



Glasgow City Council

**Briefing Paper by Executive Director of Development and
Regeneration Services**

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**Recent and Projected Population and Household Change in Glasgow City
in 1991-2037
Results from NRS 2012-base Population and Household Projections**

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1. INTRODUCTION

- 1.1 On 14th May 2014, National Records of Scotland (NRS) published its 2012-base **population projections** for Council areas and Health Board areas in Scotland. NRS published the **household projections** for Council areas, based on these population projections, on 30th July 2014. These two projections replace the previous, 2010-base projections, published by NRS on 29th February 2012 and on 14th June 2012.
- 1.2 The projection shows what will happen to the population and the households of Scotland's council areas under certain assumptions about future fertility, mortality, migration and household formation. NRS points out that the assumptions are based on past trends and policies and do not take account of changes in social trends and of new policy initiatives. Therefore projections are not forecasts of what the Scottish Government expects to happen based on policy.
- 1.3 To reflect the uncertainty with regard to future changes of the population, NRS has published the results of various scenarios. The most important of these are scenarios (1) for lower and higher fertility, (2) for lower and higher life expectancy and (3) for lower and higher (net) migration.
- 1.4 After this introduction (section 1) and a summary of results (section 2), the paper contains sections on:
 - population projection results for Glasgow City in relation to components of change, i.e. births, deaths and migration (section 3);
 - comparison of results new, 2012-base population projection with results of previous, 2010-base projection (section 4);
 - results of projection of population by age (section 5);
 - household projection results for Glasgow City (section 6);
 - comparison of results new, 2012-base household projection with results of previous, 2010-base projection (section 7); and,
 - recent population and household change in Glasgow City in relation to changes elsewhere in the Glasgow and the Clyde Valley conurbation (section 8).
- 1.5 Comparison of the new projection results with the results of the previous projections is particularly important, given that the new projections incorporate the 2011 Census results. As a result of the Census, NRS has revised its' population and household estimates and the net-migration figures for the inter-censal years (the years between 2001 and 2011).
- 1.7 The main focus of this paper is on the **population and household projection results**. More recently, NRS also published the 2013 mid-year **population estimates** (on 26th June 2014) and the 2013 mid-year **household estimates** (on 30th July 2014). Where appropriate, these estimates have been included in the text and the graphs of this paper.

2. SUMMARY OF RESULTS

Total population change

- 2.1 As stated in the Introduction, National Records of Scotland (NRS) has based its projections on a number of assumptions with regard to fertility, life expectancy and net migration.
- 2.2 Glasgow's population is expected to rise by around 3,600 per year, from 595,000 in 2012 to 685,000 in 2037. There is, however, considerable uncertainty with regard to future migration levels. Looking at various scenarios gives rise to a projected range of between 647,000 and 724,000 for Glasgow's population in 2037.
- 2.3 The projected population growth of 3,600 per year is for around 50% driven by natural change, i.e. an excess of births over deaths.

Comparison with 2010-base population projection

- 2.4 Generally, the new projection (2012-base) assumes, relative to the previous projection (2010-base):
- Higher fertility rates for women;
 - Little change for expected improvements in life expectancy; and,
 - Little change in expected net migration flows.
- 2.5 The projected rate of population growth for Glasgow (3,600 per year in 2012-2037) is higher than the rate of growth in the previous projection (2,700 per year in 2010-2035). The main reason for this is the assumed higher fertility rate for women, leading to a higher number of births.

Population change by age

- 2.6 The number of children is projected to rise by 700 per year, from 96,000 in 2012 to 113,000 by 2037. Future numbers of children are mainly determined by fertility rates for women. The scenarios considered suggest a range of 100,000 to 129,000 for the number of children in Glasgow in 2037.
- 2.7 The number of people age 16-64 is expected to grow by 1,250 per year, from 416,000 in 2012 to 447,500 in 2037. Future numbers are mainly dependent on net migration over the projection period. The scenarios considered suggest a range of 420,000 to 476,000 for the non-elderly adult population in Glasgow in 2037.
- 2.8 The number of elderly is expected to grow by 1,650 per year, from 83,000 in 2012 to 124,000 in 2037. Future numbers of elderly are largely determined by life expectancy rates. The scenarios considered suggest a range of 117,000 to 130,000 for the number of elderly by 2037.

Total household change

- 2.9 The number of households in Glasgow is expected to rise by around 2,700 per year, from 286,000 in 2012 to 354,000 in 2037. There is, however, considerable uncertainty with regard to future migration levels and household formation rates.
- 2.10 With regard to uncertainty about future migration, NRS has identified two scenarios. Under the high migration scenario, the number of households in Glasgow would rise by 3,400 per year, to 371,000 in 2037, and under the low migration scenario, the number of households in Glasgow would rise by 2,000 per year, to 337,000 in 2037.
- 2.11 There has been a downward trend in the average household size for Glasgow until 2006. Since then the average household size has increased, due to economic conditions. NRS has assumed that the downward trend in the average household size will resume in the projection period, but at a slower rate than in the 1990s.
- 2.12 NRS has included the more recent 2011 Census information on household formation rates since 2001 in its projection of household formation rates in the future. NRS has not prepared projection results for any alternative household formation scenarios.

Comparison with 2010-base household projection

- 2.13 The projected rate of household growth, at 2,700 per year in 2012-2037, is lower than the rate of household growth in the previous projection (3,200 per year in 2010-2035).
- 2.14 The main reason for this lower rate of household growth is the slowdown of household formation in the latter half of the last decade. The 2012-base projection includes more recent information from the 2011 Census and therefore the slowdown has been incorporated in this projection.

Recent change in Glasgow City and the rest of the Conurbation

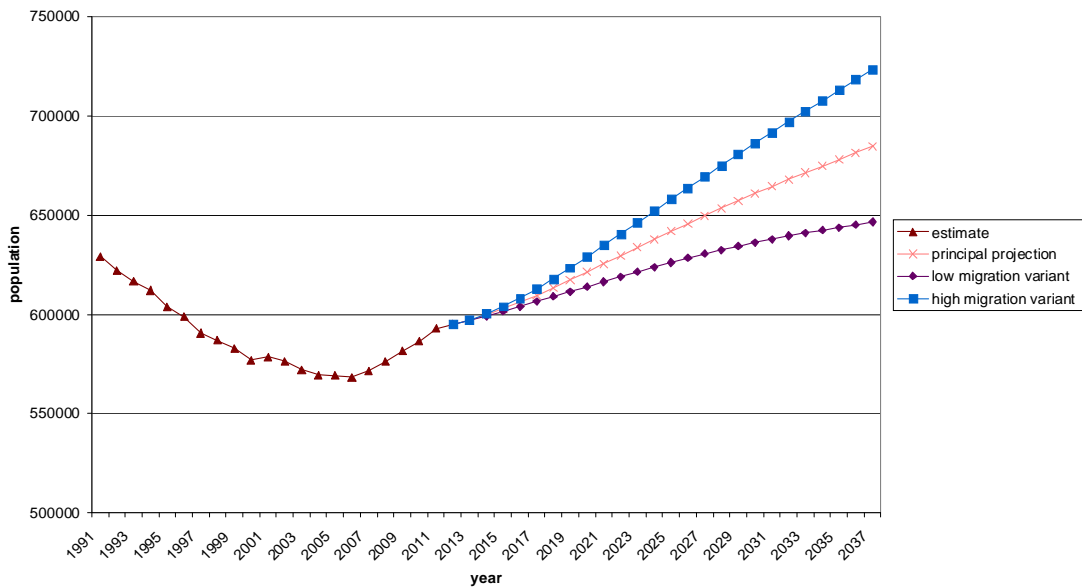
- 2.15 Based on an examination of recent population and household change in Glasgow City and in the rest of the conurbation, it is suggested that the NRS principal projection results for Glasgow may be too high. ***The NRS projections for the lower migration scenario may present more realistic projections of future population and household change in Glasgow.***

3. POPULATION PROJECTION RESULTS

Population

3.1 Graph 3.1 below shows that Glasgow has been losing population in the years between 1991 and 2006, at a rate of around 4,000 per year. In the subsequent five years, 2006-2011, Glasgow's population has been growing by almost 5,000 per year. Since 2011, there has been further growth of Glasgow's population, but at a lower rate (under 2,000 per year in 2011-2013).

Graph 3.1 - Estimated and Projected Population for Glasgow City - 1991 to 2037



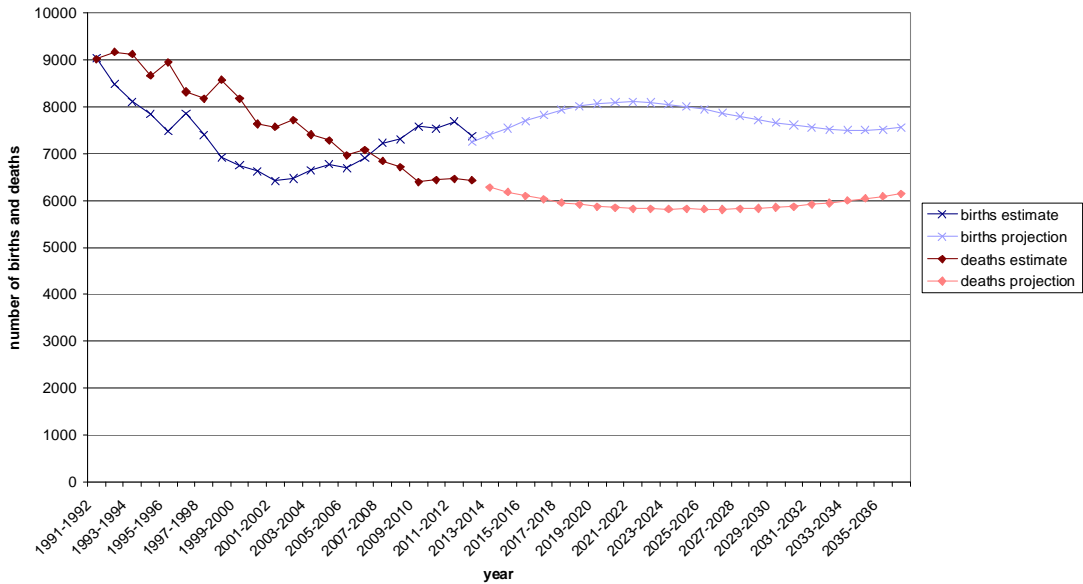
3.2 According to the NRS principal projection, Glasgow's population is expected to rise by around 3,600 per year, from 595,000 in 2012 to 685,000 in 2037. There is, however, considerable uncertainty with regard to future migration levels. NRS has identified higher and lower migration scenarios. Under the high migration scenario, Glasgow's population would rise by 5,100 per year, to 724,000 in 2037, and under the low migration scenario, Glasgow's population would rise by 2,100 per year, to 647,000 in 2037.

Natural change

3.3 The projected population growth of 3,600 per year is for around 50% driven by natural change, i.e. an excess of births over deaths. The number of births is expected to be around 7,500 to 8,000 per year and the number of deaths around 6,000 per year (see next page, Graph 3.2).

