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Mid-2010 Small Area Population Estimates Scotland

Population estimates by sex, age and data zone

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Contents

1.	Introduction and Background	5
2.	Data Zone Population Estimates, 2010	7
3.	Data Zone Population Change, 2001-2010	11
4.	Other Small Area Population Estimates	16
5.	Notes and Definitions	24
6.	Notes on Statistical Publications	26

List of Tables

Table 2.1	Characteristics of the 170 data zones with a population less than 500	8
Table 2.2	Characteristics of the 96 data zones with a population of 15,000 or more	8
Table 2.3	Data zone population summary statistics by council area, 2010	9
Table 3.1	Data zones within broad population bands, 2001-2010	11
Table 3.2	Data zone population summary statistics, 2001-2010	12
Table 3.3	Population change summary, 2001-2010	12
Table 3.4	Data zones with population increase of 200% or more, 2001-2010	13
Table 3.5	Data zones with population decrease of 50% or more, 2001-2010	14
Table 3.6	Distribution of least and most populated data zones by council area, 2001 and 2010	15
Table 4.1	Population estimates by 6-fold urban rural classification, 2010	17
Table 4.2	Population estimates by NUTS2 area, 2010	18
Table 4.3	Population estimates by SIMD 2009 decile, 2010	20

List of Figures

Figure 2.1	Distribution of data zone population, 2010	7
Figure 2.2	Median age distribution of data zone population, 2010	10
Figure 4.1	Change in population by 6-fold urban rural classification, 2001- 2010	17
Figure 4.2	Change in population by NUTS2 area, 2001-2010	19
Figure 4.3	Population trend for SIMD 2009 deciles, 2001-2010	20
Figure 4.4	Population frequency count by 2011 Scottish Parliamentary Constituency, 2010	21
Figure 4.5	Population frequency count by Westminster Parliamentary Constituency, 2010	22

Main Points

- As at 30th June 2010, the total estimated population of Scotland was 5,222,100. The population estimates for the 6,505 data zones in Scotland ranged from 0 to 7,624. But only 170 data zones (2.6 per cent) had a population of less than 500 and 96 (1.5 per cent) had a population of 1,500 or more.
- The average data zone population was 803. The council area with the highest average data zone population was City of Edinburgh (885), with the lowest average in Midlothian (724).
- The median age for Scotland as a whole in 2010 was 41. But the age distribution of data zone populations varies considerably and the median ages ranged from 19 to 70 in 2010. The peak occurred in the 40-45 age group, with 2,500 data zones (38 per cent) having a median age between 40 and 45.
- The population of most data zones has changed little over the past 10 years, but a growing number experienced more substantial changes. Between mid-2001 and mid-2010 the population of 4,134 data zones (64 per cent) changed by less than 10 per cent, while 140 data zones decreased by 20 per cent or more and the population of 724 data zones increased by 20 per cent or more. The most likely cause of big changes in the population of a data zone is housing development (building or demolition), but there may be other factors that can affect population sizes such as migration or the closure of a large communal establishment.

1. Introduction and Background

- 1.1 This report summarises the mid-2010 small area population estimates (SAPE) for the 6,505 data zones in Scotland. Data zone population estimates, by age and sex, are updated annually following the publication of the mid-year population estimates at council and NHS board area levels (available at [Mid-2010 Population Estimates Scotland](#)). The data zone estimates are consistent with mid-year population estimates for council areas. This is the first time that the data zone population tables have been accompanied by a report of the results¹ and feedback on the content and format would be welcome. Please use the [Contact us](#) facility on this website.
- 1.2 This report is accompanied by a full set of tables showing the mid-2010 population estimates for data zones by gender and five-year age group (www.nr.scotland.gov.uk/statistics/theme/population/estimates/special-area/sape/index.html).
- 1.3 [Section 2](#) of this report highlights some of the main points to emerge from the mid-2010 population estimates at data zone level, while [Section 3](#) discusses some of the changes that have occurred between 2001 and 2010.
- 1.4 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-2010 population estimates for each of these areas, built up from data zones on a best-fit basis, have been added to the appropriate section of the website at www.nr.scotland.gov.uk/statistics/theme/population/estimates/special-area/index.html. A summary of the main points from these tables is included in [Section 4](#).
- 1.5 Data zones are the small area geography used by the 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](#).
- 1.6 The data zone small area population estimates are derived using the cohort-component method where Census-based population estimates are updated annually by 'ageing on' populations and applying information on births, deaths and migration. Background information, including a description of the methodology used to produce the small area population estimates is available on the [2001-2004 Small Area Population Estimates](#) section of this website.
- 1.7 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. For example, the allocation of armed forces at data zone level in Scotland relies largely on the distribution from the

¹ The Scottish Government Geographic Information Science & Analysis Team produces an annual report '[Evaluation of the Data Zone Geography: Monitoring Population Drift](#)' that covers similar topics.

2001 Census. In addition, data zone population estimates are constrained to the age/sex distribution at council area level.

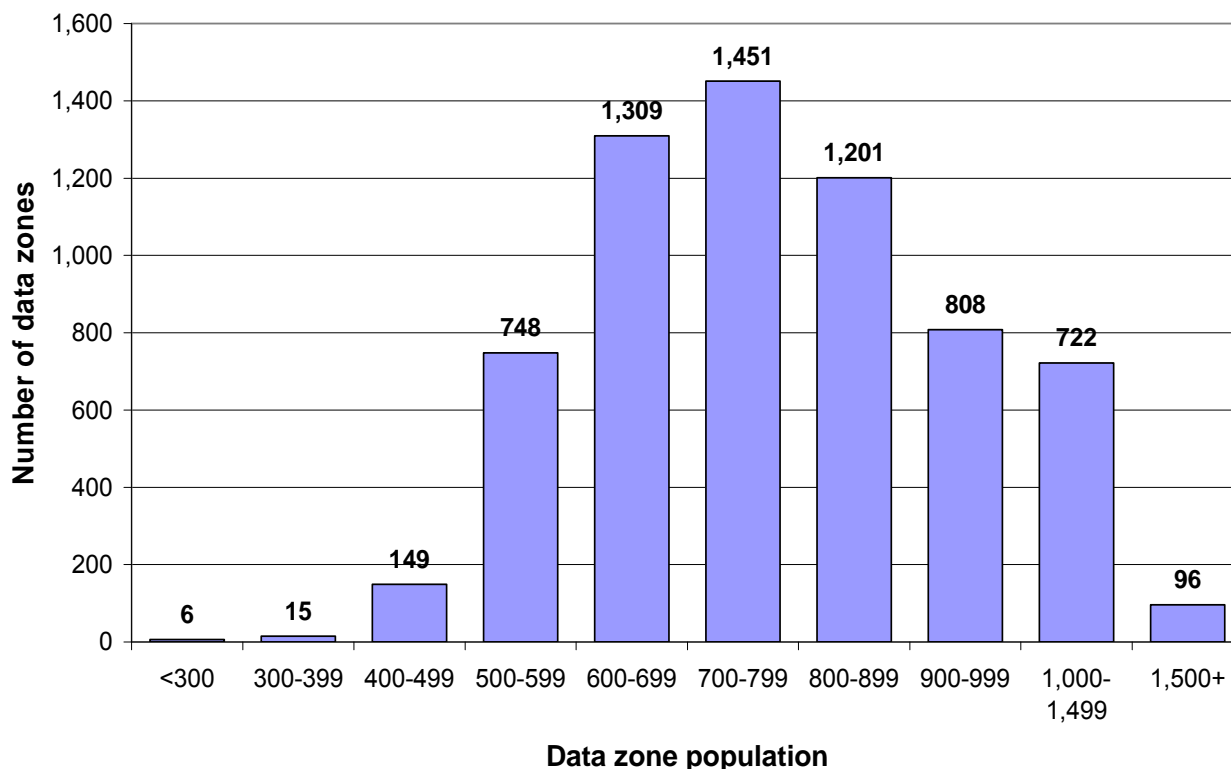
- 1.8 Data zone population estimates are an important aspect of providing information at neighbourhood level. They can be used as building blocks for a variety of different geographies that can inform planning and the provision of services at sub-council area level. They are used as the denominator in many of the rates available on the Scottish Neighbourhood Statistics website. They 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 Data zones are unique to Scotland and cannot be compared with small area geographies 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.
- 1.10 Temporal changes in the characteristics of data zones, including population, have prompted the Scottish Government (SG) to review the data zone boundaries. A consultation has taken place and details of this along with the SG's plans for the future of data zones can be found on the SG website at: www.scotland.gov.uk/Topics/Statistics/sns/SNSRef/DZresponse. The main impact of the proposed changes, as far as the population estimates are concerned, is that data zones will again have roughly standard population sizes. This will be achieved by merging data zones with low populations with neighbouring ones, and splitting data zones with high populations into two or more. The changes to data zone boundaries are scheduled to come into effect in mid-2013.
- 1.11 The 2011 Census will report the population of the existing data zones. Depending on the results from the Census it may be necessary to revise the 2001 to 2010 mid-year population estimates, including those at data zone level.
- 1.12 Small area population estimates were assessed by the UK Statistics Authority (UKSA) in May 2011, along with other population and demographic statistics² for Scotland. These statistics can now be designated as National Statistics, subject to meeting the requirements set out in the assessment report. This report addresses one of the five requirements set out by the UKSA in the assessment – 'Ensure that all releases provide commentary that aids user interpretation'.

