

Household Analysis Review Group (HARG)

2012-Based Communal Establishment Estimates

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The results presented in this paper are provisional. They may differ from the final figures used in the published household projections. Please treat these figures as 'restricted' until after publication in July 2014, and do not use them or pass them on to anyone else without prior agreement from National Records of Scotland (NRS).

1. Purpose

In the household projection process, the private household population is calculated by subtracting the population who reside in communal establishments from the total population. Since 2006 National Records of Scotland (NRS) have used administrative data sources, or external data collections, to update communal establishment figures which had previously been based solely on the 2001 Census. This paper describes the sources of the 2012-based Communal Establishment (CE) estimates, revisions to the methodology since the 2010-Based Estimates, and summarises the draft 2012-Based Communal Establishment Estimates.

2. Methodology

2.1 Data Sources

Table 1 shows the data sources that are used for the 2012-Based Communal Establishment Estimates. The data for the majority of communal establishment types has been updated using 2012-based data sources, however where this has not been possible, older data has been used. For long-stay residents of hotels and boarding houses, hostels and 'other' accommodation the 2011 Census provides the most recent information.

Table 1: Data sources for the 2012-based communal establishment estimates

Establishment type	Data source	Year of data
Adult care	Care Inspectorate (List of registered establishments)	2012
	ISD Care Home Census	2012
Children's care	Care Inspectorate (List of registered establishments)	2012
	SG Looked After Children Statistics	2012
Defence	NRS Armed Forces Data Collection	2012
	DASA Regular Forces by Age and Sex	2012
	2011 Census	2011
Hospitals	ISD SMR01 (General/Acute)	2012
	ISD SMR04 (Mental Health)	2010
	ISD Continuing Care Census (Other NHS)	2012
Hostels	2011 Census	2011
Hotels and boarding houses	2011 Census	2011
Prisons	SG Prison Statistics	2012
Residential Schools	SG Education Analytical Services	2012
	SG Directorate for Learning	2012
Student Halls of Residence - Further Education	2011 Census	2011
Student Halls of Residence - Higher Education	NRS Communal establishment address list	2011
	HESA	2011/12
Other	2011 Census	2011

2.2 Changes to Methodology for 2012 CE Estimates

In some cases, such as prisons, the data sent to us is complete, and requires no additional steps before its use in the final communal establishment dataset. In other cases some imputation must be carried out to achieve full coverage of establishments, or to estimate the age and gender of individuals at each

establishment. [Paper 2 HARG 2012\(2\)](#) (PDF document) outlines the methodology used for the 2010-based estimates. For the 2012-based CE estimates there have been changes to the data available that have resulted in revisions to the methodology. These are described below.

Adult Care

The method used for estimating the population in adult care homes has remained largely the same as in the 2010-based estimate, with the Information Services Division (ISD) Care Home Census and the Care Inspectorate being the main data sources. The only change to the method was for the imputation of long stay residents recorded in the ISD Care Home Census without information on their gender or age, this affected just over 2,500 people. In 2010 the imputation was performed using the age/sex distribution of the long-stay residents with age/sex information in the Care Home Census data. This year we used the age/sex distribution of the residents who were found in the 2011 Census but not in the Care Home Census data. This change does not affect the total number of people estimated to be in adult care homes but does increase the numbers of residents in the oldest age groups.

Children's Care

The method of estimating the number of people living in children's care is largely the same as in 2010, as described in [Paper 2 HARG 2012\(2\)](#) (PDF document). However this method would only be able to estimate the number of children who had been in a placement for at least six months as at 30 June 2012. This meant that any children who had been in a placement for less than six months as at 30 June 2012, but would go on to have a stay of at least six months, were not being included when they should be.

To allow us to include such children, an additional table was requested from the Scottish Government (SG): Looked After Children team. This table isolated those who had a stay of less than six months at 30 June 2011, and provided details of their length of stay at 31 December 2011, by placement type, age and sex. The percentage of children who went on to have a placement of at least six months was calculated by placement type, age and sex. These percentages were then applied to the number of children with a placement of less than six months at 30 June 2012, providing an estimate of the number that would go on to have a stay of at least six months. The total number estimated to be long-term residents in children's care was then distributed amongst the care establishments using the same method as in 2010.

