

2. Population

INTRODUCTION

This part of the report is divided into two main sections: 'Forecasting Model' and 'Forecasts'. The first section describes the forecasting model used and the construction of a base population at 2000 from which forecasts are made. The section goes on to detail the assumptions that were made concerning future fertility, mortality and migration.

The second section describes the results of the population forecasts, giving details of forecast population totals and changing age structures. Population change is shown in terms of its components (natural change and net migration), and the results of these 2001 forecasts are compared with previous forecasts. *Appendices* give further detailed results from the forecasts at the levels of the Structure Plan Area, Aberdeen City and Aberdeenshire.

Although the data are tabulated in units (except where indicated), this does not imply accuracy to that level. They are supplied in this way for the convenience of users wishing to analyse the data further without encountering rounding problems.

FORECASTING MODEL

This section outlines the forecasting model used to produce the population forecasts. The model (CAMPOP) was developed by Cambridgeshire County Council and has been used by the Councils in local forecasting for a considerable length of time. The model is a single zone, single year, cohort survival PC operated model. It is possible to subsequently transfer output files from CAMPOP into spreadsheets to aggregate zones and perform further analyses, and the methods used allow testing of the effect of different assumptions.

CAMPOP divides the population into three groups. The 'local' population is the main element of the population resident in the area. Fertility and death rates are applied to this group, which is then aged to the succeeding year. The 'migrant' population disaggregated by age and sex is then added at the end of the year. Net migration assumptions are used. The third element is the 'transient' population, which is used to represent the population permanently resident in the area in communal establishments, for example permanent beds in hospitals or student halls of residence. Because of the high turnover, which characterises this population, it is (usually) treated as a constant element of specified size and age structure which is not aged through with the other elements.

CAMPOP requires data on base population (in these forecasts for 2000), and a number of key assumptions. The derivation of the base population is described next. Subsequently, assumptions concerning fertility rates, mortality rates and migration are discussed.

Estimating a Population Base

An important part of the population forecasts is to estimate a population base from which the forecasts can be made. A base population age and sex structure for 2000 has been obtained for each unitary authority from the 2000 Mid Year Estimates (MYE) produced by the General Register Office for Scotland (GRO(S)). The MYE covers all persons usually resident in an area. Students are taken to be resident at their term-time address. This 2000 base total is very similar to that previously forecast for the Structure Plan Area (+162), but slightly lower in Aberdeen City (-681), and slightly higher in Aberdeenshire (+843). This is a growth since 1991 of 1.6 % in the Structure Plan Area and 5 % in Aberdeenshire, but a loss of 1.7 % in Aberdeen City.

These data have been slightly adjusted for compatibility with CAMPOP in 'mixed structure' mode, which requires single year age groups up to 24, 5-year age groups from 25 to 94, then one remaining group for 95+. Thus the final 90+ group obtained from GRO(S) for 2000 has been split based on the age distribution of patient records in the Community Health Index. Results for all age groups above 24 were then rounded to the nearest 5 persons, and numbers aged 0 were then adjusted slightly to give an overall total population, which summed to the MYE for each Council area. The final results are shown in *Figure 2.1*.

Figure 2.1 - Total Population 2000

Age	MALES			FEMALES			TOTAL		
	Aberdeen City	Aberdeenshire	Structure Plan Area	Aberdeen City	Aberdeenshire	Structure Plan Area	Aberdeen City	Aberdeenshire	Structure Plan Area
0	1,120	1,271	2,391	1,067	1,169	2,236	2,187	2,440	4,627
1	1,169	1,310	2,479	1,128	1,304	2,432	2,297	2,614	4,911
2	1,164	1,372	2,536	1,085	1,275	2,360	2,249	2,647	4,896
3	1,208	1,451	2,659	1,065	1,331	2,396	2,273	2,782	5,055
4	1,156	1,409	2,565	1,066	1,333	2,399	2,222	2,742	4,964
5	1,191	1,491	2,682	1,199	1,372	2,571	2,390	2,863	5,253
6	1,288	1,574	2,862	1,215	1,494	2,709	2,503	3,068	5,571
7	1,277	1,581	2,858	1,218	1,531	2,749	2,495	3,112	5,607
8	1,344	1,629	2,973	1,279	1,563	2,842	2,623	3,192	5,815
9	1,321	1,573	2,894	1,258	1,511	2,769	2,579	3,084	5,663
10	1,206	1,601	2,807	1,192	1,524	2,716	2,398	3,125	5,523
11	1,328	1,580	2,908	1,186	1,507	2,693	2,514	3,087	5,601
12	1,261	1,695	2,956	1,239	1,527	2,766	2,500	3,222	5,722
13	1,242	1,624	2,866	1,156	1,563	2,719	2,398	3,187	5,585
14	1,271	1,596	2,867	1,254	1,555	2,809	2,525	3,151	5,676
15	1,238	1,626	2,864	1,157	1,478	2,635	2,395	3,104	5,499
16	1,133	1,530	2,663	1,117	1,418	2,535	2,250	2,948	5,198
17	1,214	1,518	2,732	1,217	1,395	2,612	2,431	2,913	5,344
18	1,459	1,451	2,910	1,615	1,261	2,876	3,074	2,712	5,786
19	1,695	1,347	3,042	1,861	1,202	3,063	3,556	2,549	6,105
20	1,728	1,374	3,102	1,938	1,301	3,239	3,666	2,675	6,341
21	1,712	1,301	3,013	1,670	1,106	2,776	3,382	2,407	5,789
22	1,484	1,217	2,701	1,438	1,177	2,615	2,922	2,394	5,316
23	1,375	1,243	2,618	1,184	1,268	2,452	2,559	2,511	5,070
24	1,387	1,280	2,667	1,130	1,286	2,416	2,517	2,566	5,083
25-29	7,560	6,780	14,340	6,340	7,010	13,350	13,900	13,790	27,690
30-34	9,595	8,295	17,890	8,650	8,255	16,905	18,245	16,550	34,795
35-39	9,340	9,270	18,610	8,805	9,185	17,990	18,145	18,455	36,600
40-44	8,405	9,375	17,780	8,135	8,790	16,925	16,540	18,165	34,705
45-49	7,065	8,745	15,810	6,755	8,475	15,230	13,820	17,220	31,040
50-54	6,950	9,030	15,980	6,885	8,385	15,270	13,835	17,415	31,250
55-59	4,940	6,320	11,260	5,320	6,140	11,460	10,260	12,460	22,720
60-64	4,540	5,495	10,035	5,255	5,440	10,695	9,795	10,935	20,730
65-69	4,255	4,445	8,700	5,045	4,705	9,750	9,300	9,150	18,450
70-74	3,530	3,640	7,170	4,765	4,300	9,065	8,295	7,940	16,235
75-79	2,470	2,825	5,295	4,120	3,705	7,825	6,590	6,530	13,120
80-84	1,365	1,455	2,820	2,650	2,550	5,200	4,015	4,005	8,020
85-89	645	745	1,390	1,775	1,595	3,370	2,420	2,340	4,760
90-94	185	290	475	775	630	1,405	960	920	1,880
95+	35	45	80	190	185	375	225	230	455
Total	103,851	113,399	217,250	107,399	113,801	221,200	211,250	227,200	438,450

Transient Population

At the beginning of this section it was explained that CAMPOP divides the population of an area into 'local' and 'transient' components. This is important in the population forecasts because only the local component of the population is assumed to be subject to the normal demographic processes. In these forecasts the transient population is taken to represent all the population in communal establishments. The local population represents the people living in private households and thus can be used directly in the subsequent housing forecasts.

Communal establishment population totals and age/sex structure were derived from the 1991 Census of Population by subtracting the population in private households from the total population. In order to make the figures compatible with the mid year base, adjustments were made for students and armed forces. Generally, it was assumed that the population in communal establishments would remain unchanged at 2000, however the communal residents at the US Navy base at Edzell were removed. The results by 5-year age groups and 95+ were rounded to the nearest 5 persons for use with CAMPOP and are shown in *Figure 2.2*. CAMPOP derives the 2000 local (private household) population by subtracting the transient population from the total population (see *Figure 2.1*).

Figure 2.2 - Transient Population 2000

Age	MALES			FEMALES			TOTAL		
	Aberdeen City	Aberdeenshire	Structure Plan Area	Aberdeen City	Aberdeenshire	Structure Plan Area	Aberdeen City	Aberdeenshire	Structure Plan Area
0-4	20	15	35	10	5	15	30	20	50
5-9	25	10	35	20	10	30	45	20	65
10-14	50	10	60	40	15	55	90	25	115
15-19	860	145	1,005	875	65	940	1,735	210	1,945
20-24	685	150	835	735	95	830	1,420	245	1,665
25-29	195	105	300	140	45	185	335	150	485
30-34	130	60	190	90	40	130	220	100	320
35-39	95	70	165	65	30	95	160	100	260
40-44	95	60	155	50	35	85	145	95	240
45-49	90	55	145	40	30	70	130	85	215
50-54	65	55	120	35	40	75	100	95	195
55-59	70	35	105	45	40	85	115	75	190
60-64	50	40	90	35	45	80	85	85	170
65-69	70	55	125	55	60	115	125	115	240
70-74	65	80	145	90	100	190	155	180	335
75-79	75	100	175	205	210	415	280	310	590
80-84	110	145	255	380	360	740	490	505	995
85-89	85	115	200	365	380	745	450	495	945
90-94	25	50	75	245	240	485	270	290	560
95+	10	15	25	90	60	150	100	75	175
Total	2,870	1,370	4,240	3,610	1,905	5,515	6,480	3,275	9,755

Fertility Assumptions

A key demographic assumption for population forecasts is that made about future fertility. This is a particularly important assumption for the Councils' school roll forecasts (which are based in part on the population forecasts), because of its effect on future births. Fertility is more difficult to predict than mortality since it can vary much more with changes in social and economic conditions. For example, fertility levels may depend as much upon prevailing attitudes to birth control or the desirability of a second income, as upon the numbers of women of childbearing age. At a local level uncertainty about these factors is even greater.