3.4 A positive natural change position is a relatively recent development for Glasgow. Between 1992 and 2007, natural change contributed to Glasgow’s loss of population, at a rate of 900 per year.

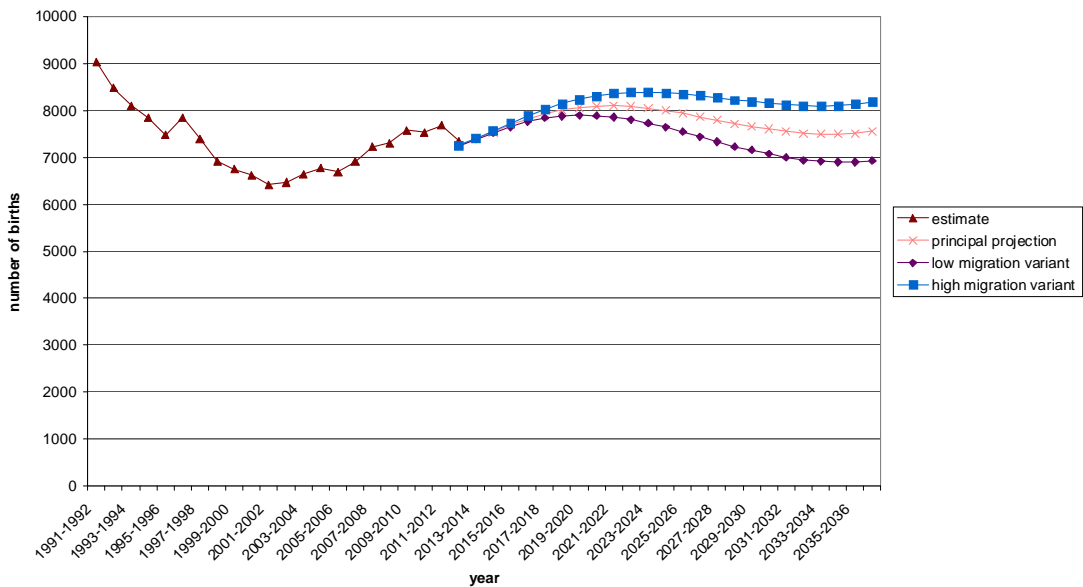
Graph 3.2 - Estimated and Projected Number of Births and Deaths for Glasgow City - 1991 to 2037



Births

3.5 Graph 3.3 shows that the number of births in Glasgow fell from around 9,000 in 1991 to 6,400 in 2002, with a subsequent increase to 7,600 in 2011. Since then the number of births has fallen to 7,300 in 2013.

Graph 3.3 - Estimated and Projected Number of Births for Glasgow City - 1991 to 2037



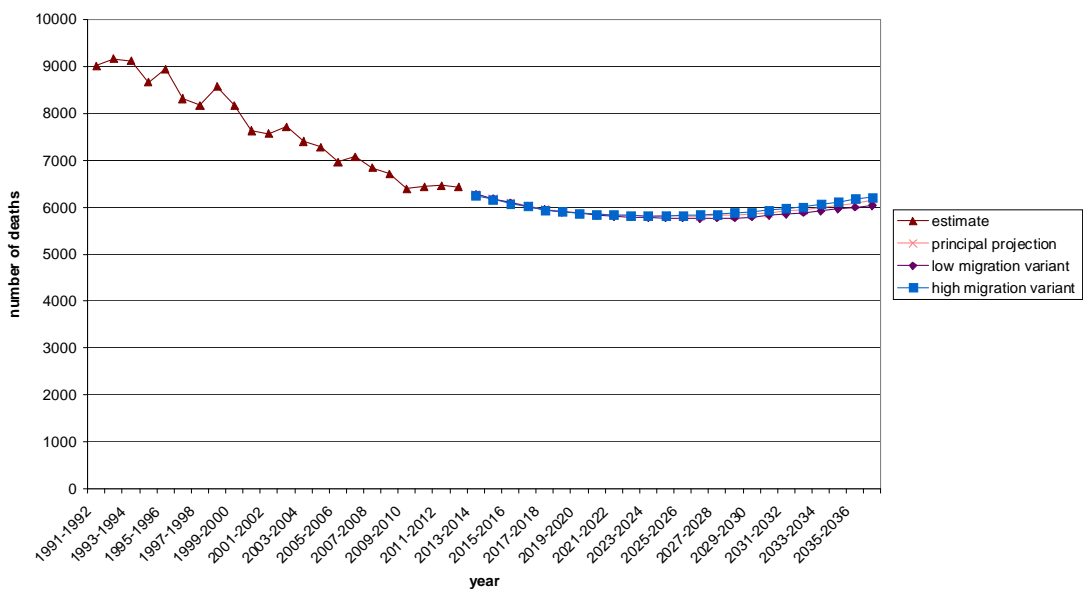
3.6 The number of births in Glasgow is projected to rise in the short term, with a likely subsequent reduction in the medium or the longer term. Graph 3.3 shows how the number of births is affected by migration. Higher gains from migration mean that there will be more women in their fertile age-band, leading to a higher number of births. A lower level of net migration has the opposite effect.

3.7 Future numbers of births are also dependent on changes in fertility rates.

Deaths

3.8 The number of deaths in Glasgow has fallen from around 9,000 in 1991 to 6,500 in 2012 (see Graph 3.4). The projected level is around 6,000 per year. A projected constant number of deaths will be due to a higher number of elderly in the future (ageing of the population), but mitigated by improvements in life expectancy.

Graph 3.4 - Estimated and Projected Number of Deaths for Glasgow City - 1991 to 2037

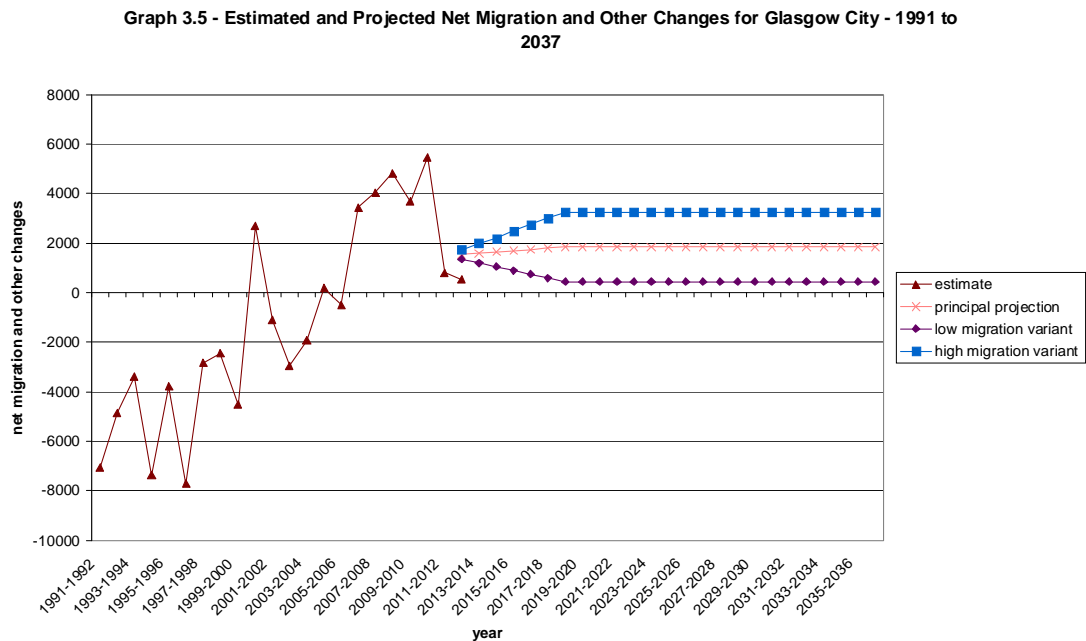


3.9 Changes in migration levels have only a minimal impact on the number of deaths, at least over the projection period (see Graph 3.4). Migration mainly affects the number of younger people in the population.

3.10 Future numbers of deaths are also dependent on changes in life expectancy.

Migration

3.11 Graph 3.5 shows a steady improving trend for migration to/from Glasgow: from migration losses (-3,200 per year in 1991-2006) to migration gains (4,300 per year in 2006-2011). Estimated net migration figures for Glasgow have been lower in 2011-2013, at 650 per year.



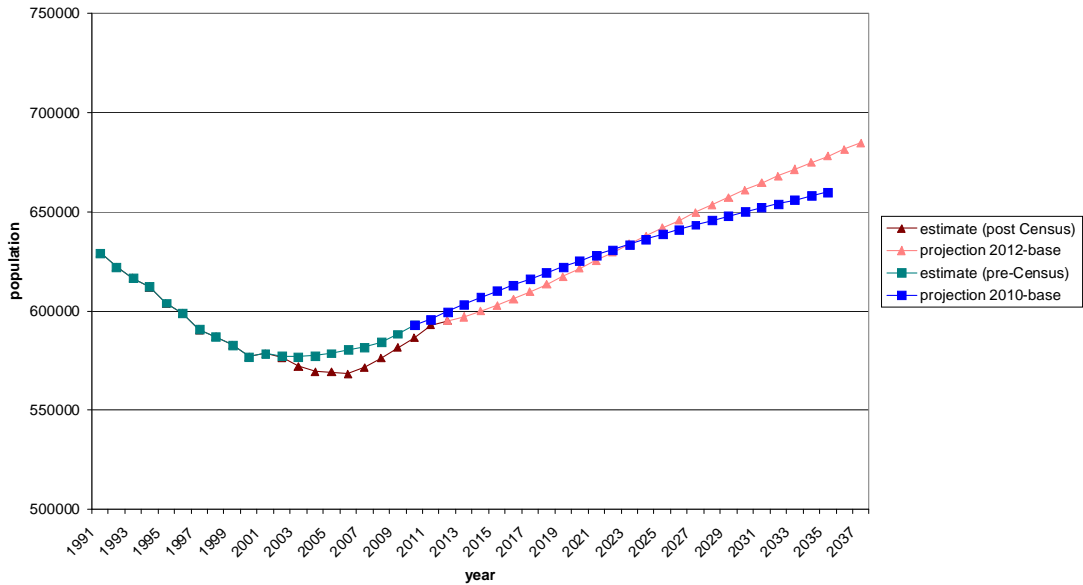
3.12 The NRS principal projection assumes a long term net migration of 1,850 per year. The high and low migration scenarios are based on an annual long term migration assumption of, respectively 3,250 per year for the high migration and 450 per year for the low migration scenario (see Graph 3.5).

4. COMPARISON WITH 2010-BASE POPULATION PROJECTION

4.1 This section compares the latest NRS projection (2012-base) with the previous NRS projection (2010-base). The comparison is only for the principal projection and does not consider any of the variant scenarios.

