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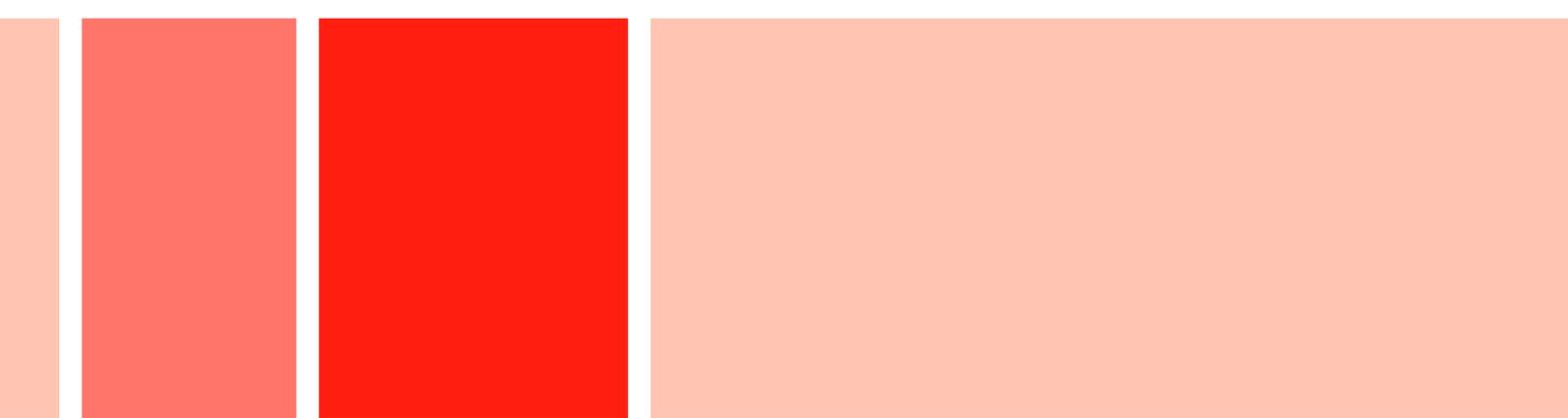
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Housing Need and Demand in Wales 2006 to 2026



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Two-Sector National Estimate for 2006-21 and 2006-26 for Wales and Local Authority Areas and Backlog of Unmet Housing Need

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Views expressed in this report are those of the researcher and not necessarily those of the Welsh Assembly Government

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1. Introduction and Purpose

1.1 In October 2007 an Affordable Housing Task & Finish Group, led by Sue Essex, was commissioned by the Deputy Minister for Housing to carry out a review to explore the barriers and opportunities presented by the Assembly Government's commitment to deliver significantly more affordable homes in Wales by 2011.

1.2 The Group reported in June 2008 with suggestions for change, and concluded that robust and up-to-date information on housing needs, demands and supply was needed urgently to provide a firmer basis for national housing policymaking. The first recommendation within the report was:

- That the Welsh Assembly Government give immediate consideration to how an adequate, up-to-date and dynamic information base on housing needs, demand and supply could be developed covering different spatial scales in Wales;
- That it considers commissioning an up-to-date and ongoing national/regional assessment of current and future housing requirements in Wales;

Capacity needs to be built across Wales to undertake this work so in dialogue with other organisations (e.g. Local Government Data Unit, Office of National Statistics, Welsh Local Government Association, Community Housing Cymru) and bringing together core policy areas such as housing and planning etc the Assembly government should consider urgently the case for establishing a specific unit within the Assembly Government to:

- develop authoritative assessments of affordable housing need
- support and work with local authorities' strategic housing fora across Wales.
- provide and publish advice on developing methodologies for assessing local housing markets, measuring the local need for affordable housing and the translation of needs in to the delivery of additional affordable housing.

- 1.3 In part-fulfilment of this wide-ranging set of actions, in November 2009 the Assembly Government commissioned Cambridge University's Department of Land Economy to carry out an assessment of current and projected housing needs and demands at Wales-level and, where feasible, local authority area level.
- 1.4 This report presents an estimate of future need and demand for housing in Wales, divided between the market and non-market sectors of housing. Its demographic base is the 2006-based projections of households published by the Statistical Directorate of the Welsh Assembly Government in 2009. The division between the market and non-market sectors is derived from data on housing tenure from the *Living in Wales* survey for 2005, 2006, and 2007 (combined) with allowance for households that became owner-occupiers through the Right-to-Buy¹ scheme and private sector tenants receiving Housing Benefit who are included in the non-market sector. The methods used at national level are similar to those used in previous estimates of housing need and demand in Wales, and also in England and some of the English regions².
- 1.5 It was not possible to produce estimates that reflected the ethnicity of households in Wales, either in the base year or for future years. In this respect, the future housing needs of ethnic minority groups separately have not been taken into account in this study. This is because the analysis depends fundamentally on the official household projections, and these are not broken down by ethnicity.
- 1.6 Neither was it possible to produce estimates reflecting housing demand and need from people with various kinds of special needs.

¹ In the non-market sector there is a need for additional dwellings to offset the reduction in the number of dwellings available for re-letting that results from past Right to Buy sales. This is because when a Right to Buy owner occupier household dies, the dwelling it occupied comes onto the market, but if it had remained in the social sector it would have been available for reletting. To allow for this, the number of 'lost' relets is added back into the estimate of housing need. When a Right to Buy owner occupier dies or moves and the dwelling is sold, it is part of the supply of dwellings to meet market sector demand and so works to reduce the demand for new private sector dwellings.

² See for example, Holmans A (2008) *Homes for the Future: A New Analysis, Technical Sources and Methods*, CCHPR, Cambridge, and Holmans A and Fenton A (2007) *Household Projection-Based Estimates of Housing Demand and Need in the West Midlands Region 2006-20026: Unconstrained*, West Midlands Regional Assembly, Birmingham

- 1.7 Consideration was given to a three-sector analysis that included an intermediate sector as well as market and non-market sector. This would comprise need for assisted housing by households able to afford distinctly more for their housing than typical council or housing association rents, but not enough to buy a suitable house or flat at market prices. However, on investigation the information available was insufficient for an estimate of need for intermediate housing that would be robust enough to use.
- 1.8 The current backlog of unmet housing need is also estimated, using available data. The method produces an under-estimate because some data, such as on households who are sharing but would prefer to live separately, and on concealed households, are not available.
- 1.9 Finally, 2006-household projections for the Welsh local authority areas and housing tenure data for them from *Living in Wales* are used to construct estimates of housing need and demand for each of the local authority areas. The estimates presented in this report may be termed 'unconstrained' because they have not been scaled to sum to the national household projection total.

