
Mid-2015 Small Area Population Estimates Scotland

Population estimates by sex,
age and 2011 Data Zone

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Main Points

The main points in this report are:

- As at 30 June 2015, the total estimated population of Scotland was 5,373,000 the highest ever. The population estimates for the 6,976 data zones in Scotland ranged from 0 to 3,385. But only 323 data zones (4.6 per cent) had a population of fewer than 500, while there were 719 (10.3 per cent) data zones with a population of 1,000 or more, and 36 (0.5 per cent) had a population of 1,500 or more.
- The average data zone population for Scotland was 770. The council area with the highest average data zone population was City of Edinburgh (836), the council area with the lowest average data zone population was Argyll and Bute (695).
- The median age for the population of Scotland as a whole in 2015 was 41. But the age distribution of data zone populations varies considerably and the median ages ranged from 19 to 72 in 2015. The most common age group for median age was 46 to 47, with 800 data zones having a population median age of 46 or 47 years old.
- The population of most 2011 Data Zones has not changed by much since 2011, although some have experienced more substantial changes. Between mid-2011 and mid-2015 the population of 6,225 of the 6,976 data zones changed by less than 10 per cent, the population of 258 data zones increased by 20 per cent or more, while 22 data zones decreased by 20 per cent or more. These changes were mostly due to demolitions and house building.
- Nearly 70 per cent of the population of Scotland live in large urban and other urban areas (settlements of 10,000 or more people; based on the 2013–2014 Scottish Government Urban Rural Classification).

1. Introduction and Background

- 1.1 This report summarises the Mid-2015 Small Area Population Estimates (SAPE) for the 6,976 data zones in Scotland. Data zone population estimates by age and sex are updated annually by the National Records of Scotland (NRS) following the publication of the mid-year population estimates at council and NHS Board area levels (available at [Mid-2015 Population Estimates Scotland](#)). The data zone estimates are consistent with mid-year population estimates for council areas.
- 1.2 Data zones are the small area geography used by Scottish Government to allow statistics to be available across a number of policy areas. The data zone geography covers the whole of Scotland. They were initially set up to nest within council area boundaries and to have populations of between 500 and 1,000 household residents. As much as possible, data zones were set up to contain households with similar social characteristics and to take into consideration physical boundaries. More information on data zone geography can be found on the [Scottish Government](#) website. 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.
- 1.3 The 2011 Data Zone population estimates in this report are based on the 2011 Census. This decision was reached after consultation with users on the [Population and Migration Statistics Committee](#) (information available on the NRS website). Following the release of this publication NRS plan to publish a consistent back series of population estimates from 2001 to 2010 using the new 2011 Data Zone boundaries. Small area estimates for mid-1996 to mid-2014 based on the 2001 Data Zone boundaries are available on the [Small Area Population Estimates \(2001 Data Zone based\)](#) section of the NRS website.
- 1.4 The mid-2015 data zone population estimates in this report are based on the 2011 Census and use the 2011 Data Zone boundaries.
- 1.5 For ease of reading the 2011 Data Zones have been referred to as data zones throughout this report.
- 1.6 This report is accompanied by a full set of tables showing the mid-2015 population estimates for data zones by sex and single year of age. The tables are available on the [Small Area Population Estimates \(2011 Data Zone based\)](#) section of the NRS website. It is also accompanied by a full set of tables of corrected 2011 Data Zone population estimates for mid-2012, mid-2013 and mid-2014 by sex and single year of age. Errors in the age distribution of the mid-year and small area population estimates were recently found for these years. More information is available on the [Population](#) section of the NRS website. We have no plans to correct the small area population estimates on the 2001 Data Zone boundaries. This approach was agreed by the [Population and Migration Statistics Committee](#).
- 1.7 An error was also discovered with data zone S01009192, which includes Polmont Young Offenders Institution in Falkirk Council area. This affected the previously published estimates for mid-2012 to mid-2014, but not the estimate for mid-2011. This error has also been corrected with the release of the new tables.
- 1.8 Data zone population estimates are an important aspect of providing information at neighbourhood level. They can be used as building blocks for a variety of different geographies that can inform planning, provision of services at sub-council area level and allocation of resources. They are used as the denominator to calculate many per capita rates and are available to use as the denominator in devising other rates

a user might wish to create. 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).

- 1.9 [Section 2](#) of this report highlights some of the main points to emerge from the mid-2015 population estimates at data zone level, while [Section 3](#) discusses some of the changes that have occurred between 2011 and 2015.
- 1.10 In addition, a number of other tables have been updated. These are the population estimates for urban/rural areas, deprivation areas, the European Union statistical geography areas, and parliamentary constituencies. The mid-2015 population estimates for each of these areas, built up from data zones on a best-fit basis, have been added to the [2011 Data Zone based Special Area Population Estimates](#) section of the NRS website. A summary of the main points from these tables is included in [Section 4](#).
- 1.11 Although the figures reported here 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. More information on the quality of the administrative data used to produce population estimates can be found on the [National and Official Statistics](#) section of the NRS website.
- 1.12 Data zones are unique to Scotland and cannot be compared with small area geographies used in other countries. For more information on small area population estimates for England and Wales go to the [Office for National Statistics \(ONS\)](#) website and for Northern Ireland go to the [Northern Ireland Statistics and Research Agency \(NISRA\)](#) website. A PDF document describing the small area population estimates across the United Kingdom can be also found on the NISRA website.
- 1.13 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.
- 1.14 Information around the age and sex structure, distribution of revisions after the 2011 Census and the components of population change for 2001 Data Zones can be found in the report that was published alongside the revised population estimates at council and NHS Board areas ([Mid-2002 to Mid-2010 Revision](#)), published 17 December 2013 on the NRS website.
- 1.15 Small area population estimates were assessed by the UK Statistics Authority (UKSA) and have been designated as National Statistics subject to completing five requirements. The assessment report¹ can be found on the UK Statistics Authority website. Some of the suggestions in the report for the publication have been addressed in this report. Information on the data sources used to produce these estimates can be found in the [Mid-Year Estimates Methodology](#) section of the NRS

Footnote

- 1) UK Statistics Authority (2015). Assessment Report 311 [Population estimates and projections for Scotland \(National Records of Scotland\)](#)

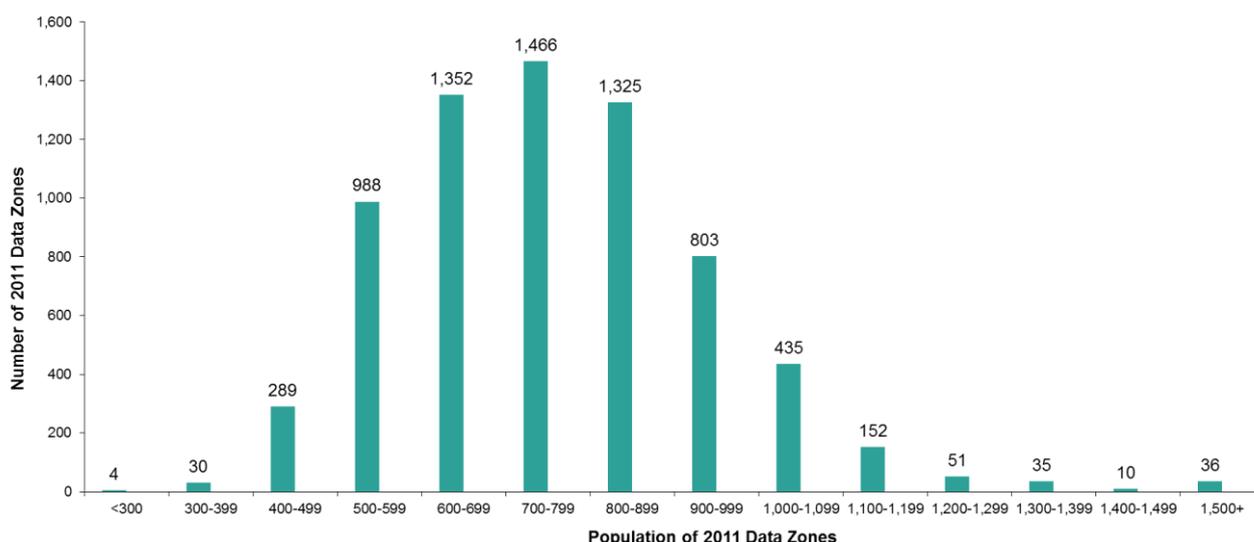
website. More information can be found in the [methodology](#) document that accompanies the report for the 2011 Data Zone population estimates.