Population

Graph 4.1 - Estimated and Projected Population for Glasgow City - 1991 to 2037



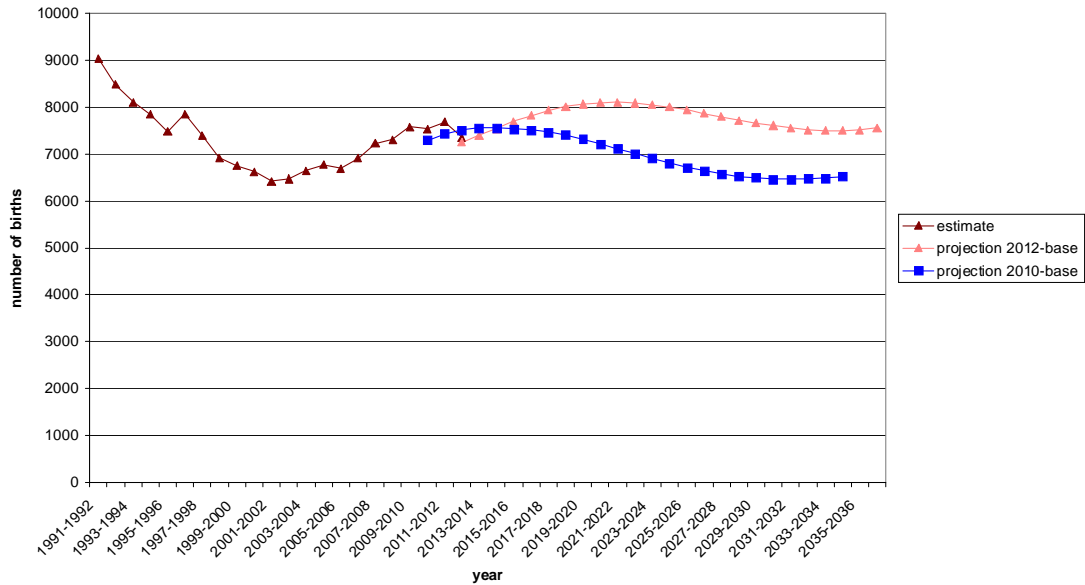
4.2 Graph 4.1 shows the effect of a revision of the population estimates for the years 2002-2010, as a result of the 2011 Census. The NRS pre-Census population estimates for Glasgow showed stable population numbers since 2001, with small rises since 2007. The post-Census population estimates show continued population decline until 2006, with higher rises in population thereafter.

4.3 The latest population projection shows a population growth for Glasgow at a rate of 3,600 per year in 2012-2037, which is higher than the rate of growth in the previous projection (2,700 per year in 2010-2035).

Births

- 4.4 The actual numbers of births in the years 2010-2011 and 2011-2012 were higher than the projected numbers from the previous projection. But the actual number of births in 2012-2013 was lower than projected. Compared with the previous projection, the 2012-base projection shows a higher projected rise in the number of births, but with a delay (see Graph 4.2 below).

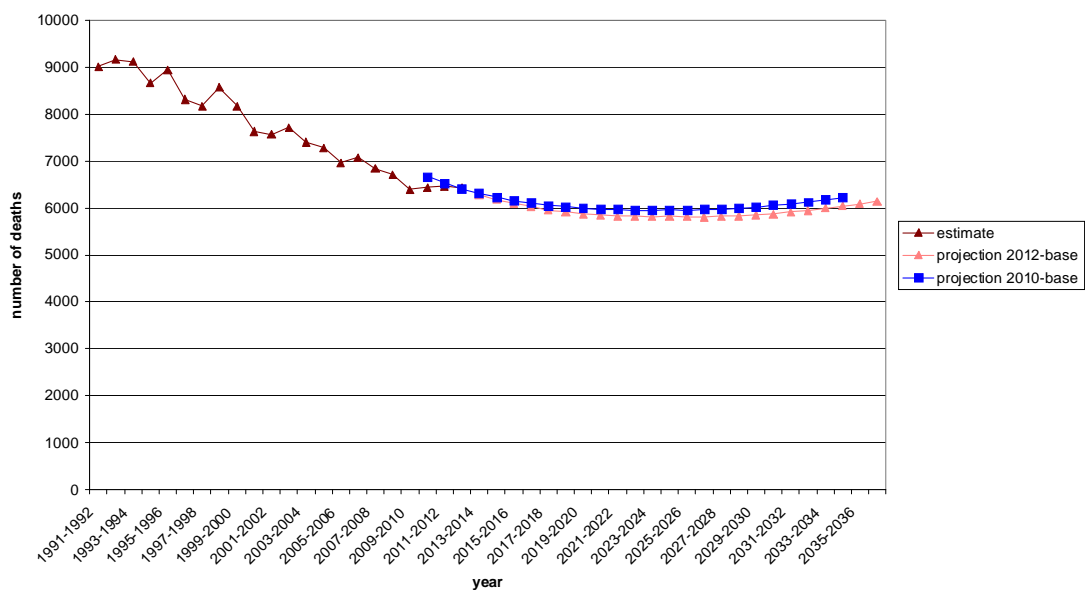
Graph 4.2 - Estimated and Projected Number of Births for Glasgow City - 1991 to 2037



Deaths

- 4.5 Graph 4.3 shows that the new figures on projected number of deaths are only slightly below numbers from the previous projection.

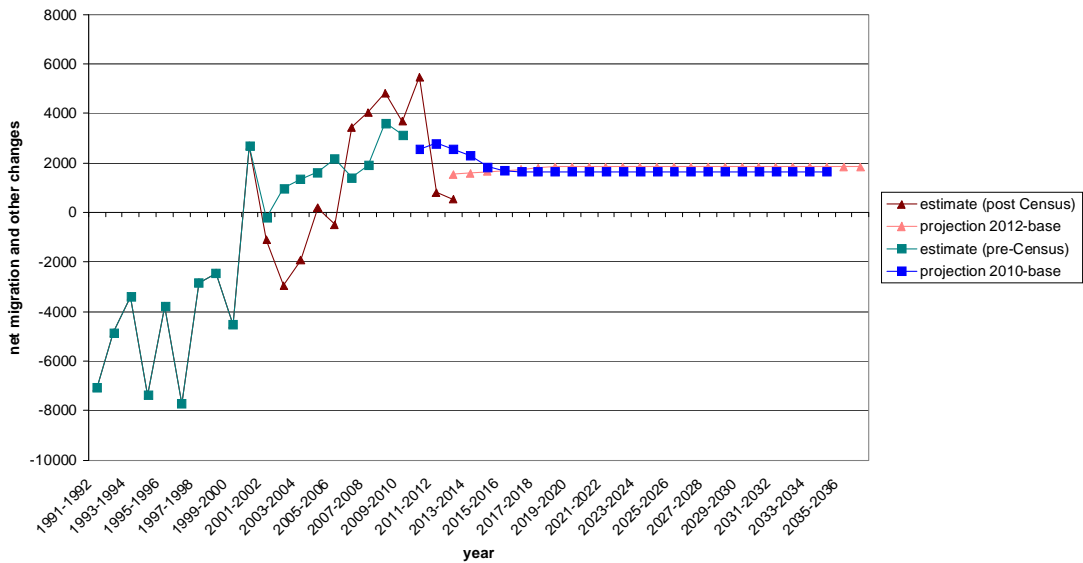
Graph 4.3 - Estimated and Projected Number of Deaths for Glasgow City - 1991 to 2037



Migration

- 4.6 Graph 4.4 shows the effect of revisions in the population estimates for 2002-2010 (as a result of the 2011 Census) on the net-migration figures. Compared with pre-Census estimates, the revised migration estimates show lower values for the years up to 2006 and higher figures for the years 2006 to 2010.

Graph 4.4 - Estimated and Projected Net Migration and other Changes for Glasgow City - 1991 to 2037



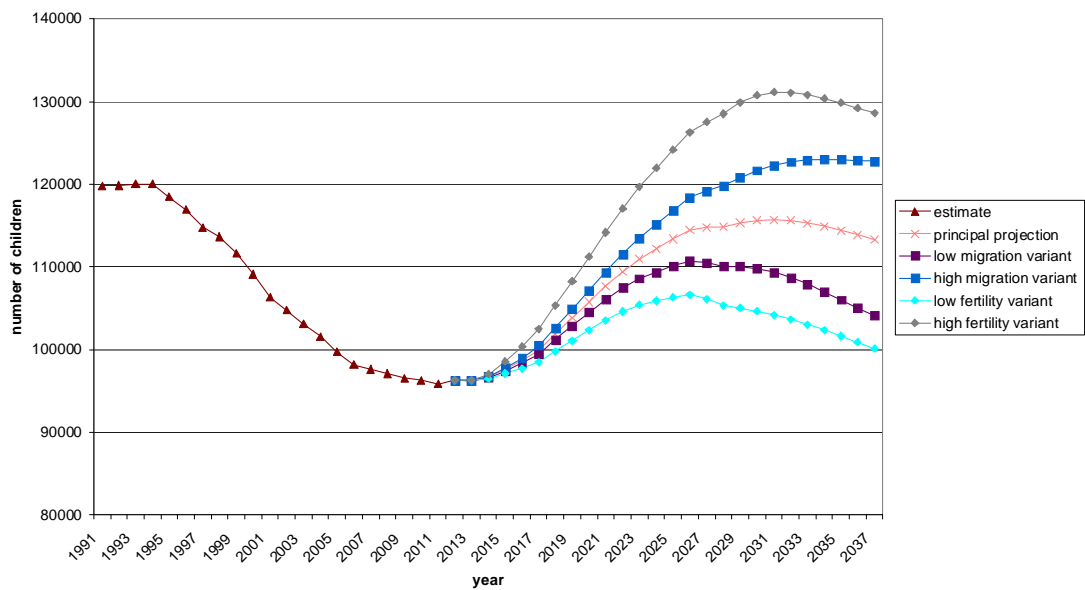
- 4.7 Net migration has been higher than projected in 2010-2011, but in the two subsequent years (2011-2012 and 2012-2013) net migration has been lower.
- 4.8 The 2012-base projection assumes a slightly higher net migration flow into Glasgow (+1,850 per year), as compared with the previous projection (+1,650 per year).

5. POPULATION PROJECTION RESULTS BY AGE

5.1 This section considers recent and projected change for (1) children (age 0 to 15), (2) people of age 16 to 64 and (3) elderly (age 65+).

