

SUB-NATIONAL POPULATION PROJECTIONS (2018-based, revised): CITY & COUNTY OF SWANSEA

Introduction

On 4 August 2020, the Welsh Government (WG) published the latest population projections for the 22 local authority areas in Wales. The projections cover the 25-year period from 2018 to 2043. This follows previous sub-national population projections which were 2006, 2008, 2011 and 2014-based. The 2018-based projections will be the last published before the 2021 Census results and subsequent annual population estimates.

Population projections are vital tools for those involved in the planning and delivery of public and other services and for long-term policy development; including (for Councils) school organisation, social care provision, economic regeneration and local development plans. This note provides a brief overview of the latest sub-national population projections for Wales, focusing on the key data for the Swansea local authority area.

Note: *These projections revise those originally published on 27 February 2020, following discovery of an error caused by incorrect processing of cross-border flows between Wales and England in the national projections, resulting in the projected mid-2028 population for Wales being approximately 65,000 too low, and that for England being similarly too high.*

Methodology

Population projections provide estimates of the size of the future population, built from assumptions on births, deaths and migration – both internal (within UK) and international – which are considered to best reflect demographic patterns at that time. The 2018-based projections are again based on past trends, using mainly five years of fertility, mortality and migration data (up to mid-2018), together with assumed fertility and mortality trends included in the latest national population projection for Wales (also 2018-based).

These estimates are not policy-based forecasts of what may happen and do not make allowances for the effects of public policies on future population levels and distribution, or change caused by other social and economic factors. These assumptions should not be interpreted as predictions of the future but as plausible scenarios based on what has happened in the past. Furthermore, as the process of demographic change is cumulative, the projections become increasingly uncertain the further they are carried forward.

As a change to the previous projections methodology, assumptions for internal (UK-based) migration are now based on migration rates rather than fixed numbers. This means that future inward and outward internal migration is no longer held constant and will depend on the size and the age structure of the population of the local area and the rest of the UK. However, international migration is held constant in all future years of the projection based on recent trends. As before, the sum of the subnational population projections in Wales have not been constrained to the 2018-based national population projections for Wales published by the Office for National Statistics (ONS).

Population change across Wales

The latest national projections for Wales, also 2018-based, were published by ONS in June 2020 (*revised due to the error noted above*). In the shorter-term (the first ten years), these project a total population increase in Wales of 85,000 (+2.7%), from 3.139 million to 3.217 million by 2028. Over 25 years (2018 to 2043) the population is projected to increase to 3.254 million, an overall increase of 116,000 (+3.7%).

In the subnational projections, the projected level of population change is not evenly distributed across Wales, with an increase in 18 of the 22 local authority areas in the first ten years of the projection (2018-2028). Projected change over that period ranges from -3.3% in Ceredigion to +7.2% in Newport, with the next highest percentage growth rates projected for Vale of Glamorgan (+6.0%) and Bridgend (+4.6%). Over the 25-year period (to 2043), the same 18 areas project an overall increase, with figures ranging from -5.8% (again Ceredigion) to +15.2% (Newport). Further details for all local authority areas in Wales, for the first ten years and the full 25-year period, are included in Appendix 1.

Projected population growth in Swansea

The total population of Swansea is projected to increase from an estimated 246,500 in 2018 to 254,400 in 2028, an increase of 7,900 (+3.2%) over the first ten-year period; and to 264,800 by 2043 (+18,400 or 7.5% over 25 years).

Figure 1 illustrates the overall trajectory of the projection; a generally steady rise over the whole period (overall average 735 per year), with slightly higher projected annual increases in the years 2025-2031 (at 850+) and the lowest increases (under 600) in 2038-2040.

The projection numbers for the three key life stage groups are summarised in Table 1 below. Further details of the projected population of Swansea in all years to 2043, together with the available components of change data, are provided in Appendix 2.