- 1.16 The methodology used to calculate mid-year population estimates is constantly being improved. In consultation with users on the [Population and Migration Statistics Committee](#) (information available on the NRS website), for the mid-2011 estimates onwards we have made improvements to the distributions we apply to international migration estimates and have introduced an adjustment to account for increases in the prison population. For mid-2015 onwards an improved method for estimating internal migration within the UK has also been introduced. We are now using a direct extract of anonymised records from the NHS Central Register (NHSCR) to calculate the migration at NHS Board level. More details are found within the updated [methodology](#) paper for mid-year estimates for Scotland on the NRS website. As well as the methodology paper for the mid-year estimates at council area there is also a [methodology](#) paper for small area population estimates at data zones available on the NRS website.

2. 2011 Data Zone Population Estimates, 2015

2.1 The overall estimated population of Scotland at 30 June 2015 was 5,373,000. The population of the 6,976 data zones in Scotland at this time ranged from 0 to 3,385 but the vast majority of the data zones (5,934) had between 500 and 999 people (Figure 2.1). A total of 323 data zones had a population of fewer than 500, while 36 had a population of 1,500 or more. Some of these 36 data zones had a population size substantially greater than 1,500 and, as a result, the mean (average) population size of 770 was higher than the median² (midpoint) of 754.

Figure 2.1: Distribution of 2011 Data Zone populations, 2015



2.2 The 323 data zones with a population of fewer than 500 in 2015 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 29 data zones in this category, followed by Aberdeenshire with 26 data zones ([Table 2.1](#)). Shetland Islands was the only council that had no data zones with a population fewer than 500.

2.3 Many of these 323 data zones, especially those with a population fewer than 400, are in areas that have been targeted in the past for regeneration by [Community Planning Partnerships](#) (CPPs). Because of the relatively small size of data zones, major regeneration projects and housing developments can have a big impact on the population size and could, for example, result in the demolition of most or all of the dwellings in a data zone. Two data zones in Glasgow no longer had anybody living in them in 2015.

2.4 When analysed by Urban Rural Classification, the number of data zones with a population of fewer than 500 is largely determined by the percentage of the total population living in each classification (refer to [Section 4](#)). Most of the 323 data

Footnote

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 2015 was 754.

zones are in large urban and other urban areas, largely because these are the areas where most data zones are located.

Table 2.1: Characteristics of the 323 2011 Data Zones with a population of fewer than 500 in 2015

Location		Urban/Rural	
Council	No. of 2011 Data Zones	Classification ¹	No. of 2011 Data Zones
South Lanarkshire	29	Large Urban Area	76
Aberdeenshire	26	Other Urban Area	127
Glasgow City	22	Accessible Small Towns	27
Edinburgh, City of	21	Remote Small Towns	11
Fife	18	Accessible Rural	50
Others	<16	Remote Rural	32

Footnote

1) 2013-2014 Urban Rural Classification.

- 2.5 There were 36 data zones that had a population of 1,500 or more in 2015. These data zones were spread throughout Scotland, with no council area having a particularly high number of data zones in this category - eight in Glasgow City were the highest ([Table 2.2](#)). Over half of all council areas (17 out of 32) had at least one data zone with a population of 1,500 or more.
- 2.6 The majority of these 36 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 36 data zones are in areas where house building has pushed up 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 36 2011 Data Zones with a population of 1,500 or more in 2015

Location		Urban/Rural	
Council	No. of 2011 Data Zones	Classification ¹	No. of 2011 Data Zones
Glasgow City	8	Large urban	21
Edinburgh, City of	7	Other urban	8
Aberdeen City	3	Accessible small towns	3
Others	<3	Remote small towns	0
		Accessible rural	4
		Remote rural	0

Footnote

1) 2013-2014 Urban Rural Classification.

- 2.7 [Table 2.3](#) shows how the characteristics of data zones differed between council areas in 2015. The highest mean (average) data zone populations were for City of Edinburgh (836), East Dunbartonshire (823) and Aberdeen City (814). The lowest average populations were for Argyll and Bute (695), Inverclyde (697), and Clackmannanshire (713). For all council areas the median (midpoint) was lower than the mean (average). This is likely to indicate that most council areas have a number of data zones with large populations that inflate the mean but have no effect on the median. The lower quartile indicates the population below which 25 per cent of data zones lie for each local authority. For example, 25 per cent of the 283 data zones in Aberdeen City have a population of 663 or fewer. Similarly, the upper quartile indicates the population above which 25 per cent of the data zones lie for each local authority. So, 25 per cent of the 283 data zones in Aberdeen City

have a population of 929 or more. In other words, 50 per cent of data zones have a population between the lower and upper quartile values.

2.8 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 2015 the population has increased from 2,455 to 3,385. The area contains a large concentration of Heriot Watt University accommodation, which explains its large population.

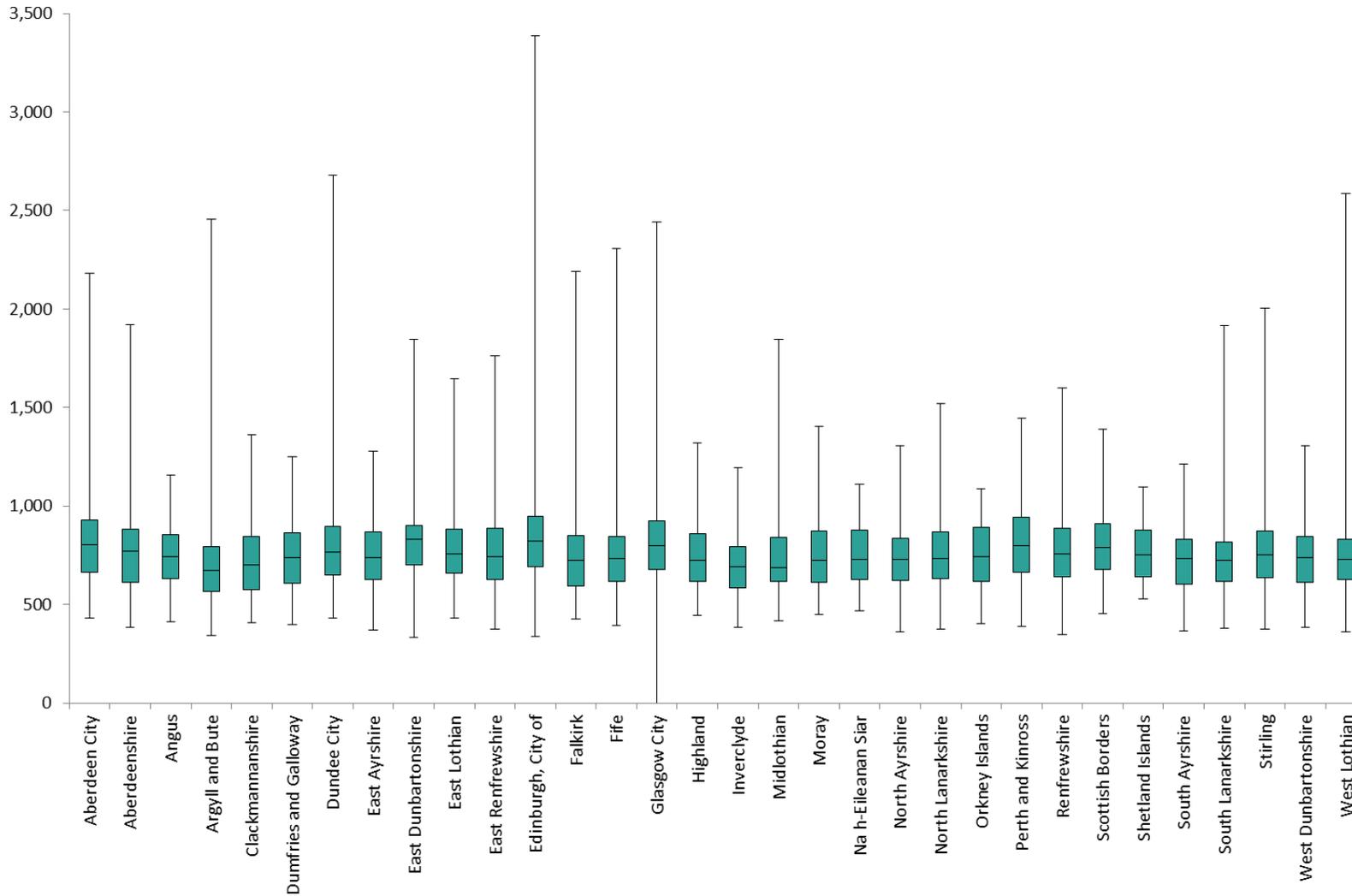
Table 2.3: 2011 Data Zone population summary statistics by council area, 2015