To calculate fertility the CAMPOP model requires two types of information: the 'fertility curve' which represents the probabilities that women in particular age groups will give live birth during a specified time period (ie age specific fertility rates); and the 'total period fertility rate' (TPFR) which is obtained from the summation of the elements in the fertility curve. TPFR accounts for the overall level of fertility and represents the average number of children, which would be born per woman if women experienced the age specific rates of the period in question throughout their childbearing life span. (A TPFR of 2.1 is the level required for the long-term replacement of the population.) The assumptions made about both of these factors are described next.

- **Fertility Curve:** The fertility curve used is that for Scotland at 2000/01 derived from the 1998 based projections produced by the Government Actuary's Department (GAD). The curve is shown in *Figure 2.3*. (These probabilities are the means of the five rates for the five ages in the age group, and represent the average number of children born per woman in the age group during the year of the projection period, weighting each age equally.) These Scottish figures were used as robust estimates in the absence of reliable local data, and formed the basis of future projections for each unitary authority. CAMPOP requires the probabilities in the fertility curve to maintain the same relative sizes throughout the forecast period; ie they are proportionately adjusted.

Figure 2.3 - Fertility Curve: Scotland 2000/01

Age Group	15-19	20-24	25-29	30-34	35-39	40-44
Rate per Female	0.029	0.065	0.099	0.086	0.035	0.006

- **Estimating and Forecasting Fertility - Total Period Fertility Rate:** In the forecasting model, the age specific probabilities of giving birth are proportionately adjusted for future years according to change in the TPFR which inflates or decreases all probabilities by this common factor, before applying them to the numbers of women of childbearing age in the local population. Thus, through the TPFR, anticipated future changes in fertility levels can be taken into account. To decide what these changes may be requires a consideration of past trends.

Nationally and locally TPF_R has been declining, although more so in Aberdeenshire than Aberdeen City. *Figure 2.4* shows estimated TPF_R for the two unitary authorities based on tables (UT5(1), U3.5¹, MYE) provided by GRO(S). (TPF_R was calculated by summing the 5-year age group specific fertility rates then multiplying by 5. Rates relate to the local population of females.) A further point to notice about the local TPF_R is the lower levels in Aberdeen City. This is associated with high married female economic activity rates. The relationship with low TPF_R is not clear-cut but the likelihood is for women in work to have their children when they themselves are older.

The 1998 based projection for Scotland from the GAD is still rising, but is lower than the previous projection until 2012, then remains the same at a constant level. This current projection, after adjustment to take account of local variations observed in the period preceding the forecast, has formed the basis of forecasts for both parts of the Structure Plan Area. As a result, the forecast rates for Aberdeenshire are the same or lower than the previous 1999 Forecasts, but rates for Aberdeen City are higher than their previous values. The forecast TPF_R for the two unitary authorities are also shown in *Figure 2.4*.

It should be noted that, although based on data supplied by GRO(S) and GAD, the estimated and forecast TPF_R are higher than the equivalent figure from GRO(S). This is because TPF_R is calibrated on the basis of *local* population in these forecasts for compatibility with CAMPOP.

Figure 2.4 - Estimated and Forecast Total Period Fertility Rate

	Estimated										Forecast			
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2000/01	2001/06	2006/11	2011/16
Aberdeen City	1.54	1.52	1.48	1.48	1.35	1.41	1.44	1.50	1.52	1.44	1.55	1.60	1.65	1.70
Aberdeenshire	1.92	1.93	1.80	1.79	1.69	1.66	1.66	1.70	1.65	1.57	1.70	1.75	1.80	1.85

Mortality Assumptions

For population forecasts mortality is a less critical variable than fertility since it varies less and can be more confidently predicted. The CAMPOP model requires the input of base year mortality rates, and mortality improvement factors to allow for the trend towards declining death rates.

The base year (2000/01) mortality rates used are those for Scotland supplied by the GAD from its 1998 based projections. These rates were applied in the forecasts to each unitary authority (*Figure 2.5*).

¹ The births for 2000 were provisional. Final figures are for Aberdeen City: +10, Aberdeenshire: -10

CAMPOP requires mortality improvement factors, and the number of years over which they operate. *Figure 2.5* also shows mortality improvement factors over a 15-year period calculated from data supplied from the GAD 1998 based projections. Overall, the mortality rates assumed for this projection are similar to those used previously by the GAD.

Figure 2.5 - Mortality Rates: Scotland

Age	Rate per 1,000 2000/01		Improvement Factors (%) 2000/01 to 2015/16 (15 years)	
	Males	Females	Males	Females
From Birth	4.23	3.64	39	39
2	0.26	0.17	23	43
7	0.13	0.08	19	47
12	0.24	0.13	15	28
17	0.96	0.33	12	10
22	1.08	0.36	9	26
27	1.32	0.45	-1	15
32	1.43	0.63	8	1
37	1.57	0.99	24	2
42	2.66	1.64	4	6
47	4.00	2.61	12	12
52	6.83	4.29	26	16
57	11.57	6.91	25	16
62	17.91	10.63	21	15
67	28.77	17.38	23	19
72	47.67	30.19	26	24
77	74.04	48.32	25	23
82	115.71	82.06	21	18
87	171.04	133.58	16	10
92	243.63	182.29	13	6
95+	338.94	275.28	11	8

Migration Assumptions

As with fertility, migration assumptions are of great importance to population forecasting and are another area of major uncertainty. Unlike births and deaths, legally recorded migration is not available on an annual basis. The CAMPOP model handles migration through the input of data on the relative age/sex structure of net migrants (the difference between in and out-migrants), and the overall level of net migration for each forecast year. Each element is considered in turn.

The handling of net migration age/sex structure by CAMPOP is not straightforward. Because of the constraints imposed by a relative age/sex structure with each input/output element rounded to the nearest 5 persons, it is not always possible to achieve a total net migration target assumption exactly. Iteration may be required in order to seek convergence on a target figure by trial and error elimination.

- **Age/Sex Structure of Net Migration:** The CAMPOP model requires a net migration structure by sex and 5-year age group to 95+. This is a relative structure which is then adjusted in forecast years to approximate target net migration totals in order to arrive at forecast migration levels for the age/sex groups.

Net migration structures by age and sex for Aberdeen City and Aberdeenshire were used in the GRO(S) 1998 based population projections. These structures for 2000/01 were aggregated to the age groups discussed above and then rounded to the nearest 5 persons for use with CAMPOP. The results are shown in *Figure 2.6*.