2. Part I Households in Wales 2006-2026

- 2.1 The demographic base of the estimates of future need and demand for housing in Wales is the 2006-projections of future numbers of households in Wales published by the Welsh Assembly Government in June 2009. The method for deriving estimates of need and demand in the market and non-market sectors of housing from the household projection depends on survey information about how the market and non-market sector proportions vary with type of household and age. The projected totals of households in future years have therefore to be divided by type of household, cross-analysed by age. Information about housing tenure according to household type and age is drawn from the Living in Wales survey, in the present instances for 2005, 2006, and 2007 combined (subsequently cited for brevity as *Living in Wales 2005-07*).
- 2.2 The 2006-based household projections for Wales were derived from the official (the Office for National Statistics) population method projections by a different method from previous household projections which were 1992, 1998, and 2003-based. The 1992-and 1998-based projections have been used as the demographic base for estimates of housing need and demand in Wales³. These household projections for Wales were produced by the same method as used for the official household projections for England published by the Department for Communities and Local Government and its predecessors-in-title and had the same household categories. The method and the structure of the published results depended on projections of the population analysed by sex, age, legal marital status and cohabiting status. Household representative rates, i.e. proportions of a population category as defined as above who were “representatives” of a household of a specific type⁴ were projected for future years. Five household types were distinguished: married couple households; cohabiting couple households; lone-parent households; other multi-person

³ *Housing Demand and Need in Wales 1991-2001*, Joseph Rowntree Foundation 1996; and *Who's Counting? Housing Demand and Need in Wales 1998-2016*, Council of Mortgage Lenders 2004

⁴ See Department of the Environment, *Households in England to 2016* (HMSO 1995) Annex A for a full explanation of the method and its rationale

households; and one-person households⁵. Numbers of household representatives are equal, by definition to numbers of households.

- 2.3 The 2006-based household projection published by the Welsh Assembly Government⁶ used a household membership rate method, not household representative rates. A household membership rate is the probability that a person of a given age and sex will be a member of a specified type of household. The private household population is by this means divided between members of each type of household; and the number of members of each type of households is converted to the number of households by reference to household size. The number of persons who are members of households comprising two adults and one child, for example, is divided by three to give the number of such households. Household membership rates were derived from 1991 and 2001 census information and were projected forward for the period covering all years from 2006 to 2031.
- 2.4 Twelve categories of households are distinguished in the 2006-based household projections: one adult households; two adult households; and one adult plus one child; and then households of three, four, and five or more persons divided into all adults; two or more adults plus children; and one adult plus children. The projected numbers of households in 2006 (the base year) and 2026 (the end year for the purposes of this report) are shown in Table 1.

⁵ Concealed married couple and cohabiting couple, and lone-person households are not discussed here as they are not relevant

⁶ Welsh Assembly Government, *Household Projections for Wales (2006-based) Summary Report*, 2009. See pages 21-23 for the methodology

Table 1 2006-based household projection for Wales

(thousands)

		2006	2026
(i)	1 person	389.5	568.6
(ii)	2 person (no children)	399.7	478.4
(iii)	2 person (1 adult 1 child)	49.7	81.1
(iv)	3 person (no children)	83.7	72.7
(v)	3 person (2 adults 1 child)	86.8	91.9
(vi)	3 person (1 adult 2 children)	32.1	49.7
(vii)	4 person (no children)	23.6	16.8
(viii)	4 person (2+ adults 1+ children)	119.7	96.4
(ix)	4 person (1 adult 3 children)	10.8	16.7
(x)	5+ person (no children)	7.8	8.7
(xi)	5+ (2 adults 1+ children)	64.5	44.9
(xii)	5+ person (1 adult 4+ children)	4.0	6.4
	All household types	1271.8	1,541.7

Source: *Household Projections for Wales (2006-based)* Table 1

2.5 There are too many separate household types in Table 1 for an analysis of housing tenure, and some are too small in relation to the sample sizes available from *Living in Wales*. They are therefore grouped into: (a) one adult; (b) two adults only; (c) three or more adults only; (d) two or more adults plus children; (e) one adult plus one or more children. Category (d) which comprises types (v); (viii), and (xi) in Table 1, conceptually includes households with three adults or even in type (xi) four; but these could be non-dependent (in the technical sense) sons and daughters. Table 2 shows the condensed version of Table 1, rounded to whole thousands.

Table 2 2006-based household projections for Wales 2006-2026 condensed

(thousands)

		2006	2026
(a)	One-person households	389	569
(b)	Two adult households	400	487
(c)	Three or more adults, no children	115	98
(d)	Two or more adults plus children	271	233
(e)	One adult plus children	97	154
	All households	1,272	1,541

Source: Derived from Table 1

2.6 Since *Living in Wales* is the source for information about housing tenure according to type of household and age, it is next necessary to compare the definitions of household types in *Living in Wales* with those in the household projections. Except in the straightforward cases of one-person, two adult, and one adult with dependent children households there are important differences. Table 3 shows the comparison. “Non-dependent children” count as adults.

Table 3 Households in Wales in 2005-07 and 2006: Living in Wales and household projections

(thousands)

	Living in Wales		Household projections	
(a)	Single persons	190.3	One adult	390
(b)	Single persons not pensioner	148.9		
		339		
(c)	Married couple pensioner	138.4	Two adults	400
(d)	Two adults not married couple pensioners	250.1		
		389		
(e)	One adult, one or more dependent children, no others	76	One adult plus children	97
(f)	Two adults, one or two dependent children	188.5	Two or more adults plus children	271
(g)	Two adults, three or more dependent children	44.7		
(h)	Two adults, one or two dependent children plus non-dependent children	48.0		
(i)	One adult with dependent children and non-dependent children	14.9		
		296		
(j)	Two adults with only non dependent children	86.4	Three or more adults, no children	115

(k)	One adult with only non-dependent children	39.2		
(l)	Other households without dependent children	19.9		
(m)	Other households	7.1		
		153		
		1,252		1,272

Source: Living in Wales survey, 2005-07 and 2006-based household projections, Welsh Assembly Government.

2.7 In Table 3 the most surprising contrast is in the number of one person households, the one category where there can be no difficulty of definition. Reference may usefully be made also to the 2003-based household projection for 2006. There are only three years of projection of births, deaths, and migration between the starting population and 2006, so there is very little difference from the mid-year population estimate for 2006, the starting population for the projection from which the new household projection was derived. The private household population in 2006 is in fact estimated at 2,921,000, as compared with the projected 2,936,000.