Table 1: Welsh Government 2018-based population projections to 2043 by key age group, Swansea

Swansea	2018	2023	2028	2033	2038	2043
Children (0-15)	42,000	42,500	41,900	41,700	42,300	43,400
Working age (16-64)	156,400	157,300	159,400	160,500	160,900	162,700
Older people (65+)	48,000	50,200	53,100	56,400	58,600	58,800
Total	246,500	250,000	254,400	258,600	261,800	264,800

Source: Sub-national population projections for Wales (2018-based), Welsh Government, August 2020. Data rounded to '00s.

The projected trend in the Swansea population between 2018 and 2043 by key age group (aged 0-15, 16-64, 65+) is also shown in Figure 2 opposite. In this graph, each value (as at 2018) is indexed to 100. This illustrates that the most significant growth over the whole 25 years will be in the population aged 65 & over, with the number of children and working age people increasing far less over the period. The graph also shows changes over time within each key age group; for example a slight projected decline in the number of older people beyond 2040.

Figure 1: Swansea projected population (principal) 2018-43

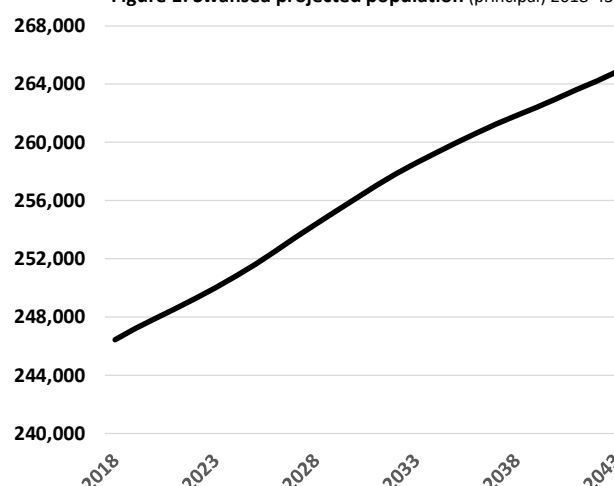
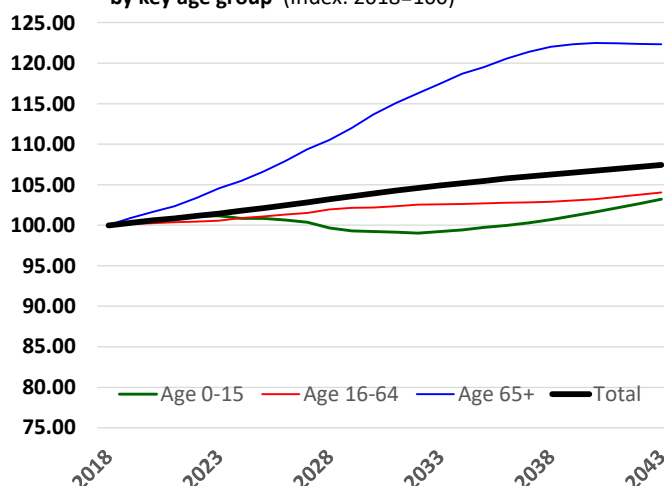


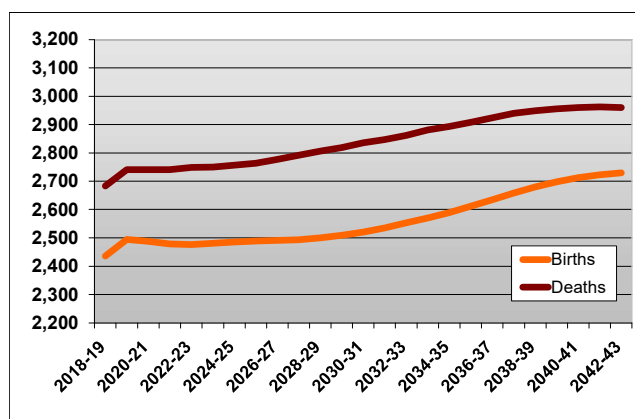
Figure 2: Swansea projected population (principal) by key age group (Index: 2018=100)



The main projected trends in Swansea, focussing on the first ten years, are outlined below:

- With an additional 7,900 people between 2018 and 2028, Swansea has the third highest level of projected growth in Wales, exceeded only by Cardiff (+11,500) and Newport (+11,100 people). As a percentage, Swansea has the fifth highest growth.
- The total population of Swansea is projected to increase by an average of 790 people (+0.3%) per year between 2018 and 2028.
- The projections point to higher growth in the number of males (+4,800 or 3.9%) than females (+3,100 or 2.5%) over ten years. The projections also suggest there will be more males than females in Swansea from 2020 onwards, reaching 50.3% by 2028.
- The number of children (aged 0-15) is projected to fall by approx. 100 (-0.3%) over the 2018-28 period, contrasting with trends in the wider population.
- The number of working age people (aged 16-64) is projected to increase by 3,000 (+1.9%) by 2028; but proportionately below growth in the whole population (+3.2%).
- By 2028, the number of people aged 65 and over is projected to increase by around 5,100 (+10.5%) to 53,100. This is mainly due to continued improvements in mortality rates (reflected in people living longer) and the ageing forward of some population cohorts, including those born in the post-war baby boom.
- However, in the latter years of this projection (from 2040), the older cohort is projected to decline slightly, in line with mortality assumptions and life expectancy patterns.
- The data suggests that deaths in Swansea will exceed births in every year of the projection, with the gap changing very little over the whole 25 years (see Figure 3).
- In these projections, the number of annual births is relatively stable, with little change by 2028, but slightly higher growth afterwards.
- Change in the projected number of deaths is also gradual, only reaching over 2,900 per year by 2035-36.
- Estimated internal (UK) migration in the base year starts at approx. -409 (i.e. more UK-based people leaving Swansea than arriving) and initially falls over the course of the projection (to -194 in 2026-27), but increases afterwards (to -566 in 2038-39).
- For the purposes of the projection model, a constant level of international migration is assumed based on patterns of in- and out- migration prior to the 2018 base year using the latest available estimates. For Swansea, the figure is set at +1,407 net overseas migrants per year (see Appendix 2), in line with recent trends.