Figure 2.6 - Relative Age and Sex Structure of Net Migration

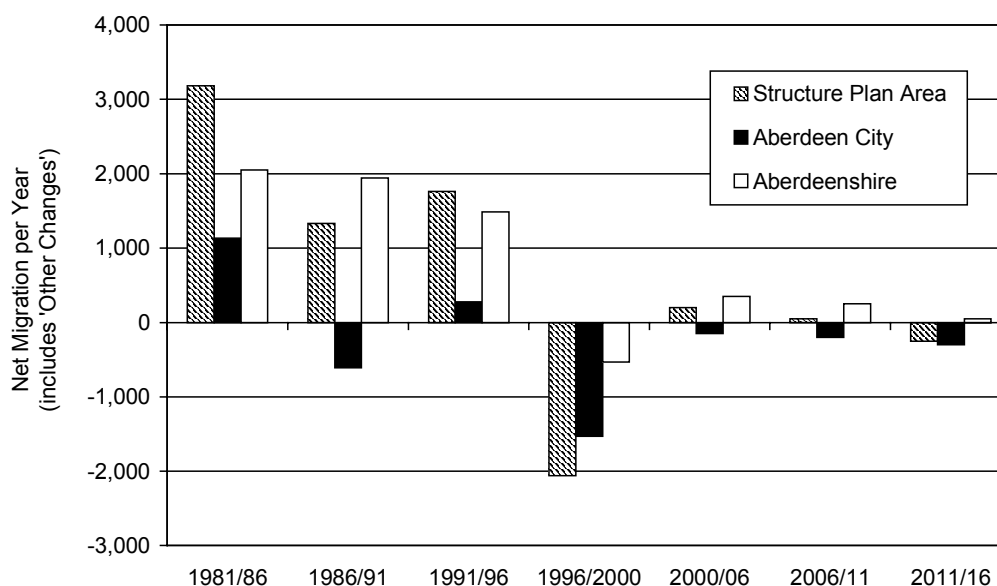
Age	MALES			FEMALES			TOTAL		
	Aberdeen City	Aberdeenshire	Structure Plan Area	Aberdeen City	Aberdeenshire	Structure Plan Area	Aberdeen City	Aberdeenshire	Structure Plan Area
0-4	-60	30	-30	-35	50	15	-95	80	-15
5-9	-15	10	-5	-20	-5	-25	-35	5	-30
10-14	-5	-20	-25	-5	-30	-35	-10	-50	-60
15-19	430	-145	285	680	-205	475	1110	-350	760
20-24	-150	-50	-200	-510	55	-455	-660	5	-655
25-29	-215	40	-175	-245	85	-160	-460	125	-335
30-34	-145	75	-70	-110	85	-25	-255	160	-95
35-39	-30	40	10	-15	-25	-40	-45	15	-30
40-44	-40	25	-15	-10	10	0	-50	35	-15
45-49	-10	-10	-20	-10	-10	-20	-20	-20	-40
50-54	-40	-5	-45	-25	-5	-30	-65	-10	-75
55-59	-35	-5	-40	-30	0	-30	-65	-5	-70
60-64	-30	-5	-35	-20	-10	-30	-50	-15	-65
65-69	-15	5	-10	-10	5	-5	-25	10	-15
70-74	-10	10	0	-5	10	5	-15	20	5
75-79	-5	10	5	0	15	15	-5	25	20
80-84	0	10	10	-10	15	5	-10	25	15
85-89	-5	5	0	-10	5	-5	-15	10	-5
90-94	0	0	0	0	0	0	0	0	0
95+	0	0	0	0	0	0	0	0	0
Total	-380	20	-360	-390	45	-345	-770	65	-705

- **Forecast Net Migration Levels:** Past trends derived from estimates made by GRO(S) are shown in *Figure 2.7*. The migration target assumptions input to the forecasting model are also shown in this figure.

These target assumptions take account of various factors.

- As a starting point, the local relationship between past change in total employment and net migration was used in examining the current forecasts of total employment change. However, a deterministic relationship between employment change and net migration was **not** assumed. The relationship is fairly weak, and there are doubts over the accuracy of both past employment and net migration estimates. Also, because of the heterogeneous nature of employment, and the extent of part-time working and multiple jobbing particularly in the modern service sector, the past does not always provide such a clear guide to the future.
- It was assumed that GRO(S) has overestimated migration overseas from Grampian Health Board Area in 1995/98. Migration, and particularly overseas migration, is acknowledged even by GRO(S) as being the weakest part of its population estimation method. GRO(S) is making improvements to migration estimation: Community Health Index data were used for the first time in the 1999/2000 council area estimates (although without any consultation with local authorities). Meanwhile, it is best to assume that major short-term apparent fluctuations in estimates of net migration should in fact be spread over a period of several earlier years.
- Considerations about relative future levels of economic conditions in North East Scotland compared to the rest of the UK.
- The travel to work balance between Aberdeen City and Aberdeenshire has been taken into account. However, because the Structure Plan Area is a nodal region, it is likely that net migration forecasts at that level will be more accurate than at the level of its component parts.

Figure 2.7 - Past Migration Trends and Target Migration Assumptions



The forecast net migration assumptions output from the model are shown in Figure 2.8. This table also includes an allowance (-125) for the effect on the transient population (resident population in communal establishments) of the planned scaling down of RAF Buchan at Boddam in late 2004. Future net migration is now assumed to be very different from GRO(S) estimates of the recent past. Levels over the forecast period are assumed to be much lower, with a slowly increasing loss in Aberdeen City and a slowly decreasing gain in Aberdeenshire. In the Structure Plan Area, the net figure declines from positive in the first two periods to negative in the last. These forecast figures are more positive than those in the 1999 Update. The current 1996/2000 per annum loss estimated for the Structure Plan Area is over 1,200 lower than the 1996/98 per annum estimate, which appeared in the 1999 Update. The forecast figures are similar to the 1997 Update in Aberdeen City, while in Aberdeenshire they show a somewhat lower gain. However, the 1996/2001 per annum forecasts in the 1997 Update were much more positive than the current 1996/2000 per annum estimates.

Figure 2.8 - Net Migration Assumptions per Annum (Mean)

	2000/06	2006/11	2011/16
Structure Plan Area	194	45	-250
Aberdeen City	-145	-200	-300
Aberdeenshire	339	245	50

The margins of error in such forecast net migration figures mean that since the current net figures are all close to zero (when compared with past estimates), they could easily become a gain rather than a loss, for example in Aberdeen City where positive policy intervention could have a significant impact. (The forecast losses were based in part on recent past estimates.) It should also be noted that this difference from zero in net migration has a minimal effect on forecasts of total households in either council area. Another important point, of course, is that these small net figures could hide large in and out-migration flows which almost balance. For example, the National Health Service Central Register in 1995/96 (excluding armed forces and overseas migrants) showed 13,054 moves into Grampian Health Board Area (including Moray) and 13,043 moves out, giving a net gain of 11.

Age and sex structure from the 2001 Census of Population will be used by GRO(S) in the calculation of the 2001 MYE which should be published in August 2002, and more detailed Census results should hopefully be delivered by March 2003. These should reduce some of the uncertainty.

FORECASTS

Population Totals

The estimated (GRO(S) MYE) and forecast total populations for the Structure Plan Area and each Council area are shown in *Figure 2.9*. It can be seen that the population of the Structure Plan Area is forecast to increase slightly by 5,092 (1.2%) between 2000 and 2016. By individual authorities, a small decline is forecast to occur in Aberdeen City: 2,935 (1.4%) over the 16 year period, whilst Aberdeenshire is forecast to increase by 8,027 (3.5%).

Components of Population Change

The extent to which estimated (GRO(S) MYE) and forecast total population change can be attributed to each of its components of births, deaths and net migration is considered next. *Figure 2.10* summarises these changes for the Structure Plan Area. (Estimated net migration includes 'other changes'; forecast net migration includes any change to the transient total.) The numbers of both births and deaths will increase slightly over the forecast period, but overall there will be population growth due to natural increase. There will be decreasing net migration gain until 2011, then net migration loss. This is now less significant than natural change. Corresponding forecast figures for each constituent Council area are given in *Appendix 1*.

Figure 2.9 - Estimated and Forecast Total Population

	Aberdeen City	Aberdeenshire	Structure Plan Area
1981	212,494	188,923	401,417
1982	213,350	192,600	405,950
1983	214,560	195,330	409,890
1984	214,800	198,630	413,430
1985	215,780	201,370	417,150
1986	217,500	202,890	420,390
1987	214,580	205,320	419,900
1988	212,720	206,380	419,100
1989	213,180	210,340	423,520
1990	213,610	212,450	426,060
1991	214,950	216,460	431,410
1992	216,520	220,530	437,050
1993	218,220	223,630	441,850
1994	219,090	226,060	445,150
1995	219,120	226,530	445,650
1996	217,260	227,430	444,690
1997	215,930	226,440	442,370
1998	213,070	226,260	439,330
1999	212,650	227,440	440,090
2000	211,250	227,200	438,450
2001	211,244	227,912	439,156
2002	211,247	228,664	439,911
2003	211,182	229,382	440,564
2004	211,052	230,068	441,120
2005	210,869	230,592	441,461
2006	210,648	231,206	441,854
2007	210,414	231,753	442,167
2008	210,176	232,284	442,460
2009	209,923	232,797	442,720
2010	209,657	233,290	442,947
2011	209,382	233,757	443,139
2012	209,100	234,087	443,187
2013	208,863	234,402	443,265
2014	208,662	234,702	443,364
2015	208,480	234,985	443,465
2016	208,315	235,227	443,542

*Figure 2.10 - Estimated and Forecast Components of Population Change:
Structure Plan Area*

	Population	Births	Deaths	Natural Change	Net Migration	Total Change
1981	401,417					
1982	405,950	5,326	4,791	535	3,998	4,533
1983	409,890	5,282	4,666	616	3,324	3,940
1984	413,430	5,198	4,597	601	2,939	3,540
1985	417,150	5,324	4,696	628	3,092	3,720
1986	420,390	5,489	4,818	671	2,569	3,240
1987	419,900	5,394	4,555	839	-1,329	-490
1988	419,100	5,453	4,316	1,137	-1,937	-800
1989	423,520	5,349	4,646	703	3,717	4,420
1990	426,060	5,341	4,830	511	2,029	2,540
1991	431,410	5,588	4,420	1,168	4,182	5,350
1992	437,050	5,673	4,438	1,235	4,405	5,640
1993	441,850	5,616	4,576	1,040	3,760	4,800
1994	445,150	5,534	4,691	843	2,457	3,300
1995	445,650	5,249	4,458	791	-291	500
1996	444,690	4,956	4,408	548	-1,508	-960
1997	442,370	5,009	4,348	661	-2,981	-2,320
1998	439,330	4,892	4,303	589	-3,629	-3,040
1999	440,090	4,935	4,443	492	268	760
2000	438,450	4,616	4,351	265	-1,905	-1,640
2001	439,156	4,742	4,251	491	215	706
2002	439,911	4,808	4,268	540	215	755
2003	440,564	4,722	4,284	438	215	653
2004	441,120	4,641	4,300	341	215	556
2005	441,461	4,561	4,310	251	90	341
2006	441,854	4,506	4,328	178	215	393
2007	442,167	4,640	4,372	268	45	313
2008	442,460	4,635	4,387	248	45	293
2009	442,720	4,625	4,410	215	45	260
2010	442,947	4,612	4,430	182	45	227
2011	443,139	4,599	4,452	147	45	192
2012	443,187	4,780	4,482	298	-250	48
2013	443,265	4,821	4,493	328	-250	78
2014	443,364	4,855	4,506	349	-250	99
2015	443,465	4,883	4,532	351	-250	101
2016	443,542	4,872	4,545	327	-250	77

Population Structure

So far, the main results of the forecasts have been given in terms of population totals and components of change. It is also important to consider the changing age structure of future populations. Forecast age structures will themselves influence future population totals and components of change by producing different numbers of births and deaths. They are also important for various local authority services (for example, education and social work) and finance. Furthermore, changes in the number of people in certain age groups may run contrary to changes in both the population totals and other age groups.

