

Local Authority Population Projections for Wales (2006-based) Summary Report for Caerphilly County Borough

Introduction

On 30 June 2008, the Statistical Directorate of the Welsh Assembly Government published population projections for the 22 unitary authorities in Wales for the first time.

There is a high level of interest in population and migration data for Wales, and so a strong demand for projections at the local authority level. Those who plan for the future, to deliver services and to help frame sustainable policies, need to consider the population by age and sex. Population projections provide estimates of the size of the future population and are based on assumptions about births, deaths and migration.

This report will explain what population projections are, how they should and shouldn't be used, the approach taken in putting the projections together and the broad methods used.

Background

What are population projections

Population projections can be used for planning services and to estimate future need (for example, number of teachers/schools, social services provision). They can be used for housing planning purposes e.g. in local authority Development Plans. Population projections can identify trends that shape the context for future policy development.

There are similar demands for local authority household projections for planning purposes. Local authority population projections are the basis for producing household projections, and the Welsh Assembly Government are currently working on a set of household projections for local authorities in Wales, which will be available in late 2008.

Limitations of population projections

Population projections have limitations. These local authority population projections only indicate what may happen should the trend-based assumptions become true. They are not policy-based forecasts of what may happen and they do not make allowances for the effects of local or central government policies on future population levels, distribution and change.

As the process of demographic change is cumulative, projections become increasingly uncertain the further they are carried forward. Demographic change affects some populations more rapidly and more seriously than others. Due to the size of migration flows, for some authorities, migration assumptions are more critical

than fertility and mortality assumptions. Therefore, migration assumptions can have a significant effect on certain areas in the long term.

Local authority population projections indicate the likely population size and profile, if existing trends continue. This may lead to new policies being introduced, which may result in the original projections not being realised. This means that the population projections will have met one of its prime functions – to illustrate the consequences of recent and current demographic trends, and allow policy makers and service delivery planners an opportunity to change this.

Approach to producing local authority projections

A new approach has been used to develop the 2006-based local authority projections. This approach means using local data and local trends, without forcing the local authority projections to sum to the national Wales level population projections.

The projections have been developed in close collaboration with local authorities and key users in Wales through the Wales sub-national population working group (WASPP). The WASPP group has met on a regular basis over the past two years and has been a forum for technical discussion on the methodology, the base and historic data, and the launch of the population projections. Members of WASPP include local authority representatives with knowledge of and/or experience of demographic data and population projections.

Methodology and Assumptions

This section provides an overview of the broad methodology used in forming the assumptions.

Population estimates methodology

In simple terms, population estimates are calculated by:

- Taking the previous year's population estimate
- Taking out special population groups
- Ageing every person on one year
- Adding births and subtracting deaths
- Allowing for inward and outward migration
- Adding back in the special population groups

A similar approach is taken to calculate population projections. However, in order to produce population projections, assumptions need to be formed to project future levels of fertility, mortality and migration for each local authority. These assumptions are based on local trends in recent years.

Population base

The population projections used the 2006 mid-year population estimates as the population base. The population estimates relate to the age at last birthday and were published by the Office for National Statistics (ONS) in August 2007.

The population estimates and population projections are based on the usually resident population. Usual residents away from home temporarily are included, but visitors are excluded. Students are counted at their term-time address. Short-term migrants (under 12 months) are not counted in the population estimates and hence are not included in the population projections.

Fertility Assumptions

Long-term age-specific fertility assumptions for each local authority were produced by analysing age-specific fertility trends for each local authority during the most recent five years.

Age Specific Fertility Rates (ASFRs) were calculated for females aged 15 to 40 by single year of age for each local authority in Wales. ASFRs are calculated by dividing the number of live births to females aged X by the total number of females aged X and multiplying by 1,000.

The fertility rate assumptions for the population projections were calculated by:

- Taking each local authority's total 2005/06 birth levels
- Distributing the total birth levels to the age groups (in order to calculate ASFRs) by using a five year ASFR average
- Applying ONS fertility differentials calculated from data produced in the national population projections to take into account changes in fertility over time

Mortality Assumptions

Long-term age-specific mortality assumptions for each local authority were produced by analysing age-specific mortality trends for each local authority during the most recent five years.

Age Specific Mortality Rates (ASMRs) were calculated for males and females aged newborn to 90+ by single years of age for each local authority in Wales. ASMRs are calculated for each single year of age and gender by dividing the number of deaths at age X by the population aged X and multiplying by 1,000.

The mortality rate assumptions for the population projections were calculated by:

- Taking each local authority's total 2005/06 death levels
- Distributing the total death levels to the age groups (in order to calculate ASMRs) by using a five year ASMR average
- Applying the ONS mortality differentials calculated from data produced in the national population projections to take into account changes in mortality over time

Migration Assumptions

In order to produce the population projections, assumptions for internal (within UK) inward and outward migration were required. In addition to this, assumptions for international inward and outward migration were required.

Long-term migration assumptions for each local authority were produced by analysing age and gender specific migration trends for each local authority during

the most recent five years. Internal migration estimates are based on information from GP registrations. International migration estimates are based on information from the International Passenger Survey (IPS) together with information from other sources (e.g. asylum seekers).

