

SDR 35/2014

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Household projections for Wales (2011-based)

This release presents the results of the principal 2011-based Household Projections for Wales. Household projections provide estimates of the future numbers of households and are based on population projections and assumptions about household composition and characteristics. The assumptions are based on past trends. Projections produced in this way do not make allowances for the effects of local or central government policies on future population levels, distribution and change.

These 2011-based projections are trend-based projections for the 25-year period from 2011 to 2036. As they are trend-based they become less certain the further they are carried forward. They are based on mid-year population estimates for 2011 which are the first population estimates to be based on the 2011 Census. They also incorporate the revised population and migration estimates for mid-2002 to mid-2010 that were published by the Office for National Statistics (ONS) on 30 April 2013 following the results of the 2011 Census.

Alternative projections can be derived by varying the assumptions used. The key points below relate to the principal projections, but users should be aware also of the variant projections presented in this release. These variant projections present scenarios based on alternative migration and natural change assumptions.

Key points:

Projected Households, Wales

- The number of households for Wales is projected to increase by around 190,000 (or 15 per cent), to around 1.5 million by 2036.
- Most of this increase is expected to come from growth in the numbers of 1-person households, and households formed of 2 persons without children.
- Households containing 4 or 5 persons without children, and lone parent households with 1 child are projected to show large percentage increases.
- Lone parent households of all types are projected to increase by 20 per cent whilst overall numbers of households containing 2 or more adults with children are expected to decrease by 4 per cent.

Projected Households by Local Authority

- For most local authorities in Wales household numbers are projected to increase by 2026. After 2026 for most local authorities households are projected to increase but growth will be slower.
- Households are projected to increase by over 40 per cent for Cardiff and over 20 per cent for Wrexham, Swansea and Newport between 2011 and 2036.

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- For most local authorities households are projected to increase by 10 per cent or less by 2036.
- For some local authorities household are expected to increase by 2031 then decrease slightly.

Projected Household Population

- At a Wales level the private household population is projected to increase by around 250,000 (or 8 per cent) to 3.26 million between 2011 and 2036.
- There are projected to be decreases for a number of local authorities and most will see a decrease in private household population after 2031.

Average Household Size

- For Wales as a whole, average household size is higher than previously projected (2.31 compared with 2.23 at 2011, based on the 2008-based household projections) and is not projected to decrease to the same extent.
- Average household size is also projected to decrease across all local authorities in Wales by 2036, but more slowly towards the end of the projection period for some authorities.
- From 2016 onwards average household size is projected be highest relative to that for Wales for Merthyr Tydfil and Caerphilly, and lowest for Conwy and Powys.

Variant Household Projections

- Based on the higher, lower, and ten-year average migration variants household numbers in Wales are projected to grow to between 1.42 and 1.45 million by 2026 compared with 1.44 million based on the principal projection.
- Based on the ten-year average migration variant, household growth is projected to be higher than when based on the principal projection for most local authorities.
- The zero migration variant shows that there would be fewer than 1.4 million households at 2026 based on natural change only (that is, the difference between numbers of births and deaths).

Comparison with Previous Projections

- Projected household numbers are considerably lower based on the 2011-based household projections than on the 2008-based, 2006-based or 2003-based projections.
- Household numbers for Wales are projected to increase by 175,000 between 2011 and 2033 to reach around 1.5 million based on the principal 2011-based projections, compared with an increase of 284,000 over the same period based on the 2008-based projections.

Detailed information is available via the interactive StatsWales website, including projected population broken down by age and sex:

<https://statswales.wales.gov.uk/Catalogue>

About the Principal and Variant Projections

The household projections covered by this release have been produced using the 2011-based Local Authority Population Projections. This includes both the 'central' or principal projections and the available variant projections. The principal projections are based on fertility, mortality and migration over a five year period. For the 2011-based set of Local Authority Population Projections four variants were produced along with the principal projection for each authority as follows:

- A *higher population variant* which is based on assumptions of higher fertility rates and lower mortality rates.

- A *lower population variant* which is based on assumptions of lower fertility rates and higher mortality rates.
- A variant in which the migration assumption is based on average migration over a longer, ten-year period¹.
- A *zero migration* (or 'natural change only') *variant* to illustrate the projected population of each local authority if there were no future inward or outward migration.

For more information on these variant projections see the Statistical Release SDR 165/2013 (R) 'Local Authority Population Projections for Wales, 2011-based: Variant Projections Revised' which was published on 20 December 2013.

Both the principal and variant projections were developed in close collaboration with local authorities and key users in Wales through the Wales Sub-national Projections working group (WASP). Whilst there are many other variants that could be produced the WASP Working Group considered these four variants to be the most useful.