Figure 2.11 shows estimated (GRO(S) MYE) and forecast populations by different client age groups for the Structure Plan Area. Results for each forecast year for the Structure Plan Area and each constituent Council area are shown in *Appendix 2*. Similarly, forecast age/sex structures by 5-year age groups are given in *Appendix 3*.

*Figure 2.11 - Estimated and Forecast Age Structure by Client Groups:
Structure Plan Area*

Age Group	1981	1986	1991	1996	2000	2001	2006	2011	2016	% Change 2000/16
0-4	25,180	26,768	27,541	27,302	24,453	24,248	23,271	23,110	24,161	-1.2
5-11	39,293	36,716	38,345	39,738	39,033	38,361	34,382	32,565	32,054	-17.9
12-15	25,162	24,020	20,819	21,909	22,482	23,146	23,089	20,175	19,246	-14.4
16-29	91,169	100,210	96,637	89,455	77,722	77,581	81,603	86,353	85,320	9.8
30-44	78,343	89,611	98,852	105,161	106,100	104,498	95,010	83,090	75,270	-29.1
45-Ret	74,462	75,155	78,934	89,319	95,045	96,952	105,960	112,218	112,675	18.5
60/65-74	44,596	42,751	43,790	45,068	45,380	45,471	47,043	52,041	58,823	29.6
75+	23,212	25,159	26,492	26,738	28,235	28,899	31,496	33,587	35,993	27.5
Total	401,417	420,390	431,410	444,690	438,450	439,156	441,854	443,139	443,542	1.2

- **Client Age Groups:** The changes described below refer to the Structure Plan Area and there may be different trends for any age group in each particular unitary authority. Examining the detailed figures given in *Appendix 2* can check these.

Pre-school (0-4)

The number of pre-school age children in the Structure Plan Area increased from 1981 to 1991 then decreased to 2000, and is forecast to decline further until 2009 before increasing.

Primary School (5-11)

The number of children of primary school age declined between 1981 and 1986. There has, however, subsequently been an increase to 1996 declining slightly to 2000. Numbers are now forecast to decrease by 17.9% between 2000 and 2016.

Secondary School (12-15)

The numbers of children 12-15 decreased between 1981 and 1991. There was then an increase to 2000. Numbers are expected to increase slightly by 2006 before declining.

Younger Workers (16-29)

Between 1981 and 1986 there had been an increase in the number of younger workers followed by a decline to 2000. Between 2000 and 2001 a slight decrease is forecast before an upturn to 2014 then a decline.

Middle Aged Workers (30-44)

Between 1981 and 2000 there was an increase in this age group, but this group now shows the largest forecast decline in the period 2000/16 of 29.1%.

Older Workers (45-Retirement)

Numbers have increased since 1981, and this age group shows a forecast growth in the period 2000/16 of 18.5%.

Younger Retired (60/65-74)

Numbers declined between 1981 and 1986 before subsequent growth to 2000. Forecast numbers show the largest growth 2000/16 of 29.6%.

More Elderly (75+)

This is an important age group for local authority service provision. Since 1981 numbers have increased, and from 2000 to 2016 a further increase of 27.5% is forecast.

Figures 2.12 and 2.13 summarise the position at Structure Plan Area level. Total population 1981/96 is estimated to have increased by 10.8% (the peak was 1995). The forecast 2000/16 increase of 1.2% is insufficient to replace the estimated loss 1996/2000. Most of the estimated gain 1981/96 was in the 30-retired age groups. Most of the estimated loss 1996/2000 was in the 16-29 group, although this group had been losing population since 1986. Forecast gains in this 16-29 group will not bring numbers up to the 1996 level. The scale of the forecast losses in the 30-44 age group is clear, as are the gains in the groups aged 45+. There are forecast losses at primary and secondary school stages (the latter after 2006), but the pre-school age group shows some stability.

Figure 2.12 - Estimated and Forecast Total Population:
Structure Plan Area

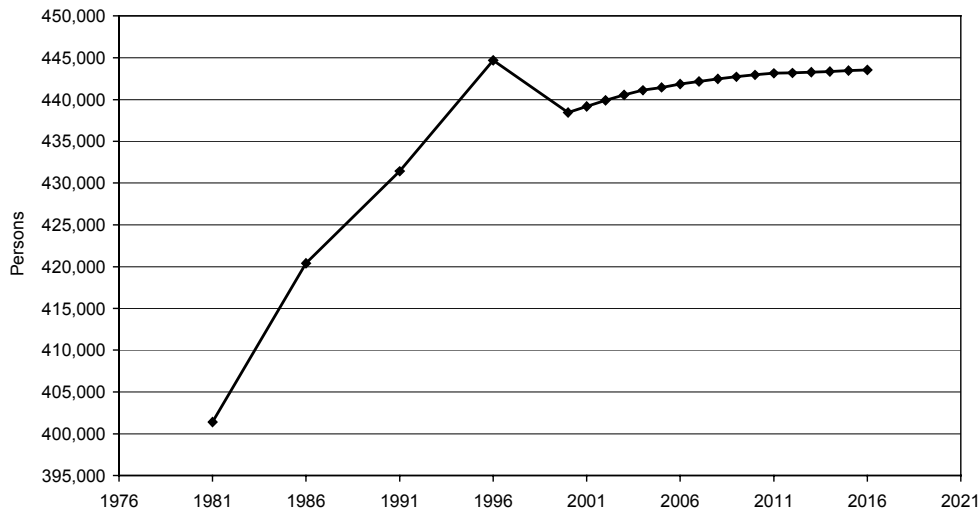
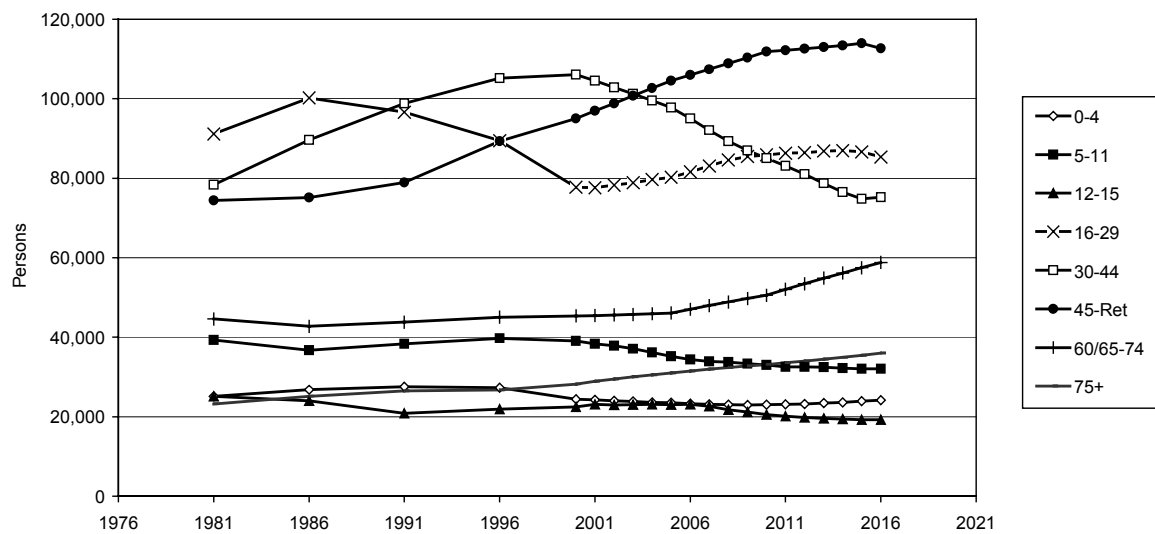


Figure 2.13 - Estimated and Forecast Age Structure by Client Groups:
Structure Plan Area



Comparison with Other Forecasts

A comparison has been made in broad terms of the results from the current forecasts with the previous Council forecasts (1999) and the most recent GRO(S) projections (1998 based, released from the end of February 2000), for which full results are available for the two Council areas. Both the assumptions and the results of the forecasts are examined. Because of the different base years, the results are looked at in terms of change.