Defence

The estimation method for defence establishments is unchanged from the 2010-based estimates. However data for one defence establishment from the 2011 Census has been included as information wasn't available for it in the other data sources despite it continuing to operate.

Hospitals

The method used in 2010 has not been changed for the 2012-based estimates. The three ISD data sources being used are:

- SMR(01) – Long stay acute data (at June 2012)
- SMR(04) – Long stay psychiatric data (at June 2010)
- Continuing Health Care Census (CHCC; March 2012)

We have used SMR(04) data from 2010 instead of more recent data as there was a problem in 2011 and 2012 caused by low submission levels of the discharge part of the SMR(04) form. This meant that the number of residents in SMR(04) was inflated and has a significant effect on the figures for these years. ISD advised that the 2010 SMR(04) is more reliable and should be used instead.

ISD also made some changes to how the SMR(01) data was assembled. This data now includes people who had a long-term stay in hospital which consisted of multiple SMR(01) episodes. ISD felt this more accurately reflected the number of long-stay residents. New episodes are created by events such as moving to another specialty in the hospital, significant facility or to the care of another consultant. Therefore to a patient with multiple episodes this would seem to be a constant stay in hospital.

Prisons

The prisons data is complete when we receive it, and therefore does not require any additional steps before including in our estimates. In the past the data provided has been as at 30 June in the relevant year. For the 2012-based estimates this was not possible due to an issue with the data provider's statistical system. Instead figures were provided from April 2012 that had been adjusted for changes in the prison population between April and June.

Student Halls of Residence – Further Education

In the 2010-based estimates this type of communal establishment was estimated using a data collection conducted by National Records of Scotland (NRS) in 2006. The only alternative source of data for this communal type is the 2011 Census. It was decided that census data should be used to provide a more up-to-date estimate.

Hotels, hostels, boarding houses and 'other' communal establishments

There are no data sources for these types of communal establishments other than the census. Therefore the only change from the 2010-based estimate is to use 2011 Census data rather than data from the 2001 Census.

3. Consultation with Population and Migration Statistics (PAMS) Members

Local authority members of PAMS have been consulted regarding the draft figures for their area. 13 LAs have responded to the consultation and a small number of revisions have been made based on these responses. These revisions were mostly due to establishments that had closed before 30 June 2012, but the closure had not been picked up in the data or our quality assurance checks.

4. Results

4.1 Scotland

We currently estimate that there are 104,412 residents in Communal Establishments (CE) in Scotland in 2012, an increase of 4,242 residents compared to our 2011 estimate of 100,169 residents. [Figure 1](#) compares the numbers of communal establishment residents by establishment type in Scotland for 2010, 2011 and 2012.

The largest percentage changes between 2011 and 2012 are found in the 'hotels, hostels, etc.' and 'other' categories, where the number of residents has increased by 49.8 and 64.3 per cent respectively. This means that the number of residents in these categories has increased by 3,874 when compared to our 2011 CE estimate, so the majority of the overall increase of 4,242 residents. However the increase in this category has actually taken place over the last 10 years as the 2011 CE estimate used data from the 2001 Census while the 2012 estimate uses 2011 Census data.

In the remaining categories the largest percentage changes between 2011 and 2012 are found in children's care, an increase of 13.7 per cent, and in defence, where there was a decrease of 11.9 per cent.

The increase in residents in children's homes is largely due to changing the methodology to include an estimate of the number of children who had not been in a residential placement for six months at 30 June 2012, but who would go on to stay for at least six months. While the decrease in defence establishments is mostly concentrated at the Faslane armed forces base (in Argyll and Bute), where the number of residents decreased by 713.

For all other communal establishment types the percentage change between 2011 and 2012 is less than 3.5 per cent.

4.2 Council areas

[Figure 2](#) shows how these changes impact on Council areas, comparing the total number of communal establishment residents in Scotland for 2010, 2011 and 2012 by Council area. [Table 3](#) shows the 2010 communal establishment figures for Scotland by Council area and by type of establishment.

East Dunbartonshire has by far the largest percentage change between 2011 and 2012, increasing by 136 per cent. The vast majority of this increase is due to the opening of a new prison (HMP Low Moss) in March 2012.