Due to the volatility relating to migration figures year on year, the long-term internal and international (both in and out) migration assumptions are based on an average of the last five years of data. This means a static level migration assumption for both in and out migration.

Special Populations

Special population groups are sub-sets of the population that have specific age structures, which are fairly consistent over time. Special population groups are not usually captured within migration (both internal and international) estimates. Such populations are also known as 'static populations'.

As these groups have fairly static age structures, the projections model of ageing-on would not be appropriate (e.g. a 17 year old boy at a boarding school would be 22 after five years but would not be living in the boarding school – he would have been replaced by someone of a similar age).

To prevent the ageing-on of these populations:

- Special populations (by age and gender) are removed at the start of each year of the projection
- The projections model is applied to the remaining population
- The special populations (by age and gender) are added back in at the end of the process for each year of the projection period.

To maintain consistency with the mid-year estimates, Home Armed Forces, prisoners and school boarders are considered as special populations in the Wales sub-national projections.

National and Local Population Projections

Background to National projections

ONS produce national population projections for Wales and the other UK countries, usually every two years.

The assumptions underlying national population projections are demographic trend based. They are agreed by ONS in liaison with the devolved administrations, following consultation with key users of projections in each country and advice from an expert academic panel.

The fertility assumptions are derived separately for each country by analysing recent fertility trends and completed family size for cohorts of women over a long period of time.

The mortality assumptions are derived by analysing the improvements in mortality rates for the UK as a whole over a long period. Future improvements are generally assumed to be the same across the UK, but are applied to the currently observed base mortality rates in each country. So, current life expectancy differentials between the four countries are maintained.

The international migration assumption for the UK is mainly derived on a model of IPS flows based on a long time-series but giving increasing weight to more recent data.

Attempts to produce local authority projections consistent with National projections

In the past, attempts have been made to produce local authority population projections for the 22 unitary authorities in Wales that are consistent with and sum to the Wales population projections. For various reasons this has not been successful. Therefore a new approach has been used to develop the 2006-based local authority projections. These have not been constrained to the national projections (either overall or by component). The local authority projections are based on a different methodology for deciding the assumptions.

Differences between the National projections and the local authority projections

The key aim of this work is to produce robust local authority population projections for Wales, which reflect local trends in recent years. The main purpose of the national projections is to produce robust population projections for Wales, which reflect national trends in recent years.

The national projections and the local authority projections are different for two main reasons:

a) Assumptions

The methodology used to produce assumptions in the local authority projections is different to those used in the national projections. Some of these are due to slightly different data sources i.e. using only five years of migration data in the local authority projections as data was not available for the ten years used for the national projections. Also, although one set of assumptions may fit well for a national trend, using similar assumptions may not always produce feasible results for all 22 local authority areas because of the different nature and trends between local authorities.

b) geographical level for which the assumptions are based and applied

The geographical level for which the assumptions are based and applied is also important e.g. it is not appropriate to sum local rates (i.e. fertility) to derive a national rate, and therefore a model operating at different geographic levels (but using rates) will produce different results for the different geographic levels.

National population projections and the sum of the 22 local authority projections

It is possible to quantify the differences observed as a result of using different assumptions by comparing the national population projections with a Wales level projection. The Wales level projection was produced by running the projection

model at a Wales level, and using exactly the same methodology as used for producing the local authority projections.

For the Wales level projection, the results followed similar patterns and levels to the ONS produced national projections – the difference between the two is fairly small in 2011 (around 10,000), and the gap increases over the projection period to around 25,000 in 2016 and 70,200 in 2031 (around 2% of the population). Comparison of the births and deaths components of each set also shows only small differences.

Using the same assumptions for a local authority and a Wales projection

It is possible to quantify the differences observed as a result of basing and applying assumptions at different geographical levels by comparing the sum of the 22 local authority projections with a Wales level projection. The difference between the two sets of projections is around 1,200 in 2015 and around 12,500 in 2031.

Comparison of the births and deaths components of each set shows some differences – particularly in the projected number of births. Age specific mortality rates are fairly similar between local authorities in Wales, however fertility rates vary considerably. The projected number of births in the sum of the local authority projections is around 200 higher by 2015/16 than in the Wales level projections, and around 900 higher in 2030/31. The projected number of births in the Wales level projection is close to the projected number of births in the national projections, meaning that the geographical level of application of the model is the main reason for the difference between the projected number of births.

When to use national and local authority projections

The local authority population projections produced by WAG should be used when looking at the projected population of one or more local authorities in Wales. They should also be used when comparing population projections for local authorities.

The sum of the local authority projections should only be used when looking at the projected population of one or more local authorities as a proportion of the Wales total.

The national population projections produced by ONS should be used when looking at the projected population of Wales as a whole. The national population projections should also be used if comparing the projected population of Wales with the other UK countries.

