



Guide to applying the Rural Urban Classification to data

July 2016





© Crown copyright 2016

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v.3. To view this licence visit <u>www.nationalarchives.gov.uk/doc/open-government-licence/version/3/</u> or email <u>PSI@nationalarchives.gsi.gov.uk</u>

This publication is available at www.gov.uk/government/publications

Any enquiries regarding this publication should be sent to us at

Rural.Statistics@defra.gsi.gov.uk

PB14438

www.gov.uk/defra

All maps

Crown Copyright and database reserved 2016 Ordnance Survey Licence No. 100022861 Rural Statistics Unit, Defra rural.statistics@defra.gsi.gov.uk

Contents

Do you know if there is a difference between rural and urban within your data?	1
So how do you split your data to identify differences?	1
Available rural-urban classifications	2
How is the classification determined?	3
Using the Census geographies classification	5
Using the higher geographies classification	7

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 ruralurban 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 classification¹ 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

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.



Department for Communities and Local Government, Welsh Assembly Government, 2014





² Maps Crown Copyright and database reserved 2016, Ordnance Survey Licence No. 100022861

It might be possible to create the classification for other geographies. If this is required please contact <u>rural.statistics@defra.gsi.gov.uk</u>

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.



¹ Maps Crown Copyright and database reserved 2016, Ordnance Survey Licence No. 100022861

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.

e con	Guide to UK Geography	WWW.ONS.GOV.UK
All Data Boundaries - Documents - Lookups - Maps - Names and	Codes - Products -	Postcodes +
Office for National Statistics)pen Geog	araphy Portal
rural urban classification SEARCH WITHIN	MAP	My Activity
Participante de la constante d	Microw Party Compared Annual A	Vi Jonnburg
Burd Urban Classification (2011) of Westminister Parill Constituencies in England mon Kis Geography deen base Stretch International Parille Paril	tary ci published in tr ninster nduced by the 70 locations i	O Share
CSV This file provides a nurl-turban view of 2011 electoral wards / division This file provides a nurl-turban view of 2011 electoral wards / divisions was released This product was sponsored by a cross-foorement working group Decartment for Environment. Food and Rural Affairs. Decartment of	in August 2013. comprising	

The example below is for Lower Super Output Areas.