There are 12 other councils with a percentage change of more than 10 per cent between 2011 and 2012. These range from an increase of 42.8 per cent in the Orkney Islands, to a decrease of 14.3 per cent in the Shetland Islands. For the majority of these councils most of the change is found in the 'hotels, hostels etc.' and the 'other' categories, where the data actually reflects 10 years of change as we use census data for these categories. Argyll and Bute is an exception to this. The increase in 'hotels, hostels etc.' and 'other' is counteracted by a large decrease in the number of residents at the Faslane armed forces base, producing an overall percentage decrease of 12.8 per cent.

4.3 Age Distribution

Figure 3 shows our estimates of the total number of residents in communal establishments in 2011 and 2012 broken down into the 16 age groups used in the household projections. Table 4 shows the 2012 CE figures for each council by age group. The age distributions are similar between 2011 and 2012 for most age groups, however there are quite large differences for those aged 16-29. This is caused by differences in the age distribution in (Higher Education Statistics Agency) (HESA) data from 2010 and 2012. The age distribution from this data is used to estimate the age/gender breakdown of residents in student halls of residence, and can be seen in Table 2.

Table 2: Age distribution of higher education students, 2008, 2010 and 2012

Age Group	0-15	16-19	20-24	25-29	30+
2008	0.2%	38.2%	44.3%	10.9%	6.3%
2010	0.0%	57.5%	26.6%	7.6%	8.2%
2012	0.0%	34.6%	44.4%	12.4%	8.6%

While the age distribution has changed between 2010 and 2012, the 2012 data has a similar age distribution to the 2008 data.

Household Analysis Review Group (HARG) members are asked whether they are satisfied with methodology described in this paper for the communal establishment estimates for the 2012-based household projections, and the figures shown.

5. Next Steps

If HARG members are satisfied with the communal establishment estimates and the proposed change to the methodology regarding adult care, the communal establishment estimates will be revised and incorporated into the 2012-based household projections.

**NRS:Household Estimates and Projections Branch
May 2014**

Figure 1: Total number of residents in communal establishments in Scotland, by type of establishment, 2010-2012