Council		2011 Data Zone Population Estimates, 2015						
Name	Number of 2011 Data Zones	Total population ¹	Minimum population	Maximum population	Mean population	Median population	Lower quartile	Upper quartile
Aberdeen City	283	230,350	431	2,179	814	804	663	929
Aberdeenshire	340	261,960	386	1,922	770	769	614	884
Angus	155	116,900	411	1,157	754	744	629	854
Argyll and Bute	125	86,890	341	2,454	695	672	565	796
Clackmannanshire	72	51,360	408	1,363	713	703	574	846
Dumfries and Galloway	201	149,670	400	1,251	745	740	610	864
Dundee City	188	148,210	431	2,681	788	768	649	895
East Ayrshire	163	122,060	372	1,276	749	739	626	868
East Dunbartonshire	130	106,960	331	1,846	823	830	701	900
East Lothian	132	103,050	433	1,645	781	756	660	882
East Renfrewshire	122	92,940	373	1,764	762	745	628	888
Edinburgh, City of	597	498,810	336	3,385	836	822	693	949
Falkirk	214	158,460	424	2,191	740	723	595	852
Fife	494	368,080	394	2,306	745	734	617	847
Glasgow City	746	606,340	0	2,442	813	797	679	925
Highland	312	234,110	445	1,321	750	726	618	861
Inverclyde	114	79,500	383	1,192	697	693	584	795
Midlothian	115	87,390	418	1,844	760	688	616	840
Moray	126	95,510	449	1,404	758	723	613	873
Na h-Eileanan Siar	36	27,070	466	1,109	752	730	627	876
North Ayrshire	186	136,130	363	1,308	732	729	622	834
North Lanarkshire	447	338,260	374	1,521	757	734	633	867
Orkney Islands	29	21,670	405	1,088	747	745	618	890
Perth and Kinross	186	149,930	390	1,444	806	800	665	941
Renfrewshire	225	174,560	346	1,599	776	757	639	886
Scottish Borders	143	114,030	455	1,391	797	791	678	913
Shetland Islands	30	23,200	529	1,097	773	751	642	878
South Ayrshire	153	112,400	364	1,211	735	732	605	830
South Lanarkshire	431	316,230	382	1,915	734	723	618	820
Stirling	121	92,830	373	2,005	767	754	635	875
West Dunbartonshire	121	89,590	386	1,305	740	739	614	845
West Lothian	239	178,550	360	2,588	747	731	628	832

Footnote

1) Source: Mid-2015 Population Estimates Scotland, available on the National Records of Scotland (NRS) website.

Figure 2.2: 2011 Data Zone population summary statistics¹ by council area, 2015

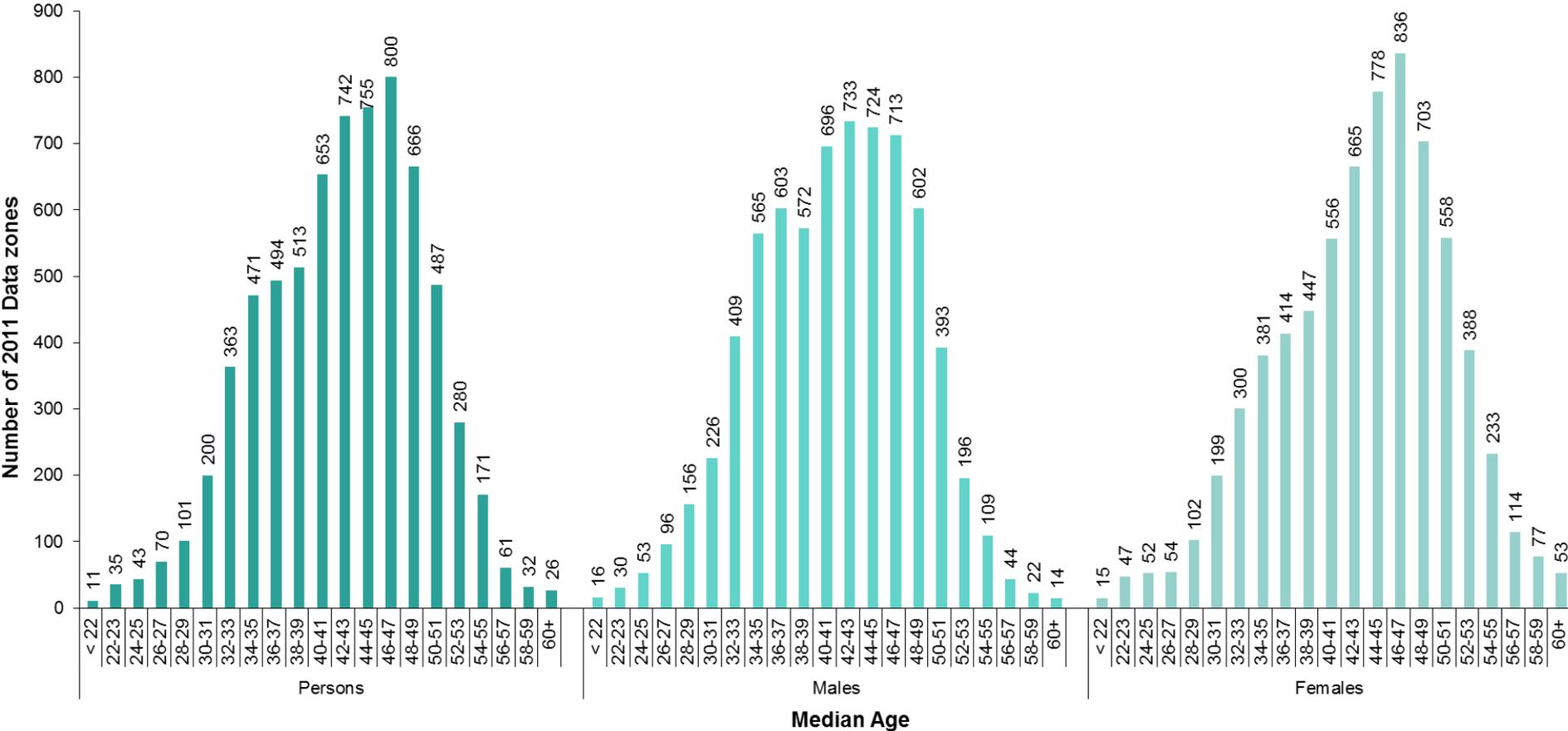


Footnote

1) The summary statistics shown in Figure 2.2 are the minimum, lower quartile, median, upper quartile and maximum data zone populations in each council area. You can read more on how to interpret these statistics in [Section 5](#) of this report.

2.9 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 (midpoint) age for Scotland as a whole was 41, the median ages at data zone level ranged from 19 to 72 years. There were 11 data zones with a population 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 26 data zones with a median age 60 and over. These were mainly in popular retirement areas and data zones with substantial accommodation for the elderly. [Figure 2.3](#) also shows the differences in median age between males and females. The median age of females by data zone tends to be slightly older than males. The peak ages for male median age are 42 and 43, while for females it is 46 and 47.

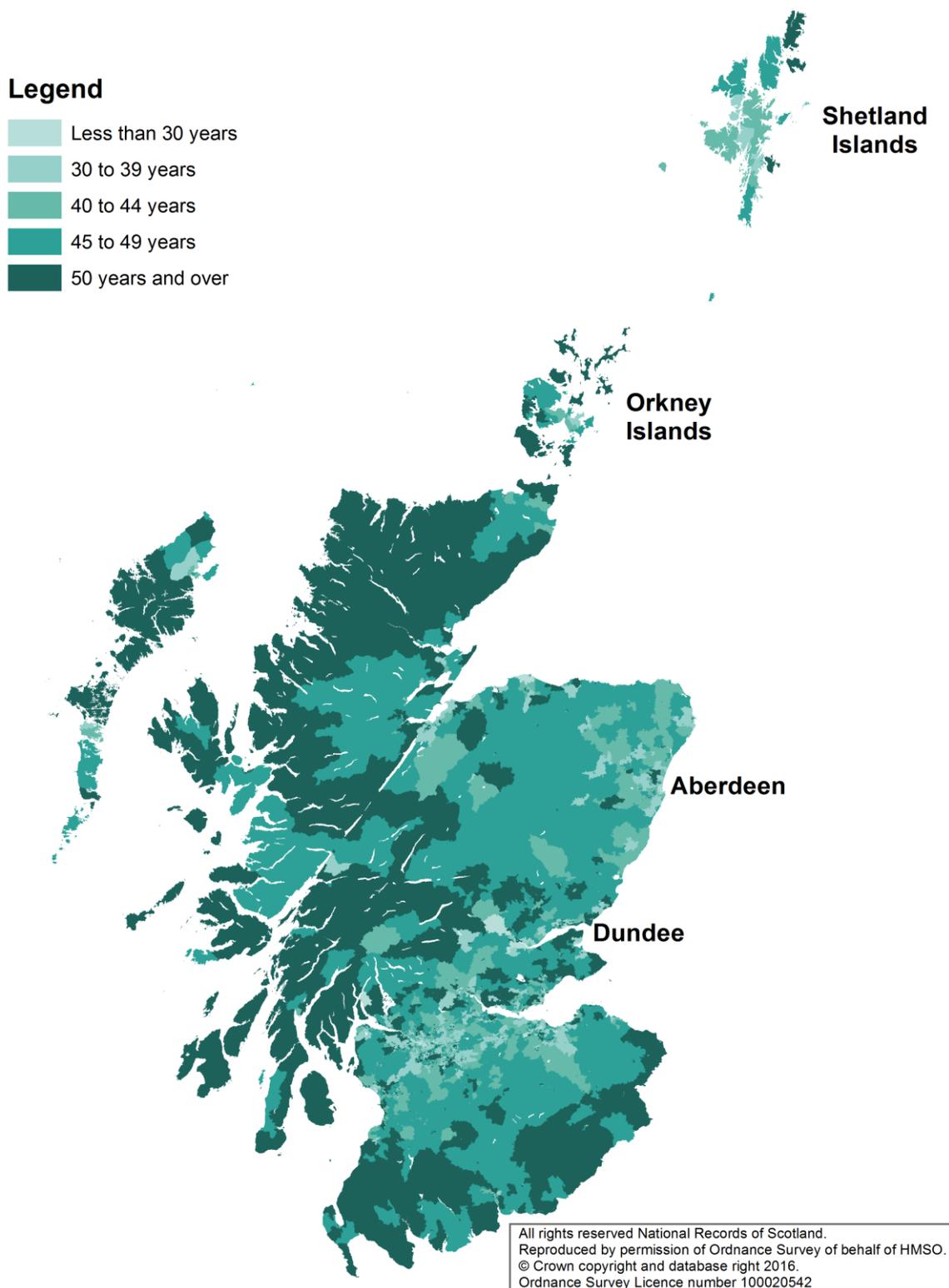
Figure 2.3: Median age distribution of 2011 Data Zone population, 2015 by sex¹



