

PROJECTED POPULATION OF SCOTLAND (2003 BASED)

I. Background

The Government Actuary, in consultation with, and at the request of, the Registrars General, prepares the population projections for the United Kingdom and its constituent countries. This note presents the main results of the latest, 2003-based, projection for Scotland, and outlines the fertility, mortality and migration assumptions used in its preparation.

II. Summary of results

The results of this new set of projections, summarised in **Table 1**, show the total population of Scotland falling steadily from 5.06 million in 2003 to 4.88 million by 2028. Longer term projections for up to 40 years ahead, also produced by the Government Actuary's Department (GAD), show a slightly faster decline after 2028 to 4.5 million in 2043. Although the trend of a slowly falling population is still the same as the previous 2002-based projection, the 2003-based projection indicates that this fall in population will take place from 2005 onwards.

Table 1	Projected population of Scotland (2003 based): 2003-2043								('000s)	
	2003 (base)	2006	2011	2016	2021	2026	2028	Longer term projections		
								2031	2043	
All Ages	5,057	5,068	5,034	5,000	4,963	4,907	4,878	4,825	4,535	

Table 2 provides information on the projected components of change between 2003 and 2028. It is clear from this table that the most significant factor affecting future projected levels of population is the natural decrease, where the number of deaths exceeds the number of births. More detailed information on the fertility assumptions which lead to the low projected numbers of births is given in the fertility section on page 4. The number of births has been falling since the early 1980s, and this trend is projected to continue. Lower birth rates lead to a lower number of women passing through child bearing ages in the next generation. This further contributes to lower numbers of births in future.

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Table 2	Projected components of population change; Scotland:						('000s)
	2003-2028, (annual averages)						
	2003	2006	2011	2016	2021	2026	
	-2006	-2011	-2016	-2021	-2026	-2028	
Population at start	5,057	5,068	5,034	5,000	4,963	4,907	
Births	53	49	49	49	47	46	
Deaths	57	55	54	55	57	59	
Natural change	-4	-5	-5	-6	-10	-13	
Migration	8	-2	-2	-2	-2	-2	
Population at end	5,068	5,034	5,000	4,963	4,907	4,878	
Total change	4	-7	-7	-7	-11	-15	

* Note: Not all figures will sum due to rounding.

A summary of projected populations by broad age groups is given in **Table 3**; projected populations by sex and five year age groups are given in **Table 6**. These tables show that the age structure of the population is projected to change notably between 2003 and 2028.

The main changes are:

- the total population of Scotland is projected to fall from 5.06 million to below 4.9 million in 2028;
- the number of children aged under 16 is projected to fall to 82 per cent of its 2003 level by the year 2028;
- the number of people of working age is projected to fall by 8.5 per cent from 3.16 million in 2003 to 2.89 million in 2028;
- the number of people of pensionable age¹ is projected to rise by more than 27 per cent to over 1.2 million in 2028;
- the population of males aged 65 and over is projected to increase by just over 60 per cent by 2028, whilst for females the corresponding increase is just over 40 per cent;
- the mean age of the population is projected to rise from just under 40 at the present time to just over 45 by 2028.

¹ Note that between 2010 and 2020 the pensionable age for women rises from 60 to 65, and the figures take account of this.

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Age group	2003 (base)	2006	2011	2016	2021	2026	2028
All ages	5,057	5,068	5,034	5,000	4,963	4,907	4,878
Children							
under 16	943	913	844	805	787	776	769
Working ages							
16-64/59 ¹	3,156	3,174	3,150	3,145	3,102	2,957	2,890
16-29	872	893	901	867	806	748	730
30-44	1,150	1,097	981	904	905	907	899
45-64/59 ¹	1,134	1,185	1,268	1,374	1,391	1,303	1,261
Pensionable ages							
65/60 ¹ & over	958	982	1,040	1,051	1,074	1,174	1,218
65/60 ¹ - 74	591	600	627	600	573	596	620
75 & over	367	382	413	452	501	579	598

¹ Pensionable age is 65 for men, 60 for women until 2010; between 2010 and 2020 pensionable age for women increases to 65.

* Note: Not all figures will sum due to rounding.