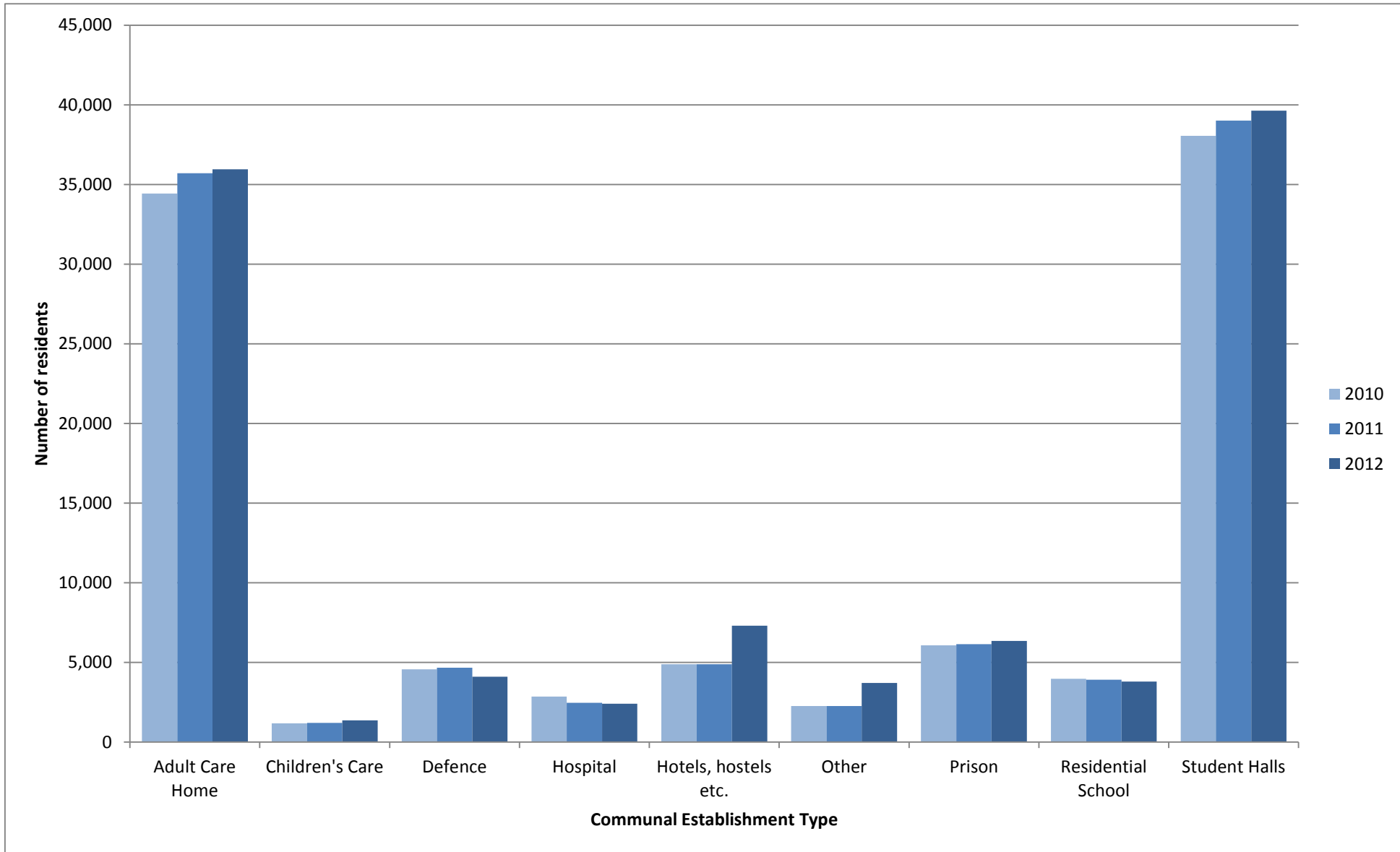


Figure 2: Total number of residents in communal establishments, by council, 2010-2012