² UK Statistics Authority (2011). [Assessment Report 113: Statistics on Population and Demography in Scotland](#).

2. Data Zone Population Estimates, 2010

2.1 The overall estimated population of Scotland at 30 June 2010 was 5,222,100. The population of the 6,505 data zones in Scotland at this time ranged from 0 to 7,624 but the vast majority of the data zones had between 500 and 1,500 people (Figure 2.1). A total of 170 data zones had a population of less than 500, while 96 had a population of 1,500 or more. Some of these 96 data zones had a population size substantially greater than 1,500 and, as a result, the mean (average) population size of 803 was higher than the median³ (midpoint) of 768.

Figure 2.1: Distribution of data zone population, 2010



Total number of data zones = 6,505.

- 2.2 The 170 data zones with a population of less than 500 in 2010 were spread throughout Scotland, with no council area having a particularly high number of data zones in this category – 16 in Glasgow City was the most (refer to [Table 2.1](#)). Five council areas (East Dunbartonshire, Orkney Islands, Scottish Borders, Shetland Islands, and West Dunbartonshire) had no data zones with a population of less than 500.
- 2.3 Many of these 170 data zones, especially those with a population of less than 400, are in areas that have been targeted for regeneration by Community Planning Partnerships (CPPs). This is likely to account for the fact that 61 of these data zones were in the 20% most deprived areas of Scotland ([Table 2.1](#)). 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,

³ 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 $(6505+1)/2 = 3253^{\text{rd}}$ highest population, which in 2010 was 768.

result in the demolition of most or all of the dwellings in a data zone. Three data zones in Glasgow no longer had anybody living in them in 2010.

- 2.4 When analysed by urban rural classification, the number of data zones with a population of less than 500 is largely determined by the percentage of the total population living in each class. Most of the 170 data zones are in the urban areas, largely because these are the areas where most data zones are located.

Table 2.1: Characteristics of the 170 data zones with a population less than 500

Location		Deprivation		Urban/Rural	
Council	No. of datazones	Quintile*	No. of datazones	Classification**	No. of datazones
Glasgow City	16	1 (most deprived)	61	Large urban	56
North Lanarkshire	14	2	37	Other urban	62
Highland	13	3	34	Accessible small towns	18
South Lanarkshire	11	4	16	Remote small towns	12
Inverclyde	9	5 (least deprived)	22	Accessible rural	11
Dundee City	8			Remote rural	11
Moray	8				
Others	<8 each				

* Quintile 1 consists of the 20% (1,301) most deprived data zones, quintile 2 the next 20% most deprived, and so on, using the 2009 Scottish Index of Multiple Deprivation.

** 2009-2010 Urban Rural Classification.

- 2.5 There were 96 data zones that had a population of 1,500 or more in 2010. These data zones were spread throughout Scotland, with no council area having a particularly high number of data zones in this category – 14 in City of Edinburgh was the most (Table 2.2). Seven council areas (Angus, East Renfrewshire, Eilean Siar, Orkney Islands, Shetland Islands, South Ayrshire and West Dunbartonshire) had no data zones with a population of 1,500 or more.

- 2.6 Few of these 96 data zones are in the most deprived areas or in small towns or remote rural areas (Table 2.2). Many of the 96 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. The relatively high number of accessible rural data zones (18) may indicate the development of rural areas close to cities and larger towns.

Table 2.2: Characteristics of the 96 data zones with a population of 1,500 or more

Location		Deprivation		Urban/Rural	
Council	No. of datazones	Quintile*	No. of datazones	Classification**	No. of datazones
City of Edinburgh	14	1 (most deprived)	5	Large urban	43
Glasgow City	12	2	14	Other urban	29
North Lanarkshire	8	3	25	Accessible small towns	3
Aberdeenshire	7	4	28	Remote small towns	1
Falkirk	6	5 (least deprived)	24	Accessible rural	18
Fife	6			Remote rural	2
Others	<6 each				

* Quintile 1 consists of the 20% (1,301) most deprived data zones, quintile 2 the next 20% most deprived, and so on, using the 2009 Scottish Index of Multiple Deprivation.

** 2009-2010 Urban Rural Classification (6-fold).

- 2.7 Table 2.3 shows how the characteristics of data zones differed between council areas in 2010. The highest mean (average) data zone populations were for City of

Edinburgh (885), Scottish Borders (868) and Glasgow City (854). The lowest mean populations were for Midlothian (724), Inverclyde (725) and Eilean Siar (728). For most council areas the median (midpoint) was lower than the mean (average), although there were two (Scottish Borders and West Dunbartonshire) where the median was higher than the mean. 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 the data zones lie for each local authority. For example, 25 per cent of the 267 data zones in Aberdeen City have a population of 675 or less. 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 267 data zones in Aberdeen City have a population of 902 or more. In other words, 50 per cent of the data zones have a population between the lower and upper quartile values.