Projected Households, Wales

The number of households for Wales is projected to increase by around 190,000, (or 15 per cent) to around 1.5million by 2036, as shown in Table 1. The average annual increase is projected to be 0.5 per cent. Most of this increase is expected to come from growth in the numbers of 1-person households, and households formed of 2 persons without children. Also, 1-person households are expected to become the most common household type from 2016 onwards. Households containing 4 or 5 persons without children, and lone parent households with 1 child are projected to show large percentage increases, although their contribution to the overall increase in the number of households is expected to be smaller. Lone parent households of all types are expected to increase by 20 per cent whilst overall numbers of households containing 2 or more adults with children are expected to decrease by 4 per cent.

Table 1: Household projections by type of household, based on the Principal Local Authority Population Projections for Wales, 2011-2036

	<i>Thousands and per cent</i>								
	2011	2016	2021	2026	2031	2036	Change, 2011 to 2036	Percentage change, 2011 to 2036	
1 person	401.7	427.7	455.9	484.9	509.7	534.3	132.7	33	
2 person (no children)	405.0	419.5	431.6	440.1	445.5	446.2	41.1	10	
2 person (1 adult, 1 child)	49.4	53.1	57.0	60.9	64.2	67.1	17.7	36	
3 person (no children)	90.5	92.0	91.5	89.8	88.7	88.3	-2.3	-3	
3 person (2 adults, 1 child)	87.1	86.9	87.0	87.2	86.8	86.3	-0.7	-1	
3 person (1 adult, 2 children)	25.9	25.4	25.6	25.7	25.3	24.7	-1.2	-5	
4 person (no children)	30.7	32.9	33.8	34.2	35.4	37.3	6.6	22	
4 person (2+ adults, 1+ children)	124.2	122.0	121.5	121.6	120.9	119.2	-4.9	-4	
4 person (1 adult, 3 children)	9.1	9.1	9.5	9.7	9.6	9.5	0.4	5	
5+ person (no children)	9.7	11.0	11.7	12.3	13.6	14.8	5.1	53	
5+ person (2+ adults, 1+ children)	67.1	65.8	65.4	64.9	63.9	62.7	-4.5	-7	
5+ person (1 adult, 4+ children)	3.4	3.5	3.7	3.8	3.7	3.7	0.3	9	
All Household Types	1,303.8	1,349.0	1,394.1	1,435.1	1,467.3	1,494.2	190.4	15	

Note: Figures may not sum exactly due to rounding.

¹ The migration assumption for the principal projections is based on average migration over a period of 5 years.

Projected Households by Local Authority

For all local authorities in Wales household numbers are projected to increase by 2026. After 2026 households are projected to increase for most local authorities but growth will be slower. This is shown in Table 2. Households are projected to increase by over 40 per cent for Cardiff and over 20 per cent for Wrexham, Swansea and Newport between 2011 and 2036. For most authorities households are projected to increase by 10 per cent or less by 2036, with a zero increase for Blaenau Gwent overall. For some local authorities, (Isle of Anglesey, Conwy, Powys, Blaenau Gwent and Monmouthshire) households are expected to increase by 2031 then decrease slightly.

Table 2: Projected Households based on the Principal Local Authority Population Projections for Wales, 2011-2036

	<i>Thousands and per cent</i>							
	2011	2016	2021	2026	2031	2036	Change, 2011 to 2036	Percentage change, 2011 to 2036
Wales	1,303.8	1,349.0	1,394.1	1,435.1	1,467.3	1,494.2	190.4	15
Isle of Anglesey	30.7	31.1	31.4	31.5	31.5	31.3	0.6	2
Gwynedd	52.4	53.7	55.2	56.7	57.9	59.0	6.6	13
Conwy	51.2	52.0	52.7	53.1	53.2	53.1	1.8	4
Denbighshire	40.6	41.8	42.9	43.8	44.5	44.9	4.3	10
Flintshire	63.9	65.6	67.1	68.2	68.8	68.8	5.0	8
Wrexham	57.1	60.5	63.8	67.0	70.0	72.7	15.6	27
Powys	58.4	60.3	61.9	63.0	63.3	63.1	4.7	8
Ceredigion	31.4	32.1	32.9	33.5	33.8	34.0	2.6	8
Pembrokeshire	53.2	54.7	56.0	57.1	57.5	57.7	4.5	8
Carmarthenshire	78.9	81.6	84.4	86.8	88.8	90.5	11.6	15
Swansea	103.5	108.0	112.7	117.4	121.5	125.3	21.9	21
Neath Port Talbot	60.4	61.2	62.0	62.7	63.1	63.2	2.8	5
Bridgend	58.6	60.9	63.0	64.8	66.1	67.1	8.5	14
The Vale of Glamorgan	53.6	55.6	57.5	59.2	60.3	61.1	7.4	14
Cardiff	142.8	153.8	165.5	177.6	189.6	201.8	59.0	41
Rhondda Cynon Taf	99.6	102.3	104.7	106.7	108.1	109.0	9.4	9
Merthyr Tydfil	24.3	24.9	25.4	25.9	26.1	26.2	1.9	8
Caerphilly	74.5	76.3	78.0	79.2	79.9	80.2	5.8	8
Blaenau Gwent	30.4	30.7	30.9	31.0	30.8	30.4	0.0	0
Torfaen	38.6	39.4	40.0	40.5	40.7	40.7	2.1	6
Monmouthshire	38.3	39.1	39.7	40.1	40.2	39.9	1.5	4
Newport	61.3	63.7	66.5	69.2	71.7	74.2	12.9	21

Note: Figures may not sum exactly due to rounding.