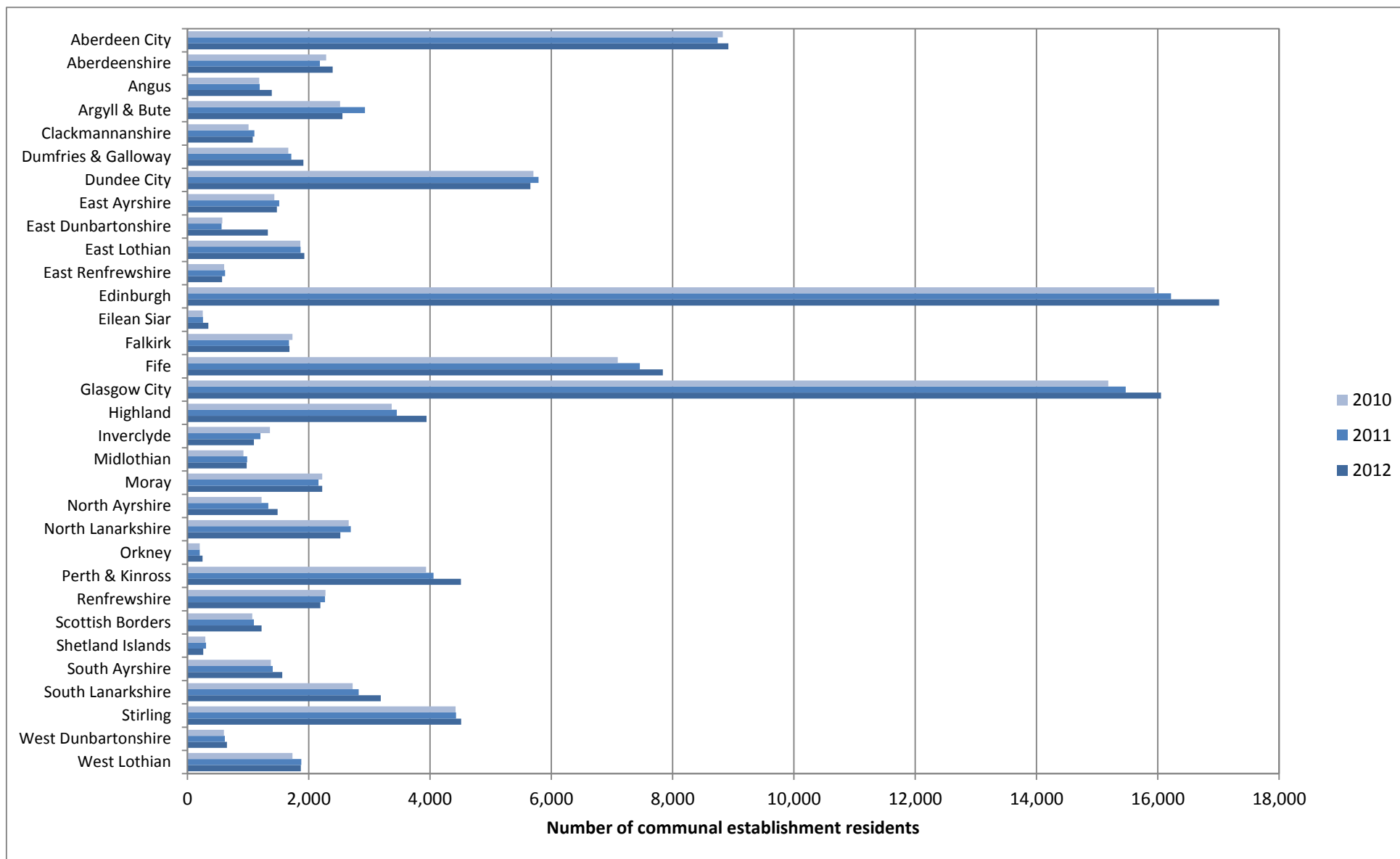


Figure 3: Total number of residents in communal establishments, by age group, 2011 and 2012