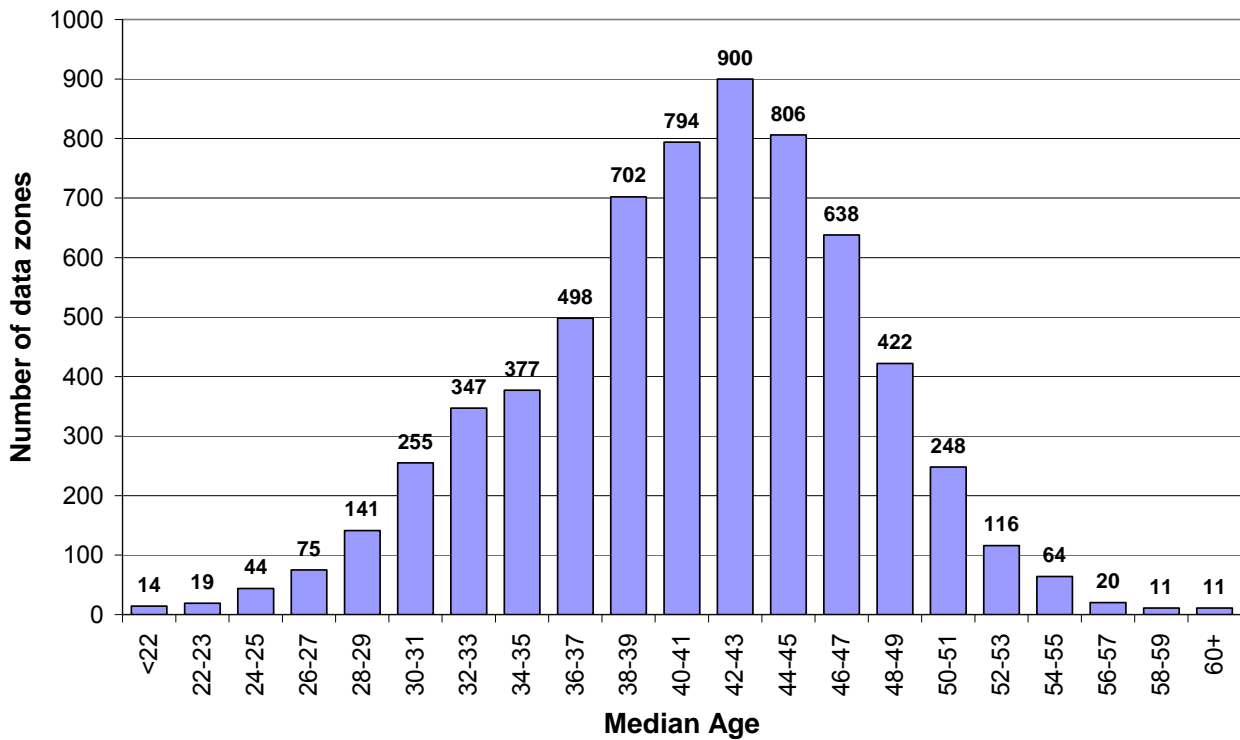
Table 2.3: Data zone population summary statistics by council area, 2010

Council		Data zones						
Name	Total popn. *	Number	Minimum popn.	Maximum popn.	Mean popn.	Median popn.	Lower quartile	Upper quartile
Aberdeen City	217,120	267	436	2,368	813	791	675	902
Aberdeenshire	245,780	301	434	2,457	817	779	645	928
Angus	110,570	142	474	1,322	779	731	655	868
Argyll & Bute	89,200	122	384	1,683	731	724	599	826
Clackmannanshire	50,630	64	449	2,818	791	714	627	903
Dumfries & Galloway	148,190	193	410	1,805	768	743	649	873
Dundee City	144,290	179	322	2,119	806	781	649	888
East Ayrshire	120,240	154	488	2,183	781	750	660	864
East Dunbartonshire	104,580	127	512	1,631	823	820	714	919
East Lothian	97,500	120	453	2,241	813	749	665	889
East Renfrewshire	89,540	120	473	1,341	746	733	626	850
Edinburgh, City of	486,120	549	217	2,953	885	848	737	970
Eilean Siar	26,190	36	459	1,047	728	701	635	841
Falkirk	153,280	197	445	2,509	778	726	615	850
Fife	365,020	453	465	7,624	806	762	653	884
Glasgow City	592,820	694	0	2,590	854	819	706	966
Highland	221,630	292	451	2,590	759	717	634	848
Inverclyde	79,770	110	316	1,500	725	705	623	810
Midlothian	81,140	112	478	1,665	724	695	625	800
Moray	87,720	116	402	2,565	756	715	573	842
North Ayrshire	135,180	179	452	2,067	755	736	623	865
North Lanarkshire	326,360	418	395	1,854	781	730	638	877
Orkney Islands	20,110	27	520	1,061	745	720	612	881
Perth & Kinross	147,780	175	354	1,669	844	829	673	973
Renfrewshire	170,250	214	316	1,878	796	783	643	904
Scottish Borders	112,870	130	526	1,659	868	880	733	989
Shetland Islands	22,400	30	533	1,021	747	715	683	834
South Ayrshire	111,440	147	457	1,356	758	755	656	844
South Lanarkshire	311,880	398	453	3,691	784	746	651	862
Stirling	89,850	110	471	2,236	817	785	664	900
West Dunbartonshire	90,570	118	502	1,279	768	772	670	855
West Lothian	172,080	211	438	3,421	816	750	661	900

* Source: [Mid-2010 Population Estimates Scotland](#)

2.8 As well as variations in the population size of data zones, the age distribution of data zone populations varies considerably (Figure 2.2). While the median (midpoint) age for Scotland as a whole was 41, the median ages at data zone level ranged from 19 to 70. There were 14 data zones with a median age of 21 or less. 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, such as a young offenders institution. At the other end of the scale there were 11 data zones with a median age of 60 or more. These were mainly in popular retirement areas and data zones with substantial accommodation for the elderly. The peak age group was the early 40s, with 2,500 data zones having a median age between 40 and 45.

Figure 2.2: Median age distribution of data zone population, 2010



Total number of data zones = 6,502 (three data zones with zero population have been excluded).

3. Data Zone Population Change, 2001-2010

3.1 Between mid-2001 and mid-2010 the overall population of Scotland increased from 5,064,200 to 5,222,100. 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 2001, a small number (29) of data zones had a population of less than 500, while 372 had a population of 1,000 or more. (A number of these 372 data zones contained sizeable non-household populations, such as prisons, halls of residence, and care homes.) By 2010 the number of data zones with a population of less than 500 had risen to 170, while 818 data zones had a population of 1,000 or more.

Table 3.1: Data zones within broad population bands, 2001-2010

	< 300		300-499		500-999		1,000-1,499		1,500 +	
	No.	%	No.	%	No.	%	No.	%	No.	%
2001	0	0.0	29	0.4	6,104	93.8	360	5.5	12	0.2
2002	0	0.0	65	1.0	6,044	92.9	384	5.9	12	0.2
2003	0	0.0	87	1.4	5,959	91.6	445	6.8	14	0.2
2004	1	0.0	112	1.7	5,876	90.3	498	7.7	18	0.3
2005	2	0.0	113	1.7	5,813	89.4	552	8.5	25	0.4
2006	2	0.0	129	2.0	5,751	88.4	584	9.0	39	0.6
2007	4	0.1	127	2.0	5,714	87.8	600	9.2	60	0.9
2008	4	0.1	138	2.1	5,638	86.6	649	10.0	76	1.2
2009	7	0.1	159	2.4	5,572	85.7	685	10.5	82	1.3
2010	6	0.1	164	2.5	5,517	84.8	722	11.1	96	1.5

Total number of data zones each year = 6,505.