Projected Household Population

At a Wales level the private household population is projected to increase by around 250,000 (or 8 per cent) to 3.26 million between 2011 and 2036. By local authority there are expected to be decreases for Blaenau Gwent from 2011 onwards, for the Isle of Anglesey, Conwy and Monmouthshire from 2021 onwards; and for Flintshire, Powys, Pembrokeshire, Neath Port Talbot, Rhondda Cynon Taf, Caerphilly and Torfaen from 2026 onwards. Moreover, after 2031 the private household population is projected to decrease for most local authorities in Wales. As a result, percentage increases in private household population by local authority are projected to be less than 10 percent for most authorities between 2011 and 2036. Where percentage increases are higher they tend to represent increases of 20-30,000 in the private household population.

Table 3: Private Household Population based on the Principal Local Authority Projections for Wales, 2011-2036

	<i>Thousands and per cent</i>						Percentage change, 2011 to 2036
	2011	2016	2021	2026	2031	2036	
Wales	3,011.4	3,077.2	3,141.9	3,195.4	3,234.9	3,262.9	8
Isle of Anglesey	69.1	69.3	69.3	68.8	67.8	66.7	-4
Gwynedd	117.6	119.2	121.1	123.4	125.5	127.4	8
Conwy	112.6	113.2	113.7	113.6	112.8	111.5	-1
Denbighshire	92.7	94.7	96.7	98.2	99.2	99.7	8
Flintshire	151.8	153.5	154.7	154.9	154.2	152.8	1
Wrexham	133.5	139.8	145.8	151.3	156.2	160.8	20
Powys	131.1	132.5	133.6	133.9	133.2	131.4	0
Ceredigion	70.8	71.6	72.5	73.5	74.1	74.3	5
Pembrokeshire	120.7	122.3	123.6	124.3	124.1	123.4	2
Carmarthenshire	181.4	186.2	191.0	195.1	198.2	200.6	11
Swansea	234.0	240.5	247.3	253.6	259.2	264.1	13
Neath Port Talbot	138.7	139.9	140.9	141.3	141.0	140.3	1
Bridgend	137.1	140.6	143.7	145.9	147.2	147.9	8
The Vale of Glamorgan	124.6	126.8	128.7	130.0	130.7	130.7	5
Cardiff	333.9	355.1	377.7	400.7	423.6	445.7	33
Rhondda Cynon Taf	231.8	233.3	234.3	234.3	233.3	231.7	0
Merthyr Tydfil	58.4	59.6	60.7	61.3	61.6	61.6	6
Caerphilly	177.7	179.9	181.5	182.1	181.6	180.4	2
Blaenau Gwent	69.2	68.7	68.2	67.3	66.0	64.4	-7
Torfaen	90.5	91.2	91.9	92.1	91.7	91.0	1
Monmouthshire	89.9	90.3	90.5	90.3	89.5	88.0	-2
Newport	144.1	149.0	154.3	159.5	164.3	168.8	17

Average Household Size

Average Household Size, measured in terms of persons per household provides a headline measure of household composition and is useful for comparing over time and between different geographic areas. It is calculated by dividing the private household population (that is, in Table 3) by the number of households (in Table 2). The results are shown in Table 4.

For Wales as a whole average household size is higher than previously projected (2.31 compared with 2.23 at 2011, based on the 2008-based household projections) and is not projected to decrease to the same extent (2.23 at 2026 compared with 2.07 previously). Average household size is projected to decrease across all local authorities in Wales by 2036, but more slowly towards the end of the projection period for some authorities.

Average household size is projected to be highest relative to that for Wales for Merthyr Tydfil and Caerphilly and lowest for Conwy and Powys from 2016 onwards. For local authority areas such as Cardiff, Newport and Wrexham average household size is projected to be above - whilst for Gwynedd, Ceredigion and Swansea it is projected to be below - the Wales average over the projection period.