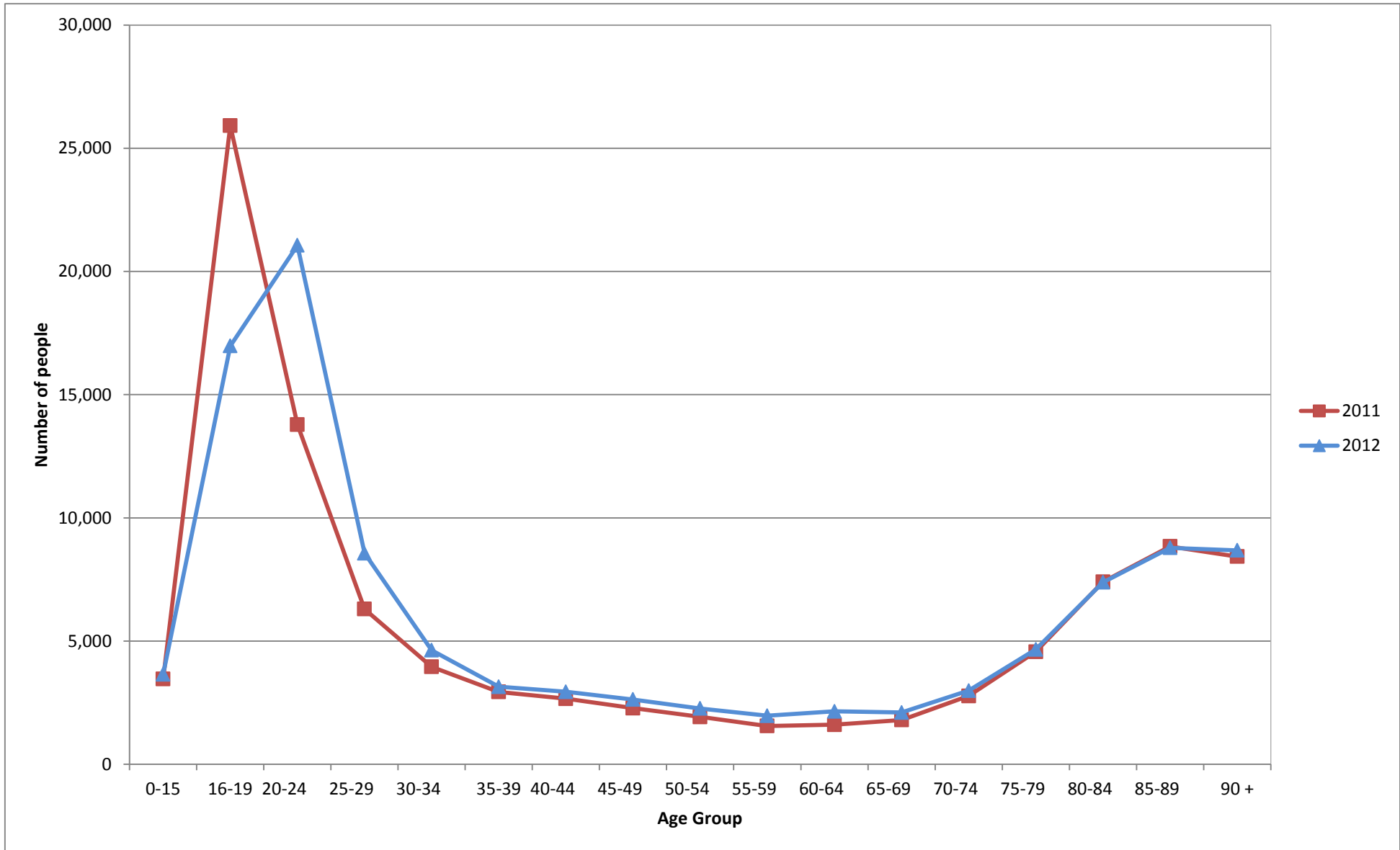


Table 3: Number of comunal establishment residents in 2012, by establishment type and council area

Council Area	Hotels, Boarding Houses, Guest Houses, Youth Hostels (except Youth hostels)										Total
	Adult Care Home	Armed Forces	Children's Care	Hospital	Hostels (except Youth hostels)	Hostels	Other	Prison	Residential School	Student Accommodation	
Aberdeen City	1,740	0	70	100	100	200	300	120	60	6,260	8,920
Aberdeenshire	1,720	20	30	20	70	270	90	140	40	0	2,390
Angus	1,020	50	0	50	10	30	190	0	20	0	1,390
Argyll & Bute	470	1,060	200	30	10	610	130	0	50	0	2,550
Clackmannanshire	280	0	0	10	10	10	10	640	110	0	1,070
Dumfries & Galloway	1,080	0	30	50	30	220	280	170	10	50	1,910
Dundee City	940	10	20	80	120	30	100	0	0	4,360	5,660
East Ayrshire	820	0	30	20	0	20	0	540	30	0	1,470
East Dunbartonshire	560	0	10	0	10	10	40	680	20	0	1,330
East Lothian	560	0	10	40	30	50	100	0	350	800	1,920
East Renfrewshire	500	0	0	40	10	0	30	0	0	0	570
Edinburgh	2,870	760	70	460	440	460	170	630	990	10,170	17,010
Eilean Siar	190	10	0	20	10	70	20	0	0	30	340
Falkirk	970	0	20	130	50	30	50	450	0	0	1,680
Fife	2,550	630	60	160	140	150	160	0	170	3,830	7,840
Glasgow City	4,320	10	170	460	610	90	280	590	20	9,510	16,050
Highland	1,830	410	200	60	90	1,070	150	70	0	70	3,940
Inverclyde	740	0	20	60	40	0	50	180	0	0	1,090
Midlothian	550	290	10	20	30	30	20	0	10	30	980
Moray	550	870	20	10	30	90	150	0	460	40	2,220
North Ayrshire	1,060	0	40	10	60	110	150	0	50	0	1,480
North Lanarkshire	1,630	0	20	90	20	10	60	560	20	120	2,520
Orkney	100	0	60	0	0	70	20	0	0	0	250
Perth & Kinross	1,390	0	0	50	130	680	460	760	980	70	4,510
Renfrewshire	1,270	0	40	80	0	10	50	0	70	670	2,190
Scottish Borders	690	0	0	30	30	190	70	0	10	200	1,220
Shetland Islands	120	0	100	10	0	30	10	0	0	0	260
South Ayrshire	950	0	20	110	80	110	110	0	0	180	1,560
South Lanarkshire	2,490	0	50	90	40	20	340	0	0	160	3,190
Stirling	600	0	30	20	0	390	50	180	310	2,940	4,510
West Dunbartonshire	520	0	10	30	30	20	40	0	0	0	650
West Lothian	850	0	20	80	50	10	40	640	30	150	1,870
Scotland	35,950	4,100	1,360	2,400	2,230	5,060	3,700	6,350	3,790	39,630	104,570

