

SD75



Llywodraeth Cynulliad Cymru  
Welsh Assembly Government

[www.cymru.gov.uk](http://www.cymru.gov.uk)

# Household Projections for Wales (2008-based)

## Summary Report



## Contact points

### Wales

For statistical enquiries contact the Statistical Directorate:

Tel: 029 2082 5050

E-mail: [stats.info.desk@wales.gsi.gov.uk](mailto:stats.info.desk@wales.gsi.gov.uk)

Minicom: 029 2082 3280

Fax: 029 2082 5350

Address: Statistical Publication Unit,  
Statistical Directorate,  
Welsh Assembly Government,  
Cathays Park,  
CARDIFF, CF10 3NQ

You can also find Statistics for Wales on the internet

[www.wales.gov.uk/statistics](http://www.wales.gov.uk/statistics)

### United Kingdom

For statistical enquiries, contact the Office for National Statistics:

Tel: 0845 601 3034

Enquiries in Welsh: 01633 813381

Minicom: 01633 812399

E-mail: [info@statistics.gov.uk](mailto:info@statistics.gov.uk)

Fax: 01633 652747

Address: Customer Contact Centre,  
Room 1.015,  
Office for National Statistics,  
Cardiff Road,  
Newport,  
NP10 8XG

You can also find National Statistics on the internet

[www.statistics.gov.uk](http://www.statistics.gov.uk)

### A National Statistics publication

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

© Crown copyright 2010

First published 2010

ISBN 978 0 7504 5767 5

Welsh Assembly Government

F3531011

WAG10-10163

Brief extracts from this publication, with the exception of maps, may be reproduced providing the source is fully acknowledged. Proposals for reproductions of maps and larger extracts should be addressed to

The Copyright Unit,  
Her Majesty's Stationery Office,  
St Clements House,  
2-16 Colegate,  
Norwich,  
NR3 1BQ

The maps are based upon the Ordnance Survey map by the National Assembly for Wales with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, © Crown copyright. All rights reserved. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence Number GD272221.

For enquiries about this publication, contact

Tel: 029 2082 3295

E-mail: [stats.housing@wales.gsi.gov.uk](mailto:stats.housing@wales.gsi.gov.uk)

To order additional copies of this publication, call Statistical Publication Unit on 029 2082 5054.

# Contents

	Page
Introduction	5
Background	9
Results Overview	15
Methodology	23
National and Local Household Projections	29
Further Work	33
Quality Information	37
Further Information	41





**Chapter 1**  
**Introduction**



## Introduction

This report provides summary information on the 2008-based household projections for local authorities. The report explains what household projections are, how they should and shouldn't be used, the approach taken and the broad methods used. This includes a summary section comparing and contrasting patterns across all local authorities.

There is an ongoing need for household projections at a local authority level within Wales. Local and strategic planners need to be aware of future numbers of households at a local authority level in order to accommodate demand for housing. Household projections provide estimates of the future numbers of households and are based on population projections and assumptions about household composition and characteristics.

This report is the first output from the second set of local authority household projections for Wales. The first set of local authority household projections for Wales were the 2006-based household projections. A separate Local Authority report which would provide detailed analyses of the household projections in the form of charts, tables and text for each local authority is also being considered.

Detailed data tables have also been published on our StatsWales website. The data presented within this report are available on StatsWales:  
**[www.statswales.wales.gov.uk](http://www.statswales.wales.gov.uk)**

This set of local authority household projections have been produced by Tony Whiffen and Hannah Kleinberg with input from the Wales sub-national household estimates projections working group (WASHP).

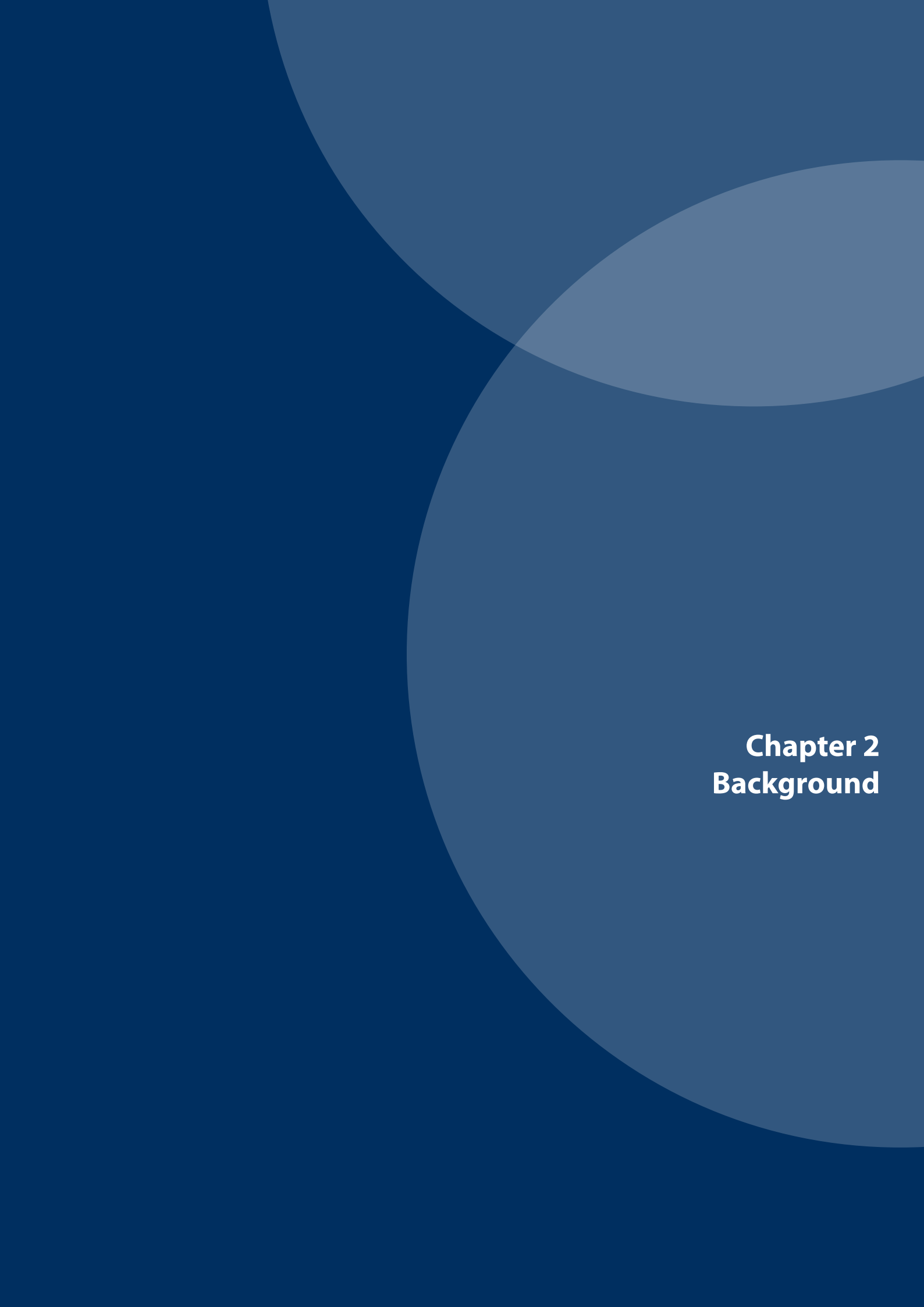
We would welcome any feedback on the content and presentation of this publication. To provide feedback or for general queries, please contact:

Statistician: Rhiannon Caunt  
e-mail: **[stats.housing@wales.gsi.gov.uk](mailto:stats.housing@wales.gsi.gov.uk)**  
phone: 029 2082 3295

Environment, Sustainability and Housing Statistics  
Statistical Directorate  
Welsh Assembly Government  
Cathays Park  
Cardiff  
CF10 3NQ







## **Chapter 2**

### **Background**



## Background

### What are household projections?

Household projections provide estimates of the future number of households, and are based on assumptions about future population growth and household composition and size. The assumptions are based on past trends and the projections only indicate what may happen should recent trends continue. Projections done in this way do not make allowances for the effects of local or central government policies or socio-economic factors on household formation rates or future population levels.

Household projections are based on population projections which are themselves based on assumptions about future births, deaths and migration. As a result they provide an indication of future demand for household spaces as a result of population growth.

Household projections have been produced on an ad-hoc basis for each country of the United Kingdom for a number of years. In the past projections for Wales were produced together with those for England. The 2006-based household projections were the first to be produced separately for Wales and have been produced by the Welsh Assembly Government Statistical Directorate. They were also the first household projections for Wales to be produced at a local authority level.

### Uses of household projections

There is a high level of demand for household projections for Wales, at a local authority level. Those who plan for the future, to provide housing and deliver services need to consider future housing demand.

Household projections are *not* forecasts of numbers of dwellings or houses. Instead they provide an indication of future *demand* for housing based on recent trends and can be used for informing housing planning functions e.g. in Local Authority Development Plans. They can also be used to estimate future need for services (for example – health and utilities).

### Limitations of household projections

Household projections have limitations. These local authority household projections only indicate what may happen should the trend-based assumptions remain valid. As mentioned above, household projections are based on population projections. As a result they are dependent to some extent on the core assumptions about future fertility, mortality and migration which are part of those population projections.

In addition, household projections 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 household formation rates or population levels.

As the process of demographic change is cumulative, projections become increasingly uncertain the further they are carried forward. It is also possible to produce different projections based on alternative assumptions or information. These are known as variant projections. In order to illustrate the uncertainty associated with household projections, variant projections have been published alongside the main (or principal) household projections. These are based on the high and low variant projections from the 2006-based population projections for Wales.

Local authority household projections indicate the likely number of households 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 household projections will have met one of its prime functions – to illustrate the consequences of recent and current trends in household formation, and allow policy makers and service delivery planners an opportunity to change this. It should be noted that household projections do not provide definitive numbers of future households for an authority but provide only an indication of future numbers based on current trends.

## **History of household projections in Wales**

This is only the second time that household projections for Wales have been produced separately to those for England. In addition it is the second set of household projections to be published for the 22 local authorities in Wales.

In the past, Anglia Ruskin University produced household estimates and projections for England and Wales together up to and including the 2003-based set of projections. These used population projection data from the Office for National Statistics and marital status projection data from Government Actuary's Department.

A key input into the previous model was the sub-national population projections which were presented for four regional groupings of unitary authorities (UAs) rather than individual UAs. These groupings were based on the National Assembly regions, as they existed before April 2005. As a result household projections have been published only at a sub-national level using the same regional groupings of UAs within Wales until now.

In 2007 a new approach was developed to produce population projections at a local authority level for Wales. This approach meant using local-level data and trends, but not forcing the local authority projections to add up to the national population projection for Wales. The resulting 2006-based local authority projections were published in June 2008 and provided a new data source on which to base household projections for Wales (for more information see the Summary Report for 'Local Authority Population Projections for Wales (2006-based)'). The resulting 2006-based household projections for Wales were published in June 2009.