Table 4 Households in 2006: 2003-based projection, 2006-based projection, and Living in Wales

(thousands)

	2003-based projection	2006-based projection	Living in Wales (c)
One-person households	393	390	339
Lone parent households (a)	110	97	76
Two adult households, no children	---	400	389
Two or more adults with children	---	271	296
Married and cohabiting couple households	691	---	---
Other households (b)	82	115	153
Total	1,275	1,272	1,252

Notes: (a) In 2006-based projection one adult plus one or more children
 (b) In 2006-based projection three or more adults and no children
 (c) Data relates to 2005-07

Source: Household projections, Welsh Assembly Government; and Table 3

- 2.8 In view of the similarity of the figures from the 2003 and 2006-based projections for one-person households and one adult with children (or lone parent) households, the figures from the 2006-based projection are taken as they stand. Figures from the 2006-based projection and *Living in Wales* for two adult households without children and households with two or more adults plus one or more children agree well. Added together as 671,000 and 685,000, they are very close to married and cohabiting couples (691,000). This closeness is partly coincidental as there are two adult households that are not married or cohabiting couples; on the other hand there are couples with only non-dependent children (included with households of two adults with only non-dependent children, shown as 86,000 in Table 3).
- 2.9 The “ageing model” for dividing the projected number of households between market and non-market sectors by rolling forward sector proportions in the base year or period was devised originally to work with household projections for England made by the same method as used for the 1992-, 1998-, and 2003-based household projections for Wales⁷. These projections used household types as shown in the “2003-based projections” column in Table 4. A couple household normally begins with two adults and no children, then two adults with one or more dependent children, then two adults with only non-dependent children (when it is a multi-adult household without children); and then when the grown-up sons and daughters leave to live independently it become a two adult household once more. The “ageing” model therefore cannot work properly with the household types in the 2006-based household projections or in the information about housing tenure and age from *Living in Wales*. It is therefore necessary to construct the nearest feasible equivalent. For *Living in Wales* the household types are (c), (d), (f), (g), (h) and (j), in Table A.3 which sum to 756,000. That leaves as “other” households (i), (k), (l), and (m) 81,000.

⁷ *Who’s Counting? Housing Demand and Need in Wales 1998-2016*, Council of Mortgage Lenders 2004

- 2.10 The total of households in 2006 is taken from the 2006-based projection as 1,272,000, of which 390,000 are one-person households and 97,000 are lone parent households. The sum of “couple” households and “other” households is therefore (by subtraction) 785,000. This figure is divided between couple and other households pro-rata to the figures of 756,000 and 81,000 to give 709,000 “couple” households and 76,000 “other” households in 2006.
- 2.11 The four household categories in 2006 have to be projected forward to 2011, 2016, 2021 and 2026 in a way that is consistent with the 2006-based household projections summarised in Table 2. For one-person households and one adult plus children/lone parent households there is no problem. The sum of two adult households, two or more adults plus children, and three or more adults with no children has to be divided between “couple” and “other” households. Figures of 709,000 for ‘couple’ households and 76,000 for ‘other’ households are taken from the previous paragraph. In conjunction with 400,000 two adult households and 271,000 two adult households with children, it follows that the 115,000 households of three or more adults but no children are divided into 38,000 included with couples and 76,000 as others. The number of “couples” in 2011, 2016, 2021 and 2026 is therefore taken to be the sum of two adult households with no children, two or more adults with one or more children, and one-third (pro-rata) of households of three or more adults with no children. Table 5 shows the projections of households to 2026, divided in the way described.

Table 5 Household projections from 2006 to 2026 for use with “ageing model”

(thousands)

	2006	2011	2016	2021	2026
One-person households	390	432	478	523	569
One adult with one or more children	97	111	125	140	154
‘Couple’ households	709	724	738	749	753
Other households	76	76	74	70	65
Total	1,272	1,342	1,415	1,482	1,541

Source: *Household Projections for Wales* (2006-based), Table 1; and see paragraphs 9, 10 and 11.

2.12 Of the projected net increase of 269,000 households between 2006 and 2026, 66 percent are one-person households and 21 percent one-parent families. “Couple” households contribute 16 percent of the total increase in households. In the 2003-based projection, the increase in one-person households (161,000) was close to the increase shown by the 2006-based projection. The projected increase in households of one adult plus children was much smaller, only 21,000. Only a small amount of the difference from 57,000 in the 2006-based projection is due to the population projections: the household membership rate method used in the 2006-based projection has produced a larger increase in lone parent households than did the household representative rates previously used.

Age Distribution of Projected Households

2.13 The number of households in Table 5 have to be divided into age groups for the “ageing model” for dividing the household projections between market and non-market housing sectors. The household membership method of household projection does not use the concepts of household representative (as in the 1992, 1998, and 2003-based household projections), or household reference

person (as in the *Living in Wales* survey) which can be used to allocate households to age ranges. What it produces is the number of persons in the private household population in each age range who are members of the different household categories (see Annex A, Table A.1). It shows, for example that 12,638 men aged 35-39 in 2026 are projected to be members of households comprising two adults and one child, and 27,143 as being members of households of four persons of which two or more are adults and one or more are children. Division by three and four respectively converts household members to households. Such households must have at least one member aged 35-39 (in the example) but the others can be of any age. An attempt was made to estimate the distribution of each type of household between age ranges pro-rata to number of adults. The results of these calculations are shown in Annex A, Tables A.2 to A.4. Where there is only one adult (one-person households and one adult with children) this procedure gave satisfactory results, but with multi-adult households there are anomalies. A different method has therefore had to be used.

- 2.14 This method, described in Annex A, uses the 2003-based household projections to calculate ratios of households to private household population in each age range, and multiply these by the 2006-based projections of the private household population to produce first stage 2006-based projection household totals in each age range. The sum of these age-range household totals is below the official 2006-based projections, by 28,000 in 2026. The age range totals were therefore scaled to add to the projected totals. The totals in each age range were divided between the four household categories in Table 5 in three stages. The numbers of one-person household and households of one adult plus children were taken as they stand from the official 2006-based projection, and then subtracted from totals of households in each age range. That leaves the sum of “couple” households and “other” households as in Table 5. The number of “other” households from Table 5 is distributed between age ranges pro-rata to the number of “other” multi-person households (i.e. not married or cohabiting couples or lone-parent households) in the 2003-based

household projection. The age distributions of households of all types together in 2006 and the projections for 2011, 2016, 2021 and 2026 are shown in Table 6.

Table 6 Age distribution of households in 2006, 2011, 2016, 2021 and 2026

	2006	2011	2016	2021	2026
Under 25	55	61	60	57	58
25-29	74	90	98	95	89
30-34	92	93	113	123	119
35-39	116	101	102	122	132
40-44	125	120	105	105	125
45-49	114	127	122	107	107
50-54	108	116	131	126	110
55-59	123	112	121	134	129
60-64	109	127	116	126	140
64-74	171	201	234	240	239
75-84	139	140	152	175	206
85 and over	46	54	61	72	87
Total	1,272	1,342	1,415	1,482	1,541

Source: Annex A, Tables A.8 to A.11

- 2.15 Of the projected increase of 269,000 households between 2006 and 2026, 176,000 (65 percent) is at ages 65 and over. This proportion is somewhat similar to that in the 2003-based projection, 69 percent. How much of this projected change in the age distribution is due to “couple” households and how much one-person households is shown in Tables 7 and 8.

Table 7 Age distribution of “couple” households in 2006, 2011, 2016, 2021 and 2026

(thousands)

	2006	2011	2016	2021	2026
Under 25	21	26	25	22	22
25-29	37	43	43	43	35
30-34	53	45	56	61	52
35-39	71	55	54	63	61
40-44	81	74	59	50	64
45-49	75	82	72	58	59
50-54	71	72	80	77	63
55-59	81	69	76	85	78
60-64	70	86	74	79	89
65-74	89	109	129	134	134
75-84	50	50	58	65	79
85 and over	9	12	12	12	16
Total	709	724	738	749	753

Source: Tables A.8 to A.11

- 2.16 The number of “couple” households in the 65 and over age ranges is projected to rise by 81,000 (55 percent) between 2006 and 2026. Differences between years in the number of “couple” households in each age range are due to differences in the size of the age groups as well as the projected numbers of one-person and lone parent households.