3.2 [Table 3.2](#) further illustrates the 'population drift' noted above. The increase in the mean (average) data zone population from 779 in 2001 to 803 in 2010 reflects 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 the population lies⁴. In 2010, for example, 5 per cent of the data zones in Scotland had a population of 528 or less. The spread of the lower and upper quartiles shows a modest increase from 220 in 2001 to 240 in 2010⁵, whereas the spread from the 5th to the 95th percentile has increased from 460 in 2001 to 633 in 2010. These summary statistics indicate that, while the majority of data zones have changed little over the past 10 years, there is a growing number that have experienced substantial changes.

⁴ The lower quartile is the same as the 25th percentile and the upper quartile is the same as the 75th percentile.

⁵ The range (called the inter-quartile range) is 886 – 666 = 220 for 2001, and 899 – 659 = 240 for 2010.

Table 3.2: Data zone population summary statistics, 2001-2010

Year	Minimum popn.	Maximum popn.	Mean popn.	Median popn.	5 th percentile	Lower quartile	Upper quartile	95 th percentile
2001	477	2,815	779	775	546	666	886	1,006
2002	453	2,859	777	771	547	663	885	1,012
2003	377	2,841	777	769	542	662	885	1,020
2004	248	3,200	781	769	540	661	887	1,037
2005	244	4,024	783	768	537	660	887	1,050
2006	0	4,510	787	768	537	657	888	1,071
2007	0	5,219	791	767	536	657	891	1,091
2008	0	6,453	795	768	535	658	894	1,118
2009	0	7,061	798	767	531	658	896	1,137
2010	0	7,624	803	768	528	659	899	1,161

3.3 Table 3.3 provides further information on the nature of the changes at data zone level between 2001 and 2010. Although the population of Scotland increased overall between 2001 and 2010, more data zones had a decrease in population than an increase in population. In this period the population of 3,747 (57.6 per cent) decreased, while 2,758 data zones (42.4 per cent) either increased or stayed the same.

3.4 Most of the big changes were in data zones where the population increased. A total of 724 data zones had population increases of 20 per cent or more, compared with 140 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 4,134 data zones had a population change of less than 10 per cent, of which 2,688 data zones had a population decrease, compared with 1,421 which had an increase (the other 25 had the same population in 2010 as in 2001). Many of the small decreases may be related to the declining average household size in recent years, with more people living alone and in smaller households⁶.

Table 3.3: Population change summary, 2001-2010

Change in population 2001-2010	Number of data zones	Percentage of data zones
No change	25	0.4
< 5% increase	863	13.3
5% to < 10% increase	558	8.6
10% to < 20% increase	588	9.0
20% to < 50% increase	493	7.6
50% or more increase	231	3.6
Total increase	2,733	42.0
< 5% decrease	1,315	20.2
5% to < 10% decrease	1,373	21.1
10% to < 20% decrease	919	14.1
20% to < 50% decrease	123	1.9
50% to 100% decrease	17	0.3
Total decrease	3,747	57.6

⁶ National Records of Scotland (2011). [‘Estimates of Households and Dwellings in Scotland, 2010’](#).

3.5 Between 2001 and 2010 the population of 17 data zones increased by 200 per cent or more (Table 3.4). Each of these data zones is in an area which has seen substantial house building in recent years. For example, the number of dwellings⁷ in data zone S01002622 rose from 905 in 2003⁸ to 3,092 in 2010. Similarly, the population increase in the other data zones in Table 3.4 was consistent with a rise in the number of dwellings.

Table 3.4: Data zones with population increase of 200% or more, 2001-2010

Data zone	Council	2001 population	2010 population	% change
S01002622	Fife	907	7,624	741
S01005804	South Lanarkshire	631	3,691	485
S01006364	West Lothian	621	3,421	451
S01003778	Highland	517	2,590	401
S01000444	Aberdeenshire	576	2,457	327
S01002806	Fife	587	2,255	284
S01002411	Falkirk	664	2,509	278
S01001406	East Ayrshire	617	2,183	254
S01002567	Falkirk	592	2,071	250
S01002317	City of Edinburgh	877	2,953	237
S01001562	East Lothian	674	2,241	232
S01004255	Moray	694	2,304	232
S01003819	Highland	614	1,995	225
S01001264	Dundee City	569	1,819	220
S01004471	North Ayrshire	650	2,067	218
S01000347	Aberdeenshire	481	1,502	212
S01001232	Dundee City	693	2,119	206

3.6 Between 2001 and 2010 the population of 17 data zones decreased by 50 per cent or more (go to [Table 3.5](#)). These data zones are in areas that have been targeted for regeneration. Most had either seen a corresponding decrease in the number of dwellings in the data zone due to demolition work, or had a substantial proportion of dwellings that were no longer occupied in 2010.

3.7 While the data zones with the big population increases ([Table 3.4](#)) were found throughout a large part of Scotland, the data zones that experienced the biggest population decreases were concentrated in a small number of areas, mainly Glasgow City and Inverclyde. This is likely to be an indication of the areas of Scotland where urban regeneration has had the biggest impact on data zone population sizes.

⁷ National Records of Scotland (2011). [Estimates of Households and Dwellings in Scotland, 2010](#).

⁸ Dwelling counts at data zone level are not available for 2001 or 2002. The 2003 figures are used here for indicative purposes.

Table 3.5: Data zones with population decrease of 50% or more, 2001-2010

Data zone	Council	2001 population	2010 population	% change
S01003031	Glasgow City	804	0	-100
S01003319	Glasgow City	722	0	-100
S01003505	Glasgow City	523	0	-100
S01002296	City of Edinburgh	735	217	-70
S01003491	Glasgow City	732	300	-59
S01003126	Glasgow City	919	398	-57
S01002282	City of Edinburgh	964	424	-56
S01004039	Inverclyde	798	353	-56
S01003578	Glasgow City	531	238	-55
S01004090	Inverclyde	705	316	-55
S01003673	Glasgow City	727	327	-55
S01003548	Glasgow City	528	241	-54
S01004060	Inverclyde	933	441	-53
S01003540	Glasgow City	963	466	-52
S01001166	Dundee City	840	409	-51
S01004050	Inverclyde	781	381	-51
S01003274	Glasgow City	1,067	528	-51

- 3.8 [Table 3.6](#) shows how the distribution of the 5 per cent least populated and 5 per cent most populated data zones in 2001 compares with 2010. In 2001, Highland (26) and Aberdeenshire (24) council areas had the highest number of data zones in the 5 per cent (327) least populated category, while in 2010 North Lanarkshire (28) and Glasgow City (27) had the highest number of data zones in this category. There are no council areas that particularly stand out in the list of least populated data zones. It is slightly different for the 5 per cent most populated data zones, where Glasgow City and City of Edinburgh council areas have notably higher numbers than the other council areas. In 2001 Glasgow City had 75 of the 5 per cent most populated data zones, while City of Edinburgh had 52. These council areas had fewer data zones in this category in 2010 than in 2001, but they were still the highest in Scotland.
- 3.9 Among the other notable results from [Table 3.6](#) we see that East Dunbartonshire had 16 of the most populated data zones in 2001, compared with 2 in 2010. By contrast, South Lanarkshire had 2 of the most populated data zones in 2001, compared with 19 in 2010.
- 3.10 The number of data zones varies from one council area to the next, so we would expect some councils to have more data zones in each of these categories than other councils. Also, the fact that a data zone moves into, or out of, one of these categories does not necessarily indicate a change in the population of that data zone, only a change in the ranking. Changes in the population of other data zones can affect whether a data zone that was in the 5 per cent most populated in 2001, for example, remains in that category in 2010.