## **Approach to producing local authority projections**

These household projections have been developed with the input of expert advice from local authorities and key users in Wales - through the Wales sub-national household projection working group (WASHP). The WASHP group has evolved from the Welsh sub-national population working group (WASPP) which is a subgroup of the Welsh Statistical Liaison Committee. The WASHP group has met on a regular basis since early 2008, and has been a forum for technical discussion on the methodology, the base and historic data, and the publication of the household projections. Members of WASHP include representatives with experience of demographic and housing data from Welsh local authorities, the Data Unit and the Welsh Assembly Government.

Regular updates (papers and presentations) have also been provided at full meetings of the WSLC. Further information on the WSLC, including membership is provided at: [www.dataunitwales.gov.uk/WSLC.asp](http://www.dataunitwales.gov.uk/WSLC.asp)





**Chapter 3**  
**Results Overview**





## Results Overview

### Projected Households by Type, Wales

Table 1 shows that the number of households in Wales is projected to grow to over 1.6 million by 2033. This is an increase of 323,000 households or 25 per cent when compared to 2008, with an average annual increase of just under 1 per cent.

**Table 1: Projected Households by Household Type, Wales, 2008-2033<sup>(a)</sup>**

*Thousands and per cent*

	2008	2013	2018	2023	2028	2033	Percentage change, 2008 to 2033
1 person	404.9	448.7	495.5	543.4	586.8	627.8	55
2 person (no children)	409.6	436.2	461.8	478.9	489.6	496.6	21
2 person (1 adult, 1 child)	53.1	61.1	69.1	77.4	85.0	91.9	73
3 person (no children)	83.6	82.8	80.3	75.6	72.0	70.2	-16
3 person (2 adults, 1 child)	87.7	89.4	90.7	92.0	93.3	94.9	8
3 person (1 adult, 2 children)	33.6	37.4	42.2	47.5	51.7	55.1	64
4 person (no children)	23.3	22.0	20.1	17.9	16.8	16.4	-30
4 person (2+ adults, 1+ children)	116.2	108.1	102.3	99.0	96.0	91.8	-21
4 person (1 adult, 3 children)	11.3	12.5	14.2	16.0	17.4	18.4	64
5+ person (no children)	8.2	8.8	8.9	8.6	9.4	10.1	23
5+ person (2+ adults, 1+ children)	61.6	54.7	49.9	47.0	43.9	40.1	-35
5+ person (1 adult, 4+ children)	4.2	4.7	5.3	6.1	6.6	7.0	68
All Household Types	1,297.3	1,366.4	1,440.3	1,509.2	1,568.5	1,620.3	25

(a) Based on the 2008-based National Population Projection

The number of single person households is projected to show an increase of over 200,000 by 2033. Single person households are projected to become the most common household type in Wales by 2010, whereas 2 person households with no children were the most common household type in 2008.

The largest percentage increase is projected increase to be for 2 person (1 adult, 1 child) households, which are projected to increase by 73 per cent between 2008 and 2033. Single parent households of all types are projected to increase from around 102,000 to 172,000 by 2033, an increase of 69 per cent. Overall numbers of households with 4 or more persons are projected to decrease from 225,000 in 2008 to 184,000 in 2033, a decrease of 18 per cent.

## Projected Households by Local Authority

Table 2 shows the projected number of households by local authority in Wales.

Between 2008 and 2033 the number of households is projected to increase for all local authorities in Wales. Projected increases range from 7 per cent for Torfaen to 52 per cent in Cardiff.

Merthyr Tydfil and Cardiff are projected to have the smallest and largest number of households respectively throughout the period.

**Table 2: Projected Households by Local Authority, Wales, 2008-2033<sup>(a)</sup>**

	<i>Thousands and per cent</i>						
	2008	2013	2018	2023	2028	2033	Percentage change, 2008 to 2033
Wales(b)	1,297.3	1,366.4	1,440.3	1,509.2	1,568.5	1,620.3	25
Isle of Anglesey	30.6	32.0	33.4	34.5	35.3	35.8	17
Gwynedd	51.9	53.8	55.7	57.5	59.0	60.3	16
Conwy	50.7	52.8	55.0	57.0	58.7	59.9	18
Denbighshire	43.1	45.8	48.5	51.2	53.5	55.3	28
Flintshire	64.1	67.1	69.9	72.2	73.8	74.6	16
Wrexham	57.2	60.7	64.1	67.4	70.2	72.7	27
Powys	59.0	63.0	66.7	70.0	72.7	74.6	26
Ceredigion	32.8	34.3	35.9	37.4	38.6	39.5	20
Pembrokeshire	52.1	55.2	58.1	60.6	62.7	64.4	24
Carmarthenshire	80.3	86.2	92.0	97.5	102.5	106.8	33
Swansea	100.5	106.5	112.7	118.8	124.4	129.9	29
Neath Port Talbot	62.1	65.8	69.3	72.5	75.4	77.9	26
Bridgend	58.2	62.0	65.7	69.2	72.2	74.7	28
The Vale of Glamorgan	52.8	56.2	59.6	62.7	65.4	67.7	28
Cardiff	136.7	149.7	164.2	178.8	192.8	207.5	52
Rhondda Cynon Taf	99.1	103.0	106.9	110.4	113.1	115.4	16
Merthyr Tydfil	23.9	24.9	25.8	26.5	27.0	27.5	15
Caerphilly	74.0	77.8	81.4	84.4	86.7	88.6	20
Blaenau Gwent	30.7	32.1	33.5	34.6	35.5	36.2	18
Torfaen	38.8	39.8	40.7	41.3	41.6	41.6	7
Monmouthshire	38.1	40.2	42.2	44.0	45.2	45.9	20
Newport	59.6	62.0	64.7	67.0	68.9	70.7	19

(a) Based on the 2008-based Local Authority Population Projections

(b) Based on the 2008-based National Population Projection

## Projected Household Population

Table 3 shows the projected household population for by local authority in Wales.