Table 4: Projected Average Household Size based on the Principal Local Authority Projections for Wales, 2011-2036

	<i>Persons per household</i>					
	2011	2016	2021	2026	2031	2036
Wales	2.31	2.28	2.25	2.23	2.20	2.18
Isle of Anglesey	2.25	2.23	2.21	2.18	2.15	2.13
Gwynedd	2.24	2.22	2.20	2.18	2.17	2.16
Conwy	2.20	2.18	2.16	2.14	2.12	2.10
Denbighshire	2.28	2.27	2.26	2.24	2.23	2.22
Flintshire	2.38	2.34	2.31	2.27	2.24	2.22
Wrexham	2.34	2.31	2.29	2.26	2.23	2.21
Powys	2.24	2.20	2.16	2.13	2.10	2.08
Ceredigion	2.25	2.23	2.21	2.19	2.19	2.18
Pembrokeshire	2.27	2.24	2.21	2.18	2.16	2.14
Carmarthenshire	2.30	2.28	2.26	2.25	2.23	2.22
Swansea	2.26	2.23	2.19	2.16	2.13	2.11
Neath Port Talbot	2.30	2.29	2.27	2.25	2.24	2.22
Bridgend	2.34	2.31	2.28	2.25	2.23	2.20
The Vale of Glamorgan	2.32	2.28	2.24	2.20	2.17	2.14
Cardiff	2.34	2.31	2.28	2.26	2.23	2.21
Rhondda Cynon Taf	2.33	2.28	2.24	2.20	2.16	2.12
Merthyr Tydfil	2.40	2.39	2.38	2.37	2.36	2.35
Caerphilly	2.39	2.36	2.33	2.30	2.27	2.25
Blaenau Gwent	2.28	2.24	2.21	2.17	2.14	2.12
Torfaen	2.34	2.32	2.30	2.27	2.25	2.23
Monmouthshire	2.34	2.31	2.28	2.25	2.23	2.21
Newport	2.35	2.34	2.32	2.30	2.29	2.28

Variant Household Projections

The results of the variant 2011-based Local Authority Population Projections, on which the variant household projections are based, were reported in Statistical Release SDR 165/2013 (R) (published on 20 December 2013), which focussed on trends up to mid-2026. Table 5 below shows the effect on projected household numbers over the same period. Based on the higher, lower, and ten-year average migration variants, household numbers in Wales are projected to grow to between 1.42 and 1.45 million by 2026, a difference of 30,000 households. By comparison based on the principal projection household numbers are expected to grow to 1.44 million.

Table 5: Projected Households at mid-2011 and mid-2026 by Local Authority for Wales by Variant

Area	Households at mid-2011	Households as at mid-2026 based on:				
		Principal Projection	High Fertility and Life Expectancy	Low Fertility and Life Expectancy	Ten-Year Average Migration	Zero Migration
Wales	1,303.8	1,435.1	1,445.8	1,420.4	1,450.8	1,384.8
Isle of Anglesey	30.7	31.5	31.8	31.2	32.3	31.2
Gwynedd	52.4	56.7	57.1	56.2	57.3	54.6
Conwy	51.2	53.1	53.5	52.6	54.5	50.3
Denbighshire	40.6	43.8	44.1	43.3	45.1	41.1
Flintshire	63.9	68.2	68.7	67.6	68.4	68.4
Wrexham	57.1	67.0	67.5	66.3	66.2	61.6
Powys	58.4	63.0	63.4	62.4	65.0	59.6
Ceredigion	31.4	33.5	33.7	33.2	33.9	33.1
Pembrokeshire	53.2	57.1	57.5	56.5	58.2	54.8
Carmarthenshire	78.9	86.8	87.5	86.0	89.1	80.2
Swansea	103.5	117.4	118.2	116.2	118.3	112.0
Neath Port Talbot	60.4	62.7	63.2	62.0	64.7	61.5
Bridgend	58.6	64.8	65.3	64.1	65.4	61.8
The Vale of Glamorgan	53.6	59.2	59.6	58.7	60.7	57.9
Cardiff	142.8	177.6	178.8	176.0	175.9	165.3
Rhondda Cynon Taf	99.6	106.7	107.6	105.4	109.7	108.2
Merthyr Tydfil	24.3	25.9	26.1	25.6	25.1	25.2
Caerphilly	74.5	79.2	79.9	78.3	79.7	79.2
Blaenau Gwent	30.4	31.0	31.3	30.6	31.1	31.5
Torfaen	38.6	40.5	40.9	40.1	40.3	40.9
Monmouthshire	38.3	40.1	40.4	39.8	41.2	39.1
Newport	61.3	69.2	69.8	68.4	68.5	67.1

As may be expected the high fertility and life expectancy and low fertility and life expectancy variants produce corresponding levels of household growth by 2026 compared with the principal projections. For most authorities though the difference in the projected number of households at 2026 is less than a thousand.

Based on the ten-year average migration variant, household growth is projected to be higher than when based on the principal projection for most local authorities, with the exception of Wrexham and Cardiff for which net migration has been higher than for other authorities in more recent years. Also, for most authorities there would be more households at 2026 based on the ten-year average migration variant than based on the higher variant.

