
Mid-2016 Small Area Population Estimates Scotland

Population estimates by sex,
age and 2011 Data Zone

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Scotland's national population estimates can be broken down into small areas, known as data zones.

Data zones are a small area geography used to provide statistics at local level and are used as building blocks to aggregate estimates to other geographies, such as wards, parliamentary constituencies and urban/rural areas.

There are 6,976 data zones covering the whole of Scotland and they nest within council areas.

Data zone population distribution

Data zones are designed to have a population of approximately 500 to 1,000 household residents.

The population in each data zone varies as areas change over time.

In 2016, there were on average 756 people per data zone.

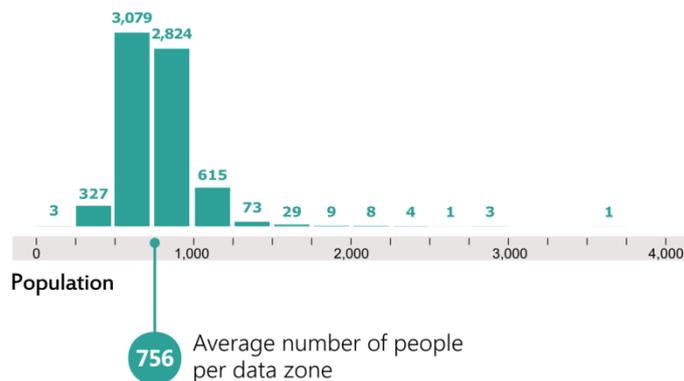
Find out about the data zone you live in

Search for a postcode on statistics.gov.scot to see the map of the data zone it is in, and to access the latest population estimates by sex and age.

Detailed data tables for small area population estimates, by data zone and other geographies, are available at the SAPE section of nrscotland.gov.uk.



Number of data zones



Data zone population distribution by council area

There is variation in the population of each data zone which changes over time reflecting increases in population due to new housing development or decreases due to demolition.

The council area with the highest average data zone population was City of Edinburgh (831) and the council area with the lowest average data zone population was Argyll and Bute (674).



Key findings

- As at 30 June 2016, the total estimated population of Scotland was 5,404,700, which is an increase of 31,700 people (0.6%) from last year. The population estimates for the 6,976 data zones in Scotland ranged from 0 to 3,559 people. There were 326 data zones (4.7%) with a population of fewer than 500, while there were 753 data zones (10.8%) with a population of 1,000 or more, and 55 data zones (0.8%) with a population of 1,500 or more.
- The average (median) data zone population for Scotland was 756. The council area with the highest average data zone population was City of Edinburgh (831), whereas the council area with the lowest average data zone population was Argyll and Bute (674).
- The median age for the population of Scotland as a whole in 2016 was 41 years. But this varied considerably across data zones, with the median age ranging from 19 years to 72 years. The most common age group was 46 to 47 years, with 749 data zones having a median age fall within this range.
- The population of most data zones has not changed by much since 2011, although some have experienced more substantial changes. These changes were mostly due to demolitions and housing developments. Between mid-2011 and mid-2016 the population of data zones changed as follows:
 - changed by less than 10%: 5,926 data zones (84.9%),
 - changed between 10 and 20%: 605 data zones (8.7%),
 - increased by 20% or more: 350 data zones (5%),
 - decreased by 20% or more: 28 data zones (0.4%), and
 - 67 data zones (1%) had no change in population.
- Nearly 70% of the population of Scotland live in large urban and other urban areas (settlements of 10,000 or more people; based on the Scottish Government Urban Rural 2013–2014 Classification).

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1. Introduction

This report summarises the Mid-2016 Small Area Population Estimates (SAPE) for Scotland. The estimates are fully consistent with the headline mid-2016 population estimates published for higher level geographies, at council area, health board and Scotland level.

The small area population estimates are published at data zone level, which are based on the 2011 Census and use 2011 Data Zone boundaries. For ease of reading, the 2011 Data Zones are referred to as data zones throughout this report. Data zones are the Scottish Government's small area statistical geography. There are a total of 6,976 data zones in Scotland, which cover the whole of Scotland and nest within council area boundaries. Based on 2011 Census population, the data zones were designed to have populations of between 500 and 1,000 household residents. However, following the constant change in population, many data zones have exceeded the upper limit while others have seen a large reduction in population. These changes are mainly due to housing developments and demolitions. Further information about the definition of data zones can be found in the [Background notes](#).

Given the large number of data zones, this report highlights some of the main findings and characteristics of data zones in relation to their population size. Users are encouraged to access the [Detailed Data Zone Tables](#) published on the National Records of Scotland (NRS) website for data on the estimated population for each data zone by sex and single year of age. Population estimates for other geographies including urban and rural areas, areas of deprivation, the EU (Eurostat) statistical geography areas, electoral wards and parliamentary constituencies can be found in the [Special Area Population Estimates](#) section of the NRS website.

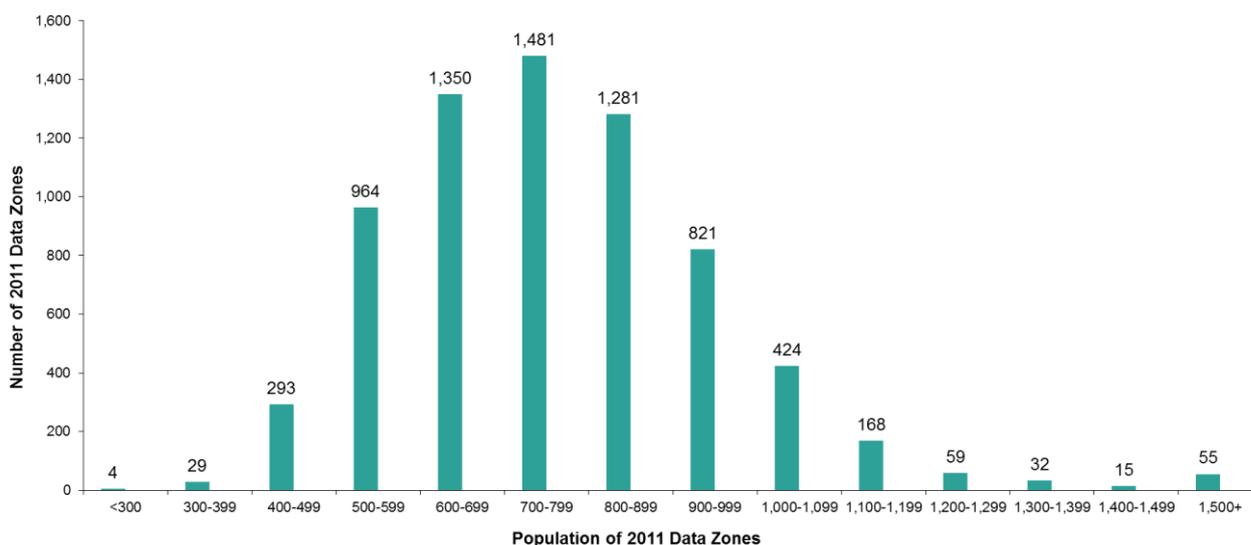
Information about the methodology and data sources for producing the small area population estimates, as well as strengths and limitations, can be found in the [Methodology Guide](#) on the NRS website.

Small area population estimates provide important information at neighbourhood level, and can be used as building blocks to provide estimates for a variety of different geographies. They are used by a wide range of users, including central and local government, to inform planning, provision of services and allocation of resources at local level. The estimates are also important in a number of other applications, such as the development and maintenance of the Scottish Government's Urban Rural Classification and the Scottish Index of Multiple Deprivation (SIMD).