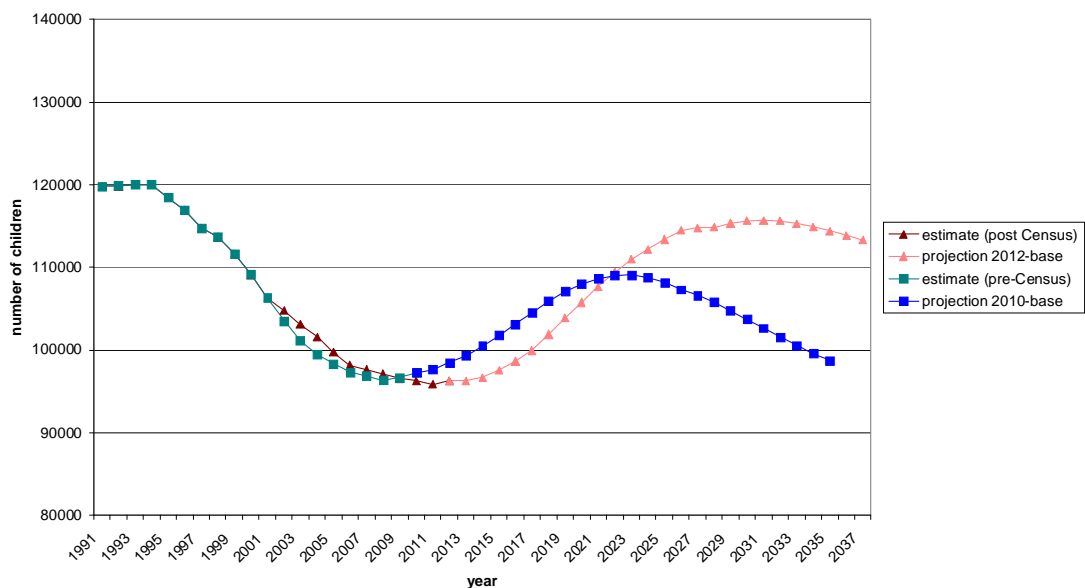
5.2 Graph 5.1 below shows recent and projected change. In 1991-2011, the **number of children** in Glasgow fell from 120,000 to 96,000. The number of children is projected to rise yearly by 700 to 113,000 by 2037. However, the various possible scenarios suggest a wide range between 100,000 and 129,000 for the number of children in Glasgow in 2037.

Graph 5.1 - Estimated and Projected Number of Children (age 0-15) for Glasgow City - 1991 to 2037



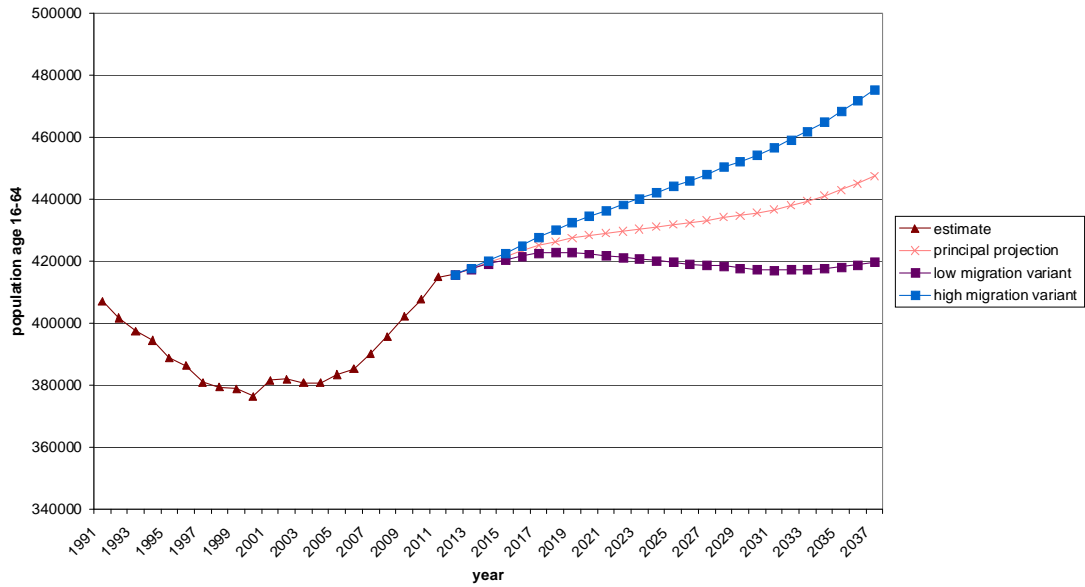
5.3 Compared with the previous projection, the number of children is projected to rise a few years later, but to a higher level (see Graph 5.2).

Graph 5.2 - Estimated and Projected Number of Children (age 0-15) for Glasgow City - 1991 to 2037



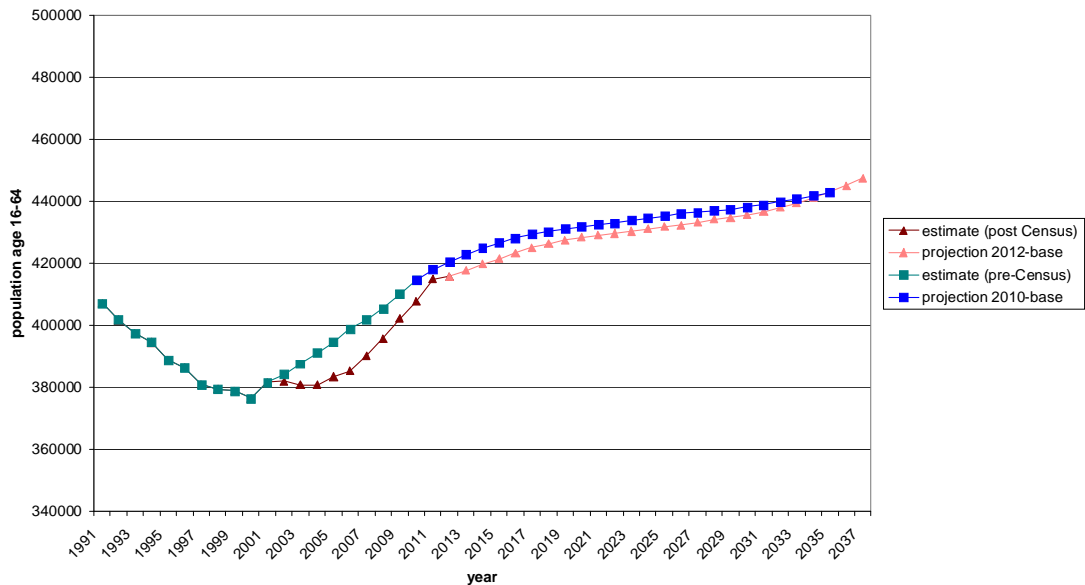
5.4 The number of people age 16-64 fell by 4,000 per year in 1991-1998, was constant between 1998 and 2004, rose by 4,400 per year in 2004-2012 and is expected to grow by 1,250 per year, from 416,000 in 2012 to 447,500 in 2037. Graph 5.3 shows that actual numbers will be highly dependent on net migration over the projection period and could be between 420,000 and 476,000 by 2037.

Graph 5.3 - Estimated and Projected Population Age 16-64 for Glasgow City - 1991 to 2037



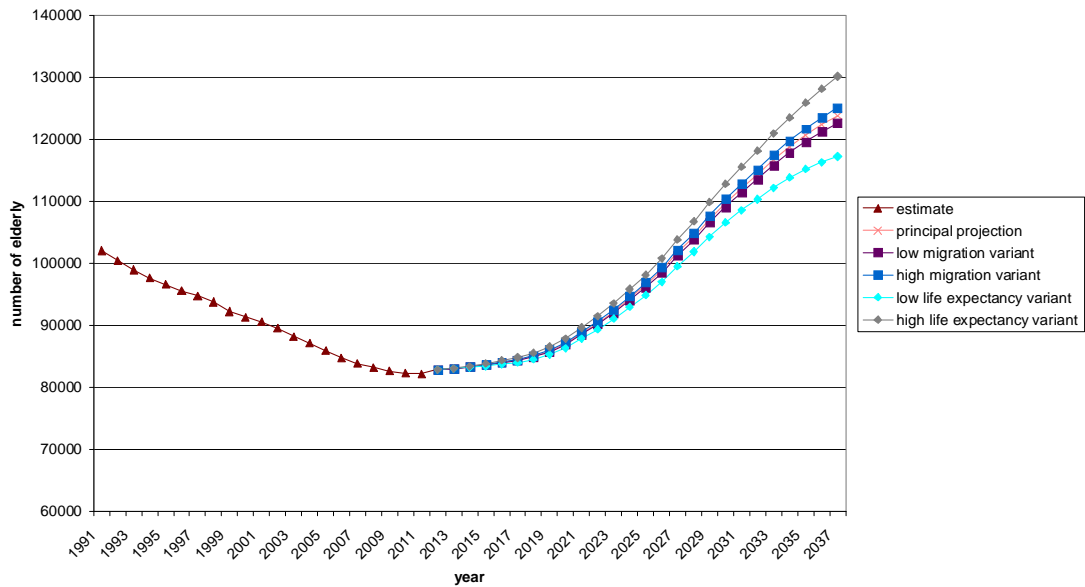
5.5 In the new projection, the number of people age 16-74 is projected to rise at a similar rate as in the previous projection (see Graph 5.4).

Graph 5.4 - Estimated and Projected Population Age 16-64 for Glasgow City - 1991 to 2037



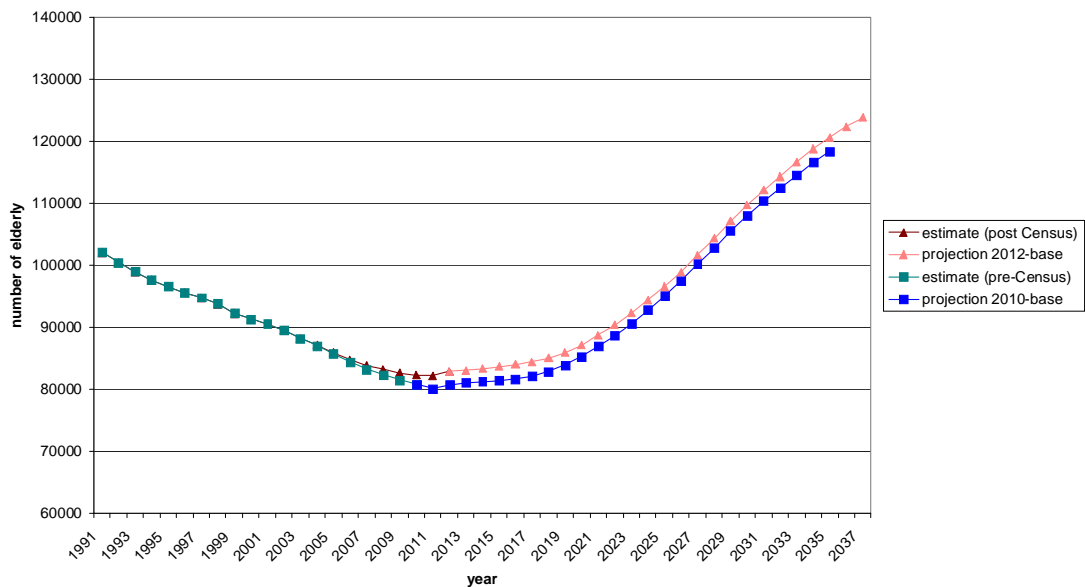
5.6 The **number of elderly** fell by 1,100 per year in 1991-2008, was almost constant between 2008 and 2012 and is expected to grow by 1,650 per year, from 83,000 in 2012 to 124,000 in 2037. Graph 5.5 shows that net migration over the projection period will only have a limited impact on the number of elderly by 2037. Generally, these numbers are more dependent on (changes in) life expectancy.

