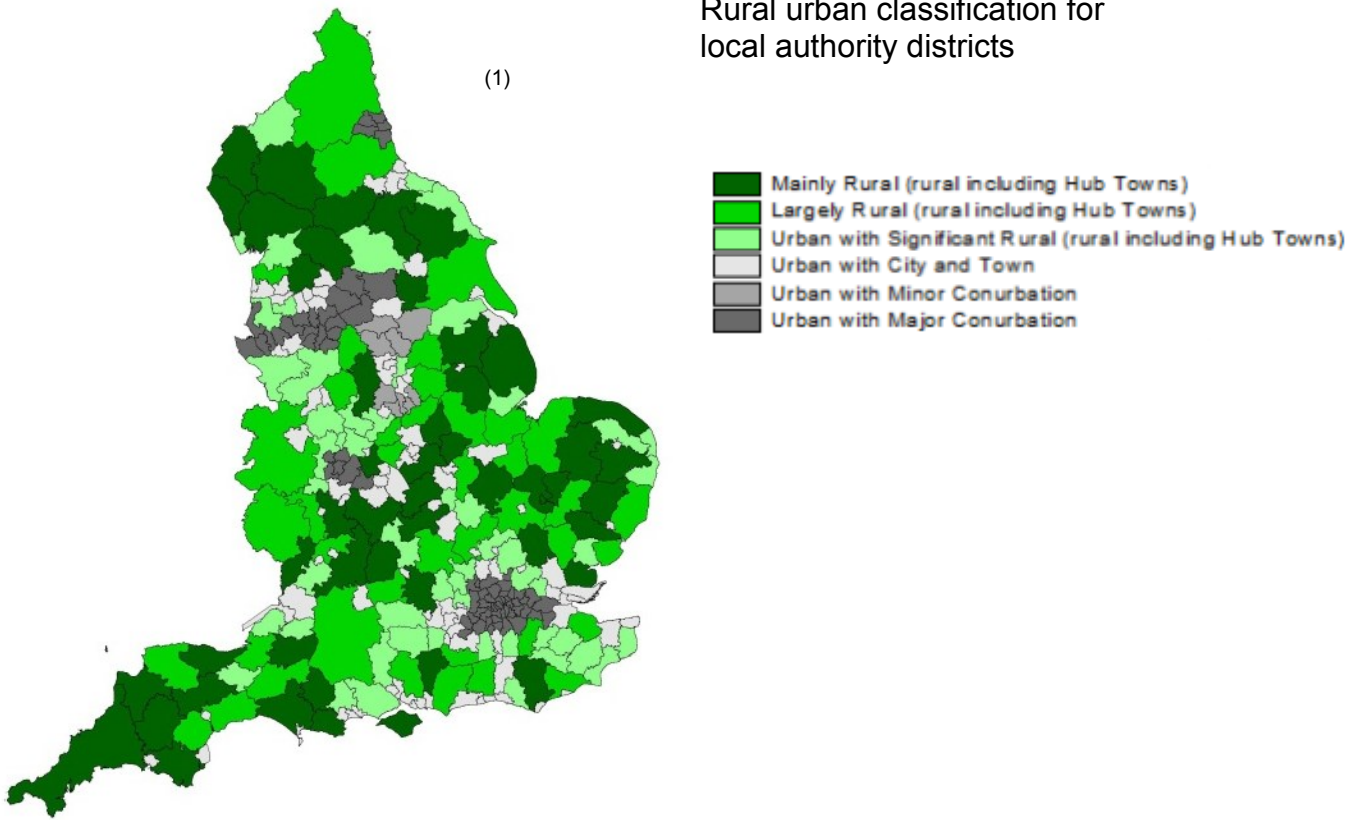
For the purposes of classifying higher geographies, the populations of hub towns have been treated as being 'rural-related', effectively 'rural', and are taken into account in determining the rural-urban classification.

Similar to way that the Census geographies are overall distinguished as being rural and urban, the high geographies are brought together as being **Predominantly rural** (50% or more of the population rural or in hub towns) and **Predominantly urban** (less than 26% of

the population rural or in hub towns), but there is a 'middle' category of **Urban with significant rural** (between 26% and 49% of the population rural or in hub towns).

Rural urban classification for local authority districts

- ■ Mainly Rural (rural including Hub Towns)
- ■ Largely Rural (rural including Hub Towns)
- ■ Urban with Significant Rural (rural including Hub Towns)
- □ Urban with City and Town
- ■ Urban with Minor Conurbation
- ■ Urban with Major Conurbation

Census 2011 population

Classification	2011 population		Broader aggregation	
Mainly Rural	4,723,045	9%	Predominantly rural	21%
Largely Rural	6,334,700	12%		
Urban with Significant Rural	6,898,341	13%	Urban with Significant Rural	13%
Urban with City and Town	14,078,134	27%	Predominantly urban	66%
Urban with Minor Conurbation	2,106,701	4%		
Urban with Major Conurbation	18,871,535	36%		
Total England	53,012,456	100%		

As the geographies become larger it becomes ever more important to understand that the classification is a generalisation and is based on the extent to which the population live in urban settlements. It is not about landscape.

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