2. Population estimates by 2011 Data Zone, 2016

The overall estimated population of Scotland at 30 June 2016 was 5,404,700. The population of the 6,976 data zones in Scotland at this time ranged from 0 to 3,559, but the vast majority of the data zones (5,897) had between 500 and 999 people (Figure 2.1). A total of 326 data zones had a population of fewer than 500, while 55 had a population of 1,500 or more. Some of these 55 data zones had a population size substantially greater than 1,500 and, as a result, the mean¹ population size of 775 was higher than the median² of 756.

Figure 2.1: Distribution of 2011 Data Zone populations, 2016



Data zones with a population of fewer than 500 people

The 326 data zones with a population of fewer than 500 in 2016 were spread throughout Scotland, with no council area having a particularly high number of data zones in this category. South Lanarkshire was the highest with 32 data zones in this category, followed by Aberdeenshire with 28 data zones. This is compared to the previous year's figures of 29 and 26 data zones for these council areas respectively (Table 2.1). Shetland Islands was the only council that had no data zones with a population fewer than 500. Two data zones in Glasgow no longer had anybody living in them in 2016.

When analysed by Urban Rural 2013-2014 Classification, the number of data zones with a population of fewer than 500 are mostly in large urban and other urban areas (refer to Background notes), largely because these are the areas where most data zones are located.

Footnotes

- 1) The term 'mean' used in this report refers to the average value of a distribution which is calculated by dividing the sum of all the values by the number of those values. For example, the mean of the data zone populations in Scotland is the sum of all data zone populations in 2016 divided by the number of data zones: $(5,404,700/6,976)=775$.
- 2) The term 'median' used in this report refers to the midpoint value of a distribution – the $((n+1)/2)$ highest value. For example, the median of the data zone populations in Scotland is the $((6,976+1)/2)$ 3,488.5 highest population, which for 2016 was 756.

Table 2.1: Characteristics of the 2011 Data Zones with a population of fewer than 500 people in 2016

Council	No. of 2011 Data Zones	Urban/Rural Classification ¹	No. of 2011 Data Zones
South Lanarkshire	32	Large Urban Area	70
Aberdeenshire	28	Other Urban Area	135
Glasgow City	19	Accessible Small Towns	29
City of Edinburgh	18	Remote Small Towns	12
Others ²	≤16	Accessible Rural	49
		Remote Rural	31
Total			326

Footnote

1) 6-fold Urban Rural 2013-2014 Classification.

2) 'Others' include the rest of the councils (27 out of 32) that had 16 or fewer 2011 Data Zones with population of fewer than 500 people. The exception is Shetland Islands that had no data zones with these characteristics.

Data zones with a population of 1,500 people or more

There were 55 data zones that had a population of 1,500 or more in 2016. These data zones were spread throughout Scotland, with two council areas having the highest number of data zones in this category – 13 in Glasgow City and 11 in City of Edinburgh (Table 2.2). This is an increase for both council areas from 2015 (eight data zones in Glasgow City and seven in City of Edinburgh). Over half of all council areas (19 out of 32) had at least one data zone with a population of 1,500 or more.

The majority of these 55 data zones are in large urban and other urban areas with a few in accessible small towns and accessible rural areas (Table 2.2). Many of the 55 data zones are in areas where house building has increased the local population in recent years. Others have a high population because of the presence of large communal establishments such as prisons, armed forces bases, or students' halls of residence.

Table 2.2: Characteristics of the 2011 Data Zones with a population of 1,500 or more people in 2016

Council	No. of 2011 Data Zones	Urban/Rural Classification ¹	No. of 2011 Data Zones
Glasgow City	13	Large Urban Area	30
City of Edinburgh	11	Other Urban Area	14
Aberdeen City	4	Accessible Small Towns	4
Others ²	≤3	Remote Small Towns	0
		Accessible Rural	7
		Remote Rural	0
Total			55

Footnote

1) 6-fold Urban Rural 2013-2014 Classification .

2) 'Others' include the rest of the councils (16 out of 32) that had 3 or fewer 2011 Data Zones with population of more than 1,500 people. There are also 13 council areas that had no data zones with these characteristics.

Summary characteristics of data zones

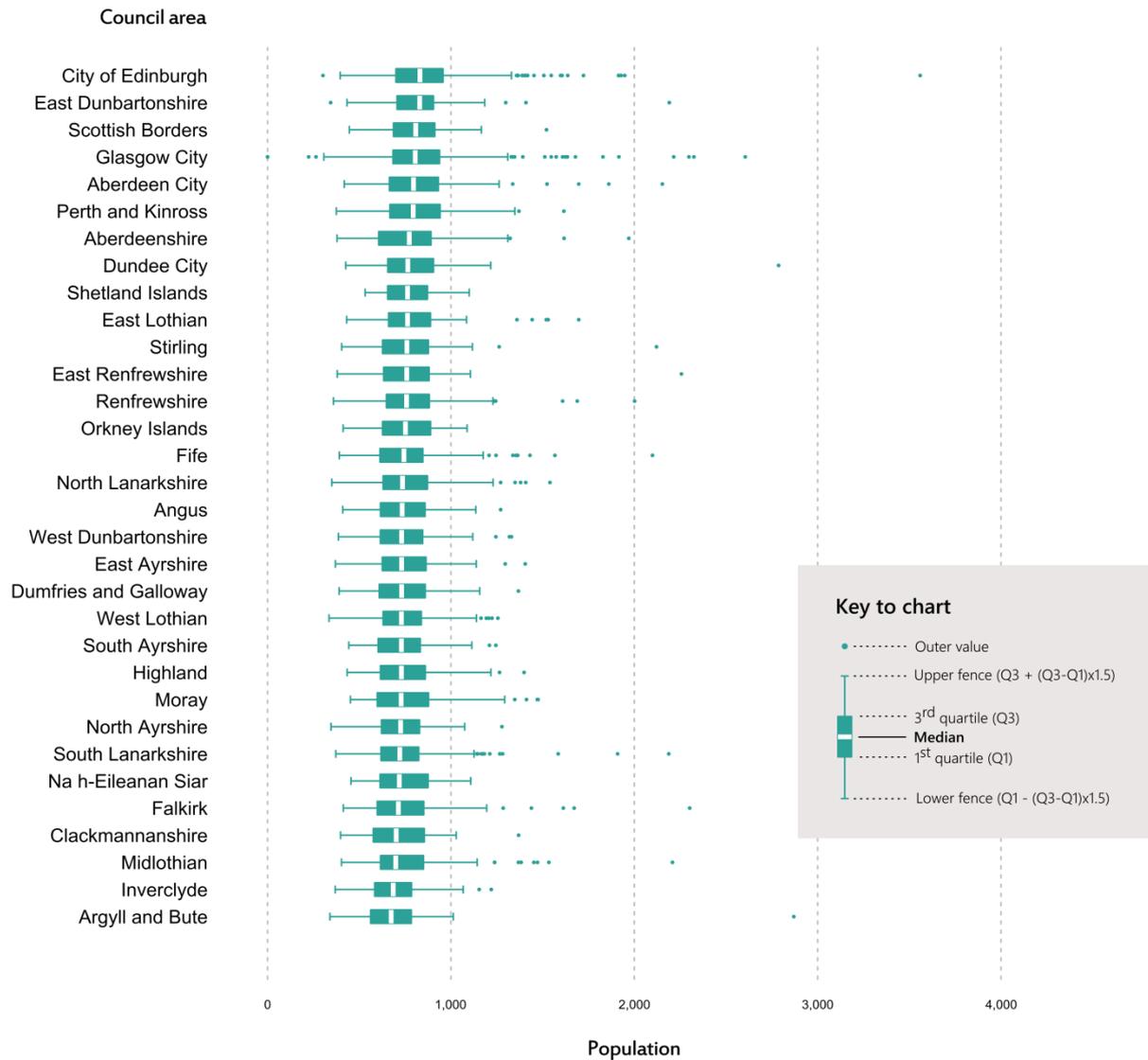
Table 2.3 shows how the characteristics of data zones differed between council areas in 2016. The highest median data zone populations were for City of Edinburgh (831), East Dunbartonshire (830), Scottish Borders (808), and Glasgow City (806). The lowest average populations were for Argyll and Bute (674), Inverclyde (685), and Midlothian (699). With the exception of three council areas (Aberdeenshire, East Dunbartonshire and Scottish Borders), the median population was lower than the mean population for all council areas. This is likely to indicate that most council areas have a number of data zones with large populations that inflate the mean but have little or no effect on the median. The lower quartile indicates the population below which 25% of data zones lie for each local authority. For example, 25% of the 283 data zones in Aberdeen City have a population of 665 or fewer. Similarly, the upper quartile indicates the population above which 25% of the data zones lie for each local authority. So, 25% of the 283 data zones in Aberdeen City have a population of 932 or more. In other words, 50% of data zones have a population between the lower and upper quartile values.