Graph 5.5 - Estimated and Projected Number of Elderly (age 65+) for Glasgow City - 1991 to 2037



5.7 Graph 5.6 shows that, under the new projection, the number of elderly is projected to rise at a similar rate as under the previous projection. Numbers of elderly are around 2,000 higher than before, due to the population estimate revision as a result of the 2011 Census.

Graph 5.6 - Estimated and Projected Number of Elderly (age 65+) for Glasgow City - 1991 to 2037

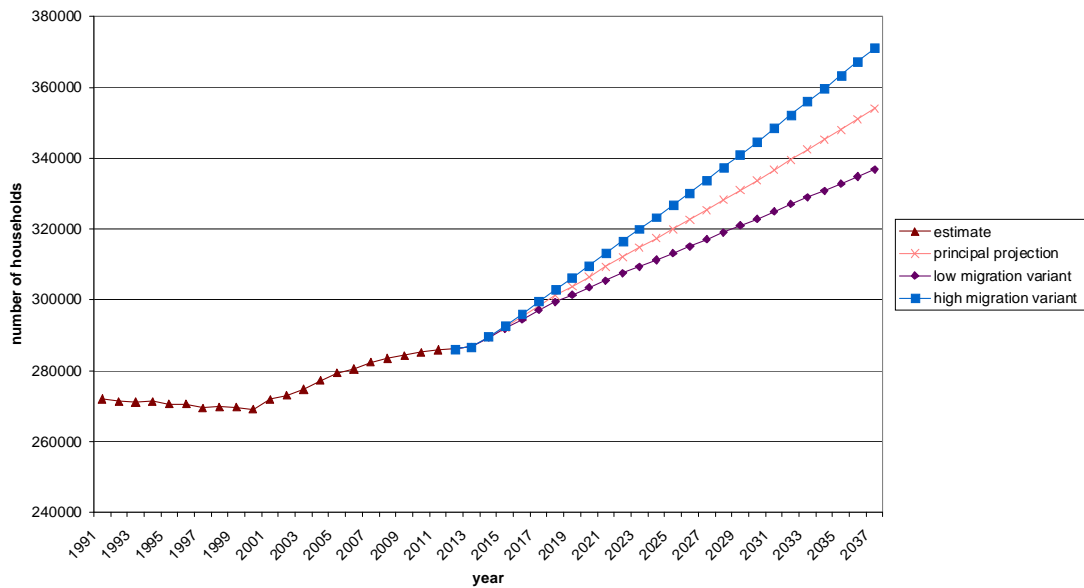


6. HOUSEHOLD PROJECTION RESULTS

Households

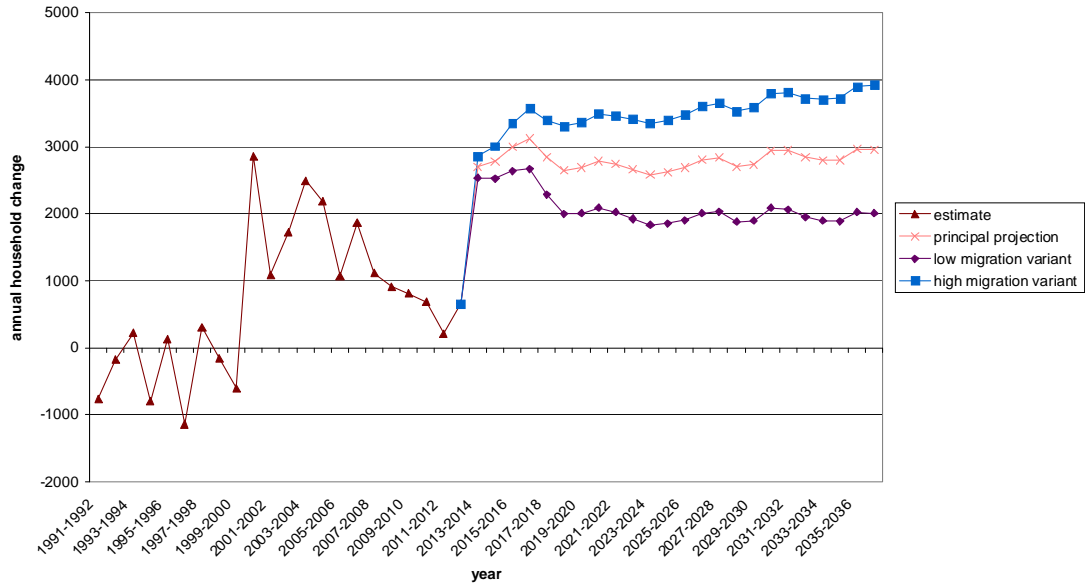
- 6.1 Graph 6.1 below shows that the number of households in Glasgow was approximately constant during the 1990s, rose by 1,650 per year in 2001 to 2008 and rose by 650 per year in 2008 to 2012.

Graph 6.1 - Estimated and Projected Households for Glasgow City - 1991-2037



- 6.2 According to the NRS principal projection, the number of households in Glasgow is expected to rise by around 2,700 per year, from 286,000 in 2012 to 354,000 in 2037.
- 6.3 There is, however, uncertainty with regard to future migration levels as well as future rates of household formation. The latter issue will be discussed later in this section. NRS has included the more recent 2011 Census information on household formation rates since 2001 in its projection of household formation rates in the future.
- 6.4 With regard to uncertainty about future migration, NRS has identified higher and lower migration scenarios (see paragraph 3.12 in section 3). Under the high migration scenario, the number of households in Glasgow would rise by 3,400 per year, to 371,000 in 2037, and under the low migration scenario, the number of households in Glasgow would rise by 2,000 per year, to 337,000 in 2037.
- 6.5 Graph 6.2 (see next page) shows the estimated and projected net annual change in the number of households in Glasgow.

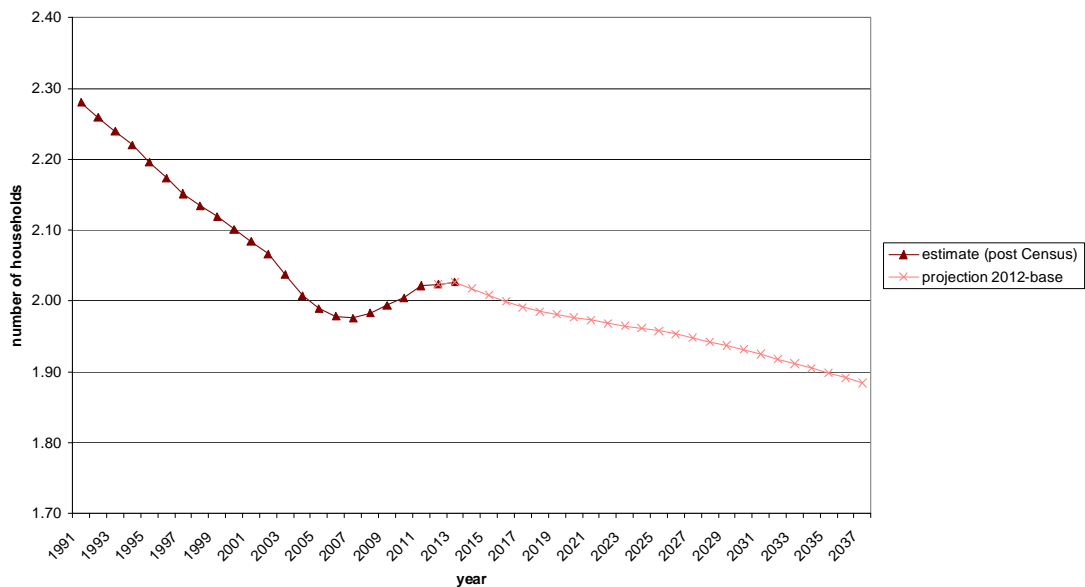
Graph 6.2 - Estimated and Projected Annual Household Change for Glasgow City - 1991-2037



Average household size

6.6 Graph 6.3 shows that the average household size fell from 2.28 in 1991 to 1.98 in 2006, was constant from 2006 to 2008, and rose from 1.98 in 2008 to 2.02 in 2012. This slowdown in the rate of household formation since 2006 will be due to the high house prices, shortage of social rented housing, as well as the economic downturn. Between 2006 and 2012, the number of households in Glasgow rose by only 900 per year, despite a sizable rise in Glasgow's population by 4,400 per year.

Graph 6.3 - Estimated and Projected Average Household Size for Glasgow City - 1991 to 2037



- 6.7 NRS expects that the average household size will resume its downward trend in the projection period (from 2.02 persons per household in 2012 to 1.88 persons per household in 2037).
- 6.8 Although there is uncertainty with respect to future rates of household formation, NRS has not prepared projection results for any alternative household formation scenarios.

Changes by household type

- 6.9 Table 6.1 below shows that the projected annual household growth of 2,700 per year is accounted for by rising numbers of single adult and two adult households, both in the short term and in the medium term.

Table 6.1 - NRS 2012-base principal projections of households by household type for Glasgow City

household type	year 2012	year 2022	2012-2022	annual change
single adult	126,538	144,906	18,368	1,837
two adults	71,124	79,053	7,929	793
three+ adults	23,299	22,848	-451	-45
one adult family	24,525	25,541	1,016	102
two+ adults family	40,648	39,759	-889	-89
total	286,134	312,107	25,973	2,597
household type	year 2022	year 2037	2022-2037	annual change
single adult	144,906	174,994	30,088	2,006
two adults	79,053	89,582	10,529	702
three+ adults	22,848	24,138	1,290	86
one adult family	25,541	26,602	1,061	71
two+ adults family	39,759	38,691	-1,068	-71
total	312,107	354,006	41,899	2,793

**Source: National Records of Scotland
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- 6.10 It is surprising that the projection shows practically no change in the number of family households, despite a projected 18% rise in the number of children. "One adult family" households are expected to see a small increase and "two+ adults family" households are expected to see a small reduction over the projection period.
- 6.11 Further detail on the results of the household projections by type, i.e. for principal and migration variant projections and for the previous 2010-base projection are given in Table A7 (see Appendix).

Changes by age of household reference person

- 6.12 Table 6.2 shows that over the next decade, 2012-2022, the main drivers for growth in the number of households are the age groups “30 to 44” and “60 to 74”. After 2022, the growth in households is entirely due to middle-aged and pensioner households (i.e. the group age 45+).