Between 2008 and 2033 the private household population for Wales is projected to increase by 11 per cent overall. The private household population is projected to increase for all local authorities in Wales except Torfaen, which is projected to decrease by 2 per cent. Projected increases to 2033 range from 42 per cent in Cardiff to 1 per cent in Flintshire. For some authorities the private household population is projected to increase initially then start to decrease by the end of the projection period.

**Table 3: Projected Household Population by Local Authority, Wales, 2008-2033<sup>(a)</sup>**

	<i>Thousands and per cent</i>						
	2008	2013	2018	2023	2028	2033	Percentage change, 2008 to 2033
Wales(b)	2,944.2	3,007.5	3,086.3	3,162.6	3,228.1	3,278.0	11
Isle of Anglesey	68.1	69.1	70.1	70.9	71.2	71.2	5
Gwynedd	115.5	116.6	118.0	119.7	121.2	122.1	6
Conwy	109.0	110.5	112.0	113.4	114.4	114.8	5
Denbighshire	94.8	97.8	100.9	103.8	106.1	107.9	14
Flintshire	148.6	149.9	151.0	151.4	151.1	149.7	1
Wrexham	131.0	135.1	139.1	142.7	145.8	148.3	13
Powys	129.9	133.5	136.8	139.8	142.0	143.0	10
Ceredigion	73.9	75.6	77.4	79.1	80.3	81.0	10
Pembrokeshire	116.1	118.9	121.6	123.9	125.6	126.5	9
Carmarthenshire	177.9	184.5	191.2	197.4	202.8	207.1	16
Swansea	226.3	233.5	242.0	250.9	259.3	266.9	18
Neath Port Talbot	136.3	139.1	142.2	144.9	147.1	148.8	9
Bridgend	132.3	136.3	140.3	143.9	147.0	149.5	13
The Vale of Glamorgan	122.1	126.2	130.5	134.7	138.3	141.1	16
Cardiff	322.4	345.7	372.7	401.9	430.8	458.8	42
Rhondda Cynon Taf	231.6	234.3	237.3	239.9	241.6	242.4	5
Merthyr Tydfil	55.2	55.8	56.6	57.1	57.4	57.5	4
Caerphilly	171.1	173.7	176.2	178.2	179.4	179.6	5
Blaenau Gwent	68.0	68.7	69.6	70.2	70.3	70.2	3
Torfaen	89.7	89.7	89.7	89.5	88.8	87.6	-2
Monmouthshire	86.3	87.9	89.3	90.6	91.5	91.7	6
Newport	137.9	140.2	143.2	146.3	148.9	151.1	10

(a) Based on the 2008-based Local Authority Population Projections

(b) Based on the 2008-based National Population Projection

## Average Household Size

Table 4 below shows that average household size in Wales is projected to decrease from 2.27 persons per household to 2.02 persons per household by mid-2033. This is due to an overall projected decrease in the number of persons in larger households (4 persons or more) and a concurrent increase in the number of persons in smaller households.

The decrease in average household size at a Wales level is reflected across all local authorities in Wales to 2033. For Conwy the projected average household size drops below 2 persons per household by 2023, followed by Denbighshire, Powys, Neath Port Talbot and Blaenau Gwent by 2028. Cardiff is projected to have the largest average household size throughout.

**Table 4: Projected Average Household Size by Local Authority, 2006-2031<sup>(a)</sup>**

	2008	2013	2018	2023	2028	2033
Wales(b)	2.27	2.20	2.14	2.10	2.06	2.02
Isle of Anglesey	2.22	2.16	2.10	2.05	2.02	1.99
Gwynedd	2.23	2.17	2.12	2.08	2.05	2.03
Conwy	2.15	2.09	2.04	1.99	1.95	1.92
Denbighshire	2.20	2.14	2.08	2.03	1.99	1.95
Flintshire	2.32	2.24	2.16	2.10	2.05	2.01
Wrexham	2.29	2.23	2.17	2.12	2.08	2.04
Powys	2.20	2.12	2.05	2.00	1.95	1.92
Ceredigion	2.25	2.20	2.16	2.11	2.08	2.05
Pembrokeshire	2.23	2.15	2.09	2.04	2.00	1.96
Carmarthenshire	2.22	2.14	2.08	2.02	1.98	1.94
Swansea	2.25	2.19	2.15	2.11	2.08	2.05
Neath Port Talbot	2.20	2.12	2.05	2.00	1.95	1.91
Bridgend	2.27	2.20	2.14	2.08	2.04	2.00
The Vale of Glamorgan	2.31	2.25	2.19	2.15	2.12	2.09
Cardiff	2.36	2.31	2.27	2.25	2.23	2.21
Rhondda Cynon Taf	2.34	2.28	2.22	2.17	2.14	2.10
Merthyr Tydfil	2.31	2.25	2.20	2.16	2.12	2.09
Caerphilly	2.31	2.23	2.17	2.11	2.07	2.03
Blaenau Gwent	2.22	2.14	2.07	2.03	1.98	1.94
Torfaen	2.31	2.25	2.20	2.17	2.13	2.10
Monmouthshire	2.27	2.19	2.12	2.06	2.02	2.00
Newport	2.31	2.26	2.21	2.18	2.16	2.14

(a) Based on the 2008-based Local Authority Population Projections

(b) Based on the 2008-based National Population Projection

## Variant Household Projections

To illustrate the uncertainty which surrounds any forecast or projection, and the inherent uncertainty of demographic behaviour, variant household projections have been produced.