Results Overview for Wales

Total Population

Table 1: Total population and percentage change since 2006 by local authority, selected years

	2011		2021		2031	
	Population	Change	Population	Change	Population	Change
Isle of Anglesey	69,700	1%	71,400	2%	71,800	1%
Gwynedd	121,000	2%	127,100	5%	132,300	4%
Conwy	114,300	3%	120,900	5%	126,500	4%
Denbighshire	99,800	4%	107,800	7%	114,800	6%
Flintshire	152,100	1%	155,700	2%	156,600	1%
Wrexham	135,100	3%	143,000	6%	149,400	4%
Powys	136,100	4%	146,100	7%	154,300	5%
Ceredigion	79,900	4%	85,800	7%	90,600	5%
Pembrokeshire	121,100	3%	129,000	6%	134,800	4%
Carmarthenshire	184,900	4%	199,100	7%	210,600	5%
Swansea	233,000	3%	247,800	6%	261,300	5%
Neath Port Talbot	141,500	3%	151,700	7%	160,700	6%
Bridgend	136,800	3%	146,000	6%	153,700	5%
Vale of Glamorgan	128,100	4%	138,600	8%	147,900	6%
Cardiff	330,200	4%	362,300	9%	394,200	8%
Rhondda Cynon Taff	238,400	2%	248,100	4%	254,900	3%
Merthyr Tydfil	55,500	0%	55,300	0%	54,100	-2%
Caerphilly	174,400	2%	180,700	3%	184,200	2%
Blaenau Gwent	69,700	1%	71,100	2%	71,200	0%
Torfaen	92,000	1%	94,100	2%	94,700	1%
Monmouthshire	90,700	3%	96,100	6%	100,400	4%
Newport	143,500	2%	152,000	6%	159,400	5%

Between mid 2006 and mid 2031, it is projected that the majority of local authorities in Wales will experience an increase in their overall population. The only local authority projected not to experience an increase in population is Merthyr Tydfil, which is predicted to decline by around 3% by mid 2031. The majority of local authorities (15) are projected to see increases of above 10% between mid 2006 and mid 2031. Cardiff is the local authority projected to have the largest population growth (24%) by mid 2031.

Total population by gender

Between mid 2006 and mid 2031 it is projected that the majority of local authorities in Wales will see an increase in the number of men and women. The only local authorities who are projected not to follow this trend are Merthyr Tydfil, with a projected decline in both the number of men and women, and Blaenau Gwent with only a small (under 1%) projected increase in its number of men.

It is projected that across local authorities in Wales, the number of men will increase by up to 30% and the number of women will increase by up to 19%. The average increase in the number of men in any local authority in Wales by mid 2031 is 17% and the average increase in the number of women is 13%.

In 2006, 48.7% of Wales' population were male. Between mid 2006 and mid 2031 the majority (20) of local authorities are projected to see an increase in the percentage of their population that are men. This means that by mid 2031, most local authorities are projected to have an even balance of men and women, with 49.4% of the population projected to be male. The two local authorities projected to see a widening gap between the percentage of their population that are males and those that are females are Blaenau Gwent and Rhondda Cynon Taff. Although the percentage of men is projected to increase, only three local authorities (Cardiff, Ceredigion and Swansea) are projected to contain more men than women by 2031.

Births, deaths and natural change

❖ Births

- Across Wales the birth rate for women aged 20-24 is expected to increase until 2007/08 and then remain fairly constant until 2030/31
- For women aged 25-29 it is expected to increase in the first few years and then remain fairly constant
- For women aged 30-34 and 35-39 it is expected to increase until 2010/11 and then decline to levels slightly below levels seen in 2005/06
- For women aged 40+ it is expected to increase until 2010/11 and then decline slightly but remain at levels higher than seen in 2005/06
- These age specific patterns suggest that the number of births will increase during the first few years of the projection period, before decreasing until 2030/31

❖ Deaths

Overall, across Wales the death rates across all ages are projected to decrease year on year throughout the projection period. However, if death rates are decreasing this means that more people will live to an older age (which have higher death rates) and therefore it is projected that from around 2015/16 the number of deaths projected will begin to rise.

❖ Natural change

In 2005/06 there were 12 local authorities that had more births than deaths.

It is projected that:

- 14 local authorities will experience more births than deaths in 2010/11, and for two authorities the number of births and deaths will be in balance
- The same 14 local authorities will also experience more births than deaths in 2020/21, however the same two authorities will see deaths outstripping births
- By 2030/31 only 6 local authorities will experience more births than deaths and an additional 6 authorities will have births and deaths in balance

The projected fall in the number of local authorities experiencing more births than deaths is due to the projected changes to the age and gender profile of each local authority e.g. a smaller number of women in the age groups with higher fertility rates (e.g. aged 25-34) and a larger number of people in the age groups with higher death rates (e.g. aged 85+).

Total Fertility Rate

The Total Fertility Rate (TFR) is the average number of children that women would bear if the female population experienced the age specific fertility rates for the year in question throughout their childbearing lifespan.