A useful summary measure of the age structure of a population is the dependency ratio - the ratio of persons aged under 16 or over pensionable age to those of working age. **Table 4** shows that the dependency ratio is projected to remain around 60 per 100 from 2003 to 2021. After 2021, and the completion of the change to the state pension age, the dependency ratio will rise to 69 per 100 working age population in 2028, and eventually reach 77 in 2043;

Age group	2003 (base)	2006	2011	2016	2021	2026	2028
All dependants	60	60	60	59	60	66	69
Children							
under 16	30	29	27	26	25	26	27
Pensionable ages							
65/60 ¹ & over	30	31	33	33	35	40	42
65/60 ¹ - 74	19	19	20	19	18	20	21
75 & over	12	12	13	14	16	20	21

¹ Pensionable age is 65 for men, 60 for women until 2010; between 2010 and 2020 pensionable age for women increases to 65.

* Note: Not all figures will sum due to rounding.

III. The base population and assumptions used in the projection

The base population: The projection is based on the Registrar General's population estimates for mid 2003. The population covered includes all persons usually resident in Scotland whatever their nationality. Members of HM and non-UK armed forces stationed in Scotland are included; HM forces stationed outside Scotland are excluded. Students are treated as being resident at their term-time address.

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Fertility: The fertility rates used in the projection are based on assumptions about the average completed family size of successive cohorts of women. It has been assumed that the average completed family size will continue to decline from just under 2 children per woman for those born in the mid to late 1950s and now reaching the end of their childbearing lives, before levelling off at 1.60 for those born in 1975 and later. A downward trend in the number of births is expected, to a projected level of about 45,000 by 2028.

Mortality: The mortality rates for the projections are based on long-term trends. Generally, mortality rates are projected to fall, initially at varying rates but tending to a reduction of 1.0 per cent a year at all ages by 2027. In line with the long-term trends, it has been assumed that the mortality rates for Scotland will continue to be higher at most ages than those for England & Wales. Based on these rates, expectations of life at birth are projected to increase from 74.0 in 2003-04 to 78.5 in 2027-28 for males; and from 79.1 in 2003-04 to 83.3 in 2027-28 for females.

Migration: It is assumed that from 2006 onwards there will be a net outflow of 1,500 per year to the end of the projection period, i.e. the total migration outflow is assumed to be greater than the total inflow. This assumption has been derived from analyses of trends in civilian migration to and from the United Kingdom as well as cross-border migration between the four constituent countries. In the first three years of the projection a net inflow is assumed, reflecting recent trends.

IV. Comparison with previous projections

The last full set of projections was based on the mid year population estimate for 2002. The 2003-based interim projections have been calculated because of population revisions which have been made for England & Wales in the light of adjustments made to the 2001 Census results. Due to a different methodology which was used in Scotland for the 2001 Census, it is not thought that these adjustments apply.

The key changes in the last three previously published projections are shown in **Table 5**.

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Table 5a Projected number of births (2001 - 2003 based); Scotland: 2003-2028

	2002-03	2005-06	2010-11	2015-16	2020-21	2025-26	2027-28
2003 based	51,792 ¹	51,446	48,818	49,260	48,751	46,449	45,253
2002 based	51,792	49,271	48,209	48,769	48,341	45,906	43,771
2001 based	51,971	51,125	50,446	50,370	49,201	46,661	44,947

Table 5b Projected number of deaths (2001 - 2003 based); Scotland: 2003-2028

	2002-03	2005-06	2010-11	2015-16	2020-21	2025-26	2027-28
2003 based	58,321 ¹	55,697	54,174	53,090	55,772	58,140	59,204
2002 based	58,326	55,577	53,997	54,094	55,517	57,817	59,663
2001 based	59,661	58,307	57,388	57,693	58,930	60,967	62,464

¹ Actual

Table 5c Projected population (2001 - 2003 based); Scotland: 2003-2028

('000s)

	2003	2006	2011	2016	2021	2026	2028
2003 based	5,057	5,068	5,034	5,000	4,963	4,907	4,878
2002 based	5,045	5,022	4,984	4,949	4,911	4,854	4,824
2001 based	5,048	5,023	4,983	4,943	4,895	4,828	4,794