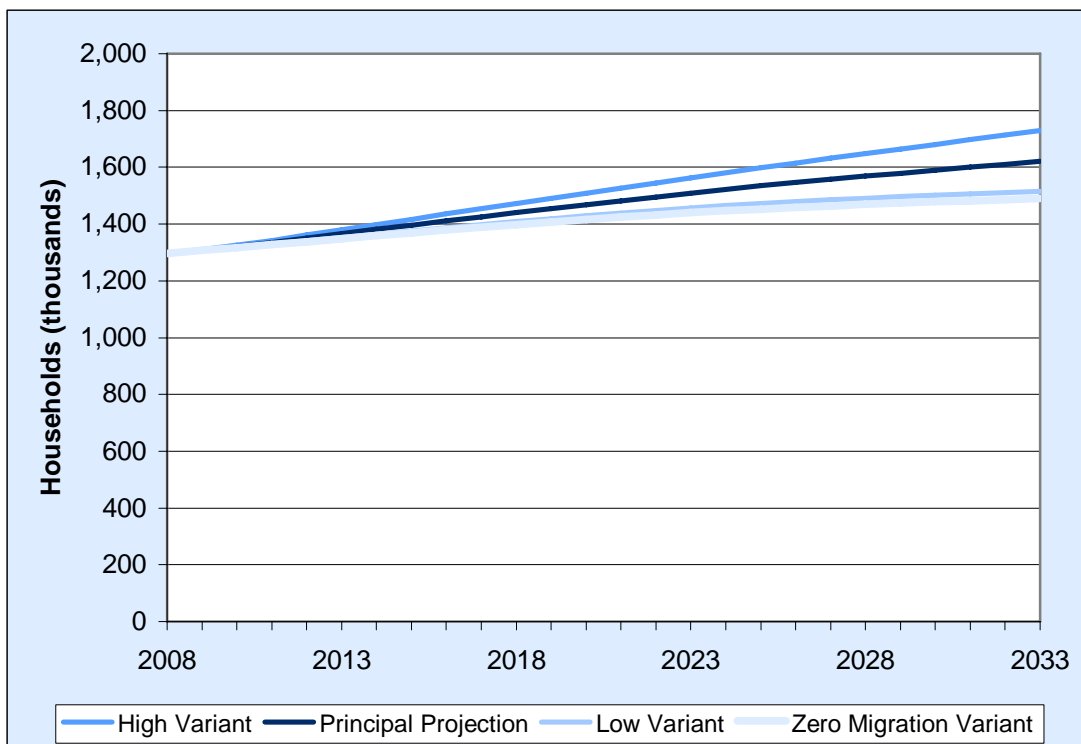
At a Wales level, the variant household projections are based on the highest and lowest combination variant population projections produced by the Office for National Statistics.

- The high variant household projection is based on assumptions of high fertility, high life expectancy and high migration.
- The low variant household projection is based on assumptions of low fertility, low life expectancy and low migration.

Nonetheless these should not be regarded as maximum or minimum projections but a set of possible outcomes resulting from alternative trends.

Figure 1 shows the projected number of households in Wales under the principal projection compared to the high and low variant projections. Under the high variant projection the number of households in Wales is projected to increase by 21 per cent to 1.56 million by 2023. Under the low variant projection the number of households in Wales is projected to increase by 12 per cent to 1.46 million over the same period.

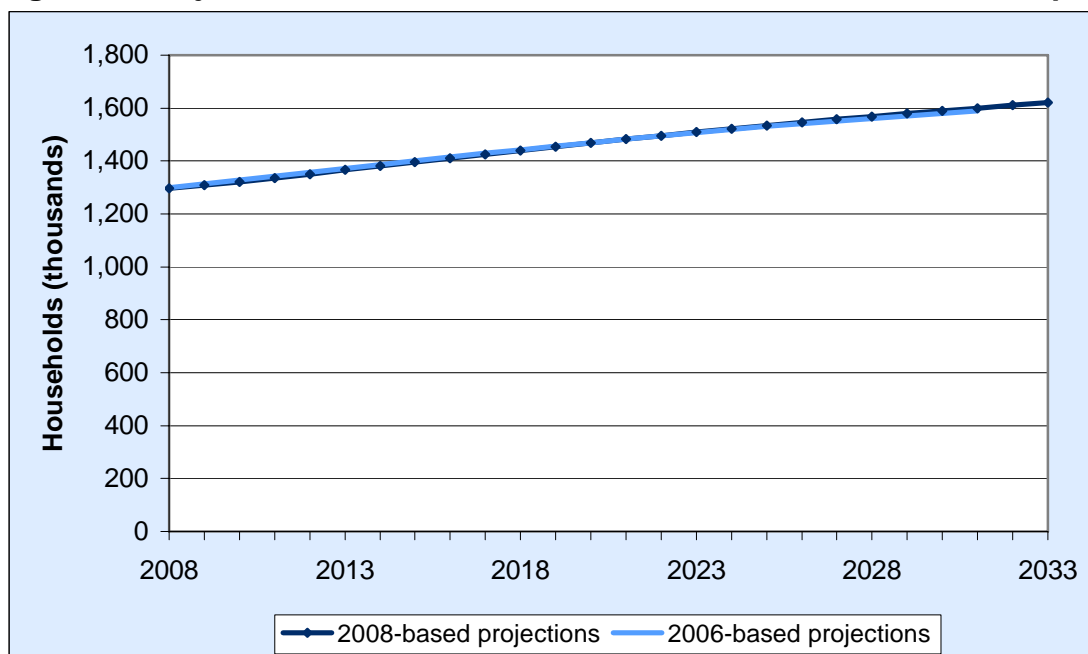
**Figure 1: Projected Household in Wales, by Variant, 2008-2033**



## Comparison with Previous Projections

Figure 2 and Table 5 show the differences in the projected total number of households and average household size for Wales based upon the 2008-based and 2006-based household projections.