As can be seen from Table 2.3 and [Figure 2.2](#), the council area which has the data zone with the highest population in Scotland is City of Edinburgh. The data zone in question is S01008425 (intermediate zone – Currie West), and between 2011 and 2016 the population has increased from 2,455 to 3,559. The area contains a large concentration of Heriot Watt University accommodation, which explains its large population.

Table 2.3: 2011 Data Zone population summary statistics by council area, 2016

Council		2011 Data Zone Population Estimates, 2016						
Name	Number of 2011 Data Zones	Total population	Minimum population	Maximum population	Mean population	Median population	Lower quartile	Upper quartile
Aberdeen City	283	229,840	418	2,153	812	796	665	932
Aberdeenshire	340	262,190	379	1,970	771	773	607	891
Angus	155	116,520	410	1,271	752	734	616	859
Argyll and Bute	125	87,130	340	2,870	697	674	562	784
City of Edinburgh	597	507,170	302	3,559	850	831	700	957
Clackmannanshire	72	51,350	398	1,369	713	702	577	854
Dumfries and Galloway	201	149,520	390	1,368	744	731	609	860
Dundee City	188	148,270	426	2,787	789	765	656	905
East Ayrshire	163	122,200	370	1,405	750	731	626	865
East Dunbartonshire	130	107,540	344	2,191	827	830	707	905
East Lothian	132	104,090	431	1,697	789	764	661	888
East Renfrewshire	122	93,810	380	2,257	769	759	634	880
Falkirk	214	159,380	413	2,302	745	714	598	852
Fife	494	370,330	391	2,099	750	744	613	847
Glasgow City	746	615,070	0	2,605	824	806	684	938
Highland	312	234,770	434	1,399	752	730	616	860
Inverclyde	114	79,160	369	1,220	694	685	585	784
Midlothian	115	88,610	403	2,208	771	699	616	851
Moray	126	96,070	452	1,475	762	729	598	878
Na h-Eileanan Siar	36	26,900	455	1,108	747	719	617	875
North Ayrshire	186	135,890	346	1,278	731	726	622	829
North Lanarkshire	447	339,390	350	1,540	759	736	630	872
Orkney Islands	29	21,850	412	1,088	753	752	627	889
Perth and Kinross	186	150,680	375	1,616	810	794	668	940
Renfrewshire	225	175,930	359	2,002	782	758	648	882
Scottish Borders	143	114,530	446	1,521	801	808	687	912
Shetland Islands	30	23,200	532	1,100	773	764	655	869
South Ayrshire	153	112,470	443	1,245	735	730	603	833
South Lanarkshire	431	317,100	372	2,188	736	721	619	825
Stirling	121	93,750	404	2,121	775	760	627	877
West Dunbartonshire	121	89,860	386	1,330	743	731	615	846
West Lothian	239	180,130	335	2,905	754	730	630	839

Figure 2.2: 2011 Data Zone population summary statistics by council area, 2016



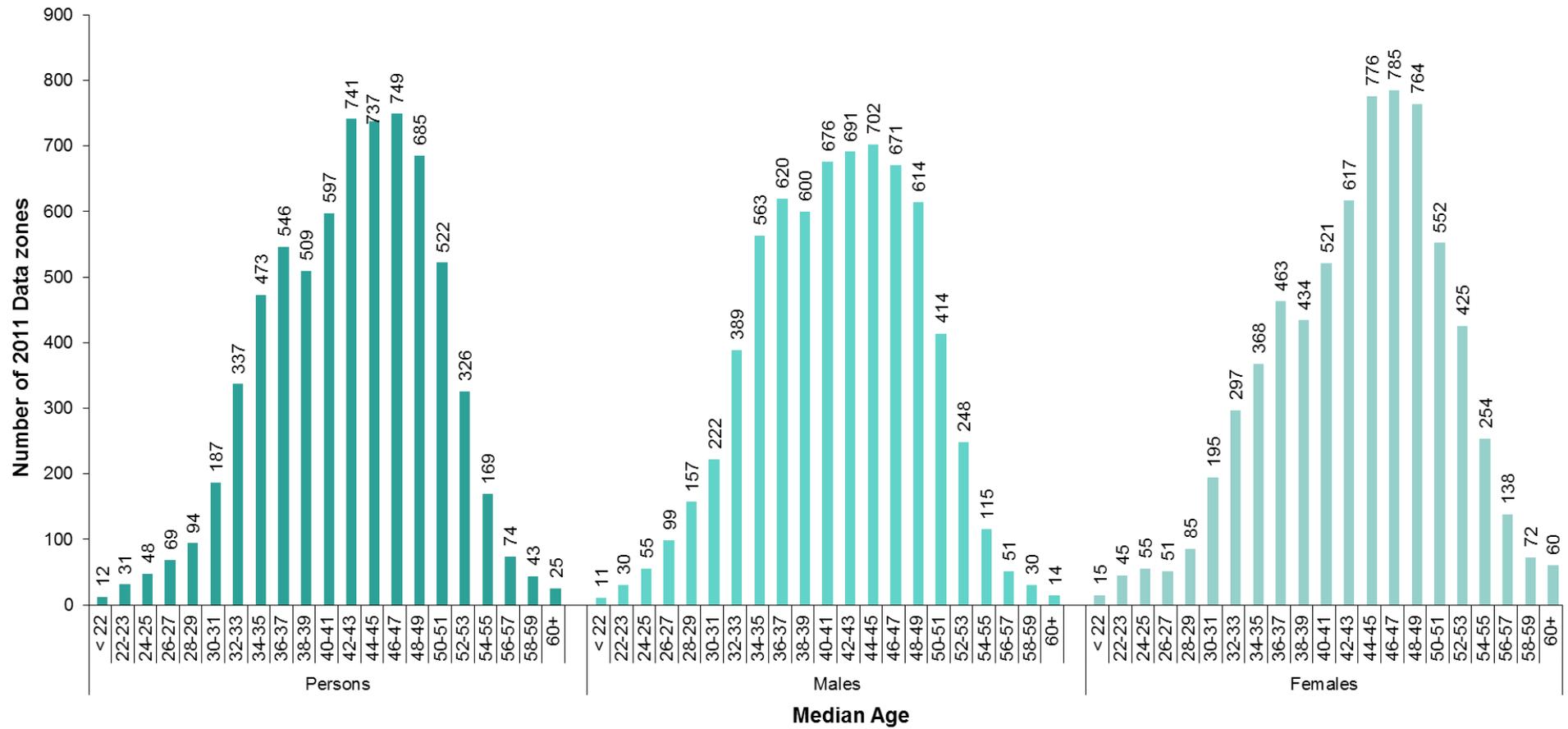
Note

You can read more on how to interpret the boxplots in the above figure in the [Background notes](#).