- Across Wales, TFRs are generally expected to increase until 2010/11 and then decline slowly until 2030/31, although still remaining at levels slightly higher than in 2005/06
- Between 2005/06 and 2010/11, the TFR is projected to rise in every local authority
- Between 2010/11 and 2020/21, the TFR is projected to decline in every local authority, but will still remain at levels higher than those seen in 2005/06
- Between 2020/21 and 2030/31, TFRs will remain constant in most local authorities except for the Isle of Anglesey, Flintshire, Swansea, Rhondda Cynon Taff, Blaenau Gwent and Newport, where they will decline slightly

Replacement level fertility (2.08) is the level of fertility required for the population to replace itself in size in the long term given constant mortality rates and the absence of migration. Over the course of the projection period, 5 local authorities are projected to see their TFRs at or above replacement level fertility for one or more years.

Expectation of life at birth

Expectation of life at birth is the age that a person is expected to live to if they experience the age specific mortality rates of the particular local authority at the time of their birth, during the course of their life. An individual's life expectancy will therefore change as mortality rates change throughout their lifetime.

- Across Wales it is predicted that life expectancy will increase year on year throughout the whole projection period
- All local authorities are predicted to see continual increases in life expectancy until 2030/31
- In each of the selected years, life expectancy across Wales is lowest in Blaenau Gwent and highest in Ceredigion.
- Although predicted to experience the lowest life expectancy over the period until 2030/31, Blaenau Gwent, Merthyr Tydfil and Caerphilly are predicted to experience the greatest increases in life expectancy (4.5 years, 4.2 years and 4.2 years respectively)

These changes reflect the expected falls in mortality rates expressed in the national population projections, which have been used in the sub-national population projections to predict future changes in mortality rates.

Migration

A constant level has been assumed for both in and out migration for each local authority, based on each local authority's in and out migration over the last 5 years. For the sub-national population projections, migration is considered as the movement of people into and out of a local authority.

Migration to or from the UK is defined as **internal migration** and is recorded for every move at the time at migration. Migration to or from overseas is defined as **international migration**. However, a person is only classified as an international migrant if they intend to migrate for a period of 12 months or more. Migrants who, at the time of migration, do not intend to stay for 12 months or more are classified as short-term migrants and are not included in the migration figures. An adjustment is made each year for people who change their length of stay from their intentions at the time of migration (under 12 months to over 12 months and vice versa).

In each year of the projection it is predicted that:

- The majority of local authorities (20) will experience more people moving in than moving out, apart from Merthyr Tydfil and Torfaen
- Carmarthenshire will see the greatest net inflow of migrants (around 1,600 more people arriving than leaving each year)

Considering only **internal migration** (within the UK), in each year of the projection it is predicted that:

- Cardiff will experience the highest number of migrants to and from the UK (15,200 and 15,700 respectively), but will experience negative net migration (around 600 more people leaving than arriving each year)
- Merthyr Tydfil will experience the lowest number of migrants to and from the UK (1,200 and 1,300 respectively)
- Only two local authorities (Cardiff and Merthyr Tydfil) will experience more people leaving for other parts of the UK than arriving from the rest of the UK

In terms of **international migration** (from overseas), in each year of the projection it is predicted that:

- Cardiff will experience the highest number of in and out migrants each year (4,000 and 2,800 respectively)
- Blaenau Gwent will experience the lowest number of in and out migrants (around 50 people each way)
- Nine local authorities will experience more people arriving from overseas than leaving each year
- Caerphilly will experience the greatest net outflow of migrants (around 200 more people leaving than arriving each year)

Results for Caerphilly County Borough

Key Results

- The total population of Caerphilly county borough is projected to increase by 12,800 (7.5%) by 2030/31. This is below the average population growth (14.1%) projected to be seen across all Welsh local authorities
- It is projected that there will be more females than males in the population throughout the projection period
- It is projected that more growth will be seen in the male population (8.9%) than the female population (6.1%)
- The most recent actual data show that births in Caerphilly have seen an upward trend since 2001/02. This trend is expected to continue in the initial years of the

projection and births are expected to follow the general pattern seen across local authorities

- The number of deaths in Caerphilly has generally fluctuated between 1,700 and 1,900 over the last five years. The number of deaths is projected to decline slightly until 2015/16 and then increase until 2030/31, in line with the general pattern seen across Welsh local authorities
- The most recent actual data shows that there have been more births than deaths. This is expected to continue for the whole projection period, following the general pattern to be seen across all local authorities
- Caerphilly is projected to have one of the highest levels of positive natural change seen across Wales
- The projected population increase is expected to be driven by natural change, with a smaller contribution through migration (around 140 more people arriving than leaving)
- The Total Fertility Rate is expected to follow the general pattern seen in local authorities across Wales. It is projected that the TFR will remain below the replacement fertility level (2.08) throughout the projection period
- Life expectancy over the projection period is projected to continually rise from 78.5 in 2005/06 to 82.7 in 2030/31
- Migration of people between Caerphilly and the rest of the UK is projected to be:
 - ❖ positive for both males and females, indicating more people arriving than leaving
 - ❖ around the same levels for males and females (around 170 net inflow)
 - ❖ the 9th lowest for males and the 10th lowest for females across all Welsh local authorities
- Migration of people between Caerphilly and outside the UK is projected to be:
 - ❖ negative for both males and females, indicating more people leaving than arriving
 - ❖ the highest level of net out-migration expected to be seen across Wales for both males and females (110 and 90 more people leaving than arriving respectively)