Figure 3: Projected births and deaths

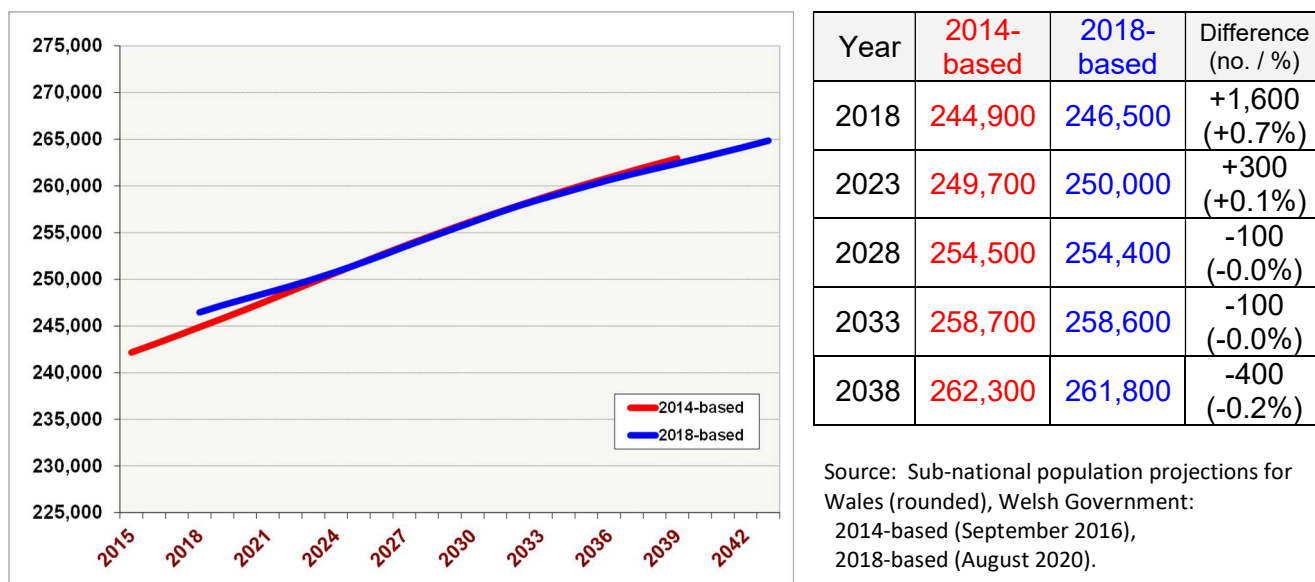


Comparison with 2014-based projections

The latest WG population projections begin from a slightly higher base level (for 2018) than those produced previously, with a benchmark mid-year population estimate (as published by ONS) around 1,600 higher than that projected as part of the 2014-based projections. However, the total rate of increase for Swansea is slightly lower in the latest population projections, at 7.5% over 25 years, than the 2014-based set, which projected 9.0% growth in the 25 years from its base year. In the first ten years common to both sets of projections (2018 to 2028), projected growth in the 2014-based figures was 3.9% or 9,600 (average 960 people per year), but is 3.2% or 7,900 in the latest projections (790 per year).

As a result, from 2023 the gap between the projection figures for each year is minor throughout the period, which is illustrated in the line graph and data table below (Figure 4). In summary, these (limited) differences are attributable to new baseline population and components of change data, together with the changes in methodology outlined on page 1.

Figure 4: Comparison of WG 2014 and 2018-based population projections (principal) for Swansea



Variant projections

In part to illustrate the inherent uncertainty around future demographic change, a number of initial 2018-based variant projections (based on alternative assumptions) were also published by WG on 4 August 2020, with more planned at a later date.

Two variants have been produced alongside the main (or principal) population projection:

- a 'high population' variant, based on high fertility, life expectancy and migration assumptions
- a 'low population' variant, based on low fertility, life expectancy and migration.

The effect of these variant projections for Swansea for the period from 2018 (the base year) to 2028 (10 years) and 2043 (25 years) is shown in Table 2 below. Over the shorter (10-year) period, projected total population growth levels vary from +4,700 (for the lower variant) to +10,100 (higher variant), which compares with the principal projection figure of +7,900 people. However, due to the cumulative effect of varying assumptions, the gap between these variant projections increases from 5,400 to 23,500 by 2043.

Table 2: Welsh Government 2018-based variant population projections to 2028 and 2043, Swansea

Variant: Swansea	Projected change to 2028	Projected change to 2043
Lower variant	+4,700 (+1.9%) to 251,200	+4,800 (+1.9%) to 251,200
Principal projection	+7,900 (+3.2%) to 254,400	+18,400 (+7.5%) to 264,800
Higher variant	+10,100 (+4.1%) to 256,600	+28,200 (+11.4%) to 274,600

Source: Sub-national population projections (2018-based, principal and variant), Welsh Government, August 2020.

The lower and higher population variants provide an indication of uncertainty, but should not be seen as representing upper or lower limits of future demographic change in Swansea. These variant projections are illustrative and show how possible variations in the fertility, mortality and migration assumptions impact the projections and how the size of this impact generally increases the further into the projection period the results are viewed.

WG are also planning to produce variants based on alternative migration assumptions, including one based on zero migration (i.e. natural change only, to show the impact of migration on overall population growth), and a variant based on 10-year migration (i.e. using ten years of data for both international and internal migration, which could mitigate the effects of a potentially atypical five-year period).

Conclusions

- The Welsh Government's latest (2018-based) population projections point to a continuation of growth in Swansea; by 7,900 (+3.2%) over the first ten-year period (to 2028), an average of around 800 additional people per year.
- Growth in the projected number of older people (aged 65+) is higher than total population growth in Swansea, over both the 10-year and 25-year periods.
- Whilst the baseline figure for 2018 is higher than the earlier projections, the overall rate of growth suggested for the 2018-2028 period (+3.2%) is lower than projected previously (+3.9%).
- The projections only indicate what may happen should recent population trends continue. They make no allowance for effects of government policies, or change caused by local or national demographic, social and economic factors.
- The variant projections indicate a difference in population growth levels between higher and lower variants of around 5,400 over the first ten-year period, a gap which rises considerably later – illustrating the inherent uncertainty of projections.
- Sub-national household projections, based on these population projections and Census data, were also published by WG in August 2020.
- These will be the last local projections published prior to the 2021 Census results.