Age distribution

As well as variations in the population size of data zones, the age distribution of data zone populations varies considerably (Figure 2.3). While the median age for Scotland as a whole was 41 years, the median ages at data zone level ranged from 19 to 72 years. There were 12 data zones with a median age of 21 and under. These are areas with a high student population (living either in residential accommodation or halls of residence) or data zones with some other type of large communal establishment for young people. At the other end of the scale there were 25 data zones with a median age of 60 years and over. These were mainly in popular retirement areas and data zones with substantial accommodation for the elderly. Figure 2.3 also shows the distribution of median age across all data zones in Scotland. The median age by data zone was slightly higher for females (43 years) than for males (40 years).

Figure 2.3: Median age distribution of 2011 Data Zone population by sex¹, 2016



Footnote

1) Two 2011 Data Zones with zero population have been excluded.

3. Population change by 2011 Data Zone, 2011-2016

Between mid-2011 and mid-2016 the overall population of Scotland increased by 104,800 people from 5,299,900 to 5,404,700 (2%). Table 3.1 shows how data zone populations have changed over this period. Initially, data zones were designed to have a total household population of between 500 and 1,000 residents wherever possible. In 2011, a small number (313) of data zones had a population of fewer than 500, while 565 had a population of 1,000 or more. A number of these 565 data zones contained sizeable non-household populations, such as prisons, students' halls of residence and care homes. By 2016, the number of data zones with a population of fewer than 500 had risen slightly to 326, while the number of data zones with a population of 1,000 or more had risen to 753, reflecting the overall increase in Scotland's population.

Table 3.1: 2011 Data Zones within broad population bands, 2011–2016

Year	< 300		300-499		500-999		1,000-1,499		1,500 +	
	No.	%	No.	%	No.	%	No.	%	No.	%
2011	1	0.0	312	4.5	6,098	87.4	551	7.9	14	0.2
2012	1	0.0	304	4.4	6,063	86.9	594	8.5	14	0.2
2013	3	0.0	320	4.6	6,017	86.3	617	8.8	19	0.3
2014	3	0.0	317	4.5	5,985	85.8	649	9.3	22	0.3
2015	4	0.1	319	4.6	5,934	85.1	683	9.8	36	0.5
2016	4	0.1	322	4.6	5,897	84.5	698	10.0	55	0.8

Note

Total number of data zones each year = 6,976.

Table 3.2 further illustrates the changes in the composition of data zones. The increase in the mean data zone population from 760 in 2011 to 775 in 2016 reflected the growing population of Scotland as a whole. However, the median has remained relatively constant over most of this period. The percentiles and quartiles show the population below which a particular percentage of the population lies³. In 2016, for example, 5% of the data zones in Scotland had a population of 504 or less. These summary statistics indicate that, while the majority of data zones have changed little over the past six years, there is a small but growing number that have experienced substantial changes.

Table 3.2: 2011 Data Zone population summary statistics, 2011–2016

Year	Minimum population	Maximum population	Mean population	Median population	5 th percentile	Lower quartile	Upper quartile	95 th percentile
2011	145	2,943	760	751	506	634	873	1,038
2012	162	2,878	762	752	507	635	874	1,049
2013	0	3,230	764	753	504	636	875	1,057
2014	0	3,139	767	753	504	634	877	1,062
2015	0	3,385	770	754	503	634	879	1,078
2016	0	3,559	775	756	504	636	883	1,091

Table 3.3 provides further information on the nature of the changes at data zone level between 2011 and 2016. Although the population of Scotland increased overall between 2011 and 2016, more data zones had a decrease in population than an increase in population. In this period the population of 3,727 data zones (53.4%) decreased, while 3,249 data zones (46.6%) either increased or had the same population in these years. Most of the large changes were in data zones where the population increased. A total of

Footnote

3) The lower quartile is the same as the 25th percentile and the upper quartile is the same as the 75th percentile.

350 data zones had population increases of 20% or more, compared with 28 data zones which had a comparable population decrease. By contrast, most of the small changes were in data zones where the population decreased. A total of 5,926 data zones had a population change of less than 10%, of which 3,516 data zones had a population decrease, 2,410 data zones had an increase. Only 67 data zones had the same population in 2016 as in 2011. Many of the small decreases may be related to the declining average household size in recent years, with more people living alone or in smaller households⁴.

Table 3.3: Population change summary, 2011–2016

Change in population 2011-2016	Number of data zones	Percentage of data zones
Total increase	3,182	45.6
50% or more increase	102	1.5
20% to <50% increase	248	3.6
10% to <20% increase	422	6.0
5% to <10% increase	703	10.1
<5% increase	1,707	24.5
No change	67	1.0
< 5% decrease	2,418	34.7
5% to <10% decrease	1,098	15.7
10% to <20% decrease	183	2.6
20% to <50% decrease	24	0.3
50% to 100% decrease	4	0.1
Total decrease	3,727	53.4

Footnote

4) National Records of Scotland (2017) [‘Estimates of Households and Dwellings in Scotland, 2016’](#).

4. Other small area population estimates

In addition to data zone estimates, National Records of Scotland (NRS) also publish best-fit data zone based population estimates for other geographies:

- Electoral Wards,
- Nomenclature of Units for Territorial Statistics (NUTS) - the statistical geography of the EU (Eurostat),
- Scottish Government Urban Rural Classification,
- Scottish Index of Multiple Deprivation (SIMD) deciles,
- Scottish Parliamentary Constituency (SPC), and
- UK Parliamentary Constituency (UKPC).

These estimates are produced by aggregating the data zone population estimates, using the appropriate geography area lookup tables. The data zone lookup tables can be found in the [Data Zone and Intermediate Zone 2011 Lookups](#) section of the Scottish Government website⁵. Data zones do not always fit these other boundaries exactly. In this case where a data zone boundary crosses that of another geography, the data zone is allocated to the area that contains the population-weighted centroid of the data zone. An evaluation of non-standard geography population estimates⁶ was carried out to assess population estimates built up from data zones. This showed that, for certain higher-level geographies, population estimates built up from data zones gave good results.

Small area population estimates are summarised below for urban rural areas, Scottish Parliamentary Constituencies and UK Parliamentary Constituencies. Detailed tables of population estimates for all other small areas can be found on the [Special Area Population Estimates](#) section of the NRS website.