**Figure 2: Projected Household in Wales, 2006-based and 2008-based projections**



**Table 5: Projected Average Household Size for Wales, 2006-2026**

	2006	2011	2016	2021	2026
2006-based projections	2.30	2.23	2.16	2.11	2.07
2008-based projections		2.23	2.16	2.11	2.07

Figure 2 shows that using the 2008-based projection the projected total number of households for Wales is 1.60 million at 2026 compared to 1.59 million using the 2006-based projection, a difference of 0.7 per cent. Whilst table 5 shows that the projected average household size has not changed compared to the 2006-based household projections.

As there have been no changes to the methodology between the 2006-based and 2008-based projections, the slight differences between the two sets of projections are solely due to changes in the underlying population projections.



**Chapter 4**  
**Methodology**





## Methodology

This section provides an overview of the broad methodology used in producing household projections. Essentially this is unchanged from the methodology used in the 2006-based household projections. A technical report including more detailed explanations of this methodology was published in August 2010. This is available on the housing statistics theme page at:

[www.wales.gov.uk/statistics](http://www.wales.gov.uk/statistics)

These household projections were calculated by:

- using population projections to calculate the projected number of people living in private households;
- 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 and aggregating by age, gender and household type to give the projected total number of households.

This process was carried out by local authority and for Wales as a whole. Each stage of the process is explained below.

### Projected Total Population

Total population was taken from the available population projections and broken down by age group and gender. At a local authority level the 2008-based local authority population projections for Wales were used. At a Wales level, data from the 2008-based national population projections (principal projection) from the Office for National Statistics was used. This approach is consistent with that used for England, with the exception that the local authority results are not forced to add up to those at a Wales level. For more details please see the National and Local Household Projections section.

### Private Household Population

The private household population is the number of people living in private households. For each year the private household population was calculated by subtracting the population living in communal establishments from the projected population by age group and gender.

Communal establishments include residential care homes, university halls of residence, boarding schools and prisons. Population projection outputs do not include separate counts for communal establishments so data from the 2001 census were used. As a result for each projected year it is assumed that the number of people aged under 75 and the proportion of people aged 75 and over living in communal establishments were the same as at 2001.

## Household Membership Rates

The total private household population is the total number of people living in private households. Once the total private household population has been calculated, the numbers living in each type of household need to be determined. Household types were determined by size and the presence of children. There were 12 types in all as shown below.

Historical data on the population in each household type were obtained from the 1991 and 2001 censuses and used to create projected membership rates for each household type. Membership of different household types tends to vary by age and gender, so historical proportions of people in each household type were calculated by gender for each age group shown below.

### Age groups and Household types used in the 2008-based household projections

Age Groups	Household Types
0-4	1 person
5-9	2 person (no children)
10-15	2 person (1 adult, 1 child)
16-18	3 person (no children)
19-24	3 person (2 adults, 1 child)
25-29	3 person (1 adult, 2 children)
30-34	4 person (no children)
35-39	4 person (2+ adults, 1+ children)
40-44	4 person (1 adult, 3 children)
45-49	5 + person (no children)
50-54	5 + person (2+ adults, 1+ children)
55-59	5 + person (1 adult, 4+ children)
60-64	
65-74	
75-84	
85+	

As only census data were used these historical proportions were projected forward using a two point exponential model. This model ensured that the resulting membership rates for each individual household type were greater than 0 but less than 1. The results were then scaled to add up to 1 for each combination of age group and gender.

### Projected Population by Household Type

Multiplying the projected private household population by the projected household membership rates gave the projected population by age group, gender, and household type.

## **Projected Households**

The projected population by household type was divided by household size and aggregated by age group and gender to give the projected number of households by type. The results of this were further aggregated to give the projected total number of households for each local authority and Wales as a whole.


## **Variant Projections**

In order to illustrate the uncertainty associated with household projections, variant projections have also been published alongside the main (or principal) household projection. Note that at both a Wales and a local authority level these should not be regarded as maxima or minima but a set of possible outcomes resulting from alternative trends.

At a Wales level, the variant household projections are based on the highest and lowest combination and natural change only (or 'zero migration') variant population projections produced by the Office for National Statistics. The high variant household projection is based on assumptions of high fertility, high life expectancy and high migration. The low variant household projection is based on assumptions of low fertility, low life expectancy and low migration. The zero migration is based on an assumption of zero net migration to or from Wales to identify the effect migration has on household formation.

At a local authority level variant household projections have been produced using the available variants from the 2008-based round of population projections. As a result, at a local authority level the high variant household projection is based on assumptions of high fertility and low mortality. The low variant household projection is based on assumptions of low fertility and high mortality. The zero migration is based on an assumption of zero net migration to or from a local authority to identify the effect migration has on household formation.