Figures rounded to the nearest 10

Table 4: Number of communal establishment residents in 2012, by age group and council area

Council Area	0-15	16-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+	Total
Aberdeen City	100	2,360	2,710	830	340	230	170	170	170	130	140	110	140	240	320	400	370	8,920
Aberdeenshire	70	50	80	80	60	70	70	80	90	90	100	80	120	210	310	430	420	2,390
Angus	20	30	40	30	20	20	30	30	40	60	60	60	90	120	220	270	260	1,390
Argyll & Bute	200	130	320	380	250	200	180	140	90	60	50	30	50	70	120	130	150	2,550
Clackmannanshire	50	60	120	130	120	100	100	80	50	30	20	20	20	40	30	50	50	1,070
Dumfries & Galloway	60	60	90	70	70	60	70	90	90	70	80	80	80	140	240	290	270	1,910
Dundee City	10	1,920	1,880	350	210	70	50	50	60	40	50	60	90	140	190	290	190	5,660
East Ayrshire	40	30	100	140	120	90	60	50	40	30	50	40	60	110	180	180	170	1,470
East Dunbartonshire	10	30	120	160	140	110	80	70	30	30	30	30	50	60	110	140	140	1,330
East Lothian	350	410	320	90	60	10	20	0	10	20	20	20	40	80	140	160	160	1,920
East Renfrewshire	0	0	0	0	0	0	0	0	10	10	10	10	30	50	100	150	180	570
Edinburgh	620	4,030	5,140	1,850	750	450	350	260	220	180	190	180	210	390	620	780	790	17,010
Eilean Siar	10	20	20	10	10	0	10	20	10	20	10	10	20	30	40	50	50	340
Falkirk	10	300	210	20	30	20	30	30	30	40	40	60	90	110	200	230	230	1,680
Fife	160	1,230	2,220	570	280	170	160	160	140	90	160	130	220	330	560	630	640	7,840
Glasgow City	150	3,550	4,190	1,690	630	400	410	320	230	240	250	290	450	610	870	910	860	16,050
Highland	210	190	350	330	220	160	160	160	170	160	170	130	120	220	340	410	410	3,940
Inverclyde	10	10	40	40	70	40	40	40	40	30	40	50	50	100	130	180	180	1,090
Midlothian	20	40	90	80	70	50	40	50	30	20	30	30	30	60	120	120	120	980
Moray	240	280	160	200	180	140	140	100	80	40	40	40	50	80	140	170	140	2,220
North Ayrshire	80	60	50	50	40	30	30	40	50	40	40	50	90	130	210	250	260	1,480
North Lanarkshire	30	70	130	140	110	100	90	80	50	50	60	70	160	250	360	420	340	2,520
Orkney	50	30	10	10	10	10	0	10	10	10	10	0	0	10	20	30	30	250
Perth & Kinross	610	530	420	440	310	200	210	160	150	120	90	90	90	140	250	330	380	4,510
Renfrewshire	80	220	260	80	50	50	50	60	40	50	50	60	100	160	270	300	320	2,190
Scottish Borders	10	90	110	60	40	50	30	30	30	40	50	40	60	90	140	170	180	1,220
Shetland Islands	70	30	0	0	0	0	0	0	10	0	10	10	20	10	20	30	40	260
South Ayrshire	30	80	140	70	30	30	40	50	40	50	50	70	70	120	210	240	250	1,560
South Lanarkshire	40	90	120	60	70	50	60	70	80	90	110	130	200	310	510	560	630	3,190
Stirling	280	870	1,450	460	190	130	150	160	110	80	70	50	40	80	100	130	150	4,510
West Dunbartonshire	10	20	0	0	10	0	10	10	10	20	20	40	50	60	110	130	140	650
West Lothian	30	160	180	130	140	110	80	60	40	30	40	40	90	130	200	220	180	1,870
Scotland	3,650	16,980	21,060	8,570	4,630	3,150	2,940	2,630	2,260	1,970	2,150	2,100	2,990	4,660	7,380	8,780	8,680	104,570

Figures rounded to the nearest 10