Al Data Boundaries Documents Lookups Maps Names and Codes Products				
Office for Statistics Open Geography Irural urban classification Q Irural urban classification Q Control Control Details Table Control Description Description Control Description Control Description Control Description Control Description Control Description Control Contro Control Control Control Control Control	☆		ONS Guide to UK Geography	WWW.ONS.GOV.UK
National Statistics Open (ural urban classification Open (ural urban classification Open (ural urban classification Open (urban classification Open (urban classification	All Data Boundaries	ries≁ Documents≁ Lookups≁ Maps≁ N	ames and Codes + Products +	Postcodes -
Rural Urban Classification (2011) of Lower Layer Super 0.566 Conventer Conveter Conveter Conventer Conventer Conventer Conventer Conventer	Office for National S	Statistics Open	Open Geog	raphy Portal
Rural orban classification (2011) of Lower Layer Super Convent (b) Output Areas in England and Wales Convent (b) Details Table Charts DESCRIPTION more The 2011 runs under control calor factor in the product asses in England and the product asses in England and the soft runs under the product asses in England and product asses in England and Wales ABOUT DESCRIPTION more the 2011 runs under the ord classifier in Signal 2013 cross-Government working group comprising Despined in Signal 2014 Data Africe, Postment of the Communities and Local Government, Office for National Data SET ATTRIBUTES ABOUT DATASET ATTRIBUTES Source May important access control base More Source Set Set Set Set Set Set Set Set Set Se	al urban classificatio	tion Q		My Activity
Comments (ii) Comments (iii) Output Areas in England and Wales Comments (iii) Details Table Charts DESCRIPTION more tracture an asstration (INUC) of lower layer super output drafts in layers to table and cress Generiment working group comprising Pleastment for Environment, Food and Rural Affitting Peartment of the Communities and Local Government, Office for National DATASET ATTRIBUTES ABOUT ONS Geography Open Data Planta Matting Peartment of the Communities and Local Government, Office for National DataSet AttriButes Source this (Ingenediata arcs) (Insert Planta Matting Peartment of the Communities and Local Government, Office for National DataSet AttriButes Source this (Ingenediata arcs) (Insert Planta Matting Peartment of the Communities and Local Government, Office for National DataSet AttriButes Source this (Ingenediata arcs) (Insert Planta Matting Peartment of the Communities and Local Government, Office for National DataSet AttriButes Source this (Ingenediata arcs) (Insert Planta Matting Peartment of the Communities and Local Government, Office for National DataSet AttriButes Source this (Ingenediata Arcs) (Insert Local Set Arman Set Arcs)			_	
Details Table Chards DESCRIPTION more Main The 2011 run accustication (RUC) of lower layer super output areas in fighted and Waters to create a counting and the event output areas in fighted and Waters to create a noutput any view of 100k even potouts. This potocit was sponsored by creas-Government working groups comprising Department for Environment, Food and Run J Afrita, Department of the Communities and Local Government, Other for National DATASET ATTRIBUTES ABOUT Local Accustication Source http://poendata.aregue co Matching Source http://poendata.aregue co Matching Read Unitson (Starting)				Download Dataset - APIs
DESCRIPTION more ABOUT DESCRIPTION more ABOUT DESCRIPTION The 2011 rank-urban classification (RUC) of lower layer super output areas in England and Ware is based on the 2011 RUC of output areas yould be indicated and and wares to create a rank/urban wire of 1500 Neel pooldst. This indicates and allows creat-ownement working group comprising Department for Environment, 60d and Run Affairs, Department of the Communities and Local Government, Office for National DATASET ATTRIBUTES LCOALLOD Tex	tput Areas in En	England and Wales		
The 2011 rural-urban classification (RUC) of lower layer super output assail in England and Water is based on the 2011 RUC of output assail priving in Angunt 2013, and alows bused to the 2011 RUC of output assail protocol was sponsored by a sponsored by a spanning in the priving interpret and the protocol was sponsored by a spanning interpret and angunt 2011 rule	ails Table Charts	5		
Were is based on the 2013. BUC of output areas publiched in August 2013, and allows users to create a navitarious new of CSU elevel products. This protocit was sponsored by a proces-Government working group comprising Department for fravionment, Pool and Runal Affaira, Department of the Communities and Local Government, Office for National DATASET ATTRIBUTES SOALID LOCALID L	ESCRIPTION		more ABOUT	
USANICO Userse http://www.ons.gov.uk/m tee	ales is based on the 2011 ers to create a rural/urba oss-Government working	11 RUC of output areas published in August 2013, and ban view of LSOA level products. This product was spo ing group comprising Department for Environment, Foc	allows isored by a By ONSGeograph d and Published: 2011-1:	iy_data 2-31
LSOA11CD Text	ATASET ATTRIB	BUTES	Metadata Rural U	Irban Classification (2011)
1765				w.ons.gov.uk/methodolog
LSOA11NM Rural Urban Classification RUC			Rural Urban Class	
Text Layer Super Output Areas LSO Products	xt			out Areas LSOA Other
RUC11CD Text				
RUC11				

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

	А	В	С	D		E
1	LSOA11CD	LSQA11NM	RUC11CD	RUC11		OBJECTID
2	E0100001	City of London 001A	A1	Urban majoi	rban major conurbation	
3	E0100002	City of London 001B	A1	Urban majo	conurbation	1
4	E01000003 \	City of London 001C	A1	Urban majo	conurbation	2
5	E	London 001E	A1		conurbation	3
6	E Lower su	per g and Dagenham 016A	A1 Dur	al urban	conurbation	4
7	EC output ar	ea g and Dagenham 015A	A1		conurbation	5
8	E0100008	вагкіng and Dagenham 015В	Δ1	sification	conurbation	6
9	E0100009	Barking and Dagenham 016B	A1 CO	de and	conurbation	7
10	E01000010	Barking and Dagenham 015C	A1	Urban majo	conurbation	8
6207	501016500	Welsie har 0170	F4	Dunaluillana		16205
	207 E01016690 Wokingham 017C		E1	Rural village	16205	
	5208 E01016691 Wokingham 017D		E1	Rural village	16206	
16209	209 E01016692 Wokingham 002C		D1	Rural town a	16207	
6210	E01016693	Wokingham 002D	D1	Rural town a	16208	
L <mark>6211</mark>	E01016694	Wokingham 002E	D1	Rural town a	16209	
6212	E01016695	Wokingham 002F	D1	Rural town a	16210	
6213	F01016696	Wokingham 013E	C1	Urhan city ar	nd 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).



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.

Version 1 July 2016

This guide has been produced by Defra Rural Statistics in collaboration with the Office for National Statistics. It will be developed further and comments are welcome. Please submit comments to rural.statistics@defra.gsi.gov.uk

¹ Maps Crown Copyright and database reserved 2016, Ordnance Survey Licence No. 100022861