Table 8 Age distribution of one-person households in 2006, 2011, 2016, 2021 and 2026

(thousands)

	2006	2011	2016	2021	2026
Under 25	12	12	12	11	10
25-29	19	24	29	26	29
30-34	20	25	30	33	36
35-39	22	22	23	29	35
40-44	24	25	25	30	34
45-49	25	29	33	33	32
50-54	26	31	37	36	35
55-59	32	34	35	38	41
60-64	32	34	36	40	44
65-74	70	80	91	92	93
75-84	77	79	84	100	116
85 and over	32	37	44	55	65
Total	390	432	478	523	569

Source: Tables A.8 to A.11

2.17 The numbers of one-person households are taken directly from the Welsh Assembly Government's 2006-based household projections and do not depend in any way on assumptions or adjustments. Of the overall projected increase of 179,000 one-person households between 2006 and 2026, 24,000 are aged under 35, 60,000 aged 35-64, and 95,000 aged 65 and over.⁸ The increase in one-person households in the 65 and over age range is somewhat larger than

⁸ The discrepancy of 1,000 is due to rounding

the projected increase in “couple” households in this range. These increases are partly the consequence of the size of the age groups reaching age 65. Persons aged 65 and over in 2006 were born in 1941 or earlier, and those aged 65 and over in 2026 were born in 1961 or earlier. Births year by year between 1941 and 1961 were more numerous than in 1926 to 1941, which included the years of the Great Depression. 1941 to 1961 included the years of the so-called post-war “bulge” in births in 1946, 1947, and 1948, and the first five years of the “baby boom”. In addition to the effect of larger numbers of person reaching age 65 there is the effect of improving longevity. The 2006-based population projections assume that the recent more rapid improvement in male than in female longevity will continue, which increases the number of couple households (because husbands survive longer) and reduces the number of widow one-person households because wives are widowed later.

- 2.18 At the other end of the age distribution of one-person households it is important to note that only 13 percent of the total projected increase in one-person households are under age 35, and 4 percent aged under 30. The high proportion of the overall projected increase in households that is one-person households does not mean that it is largely due to young men and women leaving their parental homes earlier, or that they could share and not need a place of their own.

3. Part II Two-Sector Estimate of Housing Need and Demand in Wales 2006 to 2026

- 3.1 The central core of a two-sector estimate of housing need and demand in future years is a division of the household projection that forms the estimate's demographic base between the market and non-market sectors. The starting point is the projections in Table 5 (in Part I) of numbers of households in four categories in 2011, 2016, 2021, and 2026. The method is to estimate from survey data (in this instance from the survey for *Living in Wales*) the division between market and non-market sectors in categories of household defined by type of household and age. There are four household types. Ten year and five year age ranges are used according to whether the 'ageing model' is applicable (to "couple" and one-person households) or not. The ageing model for projecting the division of households between the social and market sectors in future years depends on the fact that few households move from owning to renting in the social sector (local authorities and housing associations) at ages above the mid 40s except by purchase as sitting tenants at discounted prices. The proportion of couple households that are in the market sector in the 50-54 age group (for example) in 2006 will be very similar to the proportion in the 60-64 group in 2016 and in the 70-74 group in 2026. The proportions in future years can therefore be projected by "rolling forward" the proportions in the base period.
- 3.2 The base period (2005-07) division of households between the market and non-market sectors is described in Annex B. The projected divisions in 2011 and subsequent years are in Annex C. The market and non-market sectors are defined as in previous demographically based estimates of housing need and demand in Wales⁹. The non-market sector comprises renting from local authorities and housing associations (or Registered Social Landlords RSLs),

⁹ *Who's Counting? Housing Demand and Need in Wales 1998-2016*, Council of Mortgage Lenders 2004

plus tenants of private landlords receiving Housing Benefit, and owner-occupiers who become home owners through purchasing their homes at discounted prices from local authorities, or more rarely from housing associations, termed colloquially “Right-to-Buy” (RTB) owner-occupiers. The reasons for including them in the non-market sector is that only social sector tenants can become RTB owner-occupiers and when they change from tenants to owners they take the house or flat with them. Whereas proportions of households becoming ‘conventional’ owner-occupiers can be predicted from the way the proportions have changed over past years, future RTB purchasers cannot, because they depend on policies about sales. Current policies are considerably more restrictive than in the times where most present RTB owner-occupiers bought their houses. The market sector comprises owner-occupiers excluding RTB owner-occupiers, and private sector tenants not receiving Housing Benefit. It therefore includes households that rent from employers, including public sector employers such as the Ministry of Defence.

3.3 The estimated division between the market and non-market sectors of households in 2006 and projected for 2011, 2016, 2021, and 2026 is shown in Table 9. The detail of the estimates, including separate figures for each of the four household types, is in Annex C.

Table 9 Market and non-market sectors of households in 2006 to 2026

(Thousands)

	2006	2011	2016	2021	2026
Market sector	967	1,020	1,074	1,123	1,166
Non-market sector	305	323	341	359	375
Total	1,272	1,342	1,415	1,482	1,541

Source: Annex C, Table C.5

3.4 Of the four types of household, the 'ageing' model for projecting forward the division between the market and non-market sectors applies only to couple households and one-person households (86 percent of all households in 2006). Households of one adult with dependent children diminish in numbers with age as the children become non-dependent (in the definitional sense) and 'other' households are a mixed group where tenure does not fit the ageing model. How much of the projected increase in households in the market sector is the result of the ageing model, is shown in Table 10. The projected increase in the number of households in the market and non-market sectors between 2006 and 2026 is divided into three components: (i) the effect of the projected increase in households in total, i.e. the increase there would be if the market sector proportion were to be the same in 2026 as in 2006; (ii) the effect of the ageing model; and (iii) the effects of changes in the mix of ages and household types, for instance the increase in households of one adult with children from 7.6 percent of the total in 2006 to 10.0 percent in 2026. The effect of the ageing model is calculated by reference to what the market sector total of households would have been if the 2006 proportions in each age group were still to apply in 2026.

Table 10 Composition of projected changes in households in the market and non-market sectors between 2006 and 2026

(Thousand)

	Market sector	Non-market sector
Effect of increase in households	+203	+66
Effect of ageing model	+18	-18
Effect of changes in the mix of ages and household types	-22	+22
Total projected change	+199	+70

Source: See text

3.5 The effect of the ageing model, to raise the projected number of households in the market sector in 2026 by 18,000 is much smaller, than with the estimate of the change in the market and social sector proportions shown in *Who's Counting*¹⁰, Table 9. The effect of 'rolling forward' base year proportions of market sector households was then put at 56,000 over an 18 year period, more than three times the effect estimated in Table 10.