The zero migration variant shows that there would be less than 1.4 million households at 2026 based on natural change only (that is, the difference between numbers of births and deaths). Whilst for most authorities household growth would be lower based on the zero migration variant than on the principal projection, there would still be an increase in household numbers for most authorities by 2026.

Figure 1 shows that based on the higher, lower, and ten-year average migration variants, household numbers in Wales are projected to grow to between 1.46 and 1.53 million by mid-2036, a difference of 70,000 households.

Figure 1: Projected Households in Wales, by Variant, mid-2011-mid-2036

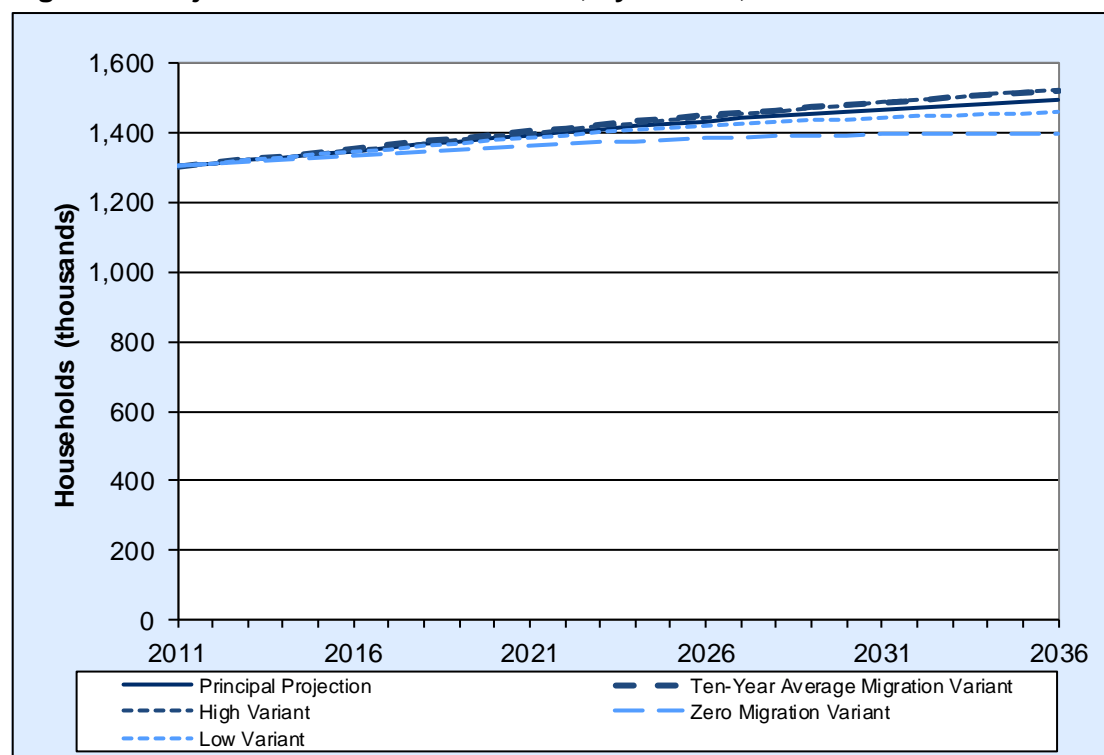


Table 6 shows the impact of the variant population projections on projected average household size by local authority at 2026, shown to three decimal places for clarity. As may be expected this indicates that for all local authorities average household size is projected to be higher when based on the high fertility and life expectancy variant than based on the principal projection and relatively lower when based on the low fertility and life expectancy variant.

For the ten-year average migration variant average household size is projected to be slightly lower at a Wales level than based on the principal projection at 2026. For most authorities average household size is projected to be lower based on the ten-year average migration variant; in particular Gwynedd, Ceredigion and Pembrokeshire. For others, including Powys, Bridgend and Rhondda Cynon Taf average household size is projected to be lower based on the ten-year average migration variant.

For the zero migration variant average household size is projected to be similar at a Wales level at 2026 to that for the low fertility and life expectancy variant. For some authorities though, in particular the Isle of Anglesey, Conwy and Powys, average household size would be higher based on the zero migration variant. For others, in particular Cardiff, Swansea, Gwynedd, Newport and Wrexham, average household size would be lower at 2026 based on the zero migration variant.