Table 3.6: Distribution of least and most populated data zones by council area, 2001 and 2010

Council	Number of data zones	5% least populated		5% most populated	
		2001	2010	2001	2010
Aberdeen City	267	11	11	20	14
Aberdeenshire	301	24	14	19	18
Angus	142	10	5	8	6
Argyll & Bute	122	11	14	3	3
Clackmannanshire	64	3	5	1	3
Dumfries & Galloway	193	18	11	4	1
Dundee City	179	4	12	9	10
East Ayrshire	154	8	7	6	6
East Dunbartonshire	127	1	2	16	2
East Lothian	120	9	5	4	9
East Renfrewshire	120	10	6	1	1
Edinburgh, City of	549	12	8	52	44
Eilean Siar	36	4	3	1	0
Falkirk	197	22	12	10	10
Fife	453	23	19	19	19
Glasgow City	694	15	27	75	57
Highland	292	26	19	2	9
Inverclyde	110	3	12	2	2
Midlothian	112	5	5	0	3
Moray	116	11	17	3	6
North Ayrshire	179	12	11	8	3
North Lanarkshire	418	21	28	20	27
Orkney Islands	27	1	1	0	0
Perth & Kinross	175	12	9	11	14
Renfrewshire	214	6	13	17	7
Scottish Borders	130	2	1	0	7
Shetland Islands	30	2	0	0	0
South Ayrshire	147	9	9	1	4
South Lanarkshire	398	19	23	2	19
Stirling	110	4	5	5	5
West Dunbartonshire	118	1	3	0	1
West Lothian	211	8	11	4	17
Scotland *	6,505	327	328	323	327

* The total number of data zones may not be exactly 5% (325) because of 'ties' in the population size ranking.

4. Other Small Area Population Estimates

- 4.1 In addition to data zone population estimates, National Records of Scotland also publishes 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 Constituencies (SPC)
 - Westminster Parliamentary Constituencies (WPC)
- 4.2 Mid-year population estimates for these geographies for 2010 and earlier years are available at www.nrscotland.gov.uk/statistics/theme/population/estimates/special-area/index.html. They are produced by aggregating the data zone population estimates, using the appropriate lookup table. The data zone lookup tables can be found in the reference section of the [Scottish Neighbourhood Statistics \(SNS\)](http://www.nrscotland.gov.uk/statistics/theme/population/estimates/special-area/index.html) website. Data zones do not always fit these other boundaries exactly. In the 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 estimates⁹ 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.
- 4.3 The population estimates for these areas, along with those for a number of other geographies, are also available on the [Scottish Neighbourhood Statistics](http://www.nrscotland.gov.uk/statistics/theme/population/estimates/special-area/index.html) website.

Urban Rural Classification Populations

- 4.4 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 2009-2010 classification. More background information on the urban rural classification is available on the Scottish Government's website at www.scotland.gov.uk/Topics/Statistics/About/Methodology/UrbanRuralClassification
- 4.5 Population estimates by single year of age and sex for the 6-fold and 8-fold urban rural classifications are available on our website at: www.nrscotland.gov.uk/statistics/theme/population/estimates/special-area/urban-rural.html. The mid-2010 population estimates, based on the 2009-2010 6-fold classification, show that nearly 70 per cent of the population of Scotland live in settlements of 10,000 or more people (the 'large urban' and 'other urban' areas), while nearly 1 million people live in the 'accessible' and 'remote' rural areas (Table 4.1).

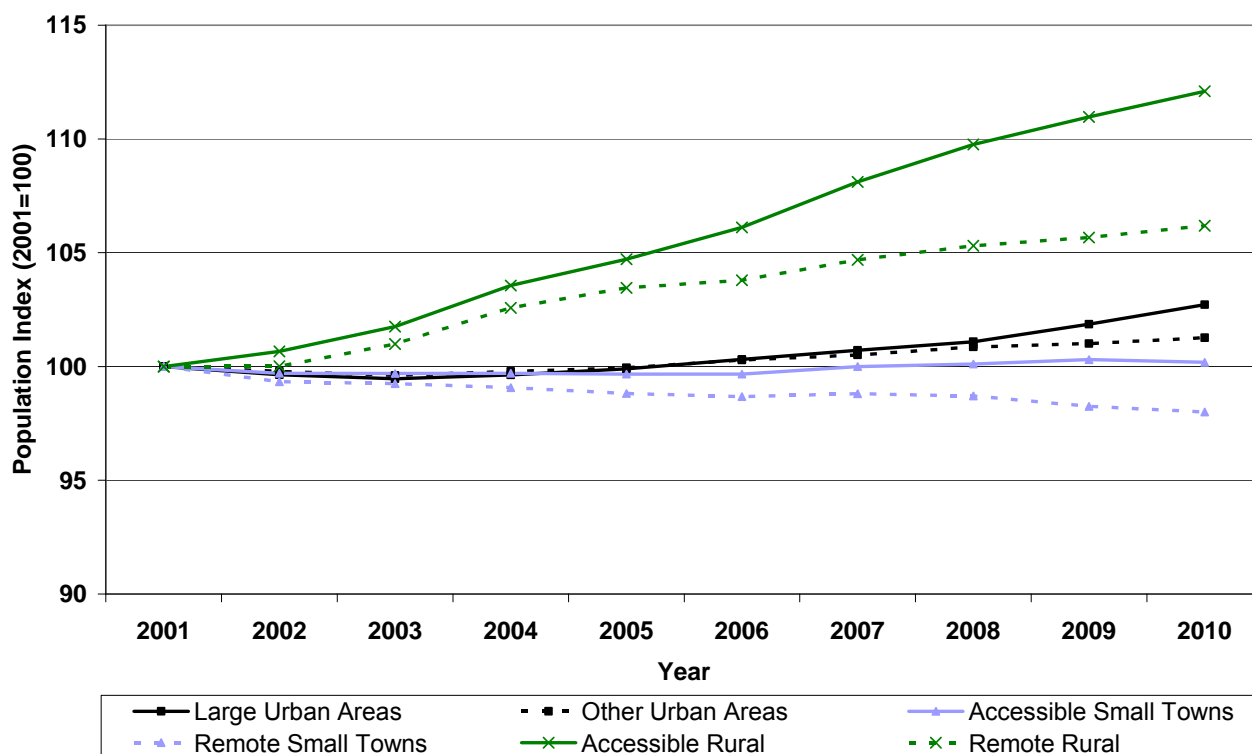
⁹ GROS (2008). [Evaluation of Non Standard Geography Population Estimates](#).

Table 4.1: Population estimates by 6-fold urban rural classification, 2010

Classification	2010 population	2010 population (%)
Large urban areas	2,039,607	39.1
Other urban areas	1,587,457	30.4
Accessible small towns	437,174	8.4
Remote small towns	193,873	3.7
Accessible rural areas	626,519	12.0
Remote rural areas	337,470	6.5

4.6 Based on the mid-2001 population estimates, Figure 4.1 shows that accessible rural areas grew at a faster rate than the other categories between 2001 and 2010. The population of accessible rural areas rose by over 12 per cent and there was an increase of more than 6 per cent in the population of remote rural areas during this period. The changes in the other categories were on a smaller scale, with the population of remote small towns falling by 2 per cent.