- Assumptions:** Figure 2.14 shows the main assumptions behind the three sets of forecasts. The current forecasts show higher fertility rates in Aberdeen City and introduce some slight net migration gain instead of loss 2000/11 in the Structure Plan Area with a lower net migration loss 2011/16, when compared with the previous 1999 Council forecasts. (These previous net migration forecasts were in contrast lower than the earlier 1997 Update figures). Such changes in net migration assumptions over successive two-year periods, do illustrate the dynamic nature of the local economy, the uncertainty about the local future, and the need for continuing regular forecast updates. As well as providing guidance, forecasts also give an opportunity to attempt to intervene to affect the outcome. The GRO(S) projections at Structure Plan Area level used net migration assumptions which are essentially the same as those used in the 1999 Council forecasts from 2006. Otherwise, the GRO(S) projections are not designed to be compatible with forecasts of employment and housing. 2000 based projections from GRO(S) are due to be available in March next year. The Councils' 2001 Update forecasts incorporate local knowledge, and are produced to a timescale which aims to meet local needs, for example the Development Plan process. The Census of Population is held every 10 years. The Councils' next set of forecasts will be able to incorporate results from the 2001 Census.

Figure 2.14 - Comparison of Main Assumptions in Recent Forecasts

	Period	Fertility (TPFR)	Mortality	Net Migration	
Current 2001	2000-16	Aberdeen City rising to	GAD 1998 based	2000/06	194 pa
		1.70 from 2011	Scottish rates	2006/11	45 pa
		Aberdeenshire rising to		2011/16	-250 pa
		1.85 from 2011			
GRO(S) 2000	1998-2016	Aberdeen City rising to	Localised from	2000/06	-700 pa
		1.58 from 2012	GAD 1998 based	2006/11	-700 pa
		Aberdeenshire rising to	Scottish rates	2011/16	-700 pa
		1.88 from 2012			
Previous 1999	1998-2016	Aberdeen City rising to	GAD 1996 based	2000/06	-549 pa
		1.60 from 2006	Scottish rates	2006/11	-730 pa
		Aberdeenshire rising to		2011/16	-730 pa
		1.85 from 2006			

- Results:** The different assumptions behind the forecasts show through in the different results for the Structure Plan Area (Figure 2.15). The GRO(S) projections produced in 2000 are relatively similar to the previous 1999 Council forecasts, but the current 2001 forecasts now show population gains.

Figure 2.15 - Comparison of Forecast Population Changes: Structure Plan Area

	2000/01	2001/06	2006/11	2011/16
Current 2001 (2000 Base)	706	2,698	1,285	403
GRO(S) 2000 (1998 Base)	-279	-2,138	-2,776	-3,080
Previous 1999 (1998 Base)	-736	-1,571	-4,517	-5,382

Figure 2.16 compares the previous Council forecasts with the current forecasts for each authority. The table shows that overall the current forecasts now suggest population gain between 2000 and 2016, as opposed to the loss previously predicted in the 1999 Forecasts. A lower loss from Aberdeen City is now forecast, whilst the previous slight loss in Aberdeenshire is now a significant gain. The table also compares the GRO(S) projections with the current forecasts. The results are again quite different except in Aberdeenshire, since GRO(S) was using essentially the same net migration assumptions at Structure Plan Area level as in the previous 1999 Council forecasts from 2006.

Figure 2.16 - Comparison of Forecast Population Change 2000/16

	Previous 1999	GRO(S) 2000	Current 2001
Structure Plan Area	-12,206	-8,273	5,092
Aberdeen City	-11,870	-15,608	-2,935
Aberdeenshire	-336	7,335	8,027

Implications of Population Change

The current population forecasts begin from a 2000 base total very similar to that previously forecast for the Structure Plan Area (+162), but slightly lower in Aberdeen City (-681), and slightly higher in Aberdeenshire (+843). The population is now expected to change during the forecast period by +1.2% in the Structure Plan Area, -1.4% in Aberdeen City and +3.5% in Aberdeenshire. Within these overall changes there will be more significant changes to the composition of the population. For example, in the Structure Plan Area there is forecast to be a decline of 17.9% in the number of primary school age children (Aberdeen City -22.0%, Aberdeenshire -14.5%), but an increase of 29.6% in the population aged 60/65-74 (Aberdeenshire 47.6%, Aberdeen City 11.9%).

The results of the population forecasts carry a number of implications for the general planning of local authority services. These implications are briefly outlined for other forecasts carried out by the planning services in Aberdeen City and Aberdeenshire Councils: housing, school rolls, and small area populations.

- ***Housing Forecasts:*** The population forecasts form an input to the forecasts of households and housing requirements. The household forecasts take as their base the forecast number of the local population in ten age groups, namely 16-24, 25-29, 30-34, 35-44, 45-54, 55-59, 60-64, 65-74, 75-84, 85+. Forecasts of the numbers of people in these age groups are combined with headship rate projections to give household forecasts. More detail is given in the part devoted to housing in this Report.
- ***School Roll Forecasts:*** The main population forecasts provide future numbers of children of school age, both for primary schools (5-11) and secondary schools up to leaving age (12-15). Each year, the planning departments forecast school rolls for the general administration of the education services of the authorities, and also as an input to land use planning. The forecasts are made by school by class year. They are controlled to the forecasts of the numbers of children in the two age groups mentioned.
- ***Small Area Population Forecasts:*** The forecast population totals are used to provide control totals for the small area population forecasts made for the electoral wards in the two Council areas.

Appendix 1 - Components of Population Change

Aberdeen City

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Population	211,250	211,244	211,247	211,182	211,052	210,869	210,648	210,414	210,176	209,923	209,657	209,382	209,100	208,863	208,662	208,480	208,315
Births		2,239	2,249	2,181	2,116	2,059	2,017	2,077	2,070	2,057	2,043	2,038	2,140	2,178	2,211	2,235	2,245
Deaths		2,100	2,101	2,101	2,101	2,097	2,093	2,111	2,108	2,110	2,109	2,113	2,122	2,115	2,112	2,117	2,110
Natural Change		139	148	80	15	-38	-76	-34	-38	-53	-66	-75	18	63	99	118	135
Net Migration*		-145	-145	-145	-145	-145	-145	-200	-200	-200	-200	-200	-300	-300	-300	-300	-300
Transients		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Change		-6	3	-65	-130	-183	-221	-234	-238	-253	-266	-275	-282	-237	-201	-182	-165
Index	100	100	100	100	99.9	99.8	99.7	99.6	99.5	99.4	99.2	99.1	99	98.9	98.8	98.7	98.6

Aberdeenshire

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Population	227,200	227,912	228,664	229,382	230,068	230,592	231,206	231,753	232,284	232,797	233,290	233,757	234,087	234,402	234,702	234,985	235,227
Births		2,503	2,559	2,541	2,525	2,502	2,489	2,563	2,565	2,568	2,569	2,561	2,640	2,643	2,644	2,648	2,627
Deaths		2,151	2,167	2,183	2,199	2,213	2,235	2,261	2,279	2,300	2,321	2,339	2,360	2,378	2,394	2,415	2,435
Natural Change		352	392	358	326	289	254	302	286	268	248	222	280	265	250	233	192
Net Migration*		360	360	360	360	360	360	245	245	245	245	245	50	50	50	50	50
Transients		0	0	0	0	-125	0	0	0	0	0	0	0	0	0	0	0
Total Change		712	752	718	686	524	614	547	531	513	493	467	330	315	300	283	242
Index	100	100.3	100.6	101	101.3	101.5	101.8	102	102.2	102.5	102.7	102.9	103	103.2	103.3	103.4	103.5

Structure Plan Area

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Population	438,450	439,156	439,911	440,564	441,120	441,461	441,854	442,167	442,460	442,720	442,947	443,139	443,187	443,265	443,364	443,465	443,542
Births		4,742	4,808	4,722	4,641	4,561	4,506	4,640	4,635	4,625	4,612	4,599	4,780	4,821	4,855	4,883	4,872
Deaths		4,251	4,268	4,284	4,300	4,310	4,328	4,372	4,387	4,410	4,430	4,452	4,482	4,493	4,506	4,532	4,545
Natural Change		491	540	438	341	251	178	268	248	215	182	147	298	328	349	351	327
Net Migration*		215	215	215	215	215	215	45	45	45	45	45	-250	-250	-250	-250	-250
Transients		0	0	0	0	-125	0	0	0	0	0	0	0	0	0	0	0
Total Change		706	755	653	556	341	393	313	293	260	227	192	48	78	99	101	77
Index	100	100.2	100.3	100.5	100.6	100.7	100.8	100.8	100.9	101.0	101.0	101.1	101.1	101.1	101.1	101.1	101.2