Table 6.2 - NRS 2012-base principal projections of households by age of household reference person for Glasgow City

age hr person	year 2012	year 2022	2012-2022	annual change
16 to 29	50,167	46,540	-3,627	-363
30 to 44	81,624	99,354	17,730	1,773
45 to 59	76,578	77,791	1,213	121
60 to 74	48,647	58,975	10,328	1,033
75+	29,119	29,448	329	33
total	286,134	312,107	25,973	2,597
age hr person	year 2022	year 2037	2022-2037	annual change
16 to 29	46,540	51,035	4,495	300
30 to 44	99,354	94,054	-5,300	-353
45 to 59	77,791	99,980	22,189	1,479
60 to 74	58,975	66,955	7,980	532
75+	29,448	41,982	12,534	836
total	312,107	354,006	41,899	2,793

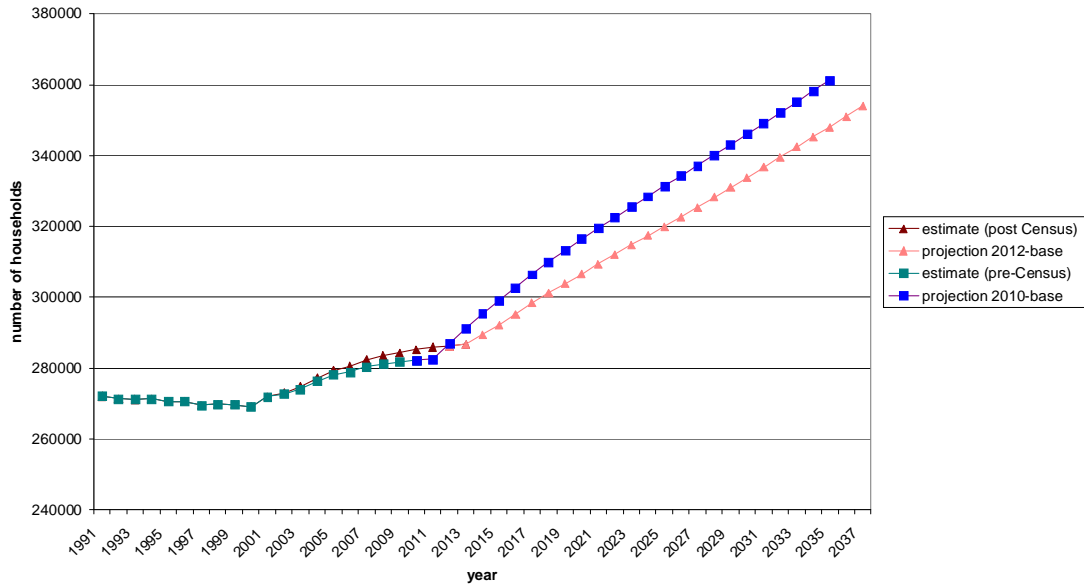
**Source: National Records of Scotland
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- 6.13 Further detail on the results of the household projections by age, i.e. for principal and migration variant projections and for the previous 2010-base projection are given in Table A8 (see Appendix).

7. COMPARISON WITH 2010-BASE HOUSEHOLD PROJECTION

7.1 This section compares the latest NRS projection (2012-base) with the previous NRS projection (2010-base). The comparison is only for the principal projection and does not consider any of the variant scenarios.

Graph 7.1 - Estimated and Projected Number of Households for Glasgow City - 1991 to 2037

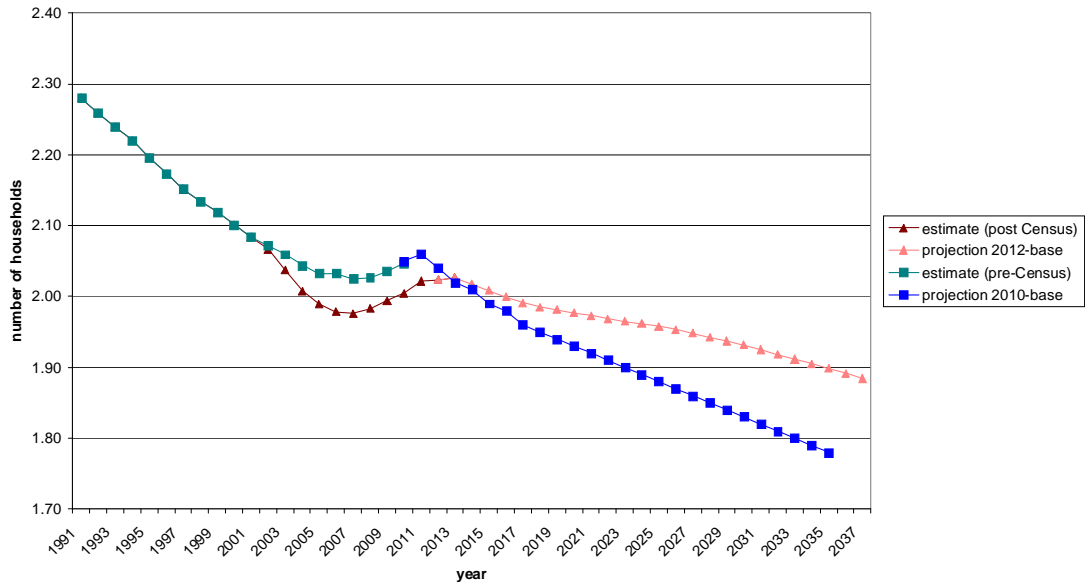


7.2 Graph 7.1 shows that there has been only a marginal upward revision of the estimated number of households in the years 2002-2010, as a result of the 2011 Census. The projected rate of household growth, at 2,700 per year in 2012-2037, is lower than the rate of household growth in the previous projection (3,200 per year in 2010-2035).

7.3 The 2010-base projection was based on household formation rates, projected forward from trends in the 1991 to 2001 period. The basis for household formation rates in the 2012-base projection includes more recent information from the 2011 Census. The slowdown in household formation in the latter half of the last decade is therefore incorporated in this projection. That is the main reason why, despite a higher rate of population growth in the 2012-base projection (from 2,700 per year to 3,600 per year, see paragraph 4.3), there is a lower rate of household growth (from 3,200 per year to 2,700 per year, see paragraph 7.2), as compared with the 2010-base projection.

7.4 Graph 7.2 shows the effect of including the more recent information from the 2011 Census on the projected average household size: the 2012-base projection shows a downward trend in the average household size, but at a slower rate, as compared with the 2010-base projection.

Graph 7.2 - Estimated and Projected Average Household Size for Glasgow City - 1991 to 2037



7.5 The slower rate of household formation assumed in the new 2012-base projection is also reflected in the projected change in households by type. Table 6.3 shows that, for the new projection, the projected growth in the number of single adult households (1,837 per year) and the number of one adult family households (102 per year) is considerably lower than in the previous 2010-base projection (2,829 per year for single adult households and 708 per year for one adult family households).

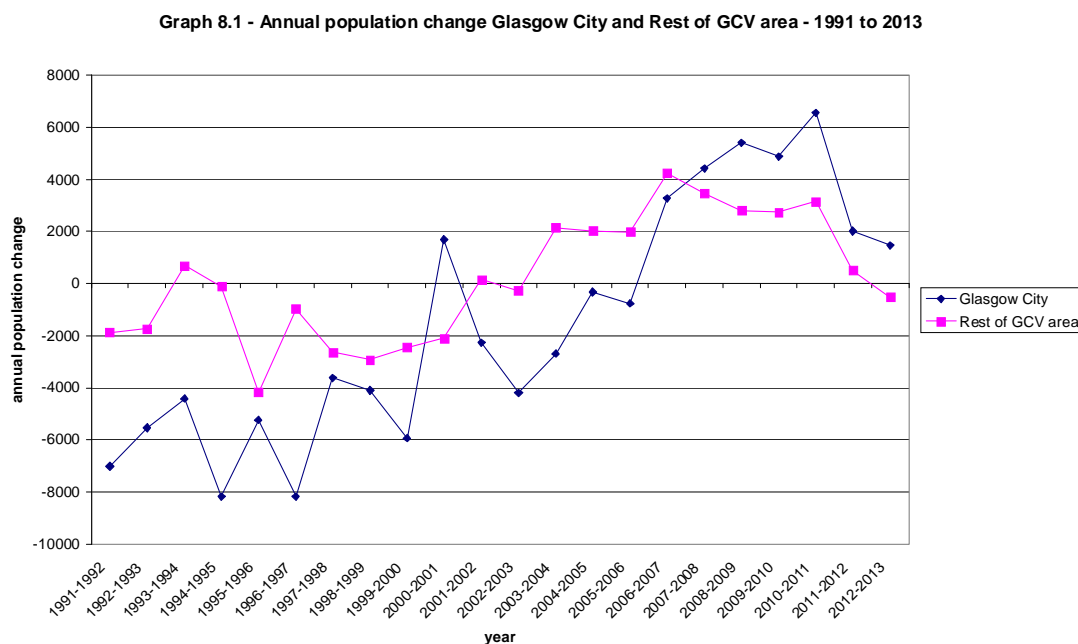
**Table 6.3 - Annual household change by household type
comparison of new and previous projections**

household type	projected for period 2012-2022		
	2012-base	2010-base	difference
single adult	1,837	2,829	-992
two adults	793	314	479
three+ adults	-45	-116	71
one adult family	102	708	-606
two+ adults family	-89	-171	82
total	2,597	3,564	-967

**Source: National Records of Scotland
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8. DEMOGRAPHIC CHANGE IN GLASGOW AND CONURBATION

8.1 This section considers recent population and household change in Glasgow City and in Rest of Glasgow and the Clyde Valley (Rest GCV) conurbation. The latter area consists of the following council areas: East and West Dunbartonshire, North and South Lanarkshire, Inverclyde, Renfrewshire and East Renfrewshire.



8.2 Graph 8.1 and Table 8.1 show that before 2001, there were population losses in both Glasgow City and in Rest GCV conurbation. Then follows a period where, generally, the losses continued in Glasgow City, but the population rose in the rest of the conurbation. After 2006, the population in Glasgow has risen at a higher rate than in Rest GCV conurbation.

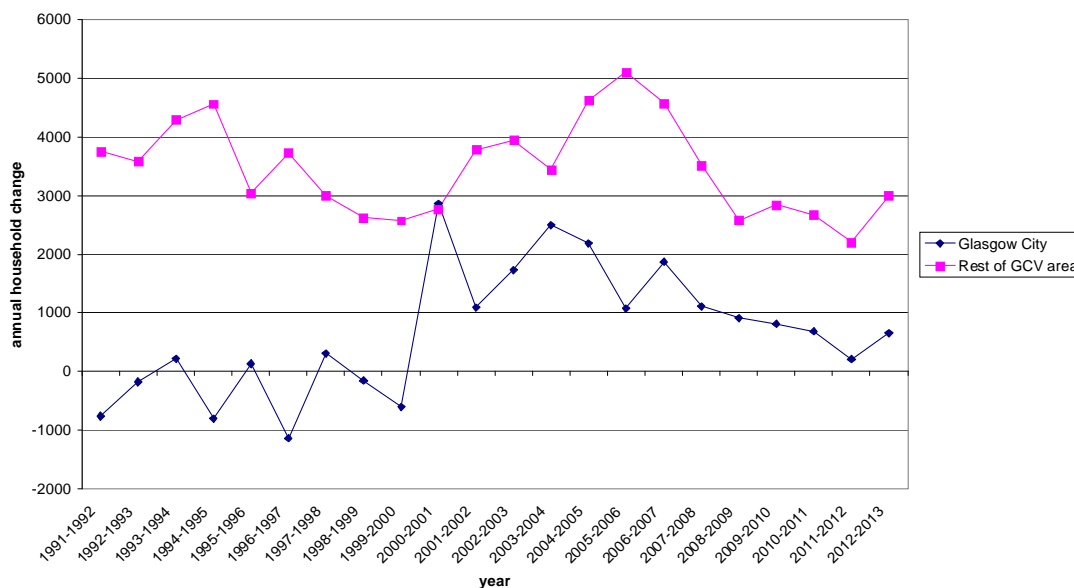
Table 8.1 - Annual Population Change in GCV area

	Glasgow City	Rest of GCV	Total GCV area
1991-1996	-6,076	-1,820	-7,896
1996-2001	-4,026	-1,619	-5,645
2001-2006	-2,046	1,208	-838
2006-2011	4,916	3,284	8,200
2011-2013	1,745	0	1,745

**Source: National Records of Scotland
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8.3 During the last two years, 2011-2012 and 2012-2013, rates of population change were considerably lower than before. In Rest GCV conurbation there was a small population loss in 2012-2013.