**Chapter 5**  
**National and Local**  
**Household Projections**



# National and Local Household Projections

## Background

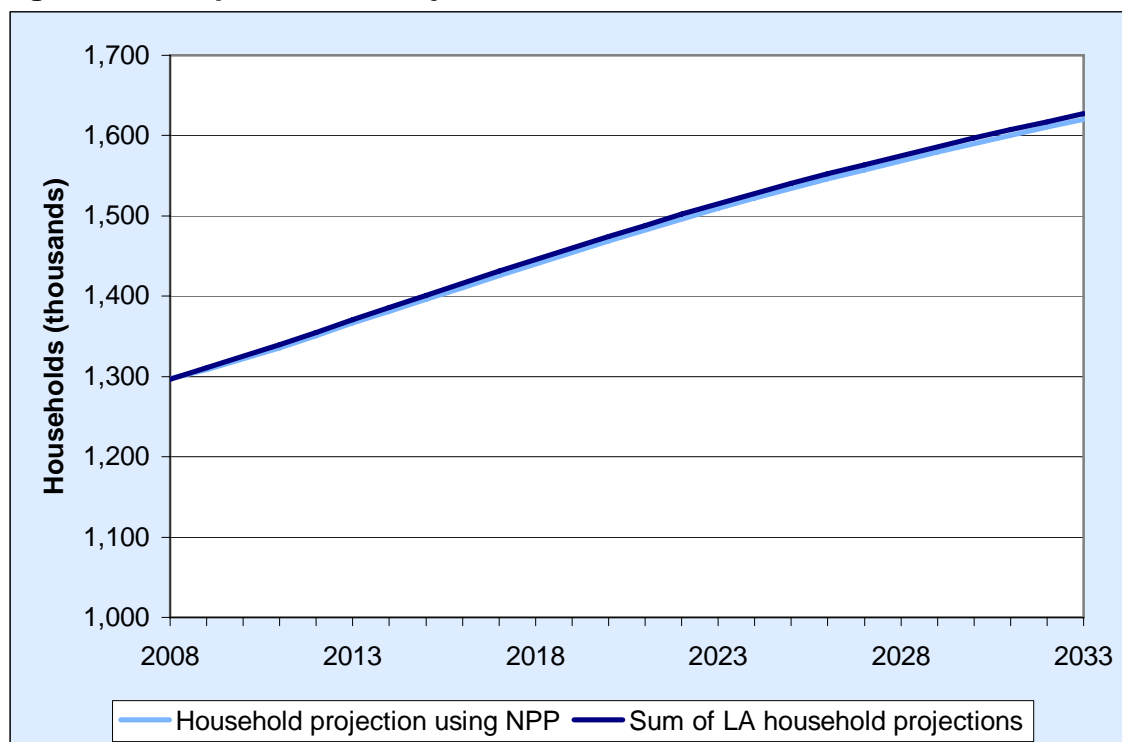
The production of 2008-based household projections for Wales follows on from the publication of the 2008-based local authority population projections for Wales published by the Welsh Assembly Government and the 2008-based national population projections for Wales published by the Office for National Statistics.

Using published population projection data it is possible to produce projected household numbers for Wales as a whole using two different approaches:

- Applying the household projections methodology to the national population projection for Wales
- Applying the household projections methodology to the local authority population projections and summing the results

As the local authority population projections do not have to add up to the national ones these two approaches will produce different results. For this set of household projections the National level projection was produced by applying the membership rates methodology to the 2008-based national population projection for Wales produced by the Office for National Statistics. As a result the local authority numbers shown in Table 2 of the Results Overview chapter do not add up to those for Wales. Figure 1 compares the household projections for Wales using the two different approaches.

**Figure 1: Comparison of Projected Total Households, Wales, 2008-2033**



Overall the National level projection follows a very similar pattern to the sum of the 22 local authority projections. The difference between the two is around 4,000 in 2013, increasing to 6,000 in 2018 and 7,000 in 2033. In percentage terms the differences are no more than 0.4 per cent by 2033, whilst the differences between the sum of 2008-based national and local authority population projections Wales, on which the household projections are based are no more than 1.1 per cent by 2033.

## **When to use National level and Local Authority Household Projections**

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

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

The National level household projection should be used when looking at projected household numbers for Wales as a whole. The National level household projection should also be used if comparing the projected household numbers with the other UK countries.





**Chapter 6**  
**Further Work**



## **Further Work**

This is the second time that household projections for the 22 local authorities in Wales have been produced. Household projections are continuously evolving – as new data is collected and improved methods for estimating the population introduced, the methods for projecting the population are thus also improved.

As part of the work on developing the local authority household projections, a number of issues/methodologies have been identified for ongoing investigation.

## **Annual Population Survey data**

It has not been possible to use data from the Annual Population Survey (APS) (formerly the Labour Force Survey) to project household membership rates. This is due to the sample size for the APS and the age, gender and household type breakdown used to create the membership rates.

Work will continue to look at how APS data may be used to project membership rates. This may yet provide a third point to the exponential model based on more recent data.

## **Socio economic effects**

The trend assumptions used in the projections are based on the last two censuses and do not take into account social change since 2001 or economic factors such as affordability.

Further work may look at whether affordability can be factored into the household projections model.

## **Migration**

The household projections model only takes account of the effect migration has on population numbers. It does not factor in the effects migration may have on household formation rates. Neither does it assume different household membership rates which may exist for migrant populations.

Further work will look at the relationship between migration and household formation rates, possibly using longitudinal data.

## **Communal Establishments**

For the 2006 and 2008-based household projections, household populations have been calculated using data on residents of communal establishments from the 2001 census.