Urban Rural Populations

The Scottish Government Urban Rural Classification defines urban and rural areas across Scotland. The classification is based on population and accessibility (using drive-time analysis to identify accessible and remote areas). The main classifications are the 6-fold and 8-fold classifications which distinguish between urban, rural and remote areas using six and eight categories respectively. Each data zone is assigned to one of the categories. The classification is updated every few years and the population estimates published on the NRS website relate to the 2013–2014 classification (the latest available at the time of publication of the 2016 population estimates). More background information on the urban

Footnotes

- 5) More information on 2011 Data Zones and an evaluation of non-standard geography population estimates can be found on the NRS website. The lookup tables used to allocate 2011 Data Zones to other areas of non-standard geography are available on request.
- 6) Further details available within the '[Evaluation of Non Standard Geography Population Estimates](#)' publication on the NRS website.

rural classification is available on the Scottish Government's [Urban Rural Classification](#) website.

[Population Estimates by Urban Rural Classification](#) (2011 Data Zone based) for the 6-fold and 8-fold classifications are available on the NRS website for years 2011 to 2016. The mid-2016 population estimates, based on the 2013–2014 6-fold Classification, show that 70% of the population of Scotland (over 3.7 million people) live in settlements of 10,000 or more people (the 'large urban' and 'other urban' areas), while over 900,000 people live in 'accessible' and 'remote' rural areas (Table 4.1).

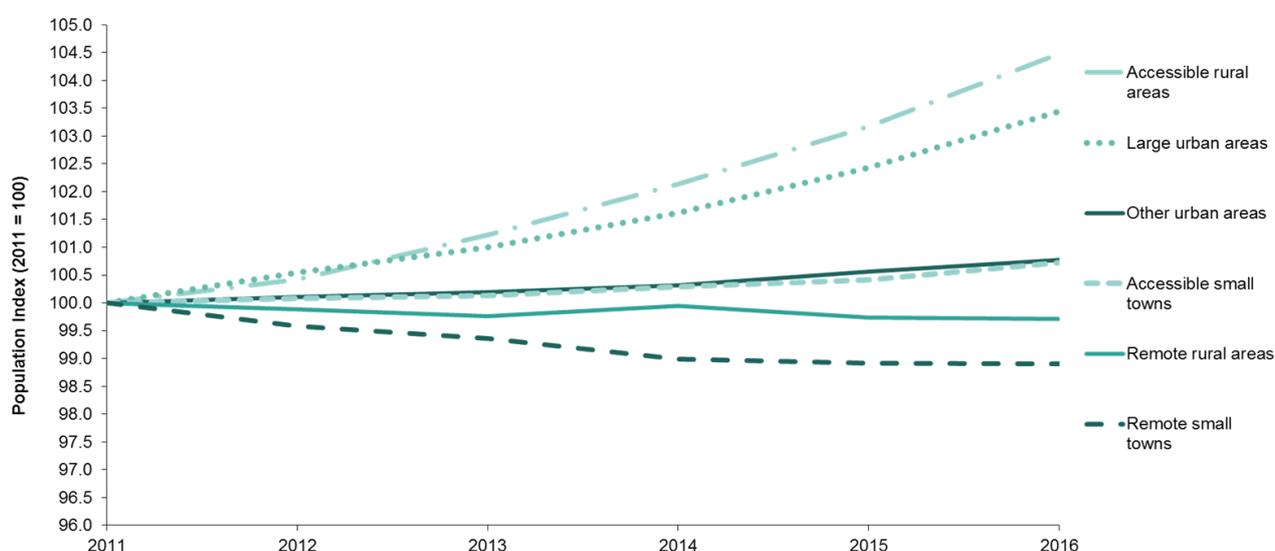
Table 4.1: Population estimates by 6-fold Urban Rural 2013-2014 Classification, 2016

Classification	2016 population	2016 population (%)
Large urban areas	1,890,444	35.0
Other urban areas	1,888,164	34.9
Accessible small towns	503,819	9.3
Remote small towns	185,572	3.4
Accessible rural areas	623,109	11.5
Remote rural areas	313,592	5.8

Figure 4.1 shows the percentage change in population since 2011, split by 6-fold Urban Rural 2013-2014 Classification. Since 2011 the population in accessible small towns has increased by 0.7%, while the population in remote small towns has decreased by 1.1%. However, the population in large urban areas has increased by 3.4%, and the population in accessible rural areas has grown by 4.5%. Meanwhile the population in remote rural areas has decreased by 0.3% in the last six years.

The definition of urban and rural areas is specific to Scotland and population estimates for these areas cannot be compared with similar estimates for other countries. Urban and rural population estimates can be used to support the work of various national and local authority government departments.

Figure 4.1: Change in population by 6-fold Urban Rural 2013–2014 Classification, 2011–2016¹



Footnote

1) Population for each area shown as a percentage of the 2011 population.

Scottish Parliamentary Constituency Populations

The Members of the Scottish Parliament (MSPs) at Holyrood represent 73 constituencies. The constituency boundaries were re-drawn in 2014. The population estimates reported in this section relate to the 2014 boundaries for all years.

[Scottish Parliamentary Constituency Population Estimates](#) (2011 Data Zone based) by single year of age and sex are available on the NRS website. The constituency population estimates for 2016 ranged between 21,850 (Orkney Islands) to 94,094 (Linlithgow). Figure 4.2 shows the distribution of constituency populations with the majority between 70,000 and 79,000. The proportion of people aged 16 and over⁷ in each constituency ranged from 79.3% in Eastwood to 91.5% in Glasgow Kelvin.