Graph 8.2 - Annual household change Glasgow City and Rest of GCV area - 1991 to 2013



8.4 Graph 8.2 and Table 8.2 show that annual household change has consistently been higher in Rest GCV conurbation as compared with Glasgow City. The recent population growth in Glasgow City between 2006 and 2011 has not resulted in a corresponding increase of household growth. Instead, annual household growth in Glasgow has fallen from 1,715 per year in 2001-2006 to 1,077 per year in 2006-2011.

Table 8.2 - Annual Household Change in GCV area

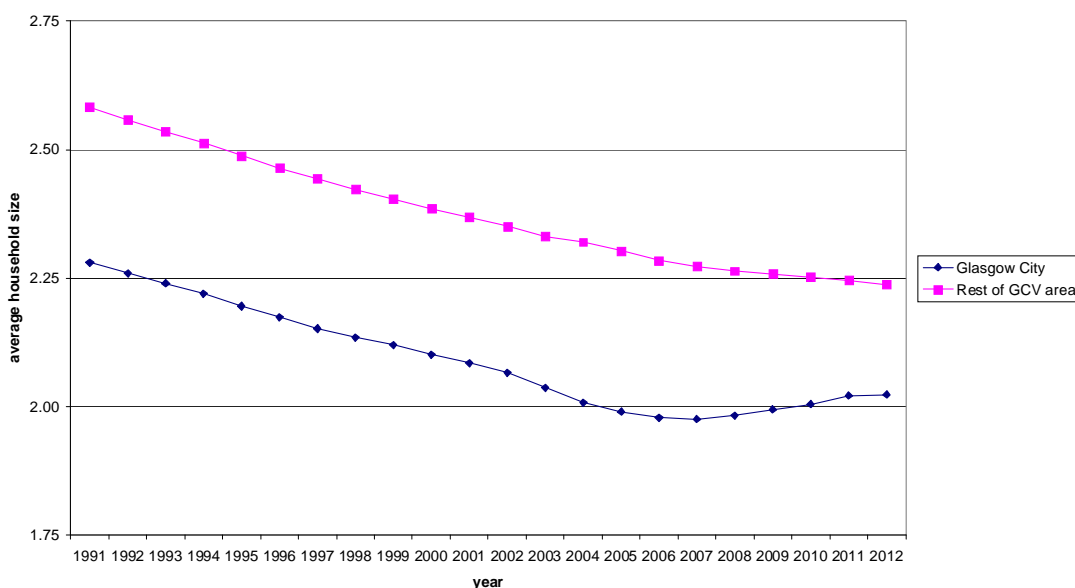
	Glasgow City	Rest of GCV	Total GCV area
1991-1996	-280	3,848	3,568
1996-2001	255	2,941	3,196
2001-2006	1,715	4,182	5,896
2006-2011	1,077	3,238	4,315
2011-2013	434	2,603	3,037

Source: National Records of Scotland
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8.5 In 2011-2013, the growth in the number of households has fallen further to 434 per year in Glasgow and to 2,603 per year in Rest GCV conurbation.

8.6 As a result of sizable population growth together with limited household growth, households in Glasgow have become bigger. The average household size in Glasgow City rose from 1.98 in 2007 to 2.02 in 2012 (see Graph 8.3 on next page).

Graph 8.3 - Average Household Size Glasgow City and Rest of GCV area - 1991 to 2012



- 8.7 It is clear that the economic downturn in the latter half of the last decade has affected the rate of household formation. Fewer new households have been formed, as many people have been unable to afford the purchase of a home. There is evidence that young people are often staying longer in the family home or share a private rented dwelling with friends or relatives. It is likely, that this will also have had an impact on migration patterns, with fewer people moving away from the City to the rest of the conurbation, due to the state of the housing market.
- 8.8 The period 2007 to 2012 has been used by NRS as the base period for determining the migration assumptions to be used in the population projection. As, for Glasgow City, this period was characterised by high population growth and very limited household growth, it is considered unlikely that this scenario will continue for the next 25 years.
- 8.9 Continued increases in average household size for Glasgow City would not be sustainable in the medium and longer term. Therefore, if Glasgow's population were to grow at projected rates, then households would have to grow by 2,700 per year. This is a household growth rate far in excess of what Glasgow has experienced in the recent past. Conversely, if households would not grow at this considerably higher rate, then the population is unlikely to grow at the rate projected from the NRS principal projection for Glasgow.
- 8.10 Considering the above, it is argued that the NRS principal projection results for Glasgow may be too high. There are indications that the economic downturn in those years has affected household formation and possibly also migration patterns. As current patterns are unlikely to be sustained in the medium to longer term, it is suggested that the NRS projections for the lower migration scenario present a more realistic projection of future population and household change in Glasgow.

APPENDIX

TABLES A1 TO A8 WITH PROJECTION RESULTS

- Table A1 – NRS 2012-base principal projection Glasgow City
- Table A2 – NRS 2012-base high migration variant projection Glasgow City
- Table A3 – NRS 2012-base low migration variant projection Glasgow City
- Table A4 – NRS 2010-base principal projection Glasgow City
- Table A5 – NRS population projection by age for Glasgow City
- Table A6 – NRS household projections for Glasgow City
- Table A7 – NRS household projections by type for Glasgow City
- Table A8 – NRS household projections by age for Glasgow City

Table A1 - NRS 2012-base principal population projection Glasgow City

year	population at start	births	deaths	natural change	net migration	population at end
2012-2013	595,080	7,260	6,751	509	1,550	597,139
2013-2014	597,139	7,401	6,283	1,118	1,600	599,857
2014-2015	599,857	7,547	6,181	1,366	1,650	602,873
2015-2016	602,873	7,694	6,101	1,593	1,700	606,166
2016-2017	606,166	7,821	6,030	1,791	1,750	609,707
2017-2018	609,707	7,936	5,960	1,976	1,800	613,483
2018-2019	613,483	8,015	5,918	2,097	1,850	617,430
2019-2020	617,430	8,068	5,878	2,190	1,850	621,470
2020-2021	621,470	8,103	5,851	2,252	1,850	625,572
2021-2022	625,572	8,106	5,832	2,274	1,850	629,696
2022-2023	629,696	8,091	5,828	2,263	1,850	633,809
2023-2024	633,809	8,054	5,816	2,238	1,850	637,897
2024-2025	637,897	8,011	5,821	2,190	1,850	641,937
2025-2026	641,937	7,946	5,814	2,132	1,850	645,919
2026-2027	645,919	7,869	5,811	2,058	1,850	649,827
2027-2028	649,827	7,796	5,823	1,973	1,850	653,650
2028-2029	653,650	7,723	5,836	1,887	1,850	657,387
2029-2030	657,387	7,666	5,857	1,809	1,850	661,046
2030-2031	661,046	7,613	5,878	1,735	1,850	664,631
2031-2032	664,631	7,565	5,916	1,649	1,850	668,130
2032-2033	668,130	7,519	5,948	1,571	1,850	671,551
2033-2034	671,551	7,502	6,006	1,496	1,850	674,897
2034-2035	674,897	7,502	6,048	1,454	1,850	678,201
2035-2036	678,201	7,518	6,089	1,429	1,850	681,480
2036-2037	681,480	7,560	6,146	1,414	1,850	684,744

**Source: National Records of Scotland
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Table A2 - NRS 2012-base high migration variant projection Glasgow City

year	population at start	births	deaths	natural change	net migration	population at end
2012-2013	595,080	7,262	6,746	516	1,750	597,346
2013-2014	597,346	7,411	6,254	1,157	2,000	600,503
2014-2015	600,503	7,570	6,167	1,403	2,200	604,106
2015-2016	604,106	7,734	6,077	1,657	2,500	608,263
2016-2017	608,263	7,892	6,016	1,876	2,750	612,889
2017-2018	612,889	8,033	5,943	2,090	3,000	617,979
2018-2019	617,979	8,149	5,911	2,238	3,250	623,467
2019-2020	623,467	8,242	5,873	2,369	3,250	629,086
2020-2021	629,086	8,315	5,848	2,467	3,250	634,803
2021-2022	634,803	8,366	5,841	2,525	3,250	640,578
2022-2023	640,578	8,391	5,823	2,568	3,250	646,396
2023-2024	646,396	8,392	5,815	2,577	3,250	652,223
2024-2025	652,223	8,380	5,813	2,567	3,250	658,040
2025-2026	658,040	8,355	5,831	2,524	3,250	663,814
2026-2027	663,814	8,319	5,835	2,484	3,250	669,548
2027-2028	669,548	8,272	5,853	2,419	3,250	675,217
2028-2029	675,217	8,227	5,882	2,345	3,250	680,812
2029-2030	680,812	8,200	5,897	2,303	3,250	686,365
2030-2031	686,365	8,165	5,938	2,227	3,250	691,842
2031-2032	691,842	8,129	5,982	2,147	3,250	697,239
2032-2033	697,239	8,106	6,010	2,096	3,250	702,585
2033-2034	702,585	8,100	6,064	2,036	3,250	707,871
2034-2035	707,871	8,112	6,116	1,996	3,250	713,117
2035-2036	713,117	8,145	6,174	1,971	3,250	718,338
2036-2037	718,338	8,192	6,219	1,973	3,250	723,561

**Source: National Records of Scotland
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Table A3 - NRS 2012-base low migration variant projection Glasgow City

year	population at start	births	deaths	natural change	net migration	population at end
2012-2013	595,080	7,259	6,752	507	1,350	596,937
2013-2014	596,937	7,395	6,282	1,113	1,200	599,250
2014-2015	599,250	7,525	6,177	1,348	1,050	601,648
2015-2016	601,648	7,656	6,096	1,560	900	604,108
2016-2017	604,108	7,762	6,025	1,737	750	606,595
2017-2018	606,595	7,842	5,953	1,889	600	609,084
2018-2019	609,084	7,887	5,899	1,988	450	611,522
2019-2020	611,522	7,904	5,871	2,033	450	614,005
2020-2021	614,005	7,896	5,831	2,065	450	616,520
2021-2022	616,520	7,863	5,811	2,052	450	619,022
2022-2023	619,022	7,808	5,792	2,016	450	621,488
2023-2024	621,488	7,737	5,781	1,956	450	623,894
2024-2025	623,894	7,649	5,776	1,873	450	626,217
2025-2026	626,217	7,552	5,775	1,777	450	628,444
2026-2027	628,444	7,449	5,761	1,688	450	630,582
2027-2028	630,582	7,342	5,768	1,574	450	632,606
2028-2029	632,606	7,235	5,778	1,457	450	634,513
2029-2030	634,513	7,160	5,799	1,361	450	636,324
2030-2031	636,324	7,081	5,821	1,260	450	638,034
2031-2032	638,034	7,008	5,856	1,152	450	639,636
2032-2033	639,636	6,951	5,884	1,067	450	641,153
2033-2034	641,153	6,917	5,918	999	450	642,602
2034-2035	642,602	6,906	5,966	940	450	643,992
2035-2036	643,992	6,908	6,000	908	450	645,350
2036-2037	645,350	6,932	6,040	892	450	646,692