Figure 4.1: Change in population by 6-fold urban rural classification, 2001-2010



4.7 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 Council¹⁰.

¹⁰ Refer to, for example, '[Socio-economic briefing on rural Scotland: Demography](#)', Scottish Government (2010).

NUTS Populations

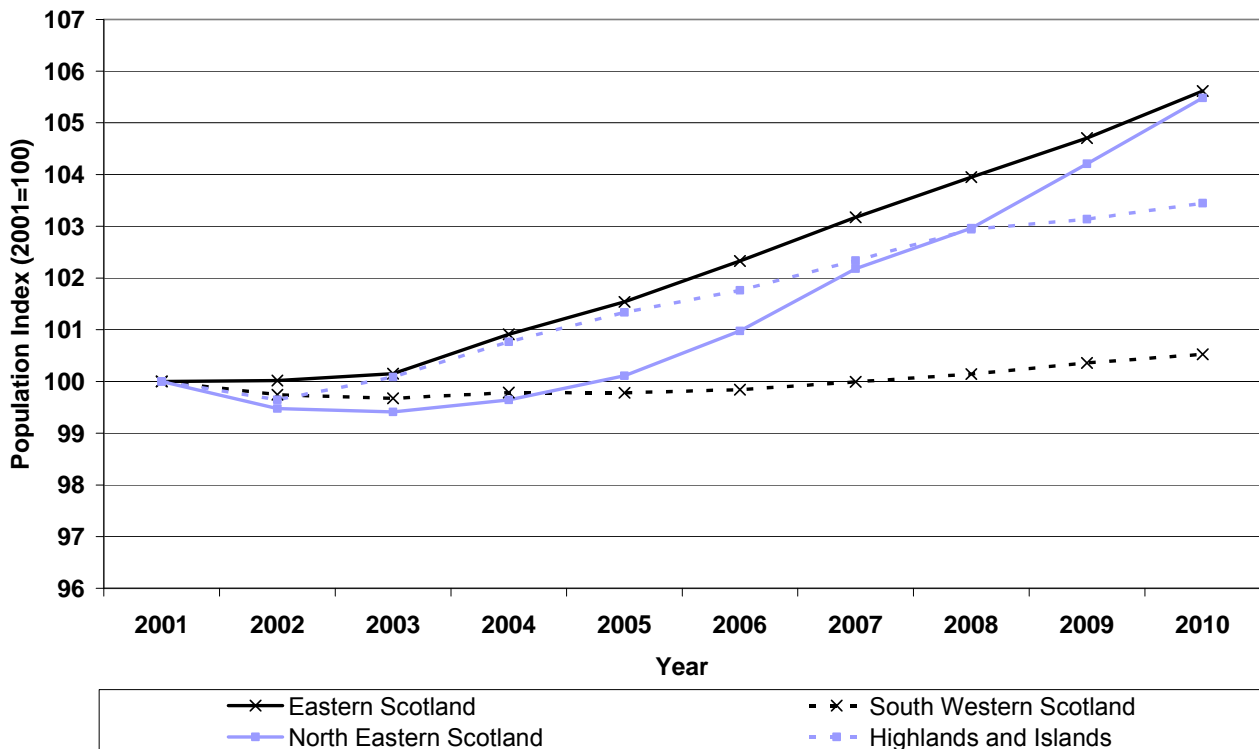
- 4.8 The European Union Nomenclature of Units for Territorial Statistics (NUTS) Regulation, enacted in June 2003, formalised the statistical geography of the European Union (EU). The United Kingdom NUTS structure was established in 1998 following an extensive consultation exercise. Some changes were made to the structure following a review in 2006. A further review took place in 2010 and the amendments will be implemented on 1 January 2012 (although Scotland is not affected by the latest changes). 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 purposes, the most important of which is for the allocation of Objective 1 structural funding whereby if any NUTS2 region has a Gross Domestic Product (GDP) per head less than 75 per cent of the EU average it is entitled to financial support.
- 4.9 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 4 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. Population estimates by single year of age and sex for NUTS2, NUTS3 and LAU1 areas are provided on our website at www.nr.scotland.gov.uk/statistics/theme/population/estimates/special-area/nuts.html.

Table 4.2: Population estimates by NUTS2 area, 2010

NUTS2 area	2010 population	2010 population (%)
Eastern Scotland	2,011,130	39
South Western Scotland	2,299,678	44
North Eastern Scotland	462,900	9
Highlands and Islands	448,392	9

- 4.10 Since 2001, the populations of the NUTS2 areas Eastern Scotland and North Eastern Scotland have grown by over 5 per cent (Figure 4.2 refers). The population of the Highlands and Islands has increased by over 3 per cent, while the population of South Western Scotland has changed by less than 1 per cent over this period.

Figure 4.2: Change in population by NUTS2 area, 2001-2010



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, so NUTS population estimates will be consistent with those for council areas. However, some NUTS areas (those in Argyll & Bute, Highland, Moray, 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.

SIMD Decile Populations

4.12 The Scottish Index of Multiple Deprivation (SIMD) ranks each of the 6,505 data zones in Scotland from 1 (most deprived) to 6,505 (least deprived). The index is updated every three years. The most recent was published in 2009 (revised in 2010) and is known as SIMD 2009. More information on SIMD 2009 and earlier versions is available on the SIMD section of the [Scottish Government](http://www.scottish.gov.uk) website.

4.13 Population estimates by single year of age and sex for SIMD 2009 deciles, where each decile has 10 per cent of the data zones in Scotland (either 650 or 651 data zones) grouped according to ascending SIMD ranking¹¹, are available on this website at www.nrscotland.gov.uk/statistics/theme/population/estimates/special-area/simd.html.

¹¹ Decile 1 has the 651 most deprived data zones, decile 2 the next 650 data zones according to deprivation ranking, and so on, up to decile 10 which has the 650 least deprived data zones.