Detailed results

Table 2: Population change, key years and key age groups

	2006	2011	2016	2021	2026	2031
Children	34,800	34,000	34,100	34,600	34,100	33,000
Working age	104,500	105,500	107,400	108,700	110,300	108,900
Pension age	32,000	34,900	36,200	37,400	38,500	42,200
Total	171,300	174,400	177,700	180,700	182,200	184,200

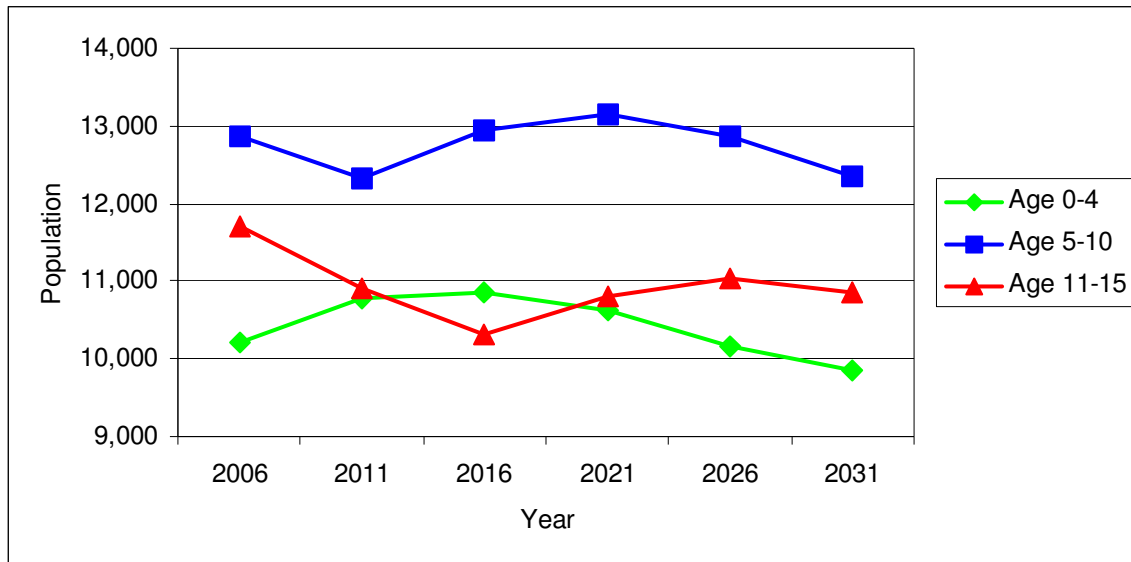
The total population is projected to increase by around 2% every five years until 2021, after which the population will increase by a slower rate until mid 2031.

The number of children is projected to:

- decrease between mid 2006 and mid 2011
- increase between mid 2011 and mid 2021
- decrease again from mid 2021 until mid 2031
- overall the number of children is projected to fall by 5.2% over the projection period

These changes are due to two factors – firstly, the difference between the number of births and the number of children turning 16 (classed as working age) in each five year period, and secondly migration. For each five-year period (except for mid 2016 to mid 2021), Caerphilly is expected to have a lower number of births than children turning 16 and a net inflow of children. The increases seen between mid 2011 and mid 2021 are mostly due to the net inflow of children.