Table 6: Projected Average Household Size by Local Authority for Wales at mid-2026, by Variant

Area	Average Household Size at mid-2026 based on:				
	Principal Projection	High Fertility and Life Expectancy	Low Fertility and Life Expectancy	Ten-Year Average Migration	Zero Migration
Wales	2.227	2.230	2.220	2.226	2.220
Isle of Anglesey	2.181	2.184	2.174	2.183	2.202
Gwynedd	2.176	2.179	2.167	2.169	2.147
Conwy	2.138	2.141	2.132	2.140	2.166
Denbighshire	2.242	2.245	2.235	2.235	2.261
Flintshire	2.271	2.273	2.265	2.267	2.273
Wrexham	2.258	2.260	2.251	2.256	2.242
Powys	2.127	2.130	2.122	2.133	2.155
Ceredigion	2.194	2.197	2.188	2.187	2.193
Pembrokeshire	2.178	2.181	2.172	2.170	2.191
Carmarthenshire	2.247	2.249	2.241	2.243	2.244
Swansea	2.161	2.164	2.154	2.164	2.129
Neath Port Talbot	2.253	2.256	2.246	2.256	2.248
Bridgend	2.253	2.255	2.246	2.260	2.265
The Vale of Glamorgan	2.197	2.200	2.191	2.202	2.195
Cardiff	2.257	2.261	2.248	2.256	2.212
Rhondda Cynon Taf	2.196	2.199	2.188	2.203	2.192
Merthyr Tydfil	2.370	2.372	2.363	2.364	2.371
Caerphilly	2.297	2.300	2.290	2.298	2.303
Blaenau Gwent	2.171	2.173	2.164	2.165	2.179
Torfaen	2.272	2.275	2.264	2.265	2.274
Monmouthshire	2.252	2.254	2.248	2.257	2.264
Newport	2.303	2.307	2.294	2.298	2.274

Comparison with Previous Projections

The 2011-based Household Projections for Wales replace projections based on earlier data (2003-based, 2006-based or 2008-based projections). The 2011-based projections are based on the results of the 2011 Census as well as the 2011 mid-year population estimates for Wales, which themselves take into account the most recent count of population from the Census. This gives us a better understanding of household size and formation trends, and also migration trends over the decade up to 2011.

The results of the 2011 Census showed that population growth was higher than had been projected for 2011 using the 2006-based and 2008-based Local Authority Population Projections for Wales. Household growth was shown to be lower than projected for the years up to 2011 based on the 2006-based and 2008-based Household Projections for Wales. Conversely average household size was higher at the time of the census than had been previously projected for 2011. This reflected the difference between actual household formation trends and those than had been built into the assumptions for the previous household projections.

The impact of using the most recent data on births, deaths, migration and household formation trends can be seen in Figure 2 and Table 7. This compares the 2011-based results with previous household projections for Wales as a whole. This shows that projected household numbers are considerably lower based on the 2011-based household projections than on the 2008-based, 2006-based or 2003-based projections. Household numbers for Wales are projected to increase by 175,000 between 2011 and 2033 to reach around 1.5 million based on the principal 2011-based projections. By comparison household numbers were expected to increase by 284,000 over the same period to reach over 1.6million based on the 2008-based projections.

This illustrates the impact of using the results of the 2011 Census to inform assumed household formation trends on overall household growth. In addition, Table 8 shows the effect on projected average household size and indicates that it is not projected to decrease to the same extent based on the 2011-based projections compared to the 2008-based, 2006-based or 2003-based household projections.