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

2.10 Figure 2.4 shows that those data zones with the younger median ages are generally located around the urban areas. It is also possible to notice that the areas with older median ages tend to be in more rural areas.

Figure 2.4: Distribution of median ages throughout data zones in Scotland, 2015



3. 2011 Data Zone Population Change, 2011 – 2015

3.1 Between mid-2011 and mid-2015 the overall population of Scotland increased by 73,100 from 5,299,900 to 5,373,000. Table 3.1 shows how data zone population sizes have changed over this period. Initially, data zones were set up to have a total household population of between 500 and 1,000 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 2015 the number of data zones with a population of fewer than 500 had risen slightly to 323, while the number of data zones with a population of 1,000 or more has risen to 719.

Table 3.1: 2011 Data Zones within broad population bands, 2011 – 2015¹

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

Footnote

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

3.2 Table 3.2 further illustrates the change noted in Section 3.1. The increase in the mean (average) data zone population from 760 in 2011 to 770 in 2015 reflected the growing population of Scotland as a whole. However, the median (midpoint) has remained relatively constant over most of this period. The percentiles and quartiles show the population below which a particular percentage of where the population lies³. In 2015, for example, five per cent of the data zones in Scotland had a population of 503 or less. The spread of the lower and upper quartiles shows a modest increase from 239 in 2011 to 245 in 2015⁴, whereas the spread from the 5th to the 95th percentile has increased from 532 in 2011 to 575 in 2015. These summary statistics indicate that, while the majority of data zones have changed little over the past five years, there is a growing number that have experienced substantial changes.

Table 3.2: 2011 Data Zone population summary statistics, 2011 – 2015

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

3.3 [Table 3.3](#) provides further information on the nature of the changes at data zone level between 2011 and 2015. Although the population of Scotland increased overall between 2011 and 2015, more data zones had a decrease in population than an increase in population. In this period the population of 3,703 (53.1 per

Footnotes

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

4) The range (called the inter-quartile range) is 873 – 634 = 239 for 2011, and 879 - 634 = 245 for 2015.

cent) decreased, while 3,273 data zones (46.9 per cent) either increased or had the same population in these years.

- 3.4 Most of the big changes were in data zones where the population increased. A total of 258 data zones had population increases of 20 per cent or more, compared with 22 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 6,225 data zones had a population change of less than ten per cent, of which 3,561 data zones had a population decrease, 2,584 data zones had an increase, and 80 data zones had the same population in 2015 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 households⁵.

Table 3.3: Population change summary, 2011 – 2015

Change in population 2011-2015	Number of data zones	Percentage of data zones
Total increase	3,193	45.8
50% or more increase	57	0.8
20% to <50% increase	201	2.9
10% to <20% increase	351	5.0
5% to <10% increase	648	9.3
<5% increase	1,936	27.8
No change	80	1.1
< 5% decrease	2,702	38.7
5% to <10% decrease	859	12.3
10% to <20% decrease	120	1.7
20% to <50% decrease	18	0.3
50% to 100% decrease	4	0.1
Total decrease	3,703	53.1

Footnote

5) National Records of Scotland (2016) [‘Estimates of Households and Dwellings in Scotland, 2015’](#).

4. Other Small Area Population Estimates

- 4.1 In addition to data zone estimates, National Records of Scotland (NRS) also publish best-fit data zone based population estimates for other geographies:
- Scottish Government Urban Rural Classification,
 - Nomenclature of Units for Territorial Statistics (NUTS) - the statistical geography of the European Union,
 - Scottish Index of Multiple Deprivation (SIMD) deciles,
 - Scottish Parliamentary Constituency (SPC), and
 - United Kingdom Parliamentary Constituency (UKPC).
- 4.2 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](#) website⁶. 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 estimates⁷ 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.

Urban Rural Classification Populations

- 4.3 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 two years and the population estimates published on our website relate to the 2013–2014 classification. More background information on the Urban Rural classification is available on the Scottish Government's [Urban Rural Classification](#) website.
- 4.4 [Population Estimates by Urban Rural Classification](#) (2011 Data Zone based) for the 6-fold and 8-fold classifications are available on the NRS website. The mid-2015 population estimates, based on the 2013–2014 6-fold Classification, show that nearly 70 per cent of the population of Scotland (over 3.7 million) 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](#)).

Footnote

- 6) 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.
- 7) Further details available within the [Evaluation of Non Standard Geography Population Estimates](#) publication on the NRS website.

**Table 4.1: Population estimates by 6-fold Urban Rural 2013 – 2014
Classification, 2015**

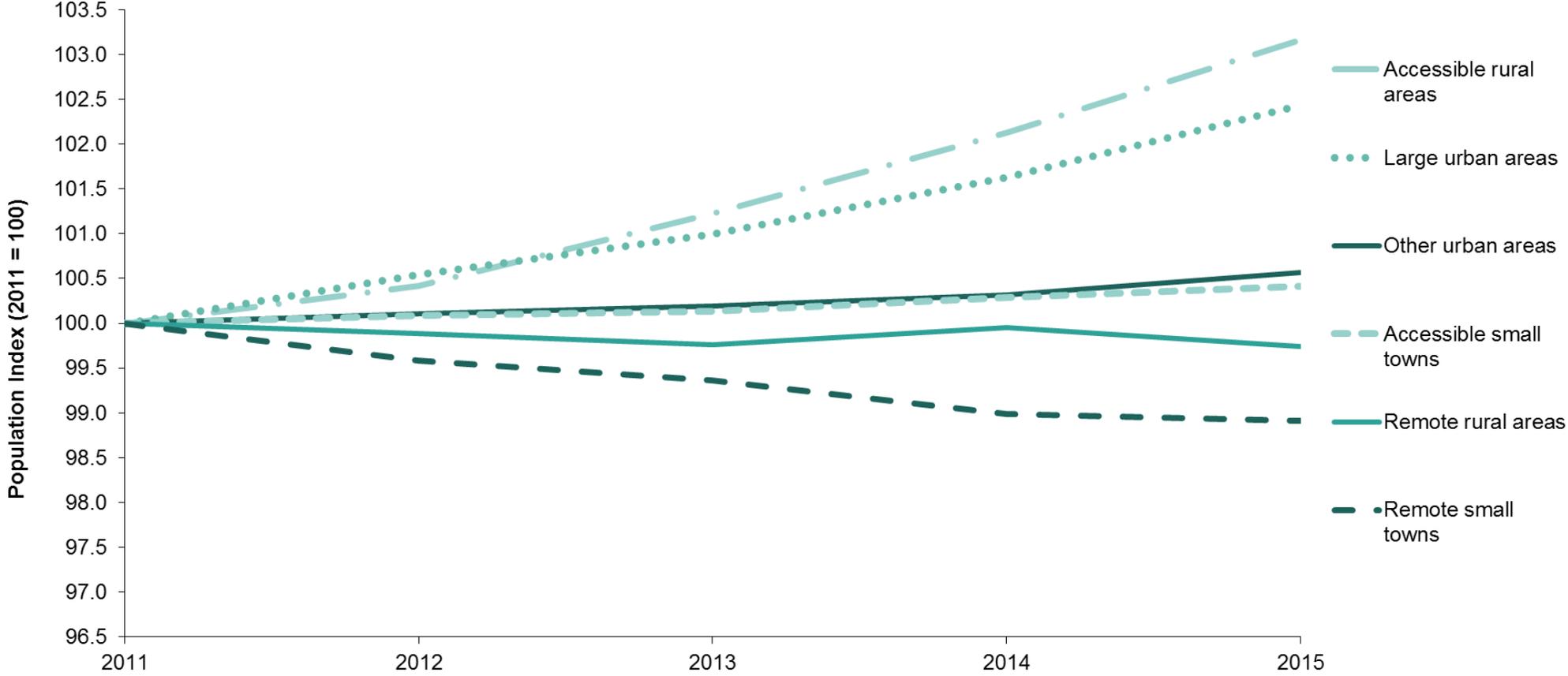
Classification	2015 population	2015 population (%)
Large urban areas	1,872,082	34.8
Other urban areas	1,884,150	35.1
Accessible small towns	502,269	9.3
Remote small towns	185,594	3.5
Accessible rural areas	615,214	11.5
Remote rural areas	313,691	5.8