If you would like any further information about population projections, or have any further queries regarding population and demographic change in Swansea, please contact:

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Appendix 1:

2018-BASED POPULATION PROJECTIONS FOR LOCAL AUTHORITY AREAS IN WALES (PRINCIPAL PROJECTION)

Projected population and change, in thousands

Local Authority	2018	2023	2028	2018-28 change (%)	2033	2043	2018-43 change (%)
Isle of Anglesey	70.0	69.8	69.7	-0.3 (-0.4%)	69.5	69.6	-0.4 (-0.6%)
Gwynedd	124.2	125.5	127.5	+3.3 (+2.7%)	129.3	132.2	+8.0 (+6.5%)
Conwy	117.2	118.6	120.0	+2.8 (+2.4%)	121.2	123.7	+6.6 (+5.6%)
Denbighshire	95.3	96.2	96.9	+1.5 (+1.6%)	97.4	98.8	+3.5 (+3.7%)
Flintshire	155.6	157.6	158.9	+3.3 (+2.1%)	159.7	162.0	+6.4 (+4.1%)
Wrexham	136.1	135.3	134.1	-2.0 (-1.5%)	133.1	132.4	-3.7 (-2.7%)
Powys	132.4	132.6	132.8	+0.4 (+0.3%)	133.1	133.9	+1.5 (+1.1%)
Ceredigion	73.0	70.9	70.6	-2.4 (-3.3%)	70.2	68.7	-4.2 (-5.8%)
Pembrokeshire	125.1	126.6	127.7	+2.6 (+2.1%)	128.5	130.2	+5.1 (+4.1%)
Carmarthenshire	187.6	190.0	192.1	+4.5 (+2.4%)	193.8	197.2	+9.7 (+5.1%)
Swansea	246.5	250.0	254.4	+7.9 (+3.2%)	258.6	264.8	+18.4 (+7.5%)
Neath Port Talbot	142.9	144.9	146.8	+3.9 (+2.8%)	148.6	151.9	+9.0 (+6.3%)
Bridgend	144.9	148.6	151.6	+6.7 (+4.6%)	154.0	158.7	+13.8 (+9.6%)
Vale of Glamorgan	132.2	136.4	140.0	+7.9 (+6.0%)	143.0	148.0	+15.8 (+12.0%)
Cardiff	364.2	369.1	375.7	+11.5 (+3.2%)	381.8	388.9	+24.6 (+6.8%)
Rhondda Cynon Taf	240.1	243.4	246.1	+6.0 (+2.5%)	248.6	254.1	+14.0 (+5.8%)
Merthyr Tydfil	60.2	61.1	61.7	+1.5 (+2.6%)	62.3	63.5	+3.4 (+5.6%)
Caerphilly	181.0	182.2	182.8	+1.8 (+1.0%)	183.2	184.9	+3.9 (+2.2%)
Blaenau Gwent	69.7	69.5	69.2	-0.5 (-0.7%)	69.1	69.2	-0.5 (-0.7%)
Torfaen	93.0	94.4	95.3	+2.3 (+2.4%)	96.2	98.2	+5.1 (+5.5%)
Monmouthshire	94.1	95.8	97.4	+3.2 (+3.4%)	98.7	101.2	+7.1 (+7.5%)
Newport	153.3	159.3	164.4	+11.1 (+7.2%)	168.7	176.6	+23.3 (+15.2%)
WALES	3,138.6	3,178.0	3,215.8	+77.2 (+2.5%)	3,248.6	3,309.2	+170.5 (+5.4%)

Source: Sub-national population projections for Wales (2018-based), Welsh Government, 4 August 2020.