**Source: National Records of Scotland
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Table A4 - NRS 2010-base principal population projection Glasgow City

year	population at start	births	deaths	natural change	net migration	population at end
2010-2011	592,820	7,301	6,671	630	2,550	596,000
2011-2012	596,000	7,436	6,535	901	2,800	599,701
2012-2013	599,701	7,520	6,411	1,109	2,550	603,360
2013-2014	603,360	7,561	6,322	1,239	2,300	606,899
2014-2015	606,899	7,557	6,234	1,323	1,850	610,072
2015-2016	610,072	7,543	6,163	1,380	1,700	613,152
2016-2017	613,152	7,520	6,118	1,402	1,650	616,204
2017-2018	616,204	7,471	6,059	1,412	1,650	619,266
2018-2019	619,266	7,406	6,037	1,369	1,650	622,285
2019-2020	622,285	7,316	6,001	1,315	1,650	625,250
2020-2021	625,250	7,219	5,981	1,238	1,650	628,138
2021-2022	628,138	7,117	5,968	1,149	1,650	630,937
2022-2023	630,937	7,013	5,960	1,053	1,650	633,640
2023-2024	633,640	6,906	5,953	953	1,650	636,243
2024-2025	636,243	6,807	5,961	846	1,650	638,739
2025-2026	638,739	6,716	5,955	761	1,650	641,150
2026-2027	641,150	6,642	5,972	670	1,650	643,470
2027-2028	643,470	6,580	5,974	606	1,650	645,726
2028-2029	645,726	6,529	6,001	528	1,650	647,904
2029-2030	647,904	6,496	6,025	471	1,650	650,025
2030-2031	650,025	6,470	6,067	403	1,650	652,078
2031-2032	652,078	6,464	6,091	373	1,650	654,101
2032-2033	654,101	6,474	6,130	344	1,650	656,095
2033-2034	656,095	6,488	6,180	308	1,650	658,053
2034-2035	658,053	6,526	6,224	302	1,650	660,005

**Source: National Records of Scotland
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Table A5 - NRS population projection by age for Glasgow City

age band	2012-base principal projection			changes		
	year 2012	year 2022	year 2037	2012-2022	2022-2037	2012-2037
0 to 15	96,263	109,448	113,336	13,185	3,888	17,073
16 to 29	143,705	122,983	134,329	-20,722	11,346	-9,376
30 to 44	129,475	157,316	141,797	27,841	-15,519	12,322
45 to 64	142,679	149,465	171,406	6,786	21,941	28,727
65+	82,958	90,484	123,876	7,526	33,392	40,918
total	595,080	629,696	684,744	34,616	55,048	89,664
age band	2012-base high migration variant			changes		
	year 2012	year 2022	year 2037	2012-2022	2022-2037	2012-2037
0 to 15	96,263	111,496	122,784	15,233	11,288	26,521
16 to 29	143,705	126,674	141,216	-17,031	14,542	-2,489
30 to 44	129,475	161,034	155,598	31,559	-5,436	26,123
45 to 64	142,679	150,469	178,780	7,790	28,311	36,101
65+	82,958	90,673	125,183	7,715	34,510	42,225
total	595,080	640,346	723,561	45,266	83,215	128,481
age band	2012-base low migration variant			changes		
	year 2012	year 2022	year 2037	2012-2022	2022-2037	2012-2037
0 to 15	96,263	107,466	104,094	11,203	-3,372	7,831
16 to 29	143,705	119,238	127,365	-24,467	8,127	-16,340
30 to 44	129,475	153,643	128,220	24,168	-25,423	-1,255
45 to 64	142,679	148,446	164,320	5,767	15,874	21,641
65+	82,958	90,229	122,693	7,271	32,464	39,735
total	595,080	619,022	646,692	23,942	27,670	51,612
age band	2010-base principal projection			changes		
	year 2010	year 2020	year 2035	2010-2020	2020-2035	2010-2035
0 to 15	97,236	108,019	98,729	10,783	-9,290	1,493
16 to 29	142,169	116,043	124,580	-26,126	8,537	-17,589
30 to 44	134,033	162,429	135,050	28,396	-27,379	1,017
45 to 64	138,519	153,421	183,210	14,902	29,789	44,691
65+	80,863	85,338	118,436	4,475	33,098	37,573
total	592,820	625,250	660,005	32,430	34,755	67,185

Source: National Records of Scotland
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Table A6 - NRS household projections for Glasgow City

year	2012-base principal projection	2012-base high migration variant	2012-base low migration variant	2010-base principal projection
2010	-	-	-	282,200
2011	-	-	-	282,520
2012	286,134	286,134	286,134	286,920
2013	286,792	286,792	286,792	291,280
2014	289,490	289,655	289,326	295,310
2015	292,270	292,662	291,851	299,090
2016	295,270	296,008	294,488	302,730
2017	298,393	299,576	297,155	306,420
2018	301,238	302,969	299,445	309,960
2019	303,885	306,279	301,441	313,220
2020	306,576	309,647	303,450	316,420
2021	309,363	313,143	305,537	319,520
2022	312,107	316,604	307,560	322,560
2023	314,767	320,016	309,485	325,550
2024	317,352	323,367	311,321	328,450
2025	319,973	326,765	313,174	331,390
2026	322,665	330,246	315,080	334,290
2027	325,469	333,851	317,087	337,190
2028	328,309	337,505	319,117	340,140
2029	331,014	341,040	320,998	343,120
2030	333,752	344,626	322,893	346,150
2031	336,695	348,418	324,979	349,070
2032	339,640	352,228	327,045	352,080
2033	342,483	355,951	328,999	355,120
2034	345,279	359,655	330,900	358,210
2035	348,082	363,379	332,786	361,280
2036	351,046	367,276	334,814	-
2037	354,006	371,197	336,826	-

**Source: National Records of Scotland
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Table A7 - NRS household projections by household type for Glasgow City

household type	2012-base principal projection			changes		
	year 2012	year 2022	year 2037	2012-2022	2022-2037	2012-2037
single adult	126,538	144,906	174,994	18,368	30,088	48,456
two adults	71,124	79,053	89,582	7,929	10,529	18,458
three+ adults	23,299	22,848	24,138	-451	1,290	839
one adult family	24,525	25,541	26,602	1,016	1,061	2,077
two+ adults family	40,648	39,759	38,691	-889	-1,068	-1,957
total	286,134	312,107	354,006	25,973	41,899	67,872
household type	2012-base high migration variant			changes		
	year 2012	year 2022	year 2037	2012-2022	2022-2037	2012-2037
single adult	126,538	146,727	182,751	20,189	36,024	56,213
two adults	71,124	80,176	93,420	9,052	13,244	22,296
three+ adults	23,299	23,056	24,988	-243	1,932	1,689
one adult family	24,525	26,158	28,702	1,633	2,544	4,177
two+ adults family	40,648	40,487	41,337	-161	850	689
total	286,134	316,604	371,197	30,470	54,593	85,063
household type	2012-base low migration variant			changes		
	year 2012	year 2022	year 2037	2012-2022	2022-2037	2012-2037
single adult	126,538	143,063	167,254	16,525	24,191	40,716
two adults	71,124	77,901	85,702	6,777	7,801	14,578
three+ adults	23,299	22,630	23,280	-669	650	-19
one adult family	24,525	24,929	24,530	404	-399	5
two+ adults family	40,648	39,037	36,060	-1,611	-2,977	-4,588
total	286,134	307,560	336,826	21,426	29,266	50,692
household type	2010-base principal projection			changes		
	year 2010	year 2020	year 2035	2010-2020	2020-2035	2010-2035
single adult	129,420	157,130	195,990	27,710	38,860	66,570
two adults	62,950	65,840	70,980	2,890	5,140	8,030
three+ adults	21,800	20,660	21,910	-1,140	1,250	110
one adult family	29,690	36,820	42,010	7,130	5,190	12,320
two+ adults family	38,340	35,970	30,390	-2,370	-5,580	-7,950
total	282,200	316,420	361,280	34,220	44,860	79,080

Source: National Records of Scotland
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Table A8 - NRS household projections by age for Glasgow City

age household reference person	2012-base principal projection			changes		
	year 2012	year 2022	year 2037	2012-2022	2022-2037	2012-2037
16 to 29	50,167	46,540	51,035	-3,627	4,495	868
30 to 44	81,624	99,354	94,054	17,730	-5,300	12,430
45 to 59	76,578	77,791	99,980	1,213	22,189	23,402
60 to 74	48,647	58,975	66,955	10,328	7,980	18,308
75+	29,119	29,448	41,982	329	12,534	12,863
total	286,134	312,107	354,006	25,973	41,899	67,872
age household reference person	2012-base high migration variant			changes		
	year 2012	year 2022	year 2037	2012-2022	2022-2037	2012-2037
16 to 29	50,167	48,007	53,589	-2,160	5,582	3,422
30 to 44	81,624	101,611	102,871	19,987	1,260	21,247
45 to 59	76,578	78,354	104,365	1,776	26,011	27,787
60 to 74	48,647	59,135	68,096	10,488	8,961	19,449
75+	29,119	29,498	42,276	379	12,778	13,157
total	286,134	316,604	371,197	30,470	54,593	85,063
age household reference person	2012-base low migration variant			changes		
	year 2012	year 2022	year 2037	2012-2022	2022-2037	2012-2037
16 to 29	50,167	45,045	48,379	-5,122	3,334	-1,788
30 to 44	81,624	97,124	85,299	15,500	-11,825	3,675
45 to 59	76,578	77,225	95,521	647	18,296	18,943
60 to 74	48,647	58,785	65,917	10,138	7,132	17,270
75+	29,119	29,381	41,711	262	12,330	12,592
total	286,134	307,560	336,826	21,426	29,266	50,692
age household reference person	2010-base principal projection			changes		
	year 2010	year 2020	year 2035	2010-2020	2020-2035	2010-2035
16 to 29	51,510	47,250	54,670	-4,260	7,420	3,160
30 to 44	86,080	110,220	102,140	24,140	-8,080	16,060
45 to 59	72,530	81,160	105,410	8,630	24,250	32,880
60 to 74	44,390	51,550	62,930	7,160	11,380	18,540
75+	27,680	26,240	36,140	-1,440	9,900	8,460
total	282,200	316,420	361,280	34,220	44,860	79,080

Source: National Records of Scotland
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