Figure 2: Projected Household in Wales, 2011-based and 2008-based projections

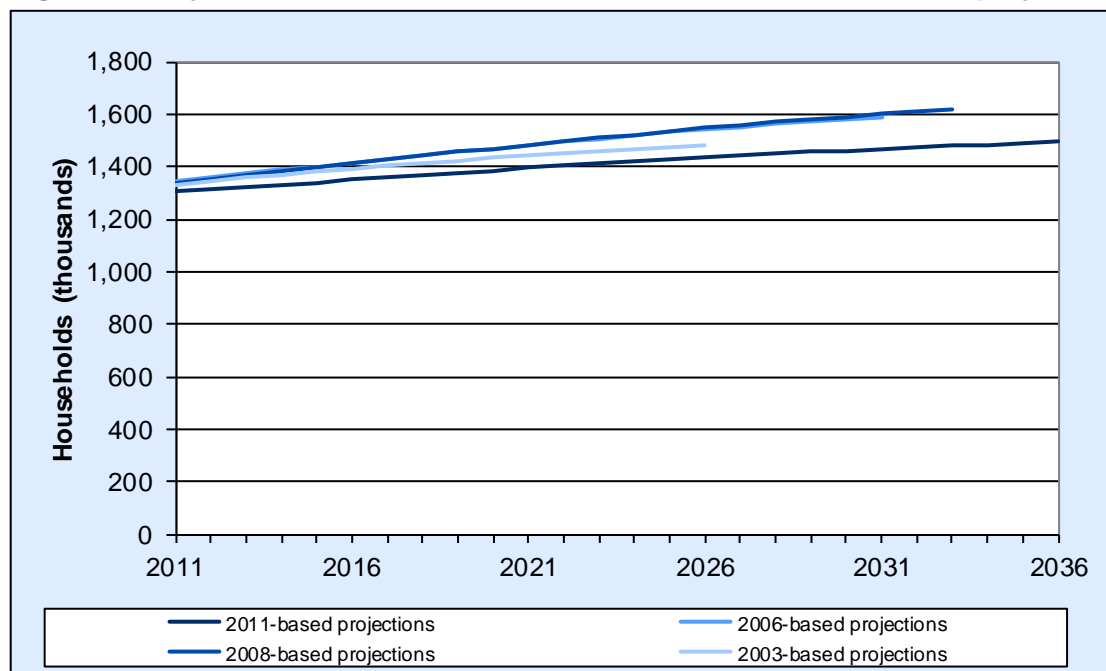


Table 7: Household Projections for Wales, 2011-2026*Thousands*

	2011	2016	2021	2026
2003-based projections	1,332	1,391	1,441	1,479
2006-based projections ¹	1,342	1,415	1,482	1,541
2008-based projections ¹	1,336	1,411	1,482	1,546
2011-based projections ²	1,304	1,349	1,394	1,435

Notes:

1 - Wales-level Household Projection based on the National Population Projections

2 - Based on the sum of the Local Authority-level Household Projections

Table 8: Projected Average Household Size for Wales, 2011-2026*Persons per household*

	2011	2016	2021	2026
2003-based projections	2.23	2.17	2.12	2.09
2006-based projections ¹	2.23	2.16	2.11	2.07
2008-based projections ¹	2.23	2.16	2.11	2.07
2011-based projections ²	2.31	2.28	2.25	2.23

Notes:

1 - Wales-level Household Projection based on the National Population Projections

2 - Based on the sum of the Local Authority-level Household Projections

Quality Information

In addition to the information below, further information can be found in the [Population and Household Statistics Quality Report](#) which is available on our website.

Relevance

Population and household statistics are important for policy development, and planning and providing public services. There is a high demand for population and household statistics for a variety of uses. Some of these include:

- Planning services and estimating future need at national and local level, e.g. schools, housing, health and social services provision.
- As part of the Local Government Finance revenue settlement.
- Policy development.
- Advice to Ministers
- Informing debate in the National Assembly for Wales and beyond.
- For the calculation of further statistics e.g. Spatial Plan Areas.
- As denominators in rates (e.g. homelessness rates).
- For the purposes of weighting surveys.
- Geographic profiling, comparisons and benchmarking.
- Analysis of population cohorts and migration trends.

There are a wide variety of users of projections data from national and local government, charities and voluntary sector organisations, other government departments, students, academics and universities, individual citizens and private companies. In particular there is a high level of interest in projections at local authority level.

There are similar demands for local authority household projections for planning purposes. Local Authority Population Projections are the basis for producing household projections which are used for housing planning purposes for example are considered in preparation of Local Development Plans.

Data Source and Definitions

Household Projections are based on the Local Authority Population Projections for Wales produced by the Welsh Government. These in turn are based on population, births, deaths and migration produced by ONS. Assumptions about future household formation are applied to the results of these population projections by age and sex. These assumptions are developed from past trends based on 2001 and 2011 census figures produced by ONS.

Household

A household is defined as one person living alone, or a group of people (not necessarily related) living at the same address with common housekeeping – that is, sharing either a living room or sitting room or at least one meal a day.

Communal Establishment

A communal establishment is defined as an establishment providing managed residential accommodation. Managed means full-time or part-time supervision of the accommodation. In most

cases (for example, prisons, large hospitals, hotels) communal establishments can be easily identified. However, difficulties can arise with small hotels, guesthouses and sheltered accommodation. Special rules apply in these cases:

Small hotels and guesthouses are treated as communal establishments if they have the capacity to have 10 or more guests, excluding the owner/manager and his/her family.

Sheltered housing is treated as a communal establishment if less than half the residents possess their own facilities for cooking. If half or more possess their own facilities for cooking (regardless of use) the whole establishment is treated as separate households.

Quality

These household projections are National Statistics. National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- Meet identified user needs;
- Are well explained and readily accessible;
- Are produced according to sound methods, and
- Are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

Household projections are trend-based projections that provide estimates of the future numbers of households and are based on population projections and assumptions about household composition and characteristics. The assumptions are generally based on past trends. Projections done in this way do not make allowances for the effects of local or central government policies or socio-economic factors on future population levels, distribution and change or household composition.

Household projections do, therefore, have limitations. These household population projections are not policy-based forecasts. They only indicate what may happen in future should the trend-based assumptions become true.

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 to a greater effect than others. These household projections are produced by applying assumptions about household formation to the projected population figures by age and sex. The results produced are thus due to the household formation assumptions as well as the assumptions used in the underlying population projections. The relative impacts of the migration, mortality, fertility and household formation assumptions on the growth in household numbers will vary between local authorities.