- 4.5 [Figure 4.1](#) shows the percentage change in population since 2011, split by 6-fold Urban Rural Classification. Since 2011 the population in the accessible small towns has increased by 0.4 per cent, while the population in remote small towns has decreased by 1.1 per cent. However, the population in large urban areas has increased by 2.4 per cent, and the population in accessible rural areas has grown by 3.2 per cent.
- 4.6 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, such as the Rural Development Council⁸.

Footnote

- 8) Refer to, for example, [Socio-economic briefing on rural Scotland: Demography](#) 2010 publication on Scottish Government website.

Figure 4.1: Change in population by 6-fold Urban Rural 2013 – 2014 Classification, 2011 – 2015¹



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

Nomenclature of Units for Territorial Statistics (NUTS) Populations

- 4.7 The European Union Nomenclature of Units for Territorial Statistics (NUTS) Regulation, enacted in June 2003, formalised the statistical geography of the European Union (EU). The United Kingdom NUTS structure was established in 1998 following an extensive consultation exercise. Some changes were made to the structure following a review in 2006. The latest review took place in 2014, during this time no changes were made to the Scottish boundaries. The purpose of the NUTS regional structure is to provide a single uniform breakdown of territorial units for the production of regional statistics for the EU. The NUTS regional structure is used for various policy funding allocation whereby if any NUTS2 region has a Gross Domestic Product (GDP) per capita of less than 75 per cent of the EU average it is entitled to financial support (refer to the [Eurostat](#) website for more details on EU regional statistics regulation).
- 4.8 There are three levels of NUTS geography. It is a hierarchical structure – Scotland is one of the NUTS1 areas of the UK. Within Scotland there are four NUTS2 areas and 23 NUTS3 areas. The previously named NUTS4 areas were renamed Local Administrative Units (LAU1) but were not included in the regulation – there are 41 LAU1 areas in Scotland. Maps of the NUTS/LAU areas of Scotland are included in the [Boundary Mapping](#) section of the Scottish Government website.
- 4.9 [NUTS Population Estimates](#) (2011 Data Zone based) by single year of age and sex for NUTS2, NUTS3 and LAU1 areas are provided on the NRS website. [Table 4.2](#) shows the population breakdown for mid-2015, at NUTS2, NUTS3 and LAU1 areas.

Table 4.2: Population estimates by Nomenclature of Units for Territorial Statistics (NUTS2, NUTS3 and NUTS4/LAU1) areas, 2015

NUTS2	NUTS3	LAU1 (NUTS 4)	NUTS2 Population $n_2 = \sum^1 n_3$	NUTS3 Population $n_3 = \sum n_4$	LAU1 Population n_4
Eastern Scotland	Angus and Dundee City	Angus	2,067,600	265,110	116,900
		Dundee City			148,210
	Clackmannanshire and Fife	Clackmannanshire		51,360	
		Fife		368,080	
	East Lothian and Midlothian	East Lothian		190,440	
		Midlothian		87,390	
	Scottish Borders	Scottish Borders		114,030	
		Edinburgh, City of		114,030	
	Edinburgh, City of	Edinburgh, City of		498,810	
		Falkirk		158,460	
	Perth and Kinross and Stirling	Perth and Kinross		242,760	
		Stirling		149,930	
	West Lothian	West Lothian		92,830	
West Lothian		178,550			
South Western Scotland			2,344,646		
East Dunbartonshire, West Dunbartonshire and Helensburgh and Lomond	Helensburgh and Lomond West Dunbartonshire East Dunbartonshire	222,484			
		25,934			
		89,590			
Dumfries and Galloway	Dumfries and Galloway	149,670			
		149,670			
East Ayrshire and North Ayrshire mainland	East Ayrshire North Ayrshire mainland	252,262			
		122,060			
Glasgow City	Glasgow City ²	130,202			
		607,451			
Inverclyde, East Renfrewshire and Renfrewshire	East Renfrewshire Renfrewshire Inverclyde	606,340			
		347,000			
		92,940			
North Lanarkshire	North Lanarkshire ²	174,560			
		79,500			
South Ayrshire	South Ayrshire	337,149			
		338,260			
South Lanarkshire	South Lanarkshire	112,400			
		112,400			
			316,230	316,230	

Table 4.2: Population estimates by Nomenclature of Units for Territorial Statistics (NUTS2, NUTS3 and NUTS4/LAU1) areas, 2015 continued

NUTS2	NUTS3	LAU1 (NUTS 4)	NUTS2 Population $n_2 = \sum n_3$	NUTS3 Population $n_3 = \sum n_4$	LAU1 Population n_4	
North Eastern Scotland	Aberdeen City and Aberdeenshire	Aberdeen City	492,310	492,310	230,350	
		Aberdeenshire			261,960	
Highlands and Islands	Caithness and Sutherland and Ross and Cromarty	Ross and Cromarty	468,444	93,697	54,820	
		Caithness and Sutherland			38,877	
	Inverness and Nairn and Moray, Badenoch and Strathspey	Inverness and Nairn			93,802	
		Badenoch and Strathspey			13,663	
		West Moray			24,007	
		North East Moray			71,503	
	Lochaber, Skye and Lochalsh, Arran and Cumbrae and Argyll and Bute	Arran and Cumbrae			99,832	5,928
		Argyll and Bute Islands			7,277	
		Argyll and Islands			53,679	
		Lochaber			19,794	
		Skye and Lochalsh			13,154	
	Na h-Eileanan Siar (Western Isles)	Na h-Eileanan Siar (Western Isles)			27,070	27,070
	Orkney Islands	Orkney Islands			21,670	21,670
	Shetland Islands	Shetland Islands			23,200	23,200

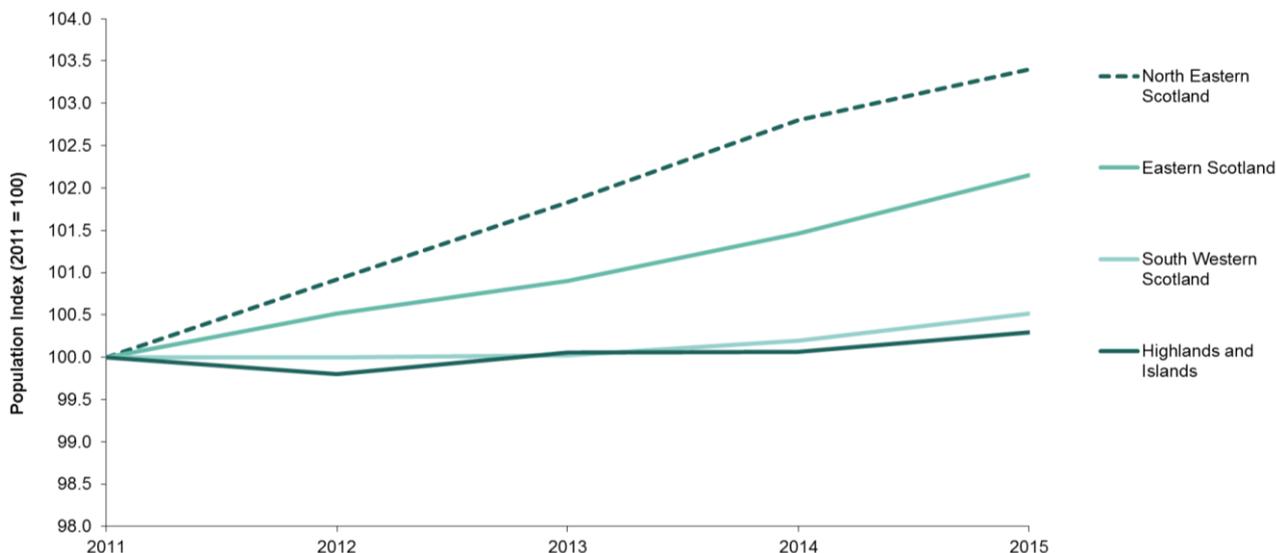
Footnotes

1) Σ = sum of

2) LAU1 areas for Glasgow City and North Lanarkshire do not equal those of the NUTS3 due to changes in boundaries. Due to legislation LAU boundaries changed following the change of council area boundaries in 2011, whereas the NUTS boundaries in 2011 were not subject to the same legislation and did not change.