Key: * relates to Local Population

Appendix 2 - Total Population by Client Group

Aberdeen City

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Change 2000/16
0-4	11,228	11,162	11,071	10,952	10,736	10,590	10,369	10,197	10,087	10,029	10,013	10,034	10,097	10,204	10,357	10,548	10,754	-4.2
5-11	17,502	17,183	17,017	16,623	16,224	15,834	15,476	15,248	15,124	14,900	14,660	14,346	14,217	14,049	13,858	13,721	13,644	-22.0
12-15	9,818	10,533	10,398	10,580	10,699	10,671	10,762	10,540	10,114	9,858	9,562	9,417	9,310	9,209	9,158	9,007	8,917	-9.2
16-29	40,257	39,801	40,152	40,450	40,921	41,476	42,464	43,649	44,608	45,082	45,384	45,839	46,248	47,054	47,737	48,048	47,526	18.1
30-44	52,930	52,005	51,024	49,986	48,889	47,738	45,738	43,694	41,919	40,509	39,284	37,793	36,134	34,149	32,293	30,890	31,117	-41.2
45-Ret	42,455	43,376	44,302	45,232	46,165	47,095	47,997	48,904	49,821	50,749	51,684	52,298	52,885	53,447	53,981	54,483	53,812	26.8
60/65-74	22,850	22,652	22,470	22,297	22,136	21,980	22,130	22,278	22,430	22,580	22,724	23,176	23,617	24,059	24,493	24,918	25,571	11.9
75+	14,210	14,532	14,813	15,062	15,282	15,485	15,712	15,904	16,073	16,216	16,346	16,479	16,592	16,692	16,785	16,865	16,974	19.5
Total	211,250	211,244	211,247	211,182	211,052	210,869	210,648	210,414	210,176	209,923	209,657	209,382	209,100	208,863	208,662	208,480	208,315	-1.4

Aberdeenshire

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Change 2000/16
0-4	13,225	13,086	12,940	12,890	12,838	12,916	12,902	12,896	12,912	12,947	13,008	13,076	13,138	13,204	13,271	13,344	13,407	1.4
5-11	21,531	21,178	20,855	20,465	19,954	19,369	18,906	18,697	18,590	18,408	18,315	18,219	18,344	18,390	18,383	18,394	18,410	-14.5
12-15	12,664	12,613	12,558	12,428	12,379	12,387	12,327	12,097	11,644	11,330	10,947	10,758	10,517	10,313	10,277	10,234	10,329	-18.4
16-29	37,465	37,780	38,101	38,421	38,740	38,781	39,139	39,445	39,964	40,387	40,496	40,514	40,189	39,764	39,243	38,610	37,794	0.9
30-44	53,170	52,493	51,846	51,230	50,643	50,073	49,272	48,397	47,411	46,442	45,740	45,297	44,879	44,567	44,204	43,907	44,153	-17.0
45-Ret	52,590	53,576	54,559	55,534	56,500	57,453	57,963	58,493	59,041	59,608	60,188	59,920	59,711	59,561	59,465	59,418	58,863	11.9
60/65-74	22,530	22,819	23,125	23,442	23,769	24,100	24,913	25,692	26,437	27,143	27,814	28,865	29,862	30,807	31,698	32,540	33,252	47.6
75+	14,025	14,367	14,680	14,972	15,245	15,513	15,784	16,036	16,285	16,532	16,782	17,108	17,447	17,796	18,161	18,538	19,019	35.6
Total	227,200	227,912	228,664	229,382	230,068	230,592	231,206	231,753	232,284	232,797	233,290	233,757	234,087	234,402	234,702	234,985	235,227	3.5

Structure Plan Area

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	% Change 2000/16
0-4	24,453	24,248	24,011	23,842	23,574	23,506	23,271	23,093	22,999	22,976	23,021	23,110	23,235	23,408	23,628	23,892	24,161	-1.2
5-11	39,033	38,361	37,872	37,088	36,178	35,203	34,382	33,945	33,714	33,308	32,975	32,565	32,561	32,439	32,241	32,115	32,054	-17.9
12-15	22,482	23,146	22,956	23,008	23,078	23,058	23,089	22,637	21,758	21,188	20,509	20,175	19,827	19,522	19,435	19,241	19,246	-14.4
16-29	77,722	77,581	78,253	78,871	79,661	80,257	81,603	83,094	84,572	85,469	85,880	86,353	86,437	86,818	86,980	86,658	85,320	9.8
30-44	106,100	104,498	102,870	101,216	99,532	97,811	95,010	92,091	89,330	86,951	85,024	83,090	81,013	78,716	76,497	74,797	75,270	-29.1
45-Ret	95,045	96,952	98,861	100,766	102,665	104,548	105,960	107,397	108,862	110,357	111,872	112,218	112,596	113,008	113,446	113,901	112,675	18.5
60/65-74	45,380	45,471	45,595	45,739	45,905	46,080	47,043	47,970	48,867	49,723	50,538	52,041	53,479	54,866	56,191	57,458	58,823	29.6
75+	28,235	28,899	29,493	30,034	30,527	30,998	31,496	31,940	32,358	32,748	33,128	33,587	34,039	34,488	34,946	35,403	35,993	27.5
Total	438,450	439,156	439,911	440,564	441,120	441,461	441,854	442,167	442,460	442,720	442,947	443,139	443,187	443,265	443,364	443,465	443,542	1.2

Appendix 3 - Total Population by Sex and 5-Year Age Group - Aberdeen City

Males	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0-4	5,817	5,758	5,662	5,585	5,480	5,406	5,293	5,205	5,149	5,120	5,112	5,123	5,155	5,210	5,288	5,385	5,490
5-9	6,421	6,242	6,085	5,944	5,790	5,677	5,618	5,522	5,445	5,340	5,266	5,153	5,065	5,009	4,980	4,972	4,983
10-14	6,308	6,358	6,458	6,470	6,424	6,401	6,222	6,065	5,924	5,770	5,657	5,598	5,502	5,425	5,320	5,246	5,133
15-19	6,739	7,002	7,366	7,888	8,452	8,682	8,732	8,822	8,826	8,774	8,748	8,568	8,397	8,245	8,084	7,965	7,903
20-24	7,686	7,836	7,891	7,721	7,375	7,248	7,514	7,870	8,382	8,934	9,152	9,193	9,278	9,275	9,214	9,178	8,987
25-29	7,560	7,163	6,765	6,488	6,446	6,430	6,578	6,627	6,455	6,108	5,979	6,238	6,582	7,079	7,617	7,828	7,863
30-34	9,595	9,046	8,489	7,924	7,351	6,770	6,374	5,982	5,705	5,663	5,646	5,786	5,826	5,650	5,302	5,167	5,417
35-39	9,340	9,344	9,330	9,299	9,250	9,184	8,642	8,091	7,530	6,959	6,381	5,992	5,606	5,334	5,288	5,266	5,401
40-44	8,405	8,537	8,673	8,812	8,953	9,097	9,101	9,088	9,058	9,011	8,946	8,407	7,860	7,304	6,741	6,171	5,787
45-49	7,065	7,295	7,522	7,745	7,962	8,174	8,304	8,437	8,573	8,713	8,856	8,862	8,850	8,822	8,776	8,712	8,181
50-54	6,950	6,892	6,843	6,802	6,772	6,749	6,979	7,203	7,424	7,637	7,845	7,974	8,108	8,244	8,384	8,526	8,534
55-59	4,940	5,260	5,578	5,896	6,211	6,525	6,472	6,430	6,395	6,373	6,356	6,584	6,806	7,025	7,234	7,437	7,567
60-64	4,540	4,539	4,532	4,520	4,501	4,475	4,785	5,090	5,393	5,693	5,991	5,948	5,916	5,890	5,874	5,863	6,089
65-69	4,255	4,190	4,137	4,091	4,054	4,022	4,031	4,031	4,026	4,014	3,996	4,289	4,575	4,860	5,138	5,413	5,382
70-74	3,530	3,546	3,553	3,553	3,546	3,535	3,493	3,459	3,431	3,408	3,390	3,409	3,420	3,424	3,424	3,415	3,687
75-79	2,470	2,530	2,578	2,618	2,648	2,671	2,700	2,721	2,735	2,745	2,746	2,727	2,713	2,704	2,698	2,697	2,724
80-84	1,365	1,416	1,470	1,527	1,587	1,650	1,704	1,748	1,785	1,813	1,841	1,873	1,900	1,923	1,941	1,954	1,954
85-89	645	654	663	675	687	703	739	776	812	849	887	925	955	980	1,004	1,027	1,056
90-94	185	195	204	210	215	218	224	231	239	248	255	271	288	305	322	338	358
95+	35	41	45	47	47	47	52	54	56	56	57	60	62	64	67	69	74
Total	103,851	103,844	103,844	103,815	103,751	103,664	103,557	103,452	103,343	103,228	103,107	102,980	102,864	102,772	102,696	102,629	102,570
Females	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0-4	5,411	5,404	5,409	5,367	5,256	5,184	5,076	4,992	4,938	4,909	4,901	4,911	4,942	4,994	5,069	5,163	5,264
5-9	6,169	5,959	5,725	5,570	5,459	5,301	5,294	5,299	5,257	5,146	5,074	4,966	4,882	4,828	4,799	4,791	4,801
10-14	6,027	6,030	6,149	6,121	6,140	6,134	5,924	5,690	5,535	5,424	5,266	5,259	5,264	5,222	5,111	5,039	4,931
15-19	6,967	7,367	7,746	8,437	9,004	9,369	9,372	9,476	9,436	9,446	9,434	9,221	8,962	8,787	8,662	8,495	8,483
20-24	7,360	7,670	7,926	7,777	7,543	7,330	7,730	8,096	8,771	9,323	9,671	9,661	9,745	9,686	9,674	9,640	9,406
25-29	6,340	5,890	5,456	5,237	5,211	5,409	5,718	5,970	5,815	5,575	5,359	5,745	6,098	6,756	7,292	7,622	7,597
30-34	8,650	8,088	7,505	6,901	6,276	5,632	5,186	4,751	4,532	4,504	4,695	4,996	5,240	5,080	4,836	4,615	4,990
35-39	8,805	8,746	8,674	8,589	8,491	8,380	7,819	7,237	6,632	6,006	5,361	4,915	4,483	4,262	4,229	4,415	4,711
40-44	8,135	8,244	8,353	8,461	8,568	8,675	8,616	8,545	8,462	8,366	8,255	7,697	7,119	6,519	5,897	5,256	4,811
45-49	6,755	7,003	7,252	7,500	7,748	7,997	8,105	8,212	8,320	8,427	8,535	8,478	8,407	8,324	8,229	8,120	7,567
50-54	6,885	6,812	6,743	6,679	6,621	6,567	6,813	7,059	7,303	7,549	7,793	7,902	8,005	8,108	8,211	8,316	8,261
55-59	5,320	5,575	5,832	6,090	6,350	6,608	6,539	6,473	6,413	6,357	6,308	6,550	6,793	7,034	7,273	7,509	7,613
60-64	5,255	5,199	5,145	5,092	5,042	4,994	5,244	5,493	5,746	5,997	6,245	6,180	6,118	6,064	6,014	5,969	6,205
65-69	5,045	5,015	4,985	4,953	4,920	4,885	4,836	4,790	4,745	4,701	4,659	4,901	5,142	5,384	5,622	5,857	5,801
70-74	4,765	4,702	4,650	4,608	4,574	4,544	4,526	4,505	4,482	4,460	4,434	4,397	4,362	4,327	4,295	4,264	4,496
75-79	4,120	4,124	4,125	4,124	4,119	4,113	4,073	4,043	4,019	4,000	3,986	3,982	3,974	3,966	3,957	3,944	3,923
80-84	2,650	2,801	2,936	3,057	3,165	3,261	3,279	3,294	3,307	3,315	3,320	3,302	3,292	3,287	3,286	3,287	3,295
85-89	1,775	1,748	1,724	1,703	1,690	1,684	1,795	1,887	1,967	2,035	2,096	2,120	2,139	2,154	2,167	2,177	2,177
90-94	775	807	831	849	862	870	860	852	847	844	845	904	953	992	1,024	1,052	1,070
95+	190	216	237	252	262	268	286	298	306	311	313	315	316	317	319	320	343
Total	107,399	107,400	107,403	107,367	107,301	107,205	107,091	106,962	106,833	106,695	106,550	106,402	106,236	106,091	105,966	105,851	105,745
Persons	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total	211,250	211,244	211,247	211,182	211,052	210,869	210,648	210,414	210,176	209,923	209,657	209,382	209,100	208,863	208,662	208,480	208,315