Figure 4.2: Population count by 2014 Scottish Parliamentary Constituency, 2016

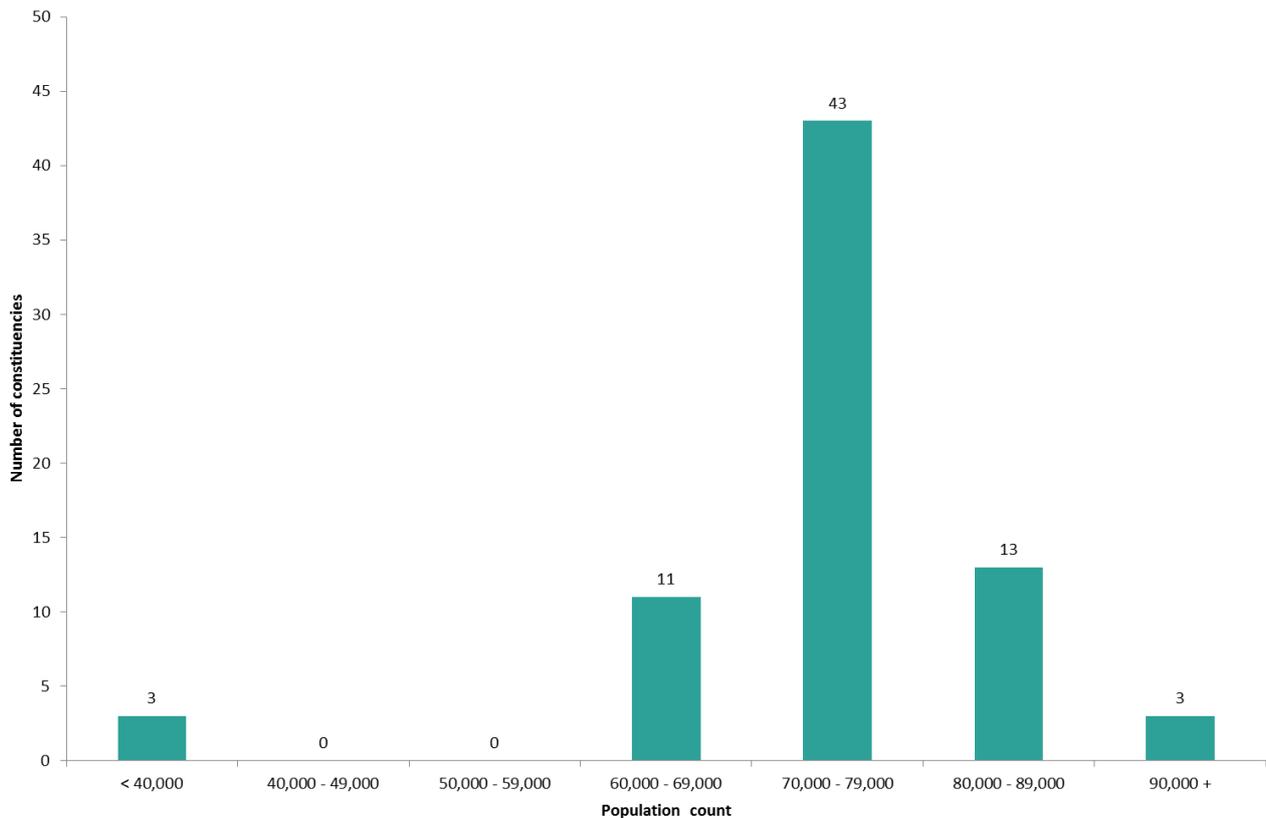
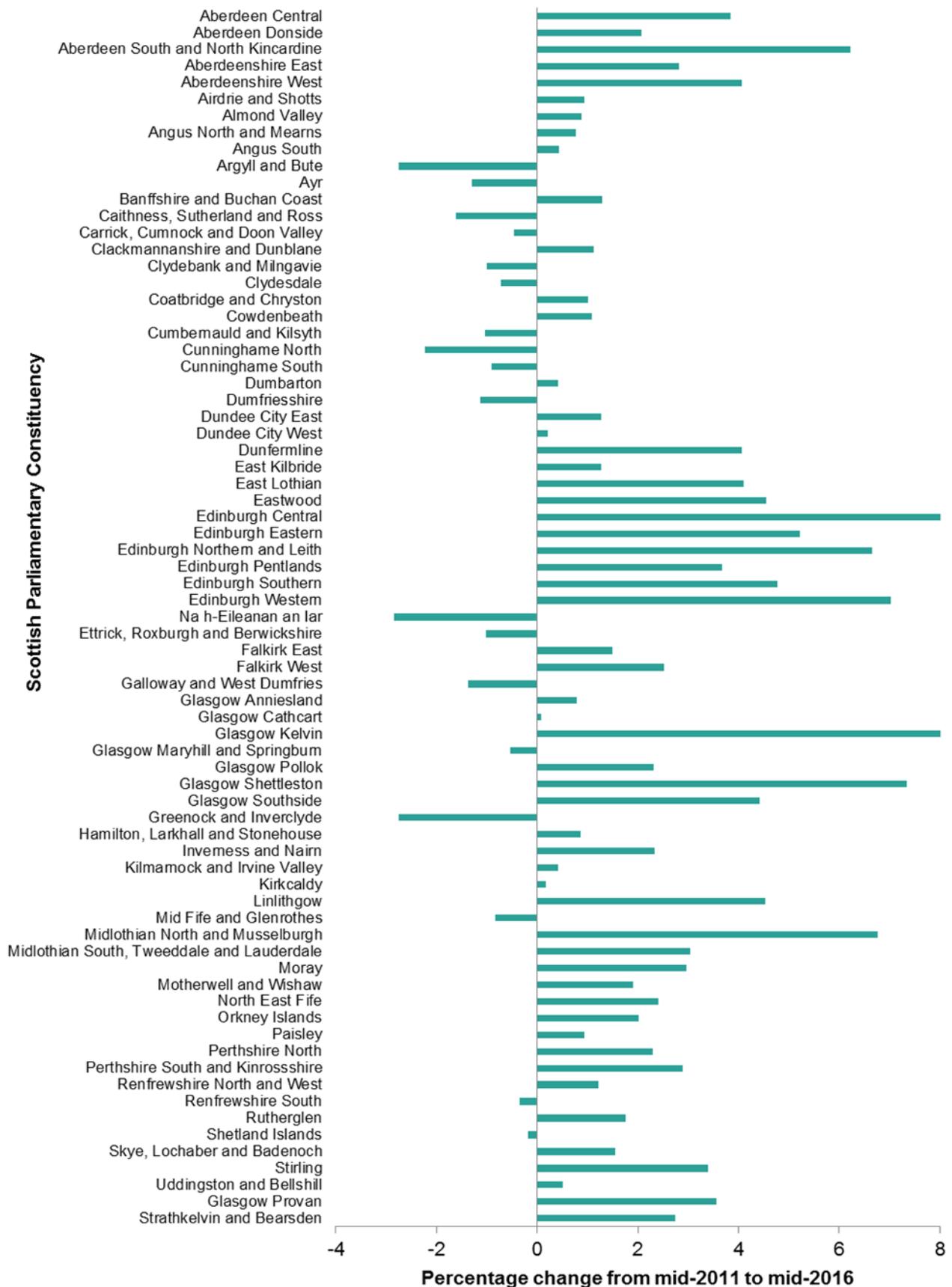


Figure 4.3 shows the percentage change between the mid-2011 and mid-2016 population estimates by Scottish Parliamentary Constituency. Glasgow Kelvin saw the greatest percentage increase in population since 2011 at 11.4%, compared with Na h-Eileanan Iar which saw a 2.9% decrease in its population since 2011. Of the 73 constituencies, 18 (25%) have seen a decrease in population between 2011 and 2016.

Footnote

7) Not necessarily the same as those registered to vote in the constituency, but a reasonable indicator in most cases.

Figure 4.3: 2014 Scottish Parliamentary Constituency, percentage change between mid-2011 and mid-2016 population estimates



UK Parliamentary Constituency Populations

The Members of Parliament (MPs) at Westminster represent 59 Scottish constituencies. The population estimates reported in this section relate to the boundaries used in the 2015 and 2017 general elections. The constituency population estimates for both the Holyrood and UK parliaments are useful in providing an age and sex breakdown of the people living in each constituency.

[UK Parliamentary Constituency Population Estimates](#) (2011 Data Zone based) by single year of age and sex are available on the NRS website for years 2011 to 2016. The constituency population estimates for 2016 ranged from 26,900 (Na h-Eileanan an Iar) to 118,006 (Linlithgow and East Falkirk). Figure 4.4 shows the distribution of constituency populations, with the majority between 80,000 and 99,000. The proportion of people aged 18 and over ranged from 77.5% in East Renfrewshire to 86.5% in Glasgow North.