Work will continue to look at using more recent and detailed data on residents in communal establishments by type, i.e. halls of residence, care homes, and boarding schools.

## **2011 Census**

Detailed results from the 2011 Census are due to become available in 2013. These will include information on residents in households and communal establishments and overall numbers of households. This will enable work to be undertaken to assess the accuracy of the current projections. Once analysed the new information will then provide an additional data point for future household projections.



**Chapter 7**  
**Quality Information**



## Quality Information

Information on quality is provided throughout this publication. A selection of key quality information is also provided below, plus a full technical report detailing the full methodology was published in August 2010 and can be found on our website: [www.wales.gov.uk/statistics](http://www.wales.gov.uk/statistics)

## Definitions

The projected numbers of households and average household size are for 30 June each year.

### Base Population

The 2008-based national population projections and 2008-based local authority population projections have been used as the base population for these household projections. These in turn are based on mid-year population estimates for 2008.

### Dwelling

A dwelling can consist of one household space (an unshared dwelling) or two or more household spaces (a shared dwelling). As a result a house may contain more than one household.

### Household

A household comprises 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. A household is not the same as a house or dwelling. The definition of a dwelling is given above.

## Geographies and Boundaries

The household projections are for Wales as a whole and for local authority areas within Wales, which are based on the boundaries used for the 2008 local authority population projections. Historical data used to produce the assumed membership rates are based on slightly different boundaries, which do not include the most recent changes. The 1991 Census data included boundary changes up to and including 1997. The 2001 Census data included boundary changes up to and including 2002.

## Frequency

It is anticipated that the local authority projections on which the household projections are based will be updated every two years (as with the national projections). It is hoped that the household projections will be published on the same basis.

## Revisions

The 2008-based household projections are not subject to planned revisions. It is, however, possible that the base population (2008 mid-year estimates) for the underlying population projections will be revised in future.

## Charts

Note that the charts used throughout this document do not always start at 0, and are based on different scales.

## Symbols

The following symbol has been used throughout the publication:

- less than half the final digit shown.

## Assessment

Our household projections and estimates are currently being assessed by the UK Statistics Authority as part of the 'Population and Demography statistics' produced by the Welsh Assembly Government. Further information on this assessment can be found on the UK Statistics Authority website:

**[www.statisticsauthority.gov.uk/assessment/current-assessments/index.html](http://www.statisticsauthority.gov.uk/assessment/current-assessments/index.html)**



The background is a solid dark blue color. Overlaid on this are several large, semi-transparent circles in a lighter shade of blue. These circles overlap each other, creating a layered effect. One large circle is positioned in the upper right, another in the middle right, and a third, larger one in the lower right. The text is located in the lower right quadrant, within the area of the bottom-most circle.

**Chapter 8**  
**Further Information**



## Further Information

### Household Projections – Wales

A local authority report, technical report, guidance leaflet and frequently asked questions on the 2006-based local authority household projections can be found at:

[www.wales.gov.uk/statistics](http://www.wales.gov.uk/statistics)

Information on the 2006-based household projections for National Park Areas in Wales can also be found at:

[www.wales.gov.uk/statistics](http://www.wales.gov.uk/statistics)

Data cubes are available on the StatsWales website:

(Housing / Household Projections)

[www.statswales.wales.gov.uk](http://www.statswales.wales.gov.uk)

### Household Projections – other UK countries

Information on household projections for England, Scotland and Northern Ireland can be found at:

England

[www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/](http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/householdestimates/)

Scotland

[www.gro-scotland.gov.uk/statistics/publications-and-data/household-projections-statistics/index.html](http://www.gro-scotland.gov.uk/statistics/publications-and-data/household-projections-statistics/index.html)

Northern Ireland

[www.nisra.gov.uk/demography/default.asp21.htm](http://www.nisra.gov.uk/demography/default.asp21.htm)

### Local Authority Population Projections

Summary, local authority and technical reports, a guidance leaflet, frequently asked questions and further information on the 2006-based local authority population projections can be found at:

[www.wales.gov.uk/statistics](http://www.wales.gov.uk/statistics)

Data cubes are available on the StatsWales website

(Population and Migration / Population/ Projections / 2006-based local authority)

[www.statswales.wales.gov.uk](http://www.statswales.wales.gov.uk)

## **National Population Projections for Wales**

Analysis of the 2008-based national population projections for Wales can be found at:  
**[www.wales.gov.uk/statistics](http://www.wales.gov.uk/statistics)**

Data cubes are available on the StatsWales website:  
(Population and Migration / Population / Projections / 2006-based national)  
**[www.statswales.wales.gov.uk](http://www.statswales.wales.gov.uk)**

Further detailed information can be found on the GAD website:  
**[www.gad.gov.uk](http://www.gad.gov.uk)**

## **Household Estimates**

Information on household estimates for Wales is available at:  
**[www.wales.gov.uk/statistics](http://www.wales.gov.uk/statistics)**

Data cubes are available on the StatsWales website  
(Population and Migration / Housing / Household Estimates)  
**[www.statswales.wales.gov.uk](http://www.statswales.wales.gov.uk)**

## **Contact details**

For queries on the 2008-based local authority household projections, or for general queries on housing data, please contact:

Environment, Sustainability and Housing Statistics  
Statistical Directorate  
Welsh Assembly Government  
Cathays Park  
Cardiff  
CF10 3NQ  
e-mail: **[stats.housing@wales.gsi.gov.uk](mailto:stats.housing@wales.gsi.gov.uk)**  
phone: 029 2082 3295