Total Population by Sex and 5-Year Age Group - Aberdeenshire

Males	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0-4	6,813	6,726	6,616	6,568	6,567	6,585	6,577	6,574	6,582	6,600	6,631	6,666	6,701	6,737	6,773	6,812	6,845
5-9	7,848	7,693	7,530	7,342	7,105	6,918	6,831	6,721	6,672	6,669	6,684	6,672	6,669	6,676	6,692	6,720	6,751
10-14	8,096	8,057	8,052	7,933	7,927	7,823	7,667	7,500	7,308	7,068	6,879	6,791	6,681	6,632	6,629	6,644	6,632
15-19	7,472	7,643	7,755	7,889	7,913	7,862	7,823	7,803	7,673	7,657	7,544	7,382	7,180	6,960	6,699	6,496	6,401
20-24	6,415	6,443	6,599	6,834	6,984	7,098	7,268	7,372	7,497	7,514	7,472	7,421	7,394	7,253	7,217	7,079	6,887
25-29	6,780	6,736	6,639	6,500	6,430	6,396	6,424	6,574	6,801	6,944	7,095	7,258	7,356	7,474	7,485	7,438	7,380
30-34	8,295	8,073	7,841	7,599	7,347	7,080	7,036	6,929	6,782	6,703	6,682	6,704	6,839	7,053	7,185	7,327	7,483
35-39	9,270	9,113	8,968	8,835	8,714	8,599	8,377	8,140	7,892	7,633	7,364	7,311	7,199	7,045	6,958	6,928	6,937
40-44	9,375	9,361	9,353	9,351	9,354	9,362	9,208	9,065	8,932	8,810	8,698	8,474	8,235	7,985	7,725	7,456	7,398
45-49	8,745	8,827	8,920	9,023	9,136	9,258	9,245	9,237	9,235	9,239	9,247	9,095	8,955	8,824	8,703	8,591	8,367
50-54	9,030	8,913	8,802	8,697	8,598	8,502	8,588	8,682	8,785	8,897	9,020	9,009	9,003	9,005	9,011	9,020	8,873
55-59	6,320	6,783	7,246	7,708	8,168	8,626	8,519	8,420	8,327	8,237	8,151	8,240	8,337	8,441	8,556	8,682	8,676
60-64	5,495	5,630	5,737	5,817	5,869	5,895	6,343	6,788	7,228	7,667	8,099	8,007	7,921	7,841	7,764	7,688	7,782
65-69	4,445	4,542	4,644	4,750	4,859	4,971	5,103	5,209	5,289	5,344	5,375	5,799	6,216	6,627	7,033	7,431	7,357
70-74	3,640	3,658	3,685	3,721	3,766	3,817	3,912	4,011	4,114	4,219	4,326	4,453	4,558	4,639	4,695	4,733	5,123
75-79	2,825	2,810	2,805	2,810	2,824	2,845	2,875	2,911	2,953	3,003	3,058	3,148	3,241	3,339	3,437	3,537	3,656
80-84	1,455	1,579	1,685	1,780	1,863	1,940	1,946	1,958	1,976	1,998	2,026	2,059	2,098	2,141	2,191	2,243	2,322
85-89	745	750	759	769	782	798	874	938	994	1,043	1,087	1,099	1,114	1,132	1,154	1,179	1,207
90-94	290	284	282	281	280	279	285	292	299	306	314	350	379	403	423	441	452
95+	45	58	66	69	69	68	70	71	72	72	72	74	77	80	82	84	94
Total	113,399	113,679	113,984	114,276	114,555	114,722	114,971	115,195	115,411	115,623	115,824	116,012	116,153	116,287	116,412	116,529	116,623
Females	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0-4	6,412	6,360	6,324	6,322	6,271	6,331	6,325	6,322	6,330	6,347	6,377	6,410	6,437	6,467	6,498	6,532	6,562
5-9	7,471	7,289	7,067	6,835	6,683	6,532	6,480	6,444	6,441	6,388	6,445	6,435	6,432	6,438	6,451	6,475	6,500
10-14	7,676	7,613	7,597	7,588	7,565	7,406	7,224	6,997	6,761	6,606	6,453	6,400	6,359	6,352	6,296	6,351	6,340
15-19	6,754	6,977	7,173	7,223	7,254	7,251	7,188	7,152	7,126	7,089	6,919	6,729	6,447	6,166	5,976	5,798	5,730
20-24	6,138	6,130	6,157	6,367	6,629	6,704	6,927	7,118	7,160	7,180	7,178	7,098	7,052	7,007	6,942	6,735	6,499
25-29	7,010	6,990	6,945	6,803	6,583	6,547	6,540	6,558	6,759	7,010	7,089	7,305	7,480	7,509	7,516	7,502	7,413
30-34	8,255	8,110	7,965	7,820	7,675	7,530	7,510	7,456	7,305	7,077	7,034	7,018	7,020	7,204	7,441	7,505	7,705
35-39	9,185	8,969	8,780	8,619	8,485	8,377	8,231	8,085	7,938	7,791	7,642	7,614	7,554	7,395	7,159	7,106	7,077
40-44	8,790	8,867	8,939	9,006	9,068	9,125	8,910	8,722	8,562	8,428	8,320	8,176	8,032	7,885	7,736	7,585	7,553
45-49	8,475	8,507	8,545	8,588	8,636	8,690	8,766	8,838	8,905	8,967	9,024	8,811	8,625	8,467	8,335	8,230	8,088
50-54	8,385	8,368	8,353	8,340	8,329	8,318	8,351	8,389	8,433	8,482	8,536	8,614	8,686	8,753	8,815	8,872	8,664
55-59	6,140	6,548	6,956	7,361	7,764	8,164	8,151	8,139	8,128	8,119	8,111	8,144	8,184	8,230	8,281	8,335	8,413
60-64	5,440	5,573	5,683	5,770	5,834	5,875	6,271	6,668	7,063	7,452	7,838	7,828	7,818	7,812	7,807	7,801	7,835
65-69	4,705	4,762	4,834	4,918	5,014	5,121	5,252	5,357	5,441	5,505	5,548	5,931	6,311	6,686	7,056	7,423	7,421
70-74	4,300	4,284	4,279	4,283	4,296	4,316	4,375	4,447	4,530	4,623	4,727	4,854	4,959	5,043	5,107	5,152	5,516
75-79	3,705	3,722	3,742	3,762	3,782	3,804	3,803	3,805	3,818	3,836	3,859	3,921	3,994	4,074	4,166	4,266	4,388
80-84	2,550	2,682	2,794	2,890	2,974	3,046	3,072	3,095	3,117	3,139	3,163	3,170	3,185	3,207	3,231	3,260	3,321
85-89	1,595	1,628	1,654	1,680	1,704	1,735	1,829	1,908	1,971	2,025	2,067	2,092	2,117	2,139	2,162	2,185	2,198
90-94	630	660	694	730	766	797	815	830	845	860	877	927	967	998	1,025	1,046	1,063
95+	185	194	199	201	201	201	215	228	240	250	259	268	275	283	290	297	318
Total	113,801	114,233	114,680	115,106	115,513	115,870	116,235	116,558	116,873	117,174	117,466	117,745	117,934	118,115	118,290	118,456	118,604
Persons																	
Total	227,200	227,912	228,664	229,382	230,068	230,592	231,206	231,753	232,284	232,797	233,290	233,757	234,087	234,402	234,702	234,985	235,227