Figure 4.4: Population count by 2005 UK Parliamentary Constituency, 2016

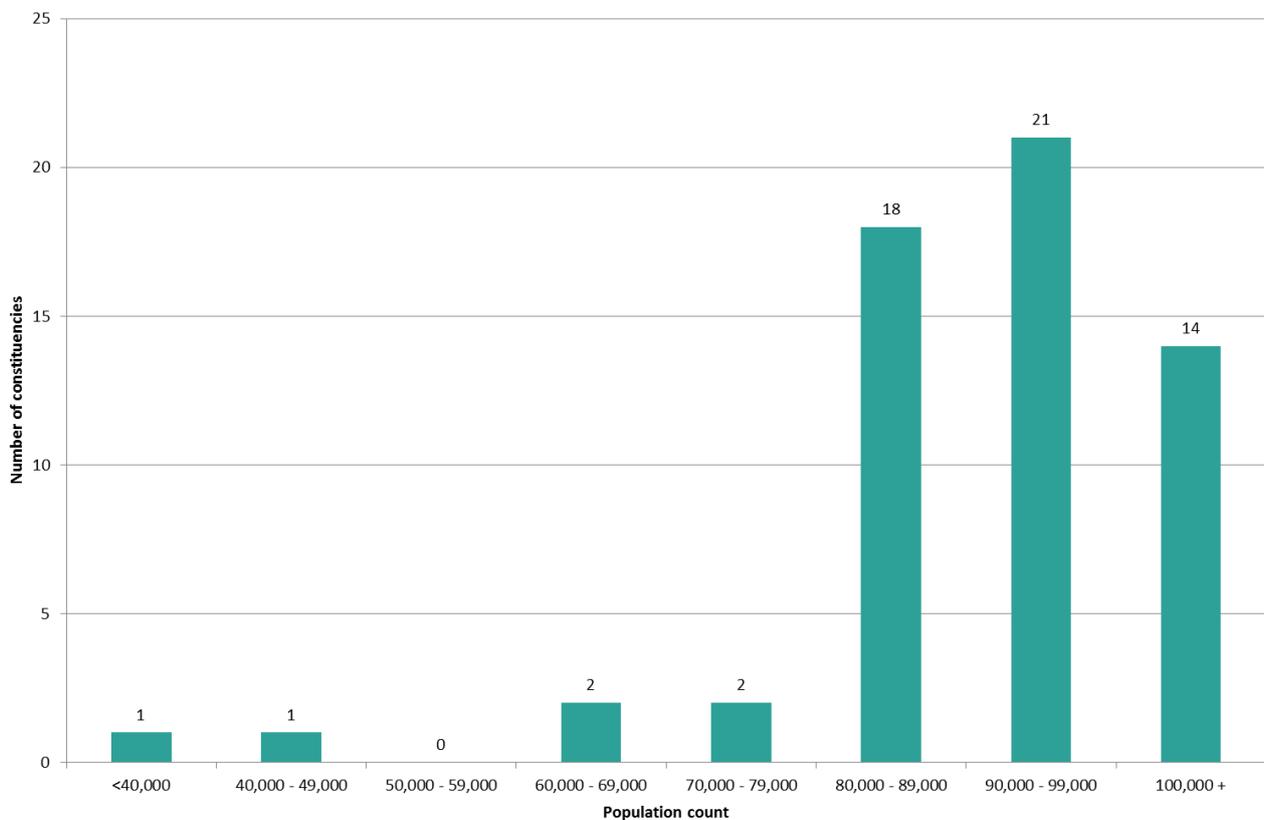
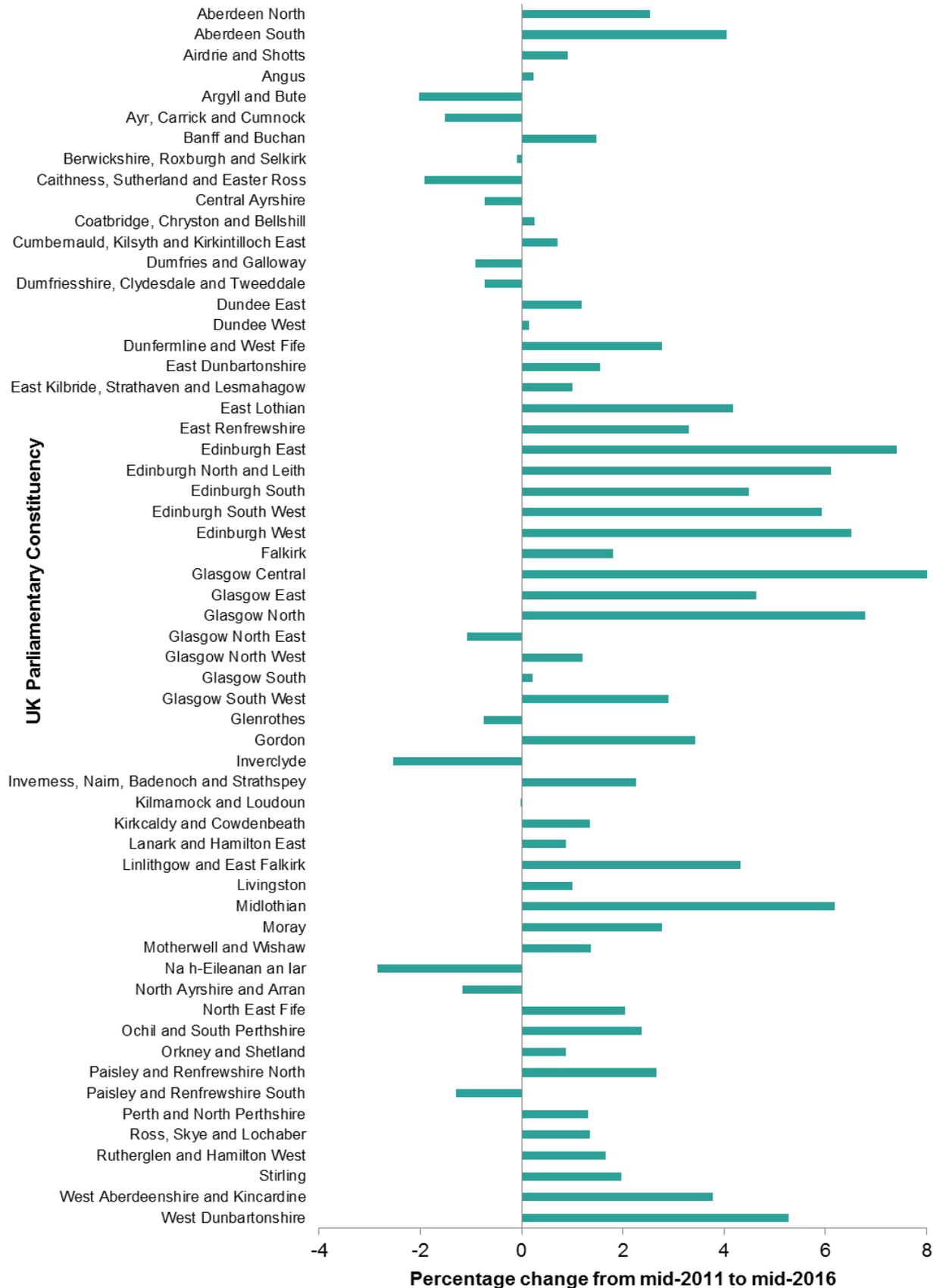


Figure 4.5 shows the percentage change in UK Parliament Constituency populations between mid-2011 and mid-2016. Glasgow Central saw the greatest percentage increase in population since 2011 at 11.6%, compared with Na h-Eileanan an Iar which saw a 2.9% decrease in its population since 2011. Of the 59 constituencies, 14 (24%) have seen a decrease in population between 2011 and 2016.

Figure 4.5: 2005 UK Parliamentary Constituency, percentage change between mid-2011 and mid-2016 population estimates



5. Links to related statistics

Data zones are unique to Scotland and cannot be compared directly with small area geographies used in other countries. However, more information on small area population estimates produced for other parts of the UK are available from:

- The Office for National Statistics (ONS) publish small area population estimates - at Lower and Middle Super Output Areas - for England and Wales. Further information is available from the [ONS website](#).
- The Northern Ireland Statistics and Research Agency (NISRA) publish small area population estimates for Super Output Areas in Northern Ireland. Further information is available from the [NISRA website](#).