3.6 The way in which projected changes between 2006 and 2026 in the mix of household types proportions of households in the market and non-market sectors is illustrated in Table 11.

Table 11 Types of household: proportions in the market sector in 2006 and rates of increase between 2006 and 2026

(percent)

	Proportions to total households in 2006	Market sector share in 2006	Change in number of households 2006-2026	Proportions of total households in 2026
Couple households	55.7	83.4	+6.2	48.9
One-person households	30.7	69.4	+45.9	36.9
Households of one adult with children	7.6	46.5	+58.8	10.0
Other households	6.0	36.6	-14.5	4.2
All households	100.0	75.6	+21.1	100.0

Source: Tables 5 and C.5

¹⁰ *Who's Counting? Housing Demand and Need in Wales 1998-2016*, Council of Mortgage Lenders 2004

- 3.7 Couple households, which have the highest proportion of households in the market sector, fall by almost 7 percent as a proportion of all households between 2006 and 2026. If the proportions of household types in 2026 were to remain the same as in 2006 the proportion of all households that would be in the market sector would be 1.6 percentage points higher than the projected changes in the proportions of household types.
- 3.8 The projected numbers of households in the market and non-market sectors in Table 9 show net increase of 199,000 households in the market sector and 70,000 in the non-market sector between 2006 and 2026. These are the first (and largest) part of an estimate of newly arising need and demand for net additional housing in the two decades. The term “newly arising need and demand” means generated by events during the projection period and excludes changes in the backlog of current un-met need. The expression “net additional housing” is preferred to new building, because housing need and demand can be met by conversion by large houses. The requirement is “net” in the sense of not including provision for replacing dwellings lost through demolition or in other ways because sufficiently comprehensive figures for such losses are not available. Apart from the projected net increase in households, the other components of the need and demand for net additional housing are:
- (a) Increases in the number of second homes
 - (b) Increases in vacant dwellings
 - (c) Provision in the social sector to offset the “loss” of re-lets arising from past sales to sitting tenants.
- 3.9 Increases in demand for second homes results in dwellings being bought up in the market and not available to meet demand for main residences, which has to be met by more new buildings, although not necessarily in the same locality of course. Increases in the number of vacant dwellings are neither demanded nor needed, in a sense; but they arise from the working of the housing system. If the additional need and demand generated by the net increase in households

is met, a constant ratio of vacant dwellings to the whole stock would imply increases in the actual number of vacant dwellings. The need for new provision to offset the effect of past RTB sales on the number of dwellings becoming available for letting to new tenants stems from the fact that the RTB purchasers takes the house with them when they move from renting to owning. If they had remained a tenant, there would be a re-let when their household dissolved; but because they bought the house dissolution of the household results in an additional dwelling for sale in the market.

3.10 The number of second homes in Wales (including holiday accommodation) counted by the 2001 census is 15,500. Council Tax figures for second homes from 1996/97 are shown in Table 12.

Table 12. Second homes: Council tax based

1996/97	18,384		2003/04	15,392
1997/98	15,390		2004/05	15,723
1998/99	14,855		2005/06	16,189
1999/00	16,995		2006/07	18,320
2000/01	16,723		2007/08	18,963
2001/02	16,512		2008/09	19,967
2002/03	16,228		2009/10	20,352

Source: Local Government Financial Statistics Unit, Welsh Assembly Government

3.11 There are variations from year to year, which appear erratic, which it difficult when trying to discern a trend to project into the future. If 1997/98 and 1998/99 taken together are compared with 2004/05 and 2005/06 taken together, an increase of 834 is shown over a 7 year period, 119 a year. The rate of increase between 2006/07 and 2009/10 is much more rapid, 2,032 over a three-year period, 677 a year. In view of this high figure, something more than the seven-

year average should be assumed. A figure of 300 a year is taken, which would result in a total increase of 6,000 between 2006 and 2026 in the stock of second homes. In the quarter century from the 2001 census it would imply a 50 percent increase in the stock of second homes and holiday accommodation.

3.12 Vacant dwellings in the market and non-market sectors are considered separately. Table 13 shows vacant dwellings belonging to local authorities and housing associations in 2001 (the year of the census, the only source for vacant dwellings in total in Wales), 2006 (the base year of the estimate of future need and demand for housing), and 2008 (the most recent available year).

Table 13 Vacant dwellings belonging to local authorities and housing associations

	Local authorities	Housing association	Non-market sector total	Non-market sector vacants as percent of stock
2000-01	8,367	638	9,005	3.7
2005-06	3,117	821	3,938	1.7
2006-07	3,058	852	3,910	1.7
2007-08	2,310	1,459	3,769	1.7
2008-09 (a)	2,320	2,009	4,329	1.9

(a) Data for housing associations and social landlords excludes data for Abbeyfield societies, Almshouse charities and Co-ownership societies.

Source: Annual social landlord vacancies returns, Welsh Assembly Government, Table 6.6

3.13 The reduction between 2001 and 2006 in vacant dwellings in the local authority stock appears to have been a one-off episode. The figures for 2006 and 2008 indicate that vacancies have stabilised, so the rate for both years, 1.7 percent

is assumed to apply in future.

- 3.14 In the absence of more recent information, an estimate of the vacancy rate in the market sector of housing in Wales must start with the 2001 census figure for all tenures, which is 51,252. The non-market sector figure in Table 13 may be deducted, to leave 42,000, in round terms, as market sector vacants. This has to be compared with the census total of household spaces minus the non-market sector housing stock in 2001, which is 1,031,000. The proportion of the private sector housing stock in Wales that was vacant in 2001 was thus 4.1 percent. This figure is taken for present purposes and applied to the increase in market sector households plus second homes (to represent dwellings) to give increase in market sector vacants.
- 3.15 The provision required to offset re-lets “lost” through past Right-to-Buy sales has to be estimated from figures used in England, as there is no information to make a separate estimate for Wales. As with Right-to-Buy owner-occupiers to be included in the non-market sector (see Annex B) a figure for Wales is derived pro-rata to Right-to-Buy sales. The estimate for England for 2006 to 2026¹¹ is 486,000, so the figure for Wales (6.2 percent of that for England) is put at 30,000 over the two decades.
- 3.16 The components of the two-sector estimate of newly arising need and demand for housing in Wales in 2006 to 2026 are brought together in Table 14. Figures in thousands are shown for the twenty-year period and the total then converted to an annual average. This is preferred to annual averages for all the items, which can cause difficulties about rounding the smaller items.

¹¹ Shelter (2008) *Homes for the Future*, Shelter, London.