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Table 6		Projected population of Scotland (2003-based), by sex and age 2003-2028							(^{'000s})
Age	Sex	Estimated population			Projected population at 30 June				
		30 June 2003	2006	2011	2016	2021	2026	2028	
All ages	Persons	5,057	5,068	5,034	5,000	4,963	4,907	4,878	
	Males	2,435	2,441	2,423	2,404	2,380	2,346	2,328	
	Females	2,623	2,628	2,611	2,597	2,583	2,562	2,549	
0-4	P	264	262	246	244	245	237	232	
	M	135	134	126	125	125	121	119	
	F	129	128	120	119	120	116	113	
5-9	P	294	278	262	246	245	246	244	
	M	151	142	133	125	125	125	124	
	F	143	136	129	121	120	121	120	
10-14	P	320	307	278	262	245	244	245	
	M	164	157	141	133	124	124	124	
	F	156	150	136	129	121	120	121	
15-19	P	324	327	309	280	264	248	246	
	M	166	167	157	142	133	125	124	
	F	158	160	152	138	131	123	122	
20-24	P	324	329	336	319	290	274	270	
	M	163	166	170	160	145	137	134	
	F	160	163	166	159	145	137	135	
25-29	P	290	302	314	321	304	275	263	
	M	143	151	157	161	152	137	130	
	F	147	151	157	160	152	138	133	
30-34	P	358	313	295	307	314	297	285	
	M	172	151	146	151	156	146	140	
	F	185	162	150	155	158	151	145	
35-39	P	400	382	309	292	303	311	307	
	M	193	183	147	142	148	152	150	
	F	208	198	162	150	155	158	157	
40-44	P	392	402	377	305	288	299	307	
	M	190	193	180	144	140	145	150	
	F	202	209	197	161	149	154	158	
45-49	P	353	375	396	371	300	284	294	
	M	173	182	189	176	141	137	142	
	F	180	193	206	195	159	147	152	
50-54	P	331	334	368	389	365	296	271	
	M	164	164	178	185	172	138	127	
	F	167	170	191	204	193	158	144	
55-59	P	323	342	325	359	380	357	334	
	M	159	168	158	172	179	168	156	
	F	164	174	167	188	201	190	178	
60-64	P	265	278	327	311	345	366	363	
	M	126	134	158	150	163	171	169	
	F	139	144	169	162	182	195	194	
65-69	P	242	244	260	307	293	326	338	
	M	112	114	123	146	139	152	157	
	F	130	130	137	161	154	174	181	
70-74	P	210	212	220	236	280	269	282	
	M	92	95	100	109	131	125	130	
	F	118	118	119	127	149	144	152	
75-79	P	165	168	178	188	204	244	232	
	M	67	70	76	83	91	110	105	
	F	98	99	102	106	113	134	127	
80-84	P	116	119	125	138	149	164	185	
	M	41	44	49	56	62	70	80	
	F	75	75	77	82	87	94	106	
85-89	P	55	62	73	80	92	103	107	
	M	16	19	25	29	35	40	42	
	F	39	43	48	51	57	63	65	
90 & over	P	31	32	37	45	55	68	73	
	M	7	8	10	14	18	23	25	
	F	24	25	27	32	37	45	48	

V. Further information

Corresponding data for the United Kingdom and its constituent countries along with detailed information on the assumptions which are made is available from the Government Actuary's web site (www.gad.gov.uk) or by contacting GAD at:

Government Actuary's Department
Finlaison House
15-17 Furnival Street
London EC4A 1AB

Tel: 020 7211 2622
Fax: 020 7211 2660
E-mail: projections@gad.gov.uk

More detailed age and sex breakdowns of the Scottish results are available from GROS customer services or from the GAD web site (www.gad.gov.uk). The next set of sub-national projections for Scotland will be released in 2005. These will be controlled to the latest 2004 based projection for Scotland. Further details can be obtained from:

Customer Services
General Register Office for Scotland
Demography and Dissemination Branch
Ladywell House
Ladywell Road
EDINBURGH EH12 7TF

Telephone 0131 314 4243
Facsimile 0131 314 4696
E-mail: customer@gro-scotland.gsi.gov.uk

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 - Contributing to production of comparable statistics across the UK and internationally.
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 - Improving access to and presentation of data and analysis;
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3. **To work effectively with users and providers by**
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