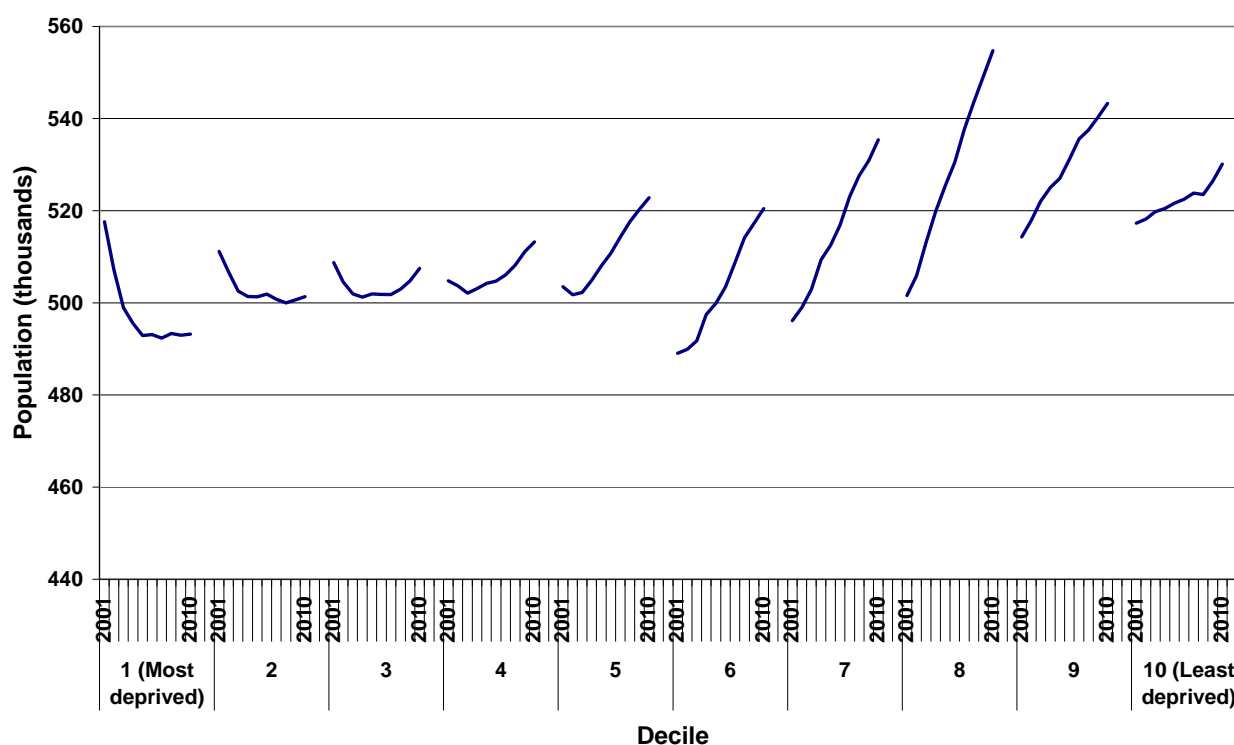
Table 4.3: Population estimates by SIMD 2009 decile, 2010

SIMD decile*	2010 population	2010 population (%)
1 (Most deprived)	493,220	9.4
2	501,329	9.6
3	507,511	9.7
4	513,209	9.8
5	522,839	10.0
6	520,429	10.0
7	535,396	10.3
8	554,756	10.6
9	543,270	10.4
10 (Least deprived)	530,141	10.2

* Each decile contains 10% (650 or 651) of the data zones in Scotland.

4.14 Between 2001 and 2010, the population of the 10 per cent most deprived data zones (decile 1) fell by around 24,000 (refer to Figure 4.3, which shows the trend from 2001 to 2010 for each SIMD decile separately). Most of this decline took place between 2001 and 2004, since when the population of the most deprived areas has remained steady. It is likely that the regeneration of the most deprived areas (and the associated de-population in many cases) along with the relatively constant population of Scotland between 2001 and 2004 resulted in the declining population of these deprived areas during this period. From 2005 onwards there has been a steady increase in the population of Scotland, resulting in corresponding increases across the SIMD 2009 deciles, except in the most deprived areas where the population has remained fairly constant.

Figure 4.3: Population trend for SIMD 2009 deciles, 2001-2010

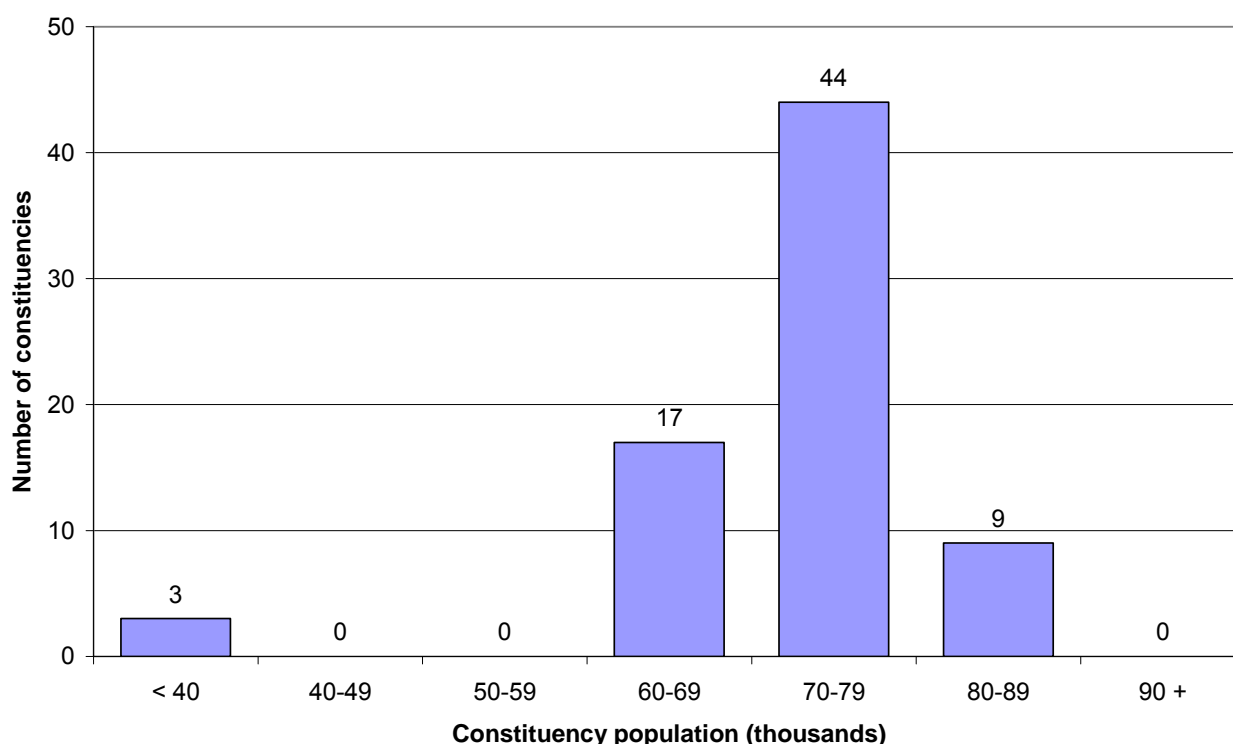


Decile 1 = 10% (651) most deprived data zones, decile 10 = 10% (650) least deprived data zones, using SIMD 2009.

Scottish Parliamentary Constituency Populations

- 4.15 The Members of the Scottish Parliament (MSPs) at Holyrood represent 73 constituencies. The constituency boundaries were re-drawn for the 2011 election. The population estimates reported here relate to the 2011 boundaries.
- 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.
- 4.17 Population estimates by single year of age and sex for Scottish Parliamentary Constituencies (SPCs) are available on our website at <http://www.nr.scotland.gov.uk/statistics/theme/population/estimates/special-area/spc-population-estimates.html>. The constituency population estimates for 2010 range from 20,110 (Orkney Islands) to 88,666 (Edinburgh Central). Figure 4.4 shows the distribution of constituency populations, with the majority between 70,000 and 80,000. The proportion of people aged 18 and over¹² ranged from 76.4 per cent in Almond Valley to 89.4 per cent in Edinburgh Central.