Table 14 Two-sector estimate of newly arising need and demand for housing in Wales in 2006 to 2026

(thousands)

	Market sector	Non-market sector	Total
Net increase in households	199	70	269
Second homes, etc	6	0	6
Vacant dwellings	8	1	9
Offset to re-lets "lost" by past Right-to-Buy sales	-30	+30	0
Total net additional housing required			
(thousands in total)	183	101	284
(average per year)	9.2	5.1	14.2

Source: Table 9; and paragraphs 11, 13, 14, and 15

3.17 A version for 2006 to 2021 is shown in Table 15.

Table 15 Two-sector analysis of newly arising need and demand for housing in Wales in 2006 to 2021

(thousands)

	Market sector	Non-market sector	Total
Net increase in households	156	54	210
Second homes, etc	4	0	4
Vacant dwellings	6	1	7
Offset to re-lets "lost" by past Right-to-Buy sales	-23	+23	0
Total net additional housing required			
(thousands in total)	143	78	221
(average per year)	9.5	5.2	14.7

Source: As Table 14

3.18 That the estimated net additional housing requirement in 2006 to 2021 is 500 a year higher than in 2006 and 2026 is due to the projected increase in households. In both 2006 to 2021 and 2021 to 2026 the non-market sector share of the net additional housing requirement is 35 to 36 percent of the total. This is higher than the 27 percent (excluding replacement of losses) in the estimate of need and demand for housing in 1998 to 2016 published in *Who's Counting*, Table 13 (CML, 2004). The explanation arithmetically is the smaller effect of the ageing model (see paragraph 5 above).

4. Part III The Backlog of Current Un-met Need for Non-market

Sector Housing

- 4.1 The backlog of current un-met need for non-market sector housing (the “backlog” for short) comprises: (i) households and potential households without self-contained accommodation; (ii) private sector tenants and to some extent as well others who have self-contained accommodation but which is not suited to their circumstances; and (iii) social sector tenants whose accommodation is unsuitable. The distinction between (ii) and (iii) is that providing for the households in (ii) entails moves from the market to the non-market sector with more social sector housing, whereas providing for (iii) can often be done by moves within the social sector, though not of course always. Meeting needs in category (i) requires adding to the non-market sector stock with no offset from the market sector stock. Meeting needs in category (ii) requires adding to the non-market sector stock but releases dwellings in the market sector. The dwelling released when a household leaves a privately owned dwelling where they were overcrowded may well be suitable for a smaller household. Meeting needs in category (iii) may require new buildings to add to the supply of particular types and sizes of dwellings, for instance larger houses for large families. But when a family leaves a small house or flat a non-market sector dwelling is released which could provide for someone in the other categories of need, such as a small family living in non-self-contained accommodation.
- 4.2 Information for Wales is available about numbers of families and others housed in temporary accommodation for homeless people, and for households that share their accommodation with other households. Also within category (i) above are concealed families, couples with or without children and lone parents with children who live in someone else’s house. They were previously identified within the household projection system used in Wales, but are not distinguished within the current system or by Living in Wales. The households in category (ii),

with self-contained accommodation that is unsuitable, about which information is available are households in crowded accommodation, defined as having fewer bedrooms than the bedroom standard. Other categories of unsuitable accommodation, for instance occupied by people with disabilities, are not identified. The estimate presented here for the backlog of need in Wales therefore comprises homeless households without self-contained accommodation; households in shared accommodation; and households in crowded conditions.

4.3 Families and others in temporary accommodation for homeless people are in a wide variety of circumstances. Table 16 shows these circumstances as at March 2006, the year which is the base date of the estimate of need and demand for housing. Some of the categories shown separately in Table 7.7 of Welsh Housing Statistics 2006 are grouped.

Table 16 Categories of Temporary Accommodation for Homeless Households at 31 March 2006

(a) Hostels and women's refuges	448
(b) Bed and breakfast and hotels	593
(c) Placed directly with private landlords, or in accommodation leased by local authorities and housing associations.	507
(d) Local authority stock and RSL stock *	614
(e) "Homeless at home"	981
(f) Other	299
Total	3,442

Note: * RSL stock let on assured tenancies

Source: Welsh Housing Statistics 2006, Table 7.7

4.4 Categories (a) and (b), 1,041 in total clearly counts as part of the backlog. Whether category (c) does is more debatable, and so is (d), particularly the latter. For present purposes, there appear to be two alternative definitions. A “narrow” definition would comprise categories (a) and (b), who are not living in houses or flats at all, 1,041 in total. The broader definition would be all those counted as homeless other than (d) who are excluded because households occupying local authority or housing association stock can hardly be a component of un-met need for local authority accommodation. On this broader definition, the figure would be 2,828. After consultation with the Welsh Assembly Government, the broader definition is used here.

4.5 *Households in shared accommodation.* These are households who share one or more rooms with another household. The numbers from the *Living in Wales* Survey for 2008 are:

Owner-occupied	11,739
Local authority and housing association tenants	10,185
Private rented	3,977

Of these, the private rented figure is classed as statistically unreliable because it is less than 5,000.

4.6 These figures are hard to interpret. Owning only part of a house is very uncommon. Most owner-occupiers who share do so with one or more private sector tenants, to whom they let part of their house. But clearly, there are not enough sharing private sector tenants for that to explain the number of sharing owner-occupiers. Similarly, local authorities and housing associations do not rent out parts of their houses. There is therefore only the “unreliable” figure for private sector tenants, rounded to 4,000. Not all of these would necessarily want self-contained accommodation, on the evidence of the Sharers Survey carried out in 1990 by the Office of Population Censuses and Surveys in England. To make further use of the information on sharing in *Living in Wales* it would be necessary to look at sharing of different types of rooms and combinations of rooms. The 1990 Sharers Survey reported 45 percent as the

proportion of sharing households that would strongly prefer self-contained accommodation. Therefore 2,000 sharing households in the private rented sector are counted as part of the backlog of housing need. This is an uncertain figure both on account of the status of the figure from *Living in Wales* from which it was derived, and because the estimate of the proportion of sharing households wanting separate accommodation from the Sharers Survey is now twenty years old.

Households that are Overcrowded

4.7 Households that are counted as overcrowded in *Living in Wales* are households that have fewer than the bedroom standard – for its size and composition. The bedroom standard is such that not more than two persons should share a bedroom; couples should have a bedroom to themselves, as should persons aged 21 and over, who are not members of a couple. Other persons should not share a bedroom with someone of the opposite sex unless both are under age 10. Numbers of households reported in the *Living in Wales* Surveys in 2007 and 2008 are shown in Table 17, along with average figures for both years together. The original published survey data included tenants of local authorities and housing associations separately. They are combined here to form the social rented sector.

Table 17 Households with Fewer Bedrooms than Standard

	2007	2008	Average, Rounded
Owner-occupiers	10,792	11,739	11,300
Social rented sector	7,254	10,185	8,700
Private rented sector	5,257	4,199	4,700
Total	23,303	26,123	24,700

Source: *Living in Wales*

4.8 Owner-occupiers with fewer bedrooms than standard are in general unlikely to be looking for a non-market sector tenancy. In some instances the cause of the overcrowding could be sons and daughters who before long will be gone to live independently. In other instances, a larger house would be sought to meet the needs of a growing family. It is households that are renting houses and flats that are too small for them that constitute the need from households whose accommodation is crowded. To provide non-market sector tenancies for private sector tenants living in overcrowded conditions, something close to 4,700 non-market sector dwellings would be needed. Many, perhaps most of the overcrowded social rented sector households, could probably be provided for by transfers within the stock. Some new building would be needed to meet local shortages of particular types of dwellings; but it is very hard to say how much.