Figure 1: Population projections for 0 to 15 year olds

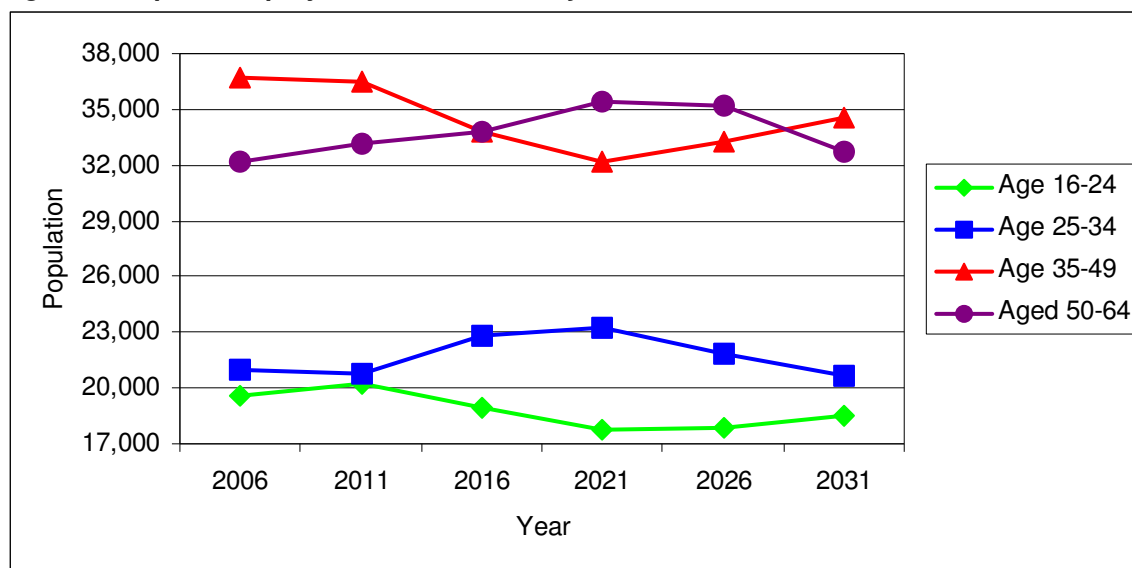


- The 0-4 population is projected to increase to 2016 but then to drop to below the 2006 level by 2031. The number of children in this age group is projected to fall by 3.6% between 2006 and 2031.
- The 5-10 population is projected to drop slightly in 2011, to increase to slightly above the 2006 level in 2021 and then to fall back to the 2011 level by 2031. The number of children in this age group is projected to fall by 4.1% between 2006 and 2031.
- The 11-15 population is projected to fall sharply until 2016, gradually rise to 2026, and then fall slightly again by 2031, but this population group is not projected match the 2006 level at any time over the projection period. The number of children in this age group is projected to fall by 7.3% between 2006 and 2031.

The number of people of working age is projected to:

- increase between 1% and 2% between each of the five year periods until mid 2026
- decline slightly between mid 2026 and mid 2031
- overall the number of people of working age is projected to fall by 4.2% over the projection period

Figure 2: Population projections for 16 to 64 year olds



- The 16-24 population is projected to increase slightly from the 2006 figure by 2011, and then fall gradually by 2021, remaining fairly constant in 2026 and increasing slightly by 2031. The number of people in this age group is projected to fall by 5.1% between 2006 and 2031.
- The 25-34 population is projected to remain at around the 2006 level by 2011, to increase to 2021 and then to fall to slightly below the 2006 level by 2031. The number of people in this age group is projected to fall by 1.3% between 2006 and 2031.
- The 35-49 population is projected to remain at around the 2006 level by 2011, to fall considerably by 2021 and then to increase slightly by 2031, but still remaining well below the 2006 level. The number of people in this age group is projected to fall by 5.9% between 2006 and 2031.
- The 50-64 population is projected to increase gradually to 2021, remain fairly constant to 2026, and then drop to slightly above the 2006 level by 2031. The number of people in this age group is projected to increase by 1.2% between 2006 and 2031.

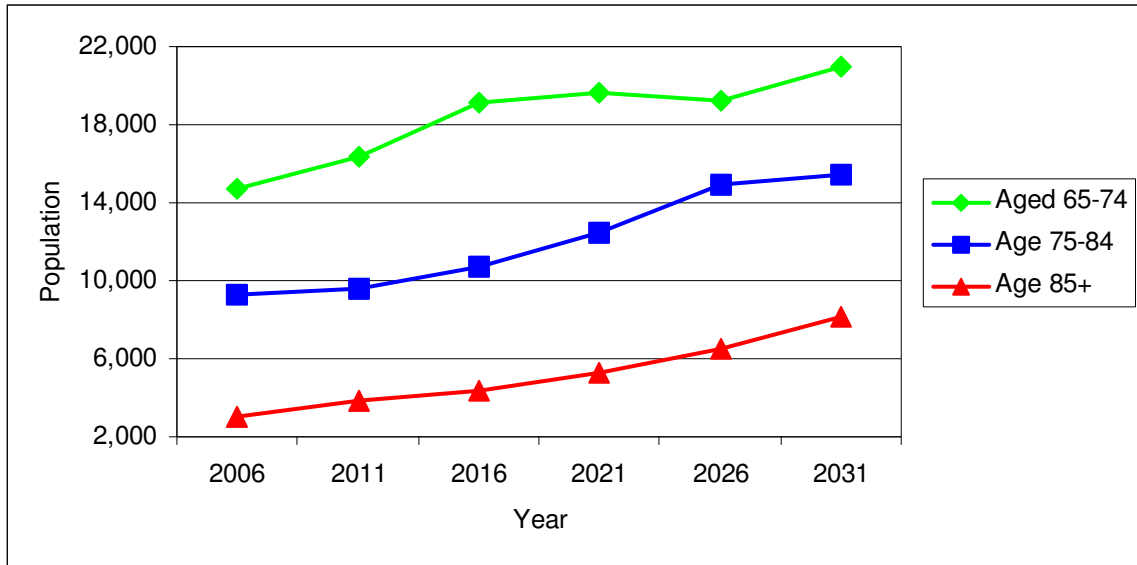
The number of pensioners is projected to:

- increase continually until mid 2031, despite increases in pensionable age¹ for both women (from 2010) and men (from 2024). The rate of increase will be the highest between mid 2026 and mid 2031 (around 10%)
- overall the number of pensioners is projected to increase by 31.9% over the projection period

The increase in the number of pensioners is due to two factors – firstly, improvements in mortality rates mean people are living longer, and secondly the ageing on of larger cohorts, such as those born after the Second World War.