Figure 4.4: Population frequency count by 2011 Scottish Parliamentary Constituency, 2010



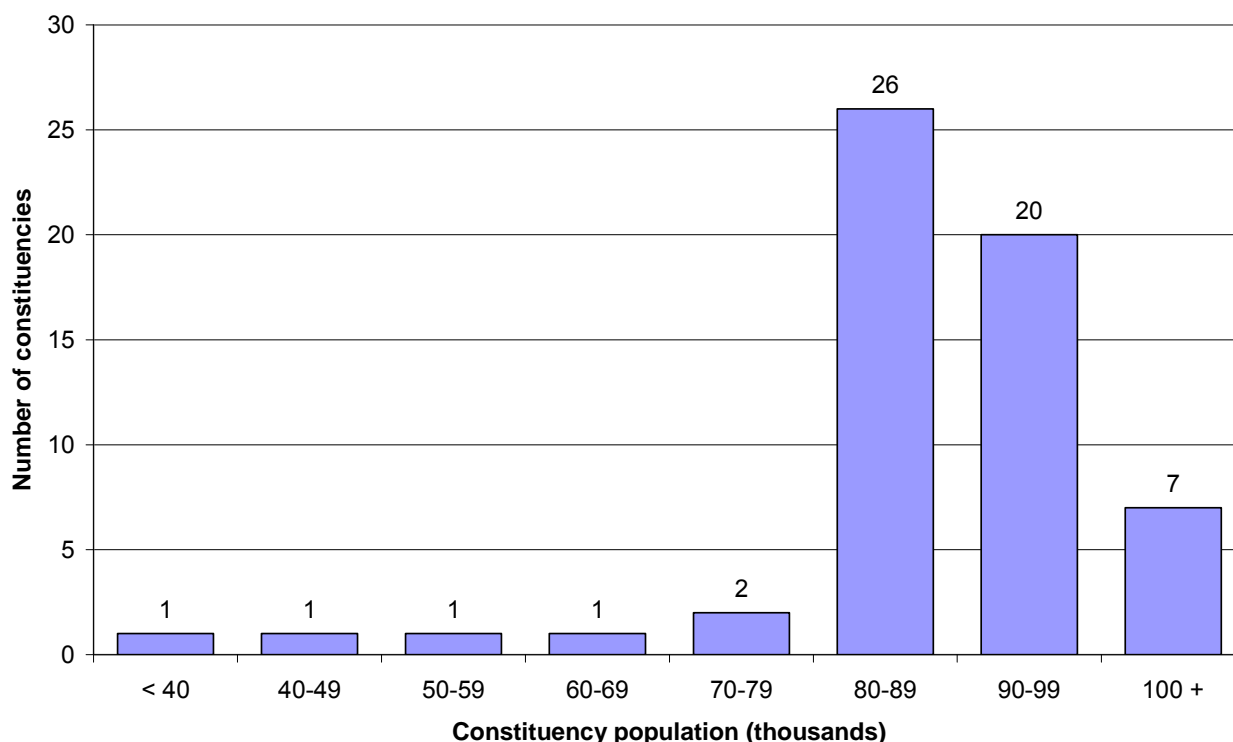
¹² Not necessarily the same as those registered to vote in the constituency, but a reasonable indicator in most cases.

Westminster Parliamentary Constituency Populations

4.18 The Members of Parliament (MPs) at Westminster represent 59 Scottish constituencies. The population estimates reported here relate to the boundaries used in the 2010 general election. 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 of +3.7 per cent has been made to the population of Glasgow North each year, spread equally across the age/sex distribution. A corresponding adjustment of -3.7 per cent has been made to Glasgow North West.

4.19 Population estimates by single year of age and sex for Westminster Parliamentary Constituencies (WPCs) are available on our website at www.nr.scotland.gov.uk/statistics/theme/population/estimates/special-area/wpc.html. The constituency population estimates for 2010 ranged from 26,190 (Na h-Eileanan an Iar) to 109,562 (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 over¹³ ranged from 76.8 per cent in Livingston to 85.5 per cent in Glasgow North.

Figure 4.5: Population frequency count by Westminster Parliamentary Constituency, 2010



¹³ Not necessarily the same as those registered to vote in the constituency, but a reasonable indicator in most cases.

- 4.20 Population estimates for constituencies in England and Wales are produced by ONS using a similar method – but using a postcode best-fit methodology rather than a data zone best-fit methodology.
- 4.21 The constituency population estimates for both the Holyrood and Westminster parliaments are useful in providing an age and sex breakdown of the people living in each constituency.

5. Notes and Definitions

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

Mean

The average of a group of values. The sum of the values divided by the number of values in the group.

Median

The midpoint of a group of values which have been arranged in ascending or descending order. 50% 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.)

Quartile

Similar to 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 usually called the lower quartile; the second quartile is the same as the median; and the third quartile is usually called the upper quartile.

Quintile

Similar to median, except that quintiles split the values into five equal groups instead of two. For example, the first quintile has the first 20% of the values.

Decile

Similar to median, except that deciles split the values into ten equal groups instead of two. For example, the first decile has the first 10% of the values.

Percentile

Similar to median, except that percentiles split the values into one hundred equal groups instead of two. For example, the first percentile has the first 1% 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](#) shows how well the boundaries for different geographies (including data zones) match, while the paper '[Evaluation of Non Standard Geography Population Estimates](#)' 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. For more information see the paper '[Data Zone Centroids Methodology](#)'.

Data zone lookup tables

The data zone lookup tables used to derive the population estimates for the areas in Section 4 can be found in the [reference section](#) of the Scottish Neighbourhood Statistics website. The text file 'Data Zone Lookup' gives geographic information for each data zone, while the Excel workbook 'Code to Name Lookup' gives the full names of the codes held in the 'Data Zone Lookup' file.

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 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 less than 3,000 people and within 30 minutes drive of a settlement of 10,000 or more.
6. Remote rural areas	Settlements of less 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 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 less than 3,000 people and within 30 minutes drive of a settlement of 10,000 or more.
7. Remote rural areas*	Settlements of less 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 less 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.

6. Notes on Statistical Publications

National Statistics

This is a National Statistics publication. It has been produced to the high professional standards set out in the UK Statistics Authority Code of Practice for Official Statistics (www.statisticsauthority.gov.uk/assessment/code-of-practice). These statistics go through regular quality-assurance reviews to make sure that they meet customers' needs. They are produced in a way that is free from any political interference.

National Records of Scotland

From 1 April 2011, the General Register Office for Scotland (GROS) merged with the National Archives of Scotland to become the National Records of Scotland (NRS). The GROS website will remain active until it is replaced by a new website for NRS.

We, the National Records of Scotland, are a non-ministerial department of the devolved Scottish Administration. Our aim is to provide relevant and reliable information, analysis and advice that meets the needs of government, business and the people of Scotland. We do this as follows.

- 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.

You can get other detailed statistics that we have produced from the Statistics section on our website (www.nrscotland.gov.uk/statistics). Statistics from the 2001 Census are on Scotland's Census Results On-Line website (www.scrol.gov.uk) and on the Census section of the NRS/GROS website (www.nrscotland.gov.uk/census).

We provide information about future publications on our website (www.nrscotland.gov.uk/futurepb.html). If you would like us to tell you about future statistical publications, you can register your interest on the Scottish Government ScotStat website at www.scotland.gov.uk/scotstat.

Enquiries and suggestions

Please contact our Customer Services if you need any further information.

E-mail: customer@gro-scotland.gsi.gov.uk

If you have comments or suggestions that would help us improve our outputs or our standards of service, contact:

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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 1.N04, St Andrew's 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 Room 1.015 Office for National Statistics Cardiff Road Newport, NP10 8XG</p> <p>Phone: 0845 601 3034</p> <p>Minicom: 01633 812399</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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