4.9 The three categories of households discussed above as components of the backlog unmet housing need are brought together in Table 18. It is only a partial measure, because not all potential categories are included. Owner-occupiers and private sector tenants who have disabilities and medical conditions that make their present accommodation unsuitable and cannot afford to buy or rent suitable housing privately are a potentially significant group that are not included, for lack of a basis for an estimate. Having to share a dwelling is a possible cause of being overcrowded, but *Living in Wales* indicates that there is no significant overlap from this cause in the table. For households in temporary accommodation for homeless households, the broader definition given above (paragraph 4) is used, rounded to the nearest hundred, in the table.

Table 18 Backlog of Current Un-Met Need for Non-market sector Housing

Households in temporary accommodation for homeless households	2,800
Sharing households wanting separate accommodation	2,000
Overcrowded households (private rented sector)	4,700
Total for whom additional non-market sector housing would be needed	9,500
Overcrowded households in the social rented sector	8,700

4.10 Of the households included in Table 18, only households in temporary accommodation for homeless households are available at local authority area level. No suitable basis for disaggregating the others to local authority level has been found.

5. Part IV Two Sector Estimate of Demand and Need for Housing in Local Authority Areas of Wales 2006-2026

- 5.1 The estimates of demand and need for housing in local authority areas of Wales are derived from 2006-based household projections published in June 2009 by the Welsh Assembly Government (Household Projections for Wales (2006-based Summary Report Table 2). The procedures by which these projections were produced is described in the Summary Report. A consequence of these procedures is that the household projections for Welsh local authority areas do not sum to the projections for Wales as a whole. The sum of projections for local authority areas in 2026 exceeds the projections for Wales by 22,700. The projected rates of increase in numbers of households differ very considerably between local authority areas (see Annex D, Table D.6), which affects the division of the sum of projected households in local authority areas between the market and non-market sectors.
- 5.2 The base year (2006) proportions of households in the market and non-market sectors of the housing system in Wales and the projected proportions in 2026 vary greatly between the different types of households (see Annex C, Table C.5). At the same time, the proportions of households of the different types are distinguished in the official household projections and future projected increases differ very considerably between local authority areas. These differences between local authority areas are brought to account by estimating the division in each local authority area in 2006 and 2026 between market and non-market sectors of households of three types separately, and then adding them to give totals of households in each sector and hence the net increases between 2006 and 2026 in households in the market and non-market sectors required for calculations at local level similar to those for Wales in Table 14 above.

- 5.3 The base year proportions of households in the market and non-market sectors in the three types of household – one person households, households of one adult with children, and all other households – are derived primarily from information about housing tenure from the Living in Wales survey for 2005, 2006, and 2007 combined. From this information, households of the three types are first divided between owner-occupiers plus private sector tenants (the market sector) and tenants of local housing authorities plus tenants of housing associations (the non-market sector). Estimates of owner-occupier households that entered home ownership through purchase as sitting tenants from public authorities (Right-to-Buy or RTB owner-occupiers) and private sector tenants with Housing Benefit are subtracted from the private sector to give the market sector, and added to the social rented sector to give the non-market sector. Figures for RTB owner-occupiers and private rented sector tenants with Housing Benefit in local authority areas come from apportionment between areas of the figures for Wales in Annex B, Tables B.5 and B.7. The way in which the apportionments were made is described in Annex D. Numbers of households in market and non-market sector are subject both to possible sampling variation in the Living in Wales survey, which is potentially greater at local authority level than in Wales as a whole; and to possible uncertainties about the apportionment procedures.
- 5.4 Market sector shares (and by subtraction non-market sector shares) of one-person households, households of one adult plus children, and other households, are shown in Table D.2 in Annex D. There is very considerable variation between local authority areas in the market sector proportions in each of the three categories of households. The variation is greatest among households of one adult plus children, and least among the “other” households. This would be expected from the sample sizes. Table 5 shows 7.6 percent of households in Wales in 2006 as comprising one adult plus children, 30.7 percent one-person households, and 61.7 percent other households (of which 55.7 percent were couple households). These variations are in all probability due to a considerable extent to sampling and mean that the estimate of

numbers of households of one adult plus children in the market sector in 2006 and 2026, and hence the division between sectors of the projected increase, must be problematic at the level of local authority areas.

- 5.5 The estimated market and non-market sector proportions in 2006 are the base-line for proportions in 2026 and hence (from the household projections for 2026) the number of households in each sector. In the national estimates of need and demand for housing in Wales, proportions of one-person and couple households in the market sector were estimated by the 'ageing' model, by rolling forward proportions in each age group. Thus the market sector proportion from the 45-49 age group in 2006 (72 percent) becomes the market sector proportion in the 55-59 age group in 2016 (as compared with 70 percent in 2006) and in the 65-69 age group in 2026 (as compared with 69 percent in 2006).
- 5.6 In consequence, the proportion of one-person households in the market sector is projected to rise from 71.0 percent in 2006 to 72.2 percent in 2026 (see Table C.5 in Annex C) and the proportion of 'couple' households plus "other" households from 82.2 to 83.4 percent. The increases of 1.2 percentage points are added to the base year market sector proportions for one-person households and in "all other households" in each local authority area. For Wales in total the market sector proportion for households of one adult plus children in 2026 was taken to be the same as in 2006, and the same assumption is made at local authority level. These assumptions imply that there will be no "catching up" of owner-occupation in local authorities where the proportion in 2006 was atypically low, and no special provision for more non-market sector housing in areas where the amounts are low. The assumptions may well be queried in the light of local knowledge. But at the outset a broad-brush assumption has to be made, of necessity.
- 5.7 The market sector proportions for 2026 are applied to the projected totals of one-person households, households of one adult plus children, and other

households to produce estimates of the number of households of each type in the market sector, and by subtraction in the non-market sector in 2026. The numbers of households in each sector for each type of household in 2006 are then subtracted, to give the net increases in households, which are then added to give the net increase in total in the number of households in the market and non-market sectors in each local authority area. To derive the need for additional dwellings in the non-market sector and demand in the market sector, increases in second homes (all in the market sector) and increases in vacant dwellings in both sectors have to be added. The number of dwellings required to offset losses of vacancies for re-letting as a result of past Right-to-Buy sales (see footnote, page 3 above) have to be added to the non-market sector and subtracted from the market sector. The way in which the figures for Wales in Table 14 are allocated between local authority areas is outlined in Annex D. Table 19 shows the estimated net increase in households in the market and non-market sectors in each area, and the need and demand for additional provision of housing.

Table 19 Two sector analysis at local authority level of net increases in households and need and demand for additional provision of housing.