Welsh Government release web page: <https://gov.wales/subnational-population-projections>

Appendix 2:

2018-BASED POPULATION PROJECTIONS FOR SWANSEA BY KEY AGE GROUP AND COMPONENTS OF CHANGE (PRINCIPAL PROJECTION)

Year	Projected Population (thousands):				Projected components of change in preceding year:					
	All ages	Children (aged 0-15)	Working age (16-64)	Older people (65+)	Births	Deaths	Net: UK Migrants	Overseas Migrants	TFR	SMR
2018	246.5	42.0	156.4	48.0	2,415	2,652	-167	1,428		
2019	247.2	42.1	156.6	48.5	2,436	2,683	-409	1,407	1.53	107.24
2020	247.9	42.2	156.8	48.8	2,494	2,741	-466	1,407	1.55	108.33
2021	248.6	42.4	157.0	49.2	2,488	2,741	-480	1,407	1.55	107.27
2022	249.3	42.5	157.1	49.7	2,479	2,741	-457	1,407	1.54	106.27
2023	250.0	42.5	157.3	50.2	2,476	2,749	-405	1,407	1.54	105.39
2024	250.8	42.4	157.8	50.7	2,481	2,750	-346	1,407	1.54	104.28
2025	251.6	42.3	158.1	51.2	2,485	2,757	-283	1,407	1.55	103.31
2026	252.5	42.3	158.4	51.8	2,489	2,764	-235	1,407	1.55	102.27
2027	253.5	42.2	158.8	52.6	2,491	2,778	-194	1,407	1.56	101.42
2028	254.4	41.9	159.4	53.1	2,494	2,791	-202	1,407	1.56	100.59
2029	255.3	41.7	159.8	53.8	2,500	2,806	-217	1,407	1.57	99.69
2030	256.1	41.7	159.9	54.6	2,510	2,818	-216	1,407	1.58	98.68
2031	257.0	41.6	160.1	55.3	2,521	2,836	-218	1,407	1.59	97.88
2032	257.8	41.6	160.4	55.9	2,536	2,847	-281	1,407	1.59	96.86
2033	258.6	41.7	160.5	56.4	2,553	2,862	-354	1,407	1.60	95.86
2034	259.3	41.8	160.5	57.0	2,571	2,881	-402	1,407	1.61	94.95
2035	260.0	41.9	160.7	57.4	2,590	2,893	-411	1,407	1.62	93.88
2036	260.6	42.0	160.7	57.9	2,612	2,908	-438	1,407	1.62	92.97
2037	261.3	42.1	160.8	58.3	2,635	2,923	-492	1,407	1.63	92.16
2038	261.8	42.3	160.9	58.6	2,658	2,939	-555	1,407	1.64	91.07
2039	262.4	42.5	161.2	58.8	2,680	2,948	-566	1,407	1.64	90.14
2040	263.0	42.7	161.5	58.9	2,698	2,955	-561	1,407	1.65	89.38
2041	263.6	42.9	161.9	58.8	2,712	2,960	-557	1,407	1.65	88.61
2042	264.2	43.1	162.3	58.8	2,723	2,963	-555	1,407	1.65	87.85
2043	264.8	43.4	162.7	58.8	2,730	2,960	-550	1,407	1.65	86.86
Projected change: 2018 to 2028										
no.	+7.9	-0.1	+3.0	+5.1						
(%)	(+3.2)	(-0.3)	(+1.9)	(+10.5)						
Projected change: 2018 to 2043										
no.	+18.4	+1.4	+6.3	+10.7						
(%)	(+7.5)	(+3.2)	(+4.0)	(+22.3)						

Source: Sub-national population projections for Wales (2018-based), Welsh Government, 4 August 2020.

Notes:

- In the table above, the 2018 data reflects the published mid-year estimates and associated components of change (2017-18).
- As a result of the projections software model used, the overseas migration figures for the years 2018 to 2043 remain constant throughout the projection period.

Key:

TFR = Total Fertility Rate: The average number of live children that a group of women would bear if they experienced the age-specific fertility rates of the calendar year in question throughout their childbearing lifespan.

SMR = Standardised Mortality Ratio: A method of comparing mortality levels in different years, or for different sub-populations in the same year, while taking account of differences in population structure. The ratio is of (observed) to (expected) deaths, multiplied by 100.