6. Background notes

- The 2011 Data Zone population estimates in this report are based on the 2011 Census. Following the 2011 Census the Scottish Government completed a consultation on the redrawing of data zone boundary and finalised boundaries for the new data zones (2011 Data Zones) were published at the end of 2014. Consistent time series on the 2011 Data Zones boundaries is available from 2011 to 2016. NRS plan to publish a consistent back series of population estimates from 2001 to 2010 using the new 2011 Data Zone boundaries (time scales to be agreed subject to available resource). More information on the data zone geography can be found on the [Scottish Government](#) website.
- The small area population estimates are produced using the demographic cohort component method. The population from the previous year is 'aged on' one year (that is the 0 year olds become 1 year olds, and so on), the number of births in the year is added, the number of deaths is subtracted for each data zone and adjustments are made for estimated migration and other changes in special populations. More information about the methodology, including the strengths and limitations of the data, can be found in the [Methodology Guide](#) on the NRS website.
- Although the figures reported in this report and in the tables are given to unit level, it is not implied that the population estimates are accurate to this level of detail. The reason the figures are not rounded is to allow more accurate aggregation of data zones. The population figures are estimates that have gone through a number of stages of processing, each of which may impact on the quality of the estimates. Also, there are limitations with the administrative data sources used to produce the figures which may increase the uncertainty in the estimates.
- Scottish Parliamentary Constituency population estimates were derived by aggregating data zone population estimates. However, data zones do not always fit the constituency boundaries exactly and those that cross a constituency boundary are allocated to the constituency that contains the population-weighted centroid of the data zone. Previous research showed that the data zone to constituency fit was good in all constituencies except Glasgow Kelvin and Glasgow Maryhill and Springburn. Based on this research an adjustment has been made to the population of both data zones whereby 3.4% of the population of Glasgow Kelvin is transferred to Glasgow Maryhill and Springburn each year, spread equally across the age/sex distribution. '[The Evaluation of Non Standard Geography Population Estimates](#)' report gives further information on the method used.
- UK Parliamentary Constituency population estimates were derived by aggregating data zone population estimates. However, data zones do not always fit the constituency boundaries exactly and those that cross a constituency boundary are allocated to the constituency that contains the population-weighted centroid of the data zone. Previous research showed that the data zone to constituency fit was good in all constituencies except Glasgow North and Glasgow North West. Based on this research an adjustment has been made to the population of both data zones whereby 2.3% of the population of Glasgow North is transferred to Glasgow North West each year, spread equally across the age/sex distribution. '[The Evaluation of Non Standard Geography Population Estimates](#)' report gives further information on the method used.

- Small area population estimates are produced using the cohort-component method and are constrained to council area population estimates for Scotland. [Mid-year population estimates Scotland](#) included the following methodology changes for 2016:
 - Refugees have been included in the population estimates for the first time. They have been included in the overseas migration figures, including the net migration estimate for overseas migration to Scotland.
 - There has also been an improvement made to the time period of one of the data sources used to calculate migration at council level, the Community Health Index (CHI). Previously we assumed a three month lag for migrants registering with a GP, but this has been changed to two months for these estimates. This harmonises the lag assumed for registering on the CHI with one of the other main data sources for estimating migration, the National Health Service Central Register.

More detail on these changes and their impact is available in the [Mid-year Estimates for Scotland Methodology Guide](#).

Definitions used throughout this report

- **Best-fit:** Aggregating data zones to a higher-level geography does not always give an exact match. In these cases, data zones are allocated on a 'best-fit' basis to give the best possible match. The [Geography Best Fit Matrix](#) on the Scottish Government (SG) website shows how well the boundaries for different geographies (including data zones) match, while the paper '[Evaluation of Non Standard Geography Population Estimates](#)' on the National Records of Scotland website assesses the accuracy of population estimates built up from data zones.
- **Boxplots:** A box plot is sometimes used to visually represent data. It usually shows a measure of an average and the quartiles of the data.

The median is the midpoint of a group of values which have been arranged in ascending or descending order. Fifty per cent of the values will be less than or equal to the median, the remainder will be greater than the median.

Quartiles are similar to the median, except that quartiles split the values into four equal groups instead of two. For example, the first quartile has the first 25% of the values. The first quartile is often called the lower quartile; the second quartile is the same as the median; the third quartile is often called the upper quartile and contains 75% of the values.

Unusually high maximum and minimum values are known as outliers or outer values, and can be present in large datasets. However, these extreme values do not represent where the majority of data points lies within a distribution of the dataset.

To provide an accurate representation of the population distribution, the boxplots used in this publication show the median, interquartile range (IQR) (the range between first (Q1) and third quartile (Q3)), and upper and lower fences. Upper fence includes values that lie within 1.5×IQR above the third quartile; and lower fence includes values that lie within 1.5×IQR below the first quartile. Outliers (or outer values) lie outside the upper and lower fences, and are shown as individual points on

a boxplot. In other words, these boxplots show where the majority of the data lies, as well as the range of outer values ([Figure 2.2](#)).

- **Decile:** A decile splits a group of values which have been arranged in ascending or descending order into 10 equal groups. For example, the first decile has the first 10% of the values.
- **Population-weighted centroid:** This identifies the centre of a data zone by taking into account the size and location of the population, as well as the physical characteristics of the data zone. More information is available in the paper '[Data Zone Centroids Methodology](#)' on the SG website.
- **Urban Rural Classification:** This Scottish Government classification is used to define urban, rural and remote areas in Scotland based on population density in different postcodes using National Records of Scotland (NRS) Small Area Population Estimates and the Royal Mail Postcode Address File.

For example, the 6-fold Urban Rural Classification 2013-2014 categories are:

1. Large urban areas	Settlements of over 125,000 people
2. Other urban areas	Settlements of 10,000 to 125,000 people
3. Accessible small towns	Settlements of between 3,000 and 10,000 people and within a 30 minutes' drive of a settlement of 10,000 or more
4. Remote small towns	Settlements of between 3,000 and 10,000 people and with a drive time of over 30 minutes to a settlement of 10,000 or more
5. Accessible rural areas	Settlements of fewer than 3,000 people and within 30 minutes' drive of a settlement of 10,000 or more
6. Remote rural areas	Settlements of fewer than 3,000 people and with a drive time of over 30 minutes to a settlement of 10,000 or more

Further details on different breakdowns and definitions of rural areas in Scotland are on the [Urban Rural Classification](#) section on the Scottish Government website.

7. Notes on statistical publications

National Statistics

The United Kingdom Statistics Authority (UKSA) has designated these statistics as National Statistics, in line with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics (available on the [UKSA](#) website).

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods; and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

Information on background and source data

Further details on data source(s), timeframe of data and timeliness, continuity of data, accuracy, etc. can be found in the [About this publication](#) document that is published alongside this publication on the National Records of Scotland (NRS) website.

National Records of Scotland

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- Preserving the past – We look after Scotland's national archives so that they are available for current and future generations, and we make available important information for family history.
- Recording the present – At our network of local offices, we register births, marriages, civil partnerships, deaths, divorces and adoptions in Scotland.
- Informing the future – We are responsible for the Census of Population in Scotland which we use, with other sources of information, to produce statistics on the population and households.

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Enquiries and suggestions

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