¹ Between 2010 and 2020, state pension age will change from 65 years for men and 60 years for women, to 65 for both sexes. Between 2024 and 2046, state pension age will increase in three stages from 65 years to 68 years for both sexes.

Figure 3: Population projections for people aged 65 and over



- The population of the 65-74 age group is projected to increase to 2016, to even off between 2016 and 2026 and then to increase again by 2031. The number of people in this age group is projected to increase by 42.5% between 2006 and 2031.
- The population of the 75-84 age group is projected to increase fairly steadily up to 2026 and then to increase only slightly to 2031. The number of people in this age group is projected to increase by 66.7% between 2006 and 2031.
- The population of the 85+ age group is projected to increase steadily until the end of the projection period in 2031. The number of people in this age group is projected to increase by 166.2% between 2006 and 2031.

Table 3: Components of change, key years

Year	Births	Deaths	Net UK Migrants	Net Overseas Migrants	TFR	SMR
2006-07	2,085	-1,653	+333	-197	2.0	107
2007-08	2,125	-1,674	+333	-197	2.0	106
2008-09	2,140	-1,659	+333	-197	2.0	102
2009-10	2,153	-1,652	+333	-197	2.0	100
2010-11	2,163	-1,643	+333	-197	2.0	97
2011-12	2,164	-1,637	+333	-197	2.0	94
2012-13	2,158	-1,632	+333	-197	2.0	91
2013-14	2,151	-1,631	+333	-197	2.0	89
2014-15	2,145	-1,630	+333	-197	2.0	87
2015-16	2,139	-1,629	+333	-197	2.0	85
2016-17	2,132	-1,632	+333	-197	2.0	83
2017-18	2,122	-1,635	+333	-197	2.0	81
2018-19	2,108	-1,643	+333	-197	2.0	80
2019-20	2,089	-1,654	+333	-197	2.0	78
2020-21	2,067	-1,663	+333	-197	2.0	76
2021-22	2,047	-1,675	+333	-197	2.0	75
2022-23	2,027	-1,692	+333	-197	2.0	73
2023-24	2,008	-1,709	+333	-197	2.0	72
2024-25	1,992	-1,726	+333	-197	2.0	71
2025-26	1,977	-1,745	+333	-197	2.0	69
2026-27	1,963	-1,764	+333	-197	2.0	68
2027-28	1,953	-1,787	+333	-197	2.0	67
2028-29	1,945	-1,810	+333	-197	2.0	66
2029-30	1,939	-1,834	+333	-197	2.0	65
2030-31	1,934	-1,860	+333	-197	2.0	64

Although the number of births is projected to increase to around 2,160 in 2011/12 and then decrease over the remaining period to 1,900 in 2030/31, the Total Fertility Rate (TFR) is projected to remain fairly constant around 2.0. The changes seen in the birth figures are due to a cohort effect, in that there are projected to be more women of childbearing age (15-49) in the initial years of the projection and then fewer women of childbearing age in the majority of the latter half of the projection period than currently seen.

The number of deaths is projected to decline until 2015/16 and the rise again to 1,900 in 2030/31. The Standard Mortality Rate (SMR), however, is projected to continually decrease over the whole projection period until 2030/31. The changes seen in the death figures are due to two factors – firstly the projected increases in life expectancy (hence the decrease in the early years of the projection), and secondly a cohort effect in that if people are living longer, in future years there will be more people in the very elderly population (aged 90+), which is an age group with a higher SMR, leading to more deaths being projected.

Implications for Caerphilly County Borough

As stated previously, the population of Caerphilly county borough is projected to rise by 12,800 or 7.5% by 2030/31, just over half the projected Wales increase of 14.1%.

It should be reiterated here that this increase is based on recent trends in the population of the county borough, and does not take into account any policies that the Welsh Assembly Government, Caerphilly County Borough Council or other agencies may decide to introduce, which may have potential impacts on the future population of the area. For example, there are targets for the number of new houses that each local authority is required to build each year, but these do not feature in the projected population figures. A further policy could relate to the number of migrants each local authority is expected to accommodate in the years ahead, but again this would not feature in the projections as they are based on historical trends.

As stated previously, the number of children between 0 and 15 years old is projected to fall by 5.2% between 2006 and 2031, equating to 1,800 less children in this age group in 2031 than in 2006. In addition the number of births is projected to increase from 2,085 in 2006 to a peak of 2,164 in 2011, before steadily declining to 1,934 births in 2030/31. This means that 151 less births are projected to occur in 2031 than in 2006.

This fall in the number of children aged 0 to 15 and the falling birth rate will have implications for schools within the county borough in the years to come. The fall in the number of children until 2011 has been expected for some time and has been planned for. Due regard will need to be given to the projected 600 increase in the number children between 2011 and 2021 when school place planning, and this will also affect any strategies to deal with surplus school places.