4.10 Since 2011, the populations of the NUTS2 areas of North Eastern Scotland have grown by the most at 3.4 per cent (Figure 4.2). The population of Eastern Scotland has grown by 2.1 per cent, while the populations of South Western Scotland and Highlands and Islands have grown by 0.5 and 0.3 per cent respectively.

Figure 4.2: Change in population by NUTS2 area, 2011 – 2015¹



Footnote

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

4.11 These population estimates were derived by aggregating data zone estimates. Many NUTS areas are equivalent to council areas or groups of council areas. However, some NUTS areas (those in Argyll and Bute, Highland and North Ayrshire council areas) do not correspond to council areas. In these cases data zones have been allocated to NUTS areas on a best-fit basis.

Scottish Index of Multiple Deprivation (SIMD) Decile Populations

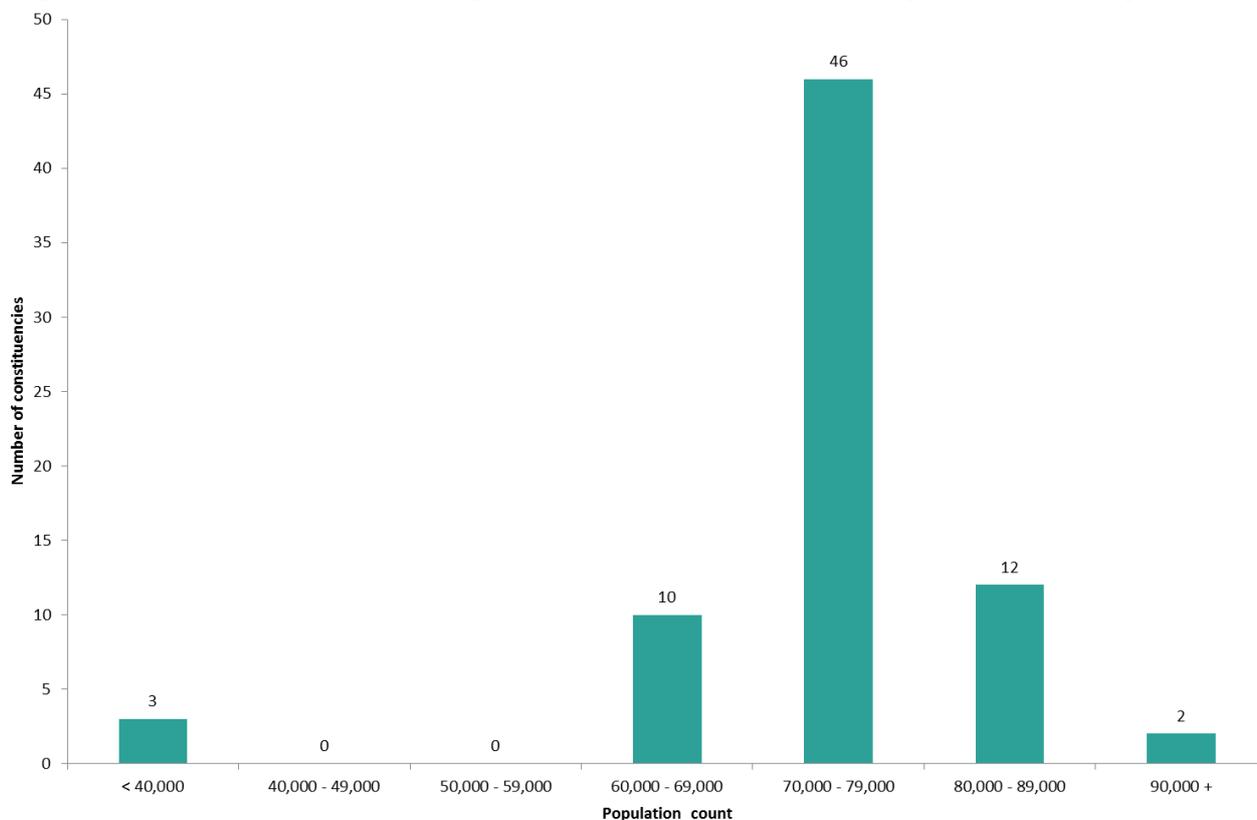
4.12 A new version of the Scottish Index of Multiple Deprivation (SIMD) is scheduled to be published by the Scottish Government in 2016. It will rank each of the 6,976 data zones in Scotland from one (most deprived) to 6,976 (least deprived). The index is usually updated every three years. The current index was published in 2012 and is known as SIMD 2012. More information on SIMD 2012 and earlier versions is available on the SIMD section of the [Scottish Government](http://www.scotland.gov.uk) website. The new version will be called SIMD16.

4.13 Population Estimates by SIMD16 will be available on the NRS website once the SIMD16 becomes available, by single year of age and sex for SIMD 2016 deciles, where each decile has ten per cent of the data zones in Scotland grouped according to ascending SIMD ranking.

Scottish Parliamentary Constituency Populations

- 4.15 The Members of the Scottish Parliament (MSPs) at Holyrood represent 73 constituencies. The constituency boundaries were re-drawn in 2014. The population estimates reported here relate to the 2014 boundaries for all years.
- 4.16 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 per cent of the population of Glasgow Kelvin is transferred to Glasgow Maryhill and Springburn each year, spread equally across the age/sex distribution.
- 4.17 [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 2015 ranged between 21,670 (Orkney Islands) and 92,948 (Linlithgow). Figure 4.3 shows the distribution of constituency populations with the majority between 70,000 and 79,000. The proportion of people aged 16 and over⁹ in each constituency ranged from 79.5 per cent in Eastwood to 91.6 per cent in Glasgow Kelvin.

Figure 4.3: Population count by 2014 Scottish Parliamentary Constituency, 2015



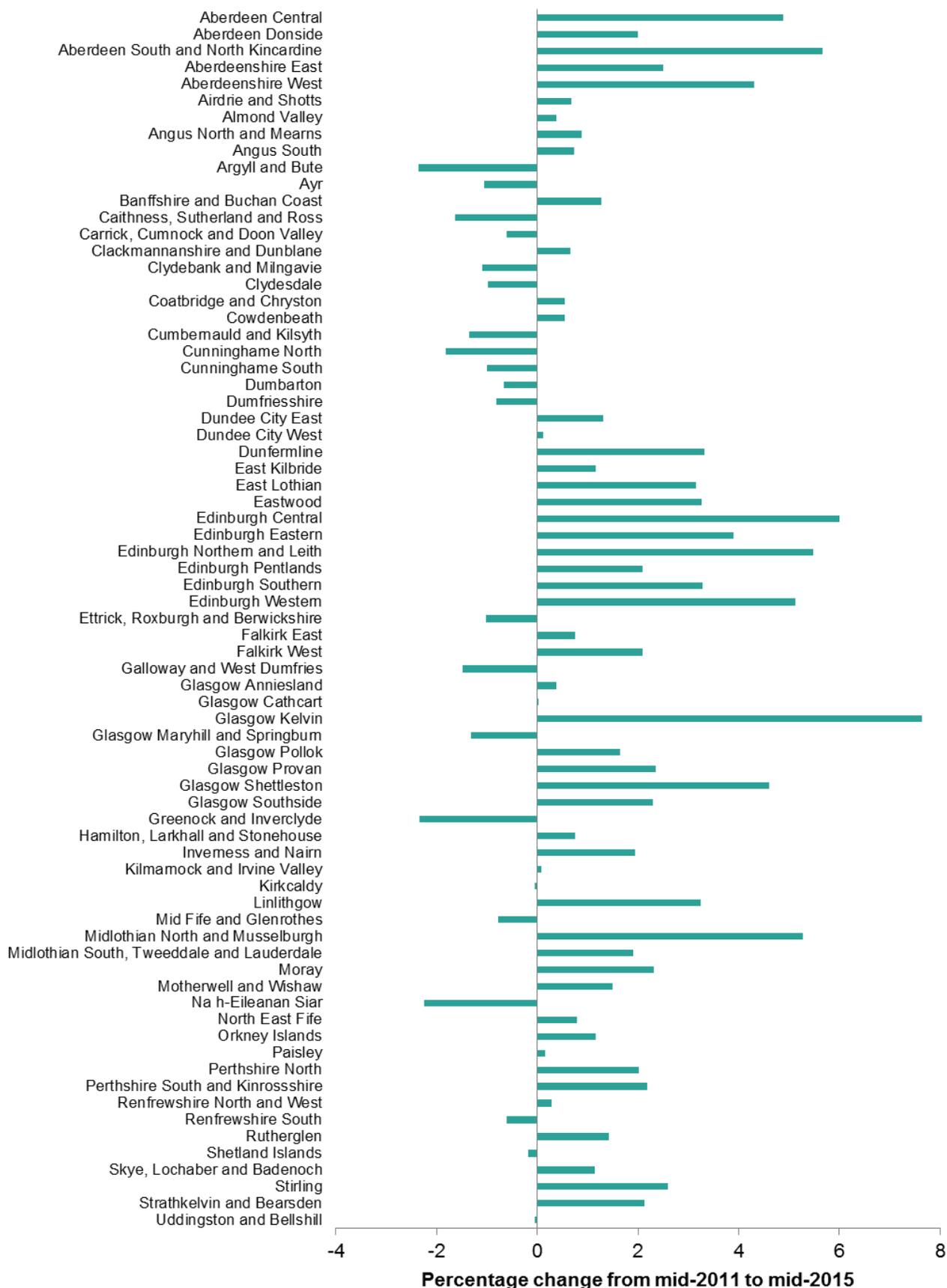
- 4.18 [Figure 4.4](#) shows the percentage change between the mid-2011 and mid-2015 population estimates. Glasgow Kelvin saw the greatest percentage increase in