It would be highly unlikely for any projections to be completely accurate – changes in the economy, in individual, family and household behaviour and events outside the UK will occur and will influence the components of population change. Comparison between the Census results and previous projections for 2011 have indicated that trends in population and household growth have varied considerably over the previous decade, most likely due to variations in migration and household formation. The effects of this

likely uncertainty in future trends are shown by producing both principal- and variant projections. The variant projections give alternative plausible scenarios according to different assumptions about the trajectories of fertility, migration, mortality and household formation; they can also be combined to see the effect on the household projections of, for example, a 'young' population assumption (high fertility, high migration and low life expectancy assumptions).

Local authorities are advised to use these published projections as a starting point, and are encouraged to produce their own variant projections and scenarios if required. An updated version of the HouseGroup Wales software which was used to produce the household projections will be made available so that local authorities can create their own variants if they wish.

Methodology

These household projections were calculated by:

- subtracting the assumed population living in communal establishments from the projected population by age group and gender.
- using historical data to calculate projected household membership rates;
- multiplying the projected number of people living in private households by the projected household membership rates;
- dividing the results out by household size, then aggregating by age group, gender and household type to give the projected total number of households.

This process was carried out for each local authority in Wales for each year of the Local Authority Population Projections for Wales.

The methodology for these household projections has been developed in close collaboration with local authorities and key users in Wales - through the Wales Sub-national Projections (WASP) working group. This group has met on a regular basis during the preparation of the projections and has been a forum for technical discussion on the methodology and to agree the assumptions and base data used. Members of WASP include local authority representatives with knowledge of and/or experience of demographic data and population projections.

As part of the development work for these household projections the WASP working group agreed to the use of 2001 and 2011 Census data as the historical basis for projected household membership rates. This followed extensive testing of the projections model with census data for 1991, 2001 and 2011 in order to base household membership rates on trends from all three censuses. From this it became evident that further work would be needed to incorporate longer term trends into the household projections in this way.

Guidance on the detailed methodology used to produce the 2011-based Household Projections for Wales has not yet been published. Full guidance on the methodology for previous projections can be found at: <http://wales.gov.uk/statistics-and-research/household-projections/?lang=en#/statistics-and-research/household-projections/technical-report/?lang=en>

Comparability

Due to the release of the 2011 Census results and the subsequent revisions to historical population estimates the base of the 2011-based Household Projections for Wales is not directly comparable with that for the 2008-based or 2006-based projections. Also, for the 2006-based and 2008-based household projections the projected figures for Wales as a whole were based on the National Population Projections (produced by ONS) which were available at the time. For the 2011-based set the figures for Wales are

instead based on the sum of the local authority-level household projections. Thus any comparison with previous projections needs to be treated with caution.

The Household Projections also use a different approach to those used to produce Household Projections for England, Scotland and Northern Ireland. The projected total household numbers for Wales are based on the sum of the figures for each local authority. Guidance on the differences between the household projections for the four countries of the UK are detailed in a report which is available here:

<http://wales.gov.uk/statistics-and-research/household-projections/?lang=en#/statistics-and-research/household-projections/?tab=previous&lang=en>

Frequency

Household Projections for Wales are normally produced every two years. The previous set of projections was 2008-based. A 2010-based set of projections was not produced; instead a decision was taken to base the next set of projections on the mid-year population estimates for 2011 in order to fully incorporate the results of the 2011 Census as soon as was practicable. The next set of household projections is expected to be 2012-based or 2014-based and will be based on the mid-year population estimates for 2012 or 2014 as appropriate. A final decision will be taken following consultation with users and the ONS.

Related Outputs

Further population data for Wales including Local Authority Population Projections for Wales can be accessed via the Welsh Government website at:

<http://wales.gov.uk/statistics-and-research/?topic=Population+and+migration&lang=en>

Population estimates for England and Wales are published by the Office for National Statistics and can be found at:

<http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/index.html>

National Population Projections for the United Kingdom and constituent countries, including Wales, are published by the Office for National Statistics. The most recent projections are 2012-based and can be found at:

<http://www.ons.gov.uk/ons/rel/npp/national-population-projections/2012-based-projections/index.html>

Household projections for England, Scotland and Northern Ireland are published by the Department for Communities and Local Government, the General Register Office for Scotland and the Northern Ireland Statistics & Research Agency respectively. More information can be found at:

England

<http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/>

Scotland

<http://www.gro-scotland.gov.uk/statistics/theme/households/projections/index.html>

Northern Ireland

<http://www.nisra.gov.uk/demography/default.asp21.htm>

Other housing statistics for Wales, including dwelling stock estimates can be found at:

<http://wales.gov.uk/statistics-and-research/?topic=Housing+and+community&lang=en>

Further Information

Detailed household statistics by local authority and household type can be found on StatsWales at:
<https://statswales.wales.gov.uk/Catalogue>

We actively encourage feedback from our users. If you have any comments please contact us using the details below.

For queries on Household Projections for Wales, or for general queries on demographic data, please contact:

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