It is difficult to be precise at this stage on the likely effects, as the 600 increase is generalized under 'children', which includes pre-school. Also 'adults' refers to 16+ in this instance, so some 'adults' will be in schools. In addition, without any breakdown by area it will be impossible to plan by locality. The bottom line is that the authority will need to manage a circa 600 school places increase during the period of the population projections, which hopefully may result in the Council being able to attract S106 monies from new developments.

The other group likely to have a major impact on services in the future is the huge increase in the number of pensioners. Overall, this age group is expected to grow by 31.9% between 2006 and 2031, a total of 10,200 more people. The number of people in each of the categories is projected to grow, with increases of 42.5% (6,623) for the 65-74 age group, 66.7% (6,168) for the 75-84 age group and 166.2% (5,112) for the 85+ age group. Overall, this means an increase of 17,543 more people aged 65 and over in 2031 than in 2006.

These increases will have a substantial impact of a variety of Council services – there will be a greater demand on the most obvious services, such as the need for appropriate accommodation for these individuals, and the increased and possibly more complex services they will require from Social Services and other agencies such as the Health Service. There will also be an impact on less obvious services such as Leisure and Countryside, Benefits advice and claims, and Education, including both adult and community provision. There will also be added pressure on

carers living within the county borough, as families potentially play an even greater role in taking care of elderly relatives on an informal or perhaps formal basis. All of this is likely to come at potentially a high cost to the Council.

In more general terms, whilst the projections do not show a huge population increase for the county borough over the quoted years, the increase in an ageing population will have significant implications for the Council in another way. A significant proportion of our oldest residents belong to a generation that, generally, 'accepted their lot, got on with it and made the most of it'. The result is that they are most likely to accept whatever level of service a council gives them, with little dissent. The new generation of older people is different and their characters have been developed through the late 1950's and 1960's. This generation challenged the 'system' and status quo (not to be confused with the 70's/80's group) and has grown up expecting and demanding more from the 'system'. The probable effect of this is that increasingly, our residents' expectations and demands of quality of service from the Council will be greater. This in itself will lead to the Council having to become more customer focused than it has traditionally been, in line with the Welsh Assembly Government's current drive on engaging with the citizen.

Population projections and the Local Development Plan

Local authorities are required to prepare development plans for their areas, which are land-use plans generally covering a fifteen-year period. This plan identifies both areas where development should take place, and areas that should be protected from development.

The current development plan for this authority is the **Council approved Caerphilly Unitary Development Plan 1996-2011**. The development plan system has been changed since this plan was prepared, and rather than being updated it will be replaced by the **Caerphilly Local Development Plan up to 2021**. This plan is currently in preparation, and is expected to be adopted in 2010.

The most extensive land-use for which the development plan has to make provision is for housing, and the most important use of the population projection underlying the plan is to identify the amount of housing land required. WAG Planning Guidance generally requires authorities to take the most recent WAG population and household projections as the starting point for determining the scale of growth in their development plan. At the time the Deposit LDP was prepared, these were the WAG 2003-based projections for the four planning regions of Wales: projections were not available for individual unitary authorities, because attempts to prepare these had been unacceptable for some authorities i.e. those with large student populations, and Cardiff in particular. The projections for individual authorities were constrained to sum to an all-Wales total, and so these unacceptable projections affected those for all authorities.

The recently published 2006-based population projections for the unitary authorities of Wales represent a very welcome advance over the previous situation, although there are still serious reservations about the projections for some authorities, and in particular Cardiff, which indicate that the problems of areas with large student populations have not yet been resolved. However, unlike in the past, no attempt has been made to constrain the projections to all-Wales totals, so the projections for

individual authorities are now essentially independent, and problems with individual authorities do not impinge on others.

WAG is currently preparing 2006-based household projections for unitary authorities using these population projections, and these may be available by the end of this year. The projections cannot be used for the estimates of future housing requirements for the development plan until these household projections are available, so LDPs will continue to be prepared using the 2003-based projections.

The WAG population projections are described as trend projections because the assumption made is that current levels of migration will continue throughout the projection period: in the case of the WAG 2006-based population projections, the relevant period is 2001-2006, when Caerphilly experienced an annual net in-migration of 100 persons per year. This is the same as the migration assumption used for the LDP projection, albeit for different reasons.

The WAG 2006-based population projection results in a population for the county borough of 180,700 in 2021, compared with the LDP projection of 177,500. This difference is therefore due to the different assumptions on future levels of fertility and mortality, which reflects the changes that have occurred between the preparation of the WAG 2003-based and 2006-based projections.

In fact, however, the assumptions on future mortality rates are generally of gradual improvements over time, and there is little scope for major changes in assumptions between the two sets of projections. The main difference between the projections is therefore due to the assumptions on higher levels of fertility now, which reflects the higher birth rates currently being experienced.

It is worth noting that the reasons for changes in fertility patterns are very poorly understood, and any projections of future birth rates have to be regarded with suitable reservations. For example, one explanatory factor for changes in birth rates is the national economic situation, so the future increase in birth rates may turn out to be lower than that anticipated in the WAG projections.

It should also be noted that for the primary purpose relating to the development plan of estimating future household requirements, the number of births within the Plan period is irrelevant, because none of these people will form their own households then.