Footnote

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

population since 2011 at 7.6 per cent, compared with Argyll and Bute which saw a 2.4 per cent decrease in the population since 2011. Of the 73 constituencies, 21 (28.8 per cent) have seen a decrease in population between 2011 and 2015.

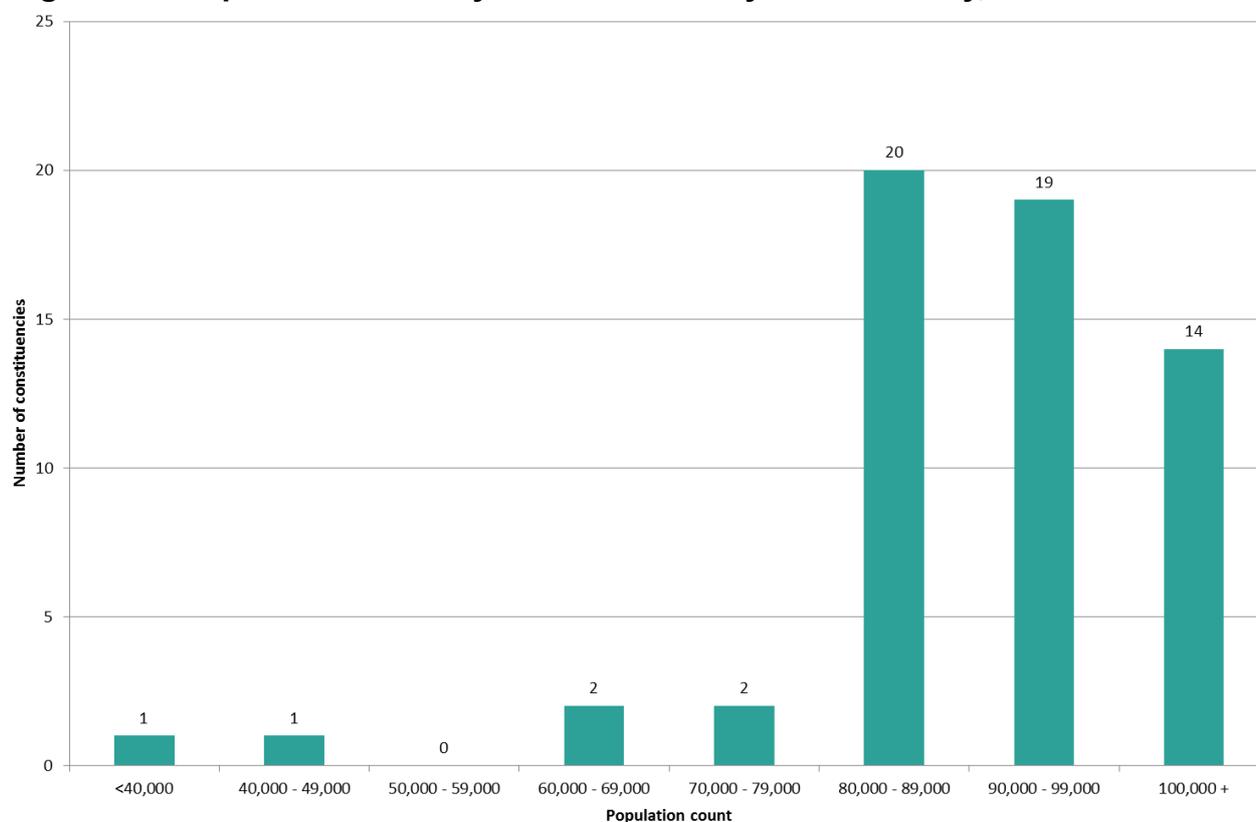
Figure 4.4: 2014 Scottish Parliamentary Constituency, percentage change between mid-2011 and mid-2015 population estimates



UK Parliamentary Constituency Populations

- 4.19 The Members of Parliament (MPs) at Westminster represent 59 Scottish constituencies. The population estimates reported here relate to the boundaries used in the 2010 and 2015 general elections. 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 per cent of the population of Glasgow North is transferred to Glasgow North West each year, spread equally across the age/sex distribution.
- 4.20 [UK 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 2015 ranged from 27,070 (Na h-Eileanan Siar) to 116,697 (Linlithgow and East Falkirk). Figure 4.5 shows the distribution of constituency populations, with the majority between 80,000 and 100,000. The proportion of people aged 18 and over ranged from 77.5 per cent in East Renfrewshire to 86.6 per cent in Glasgow North.

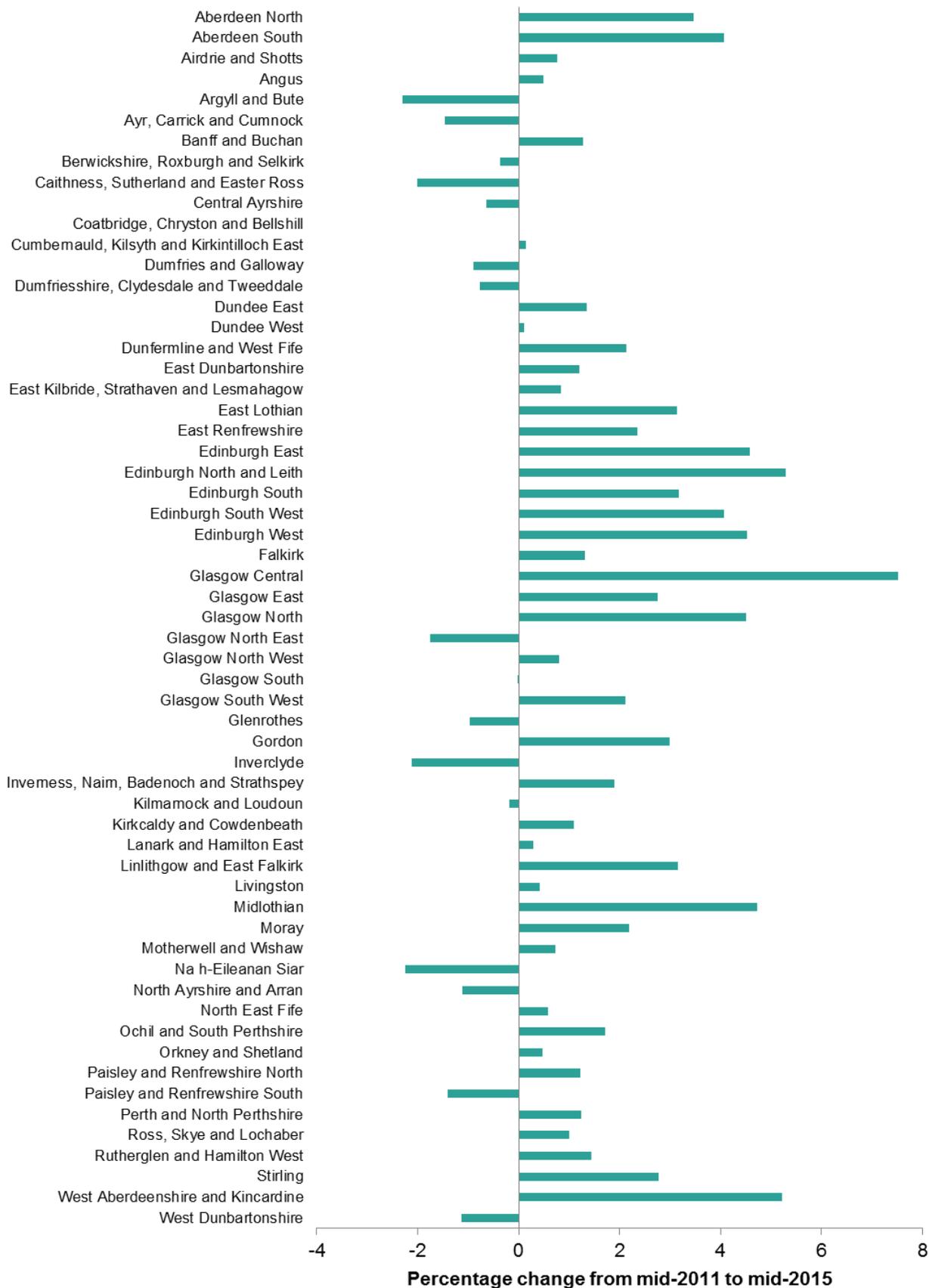
Figure 4.5: Population count by UK Parliamentary Constituency, 2015