Total Population by Sex and 5-Year Age Group - Structure Plan Area

Males	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0-4	12,630	12,484	12,278	12,153	12,047	11,991	11,870	11,779	11,731	11,720	11,743	11,789	11,856	11,947	12,061	12,197	12,335
5-9	14,269	13,935	13,615	13,286	12,895	12,595	12,449	12,243	12,117	12,009	11,950	11,825	11,734	11,685	11,672	11,692	11,734
10-14	14,404	14,415	14,510	14,403	14,351	14,224	13,889	13,565	13,232	12,838	12,536	12,389	12,183	12,057	11,949	11,890	11,765
15-19	14,211	14,645	15,121	15,777	16,365	16,544	16,555	16,625	16,499	16,431	16,292	15,950	15,577	15,205	14,783	14,461	14,304
20-24	14,101	14,279	14,490	14,555	14,359	14,346	14,782	15,242	15,879	16,448	16,624	16,614	16,672	16,528	16,431	16,257	15,874
25-29	14,340	13,899	13,404	12,988	12,876	12,826	13,002	13,201	13,256	13,052	13,074	13,496	13,938	14,553	15,102	15,266	15,243
30-34	17,890	17,119	16,330	15,523	14,698	13,850	13,410	12,911	12,487	12,366	12,328	12,490	12,665	12,703	12,487	12,494	12,900
35-39	18,610	18,457	18,298	18,134	17,964	17,783	17,019	16,231	15,422	14,592	13,745	13,303	12,805	12,379	12,246	12,194	12,338
40-44	17,780	17,898	18,026	18,163	18,307	18,459	18,309	18,153	17,990	17,821	17,644	16,881	16,095	15,289	14,466	13,627	13,185
45-49	15,810	16,122	16,442	16,768	17,098	17,432	17,549	17,674	17,808	17,952	18,103	17,957	17,805	17,646	17,479	17,303	16,548
50-54	15,980	15,805	15,645	15,499	15,370	15,251	15,567	15,885	16,209	16,534	16,865	16,983	17,111	17,249	17,395	17,546	17,407
55-59	11,260	12,043	12,824	13,604	14,379	15,151	14,991	14,850	14,722	14,610	14,507	14,824	15,143	15,466	15,790	16,119	16,243
60-64	10,035	10,169	10,269	10,337	10,370	10,370	11,128	11,878	12,621	13,360	14,090	13,955	13,837	13,731	13,638	13,551	13,871
65-69	8,700	8,732	8,781	8,841	8,913	8,993	9,134	8,993	9,240	9,315	9,358	9,371	10,088	10,791	11,487	12,171	12,844
70-74	7,170	7,204	7,238	7,274	7,312	7,352	7,405	7,470	7,545	7,627	7,716	7,862	7,978	8,063	8,119	8,148	8,810
75-79	5,295	5,340	5,383	5,428	5,472	5,516	5,575	5,632	5,688	5,748	5,804	5,875	5,954	6,043	6,135	6,234	6,380
80-84	2,820	2,995	3,155	3,307	3,450	3,590	3,650	3,706	3,761	3,811	3,867	3,932	3,998	4,064	4,132	4,197	4,276
85-89	1,390	1,404	1,422	1,444	1,469	1,501	1,613	1,714	1,806	1,892	1,974	2,024	2,069	2,112	2,158	2,206	2,263
90-94	475	479	486	491	495	497	509	523	538	554	569	621	667	708	745	779	810
95+	80	99	111	116	116	115	122	125	128	128	129	134	139	144	149	153	168
Total	217,250	217,523	217,828	218,091	218,306	218,386	218,528	218,647	218,754	218,851	218,931	218,992	219,017	219,059	219,108	219,158	219,193
Females	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
0-4	11,823	11,764	11,733	11,689	11,527	11,515	11,401	11,314	11,268	11,256	11,278	11,321	11,379	11,461	11,567	11,695	11,826
5-9	13,640	13,248	12,792	12,405	12,142	11,833	11,774	11,743	11,698	11,534	11,519	11,401	11,314	11,266	11,250	11,266	11,301
10-14	13,703	13,643	13,746	13,709	13,705	13,540	13,148	12,687	12,296	12,030	11,719	11,659	11,623	11,574	11,407	11,390	11,271
15-19	13,721	14,344	14,919	15,660	16,258	16,620	16,560	16,628	16,562	16,535	16,353	15,950	15,409	14,953	14,638	14,293	14,213
20-24	13,498	13,800	14,083	14,144	14,172	14,034	14,657	15,214	15,931	16,503	16,849	16,759	16,797	16,693	16,616	16,375	15,905
25-29	13,350	12,880	12,401	12,040	11,794	11,956	12,258	12,528	12,574	12,585	12,448	13,050	13,578	14,265	14,808	15,124	15,010
30-34	16,905	16,198	15,470	14,721	13,951	13,162	12,696	12,207	11,837	11,581	11,729	12,014	12,260	12,284	12,277	12,120	12,695
35-39	17,990	17,715	17,454	17,208	16,976	16,757	16,050	15,322	14,570	13,797	13,003	12,529	12,037	11,657	11,388	11,521	11,788
40-44	16,925	17,111	17,292	17,467	17,636	17,800	17,526	17,267	17,024	16,794	16,575	15,873	15,151	14,404	13,633	12,841	12,364
45-49	15,230	15,510	15,797	16,088	16,384	16,687	16,871	17,050	17,225	17,394	17,559	17,289	17,032	16,791	16,564	16,350	15,655
50-54	15,270	15,180	15,096	15,019	14,950	14,885	15,164	15,448	15,736	16,031	16,329	16,516	16,691	16,861	17,026	17,188	16,925
55-59	11,460	12,123	12,788	13,451	14,114	14,772	14,690	14,612	14,541	14,476	14,419	14,694	14,977	15,264	15,554	15,844	16,026
60-64	10,695	10,772	10,828	10,862	10,876	10,869	11,515	12,161	12,809	13,449	14,083	14,008	13,936	13,876	13,821	13,770	14,040
65-69	9,750	9,777	9,819	9,871	9,934	10,006	10,088	10,147	10,186	10,206	10,207	10,832	11,453	12,070	12,678	13,280	13,222
70-74	9,065	8,986	8,929	8,891	8,870	8,860	8,901	8,952	9,012	9,083	9,161	9,251	9,321	9,370	9,402	9,416	10,012
75-79	7,825	7,846	7,867	7,886	7,901	7,917	7,876	7,848	7,837	7,836	7,845	7,903	7,968	8,040	8,123	8,210	8,311
80-84	5,200	5,483	5,730	5,947	6,139	6,307	6,351	6,389	6,424	6,454	6,483	6,472	6,477	6,494	6,517	6,547	6,616
85-89	3,370	3,376	3,378	3,383	3,394	3,419	3,624	3,795	3,938	4,060	4,163	4,212	4,256	4,293	4,329	4,362	4,375
90-94	1,405	1,467	1,525	1,579	1,628	1,667	1,675	1,682	1,692	1,704	1,722	1,831	1,920	1,990	2,049	2,098	2,133
95+	375	410	436	453	463	469	501	526	546	561	572	583	591	600	609	617	661
Total	221,200	221,633	222,083	222,473	222,814	223,075	223,326	223,520	223,706	223,869	224,016	224,147	224,170	224,206	224,256	224,307	224,349
Persons																	
Total	438,450	439,156	439,911	440,564	441,120	441,461	441,854	442,167	442,460	442,720	442,947	443,139	443,187	443,265	443,364	443,465	443,542