- 4.21 [Figure 4.6](#) shows the percentage change between mid-2011 and mid-2015 estimates. Glasgow Central saw the greatest percentage increase in population since 2011 at 7.5 per cent, compared with Argyll and Bute which saw a 2.3 per cent decrease in the population since 2011. Of the 59 constituencies, 16 (27 per cent) have seen a decrease in population between 2011 and 2015.
- 4.22 Population estimates for constituencies in England and Wales are produced by the Office for National Statistics (ONS) using a similar method – but using a postcode best-fit methodology rather than a data zone best-fit methodology.

4.23 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.

Figure 4.6: UK Parliamentary Constituency, percentage change between mid-2011 and mid-2015 population estimates



5. Notes and Definitions

This section gives brief definitions of statistical and other terms used in this report.

Decile

A decile splits a group of values which have been arranged in ascending or descending order into ten equal groups. For example, the first decile has the first ten per cent of the values.

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.

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.

Data zone lookup tables

Small Area Population Estimates for other geographies in [Section 4](#) are produced on a 'best-fit' basis using 2011 Data Zone population estimates. 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.

Urban Rural Classification

The 6-fold Urban Rural Classification 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

The 8-fold Urban Rural Classification 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 between 30 and 60 minutes to a settlement of 10,000 or more
5. Very remote small towns	Settlements of between 3,000 and 10,000 people and with a drive time of over 60 minutes to a settlement of 10,000 or more
6. Accessible rural areas	Settlements of fewer than 3,000 people and within 30 minutes' drive of a settlement of 10,000 or more
7. Remote rural areas*	Settlements of fewer than 3,000 people and with a drive time of between 30 and 60 minutes to a settlement of 10,000 or more
8. Very remote rural areas	Settlements of fewer than 3,000 people and with a drive time of over 60 minutes to a settlement of 10,000 or more

* The Remote Small Towns and Remote Rural categories in the 8-fold classification should not be confused with the similarly labelled categories in the 6-fold classification.

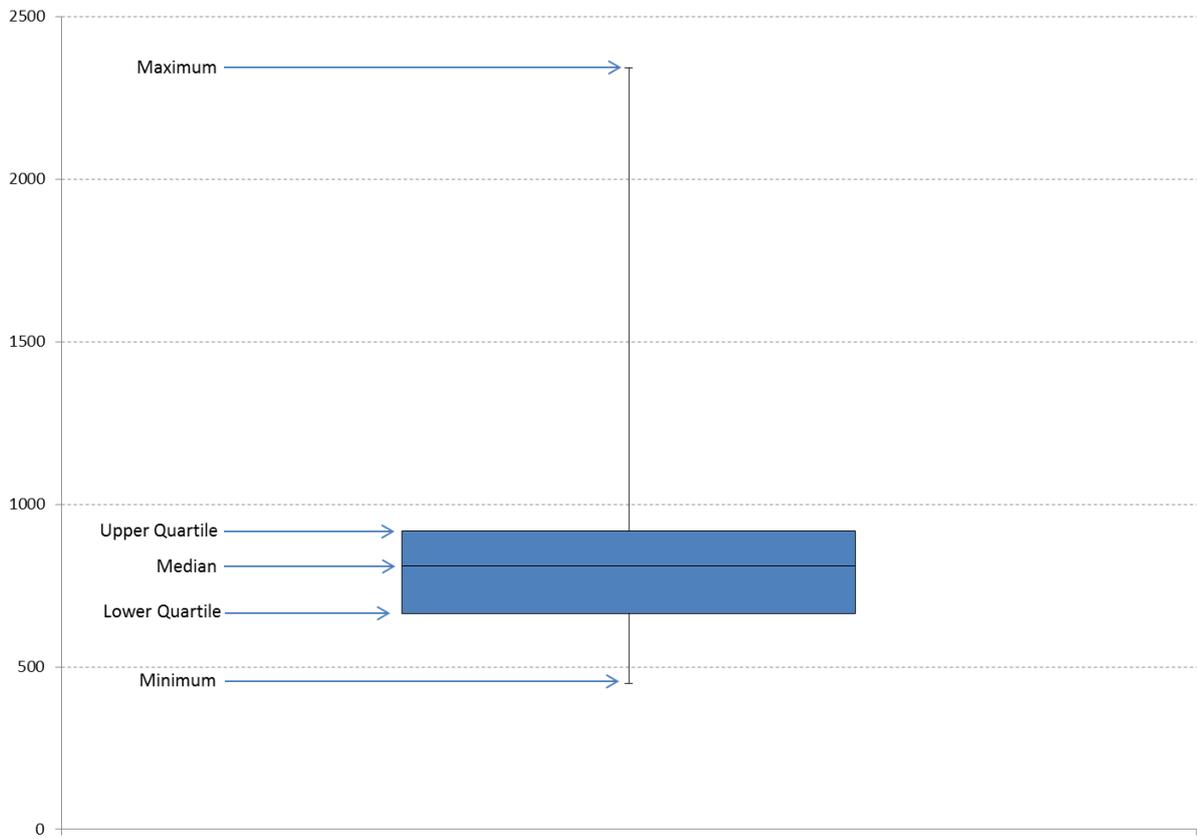
Boxplots

A box plot is sometimes used to visually represent data. It usually shows where the quartiles of the data lie as well as selected percentiles. In this publication all box plots show the minimum value, lower quartile, median, upper quartile and maximum value for a selection of 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. The split may not be exactly 50/50 depending on how many values in the group have the median value.

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 per cent 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.

A sample box-plot is shown below:



Example Box Plot

6. Notes on Statistical Publications

National Statistics

The UK Statistics Authority 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 [UK Statistics Authority](#) website).

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is National Records of Scotland's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

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 NRS website.

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7. Related Organisations

Organisation	Contact
<p>The Scottish Government (SG) forms the bulk of the devolved Scottish Administration. The aim of the statistical service in the SG is to provide relevant and reliable statistical information, analysis and advice that meets the needs of government, business and the people of Scotland.</p>	<p>Office of the Chief Statistician Scottish Government 3WR, St Andrews House Edinburgh EH1 3DG</p> <p>Phone: 0131 244 0442</p> <p>Email: statistics.enquiries@scotland.gsi.gov.uk</p> <p>Website: www.scotland.gov.uk/Topics/Statistics</p>
<p>The Office for National Statistics (ONS) is responsible for producing a wide range of economic and social statistics. It also carries out the Census of Population for England and Wales</p>	<p>Customer Contact Centre Office for National Statistics Room 1.101 Government Buildings Cardiff Road Newport NP10 8XG</p> <p>Phone: 0845 601 3034 Minicom: 01633 815044</p> <p>Email: info@statistics.gsi.gov.uk</p> <p>Website: www.ons.gov.uk/</p>
<p>The Northern Ireland Statistics and Research Agency (NISRA) is Northern Ireland's official statistics organisation. The agency is also responsible for registering births, marriages, adoptions and deaths in Northern Ireland, and the Census of Population.</p>	<p>Northern Ireland Statistics and Research Agency McAuley House 2-14 Castle Street Belfast BT1 1SA</p> <p>Phone: 028 9034 8100</p> <p>Email: info.nisra@dfpni.gov.uk</p> <p>Website: www.nisra.gov.uk</p>

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