(thousands)

	Increase in households			Need and demand for housing		
	Market sector	Non-market sector	Total	Market sector	Non-market sector	Total
Isle of Anglesey	3.2	1.5	4.6	3.1	2.2	5.2
Gwynedd	7.0	3.08	10.0	7.8	4.2	12.0
Conwy	8.9	2.3	11.2	8.7	3.3	12.0
Denbighshire	9.6	2.4	12.0	9.1	3.3	12.4
Flintshire	8.3	3.5	11.8	7.2	5.0	12.2
Wrexham	8.4	4.4	12.8	7.3	6.0	13.3

Powys	13.0	3.5	16.5	12.8	4.8	17.6
Ceredigion	6.6	1.4	8.0	6.5	2.1	8.6
Pembrokeshire	9.4	3.4	12.8	9.8	4.6	14.4
Carmarthenshire	17.1	6.2	23.3	16.0	8.1	24.1
Swansea	14.6	7.3	21.9	13.1	9.7	22.8
Neath Port Talbot	11.2	6.0	17.2	10.0	7.7	17.7
Bridgend	11.5	3.3	14.8	10.7	4.6	15.3
Vale of Glamorgan	11.3	3.0	14.3	10.7	4.1	14.8
Cardiff	26.3	9.8	36.1	24.3	13.0	37.3
Rhondda Cynon Taf	13.4	4.2	17.6	11.9	6.5	18.4
Merthyr Tydfil	1.5	0.8	2.4	1.0	1.4	2.5
Caerphilly	9.4	4.8	14.2	7.9	6.8	14.7
Blaenau Gwent	2.6	2.3	4.9	1.9	3.2	5.1
Torfaen	3.6	1.1	4.7	2.7	2.2	4.9
Monmouthshire	7.2	2.4	9.6	6.7	3.2	9.9
Newport	8.6	3.6	12.2	7.5	5.2	12.7
Wales	213	80	293	197	111	308

Note: Detail does not always add to totals owing to rounding

Source: Annex D, Table D.4

5.8 In considering the estimates in Table 19 of demand and need for additional housing, particularly in the non-market sector, it is important to have regard to the way in which the figuring depends on pro-rata apportionment and not about local knowledge of current needs. That more than one-half of demand and need is shown as being for non-market sector housing in two areas, Merthyr Tydfil and Blaenau Gwent, is the arithmetical consequence of a comparatively

small projected increase in households in total and a low proportion of households in the market sector (hence a smaller than average increase in the market sector) and the offset to the loss of re-lets due to past Right-to-Buy sales. Whether or not there is a current need for that many more dwellings in the non-market sector is a matter of local knowledge. It appears best, at this stage at least, to keep the figures for all local authority areas which are partly pro-rata rather than make judgemental adjustments for some areas.

5.9 Table 19 shows estimates of newly arising need and demand for 197,000 dwellings in the market sector and 111,000 in the non-market sector in 2006-2026 in all Welsh local authority areas added together. These are higher figures than the national estimates in Table 14. They are compared in Table 20.

Table 20 Increase in households and need and demand for additional housing in 2006-26: Wales in total and sum of local authority areas

(thousands)

	Market sector	Social sector	Total
National estimate			
Net increase in households	199	70	269
Demand and need for housing	183	101	284
Demand and need proportions (percent)	64.4	35.6	100.0
Sum of sub-national estimates			
Net increase in households	213	80	293
Demand and need for housing	197	111	308
Demand and need proportions (percent)	64.0	36.0	100.0

Source: Tables 14 and 17

- 5.10 A somewhat higher proportion of total newly arising need and demand for housing in Wales is shown as being in the non-market sector if derived from aggregating separate estimates for each local authority area than if derived from a national 'top down' calculation. This is the result of the inter-action between differences in the projected rates of increase of households in different local authority areas; different mixes of household types; and different proportions of market and non-market sector households in different areas.
- 5.11 The estimates of need and demand for additional housing in each local authority area derived from the Welsh Assembly Government's published household projections for local authority areas may be termed 'unconstrained', in the sense that there is an element of local authority input into the projections, which are not constrained by the national population and households projections for Wales. As noted above, the sum of the local authority area projections exceeds the national projection by 22,700. An alternative would be a 'constrained' set of estimates of housing need and demand, which are derived from increases in numbers of households between 2006 and 2026 which are scaled to add to the national projected increase in households. The 'constrained' increase in households is divided between the private sector (owner-occupiers plus private rented sector) and the non-market sector (local authority and housing association tenants) in the same proportions as in the 'unconstrained' calculation. The apportionment of 'Right to Buy' owner-occupiers and private rented sector tenants with Housing Benefit between local authority areas is the same as in the 'unconstrained' calculation. So too is the apportionment of the increase in second homes and vacant dwellings and the need for dwellings in the non-market sector to offset the effect of past Right to Buy sales on re-lets. The 'constrained' estimates of need and demand for additional housing in each local authority area are shown in Table 21. It is in the same form as the 'unconstrained' figures in Table 19.

Table 21 Constrained two sector analysis at local authority level net increases in households and need and demand for additional housing.

(thousands)

	Increase in households			Need and demand for housing		
	Market sector	Non-market sector	Total	Market sector	Non-market sector	Total
Isle of Anglesey	2.8	1.4	4.2	2.7	2.1	4.8
Gwynedd	6.3	2.8	9.1	7.1	4.0	11.1
Conwy	8.1	2.2	10.3	7.9	3.2	11.1
Denbighshire	8.9	2.3	11.2	8.4	3.2	11.6
Flintshire	7.4	3.2	10.6	6.3	4.7	11.0
Wrexham	7.7	4.1	11.8	6.6	5.7	12.3
Powys	12.1	3.3	15.4	11.9	4.6	16.5
Ceredigion	6.1	1.3	7.4	6.0	2.0	8.0
Pembrokeshire	8.7	3.2	11.9	9.1	4.4	13.5
Carmarthenshire	15.9	5.8	21.7	14.7	7.7	22.4
Swansea	13.3	6.8	20.1	11.8	9.2	21.0
Neath Port Talbot	10.4	5.6	16.0	9.2	7.3	16.5
Bridgend	10.7	3.1	13.8	9.9	4.4	14.3
Vale of Glamorgan	10.4	2.9	13.3	9.8	4.0	13.8
Cardiff	24.4	9.2	33.6	22.4	12.4	34.8
Rhondda Cynon Taf	12.0	3.8	15.8	10.5	6.1	16.6
Merthyr Tydfil	1.2	0.8	2.0	0.8	1.4	2.2
Caerphilly	8.4	4.5	12.9	6.9	6.5	13.4
Blaenau Gwent	2.2	2.2	4.4	1.5	3.1	4.6

Torfaen	3.1	0.8	3.9	2.2	1.9	4.1
Monmouthshire	6.6	2.3	8.9	6.1	3.1	9.2
Newport	7.8	3.4	11.2	6.7	5.0	11.7
Wales	194	75	269	178	106	284

Note: Detail does not always add to totals owing to rounding

5.12 By definition the sum of the constrained estimates of the increase in the number of households and of newly arising demand and need in total is the same as the national top-down estimate (Tables 14 and 20). The division between the market and non-market sectors is different, for the same reasons as discussed in connection with the unconstrained estimates for local authority areas. The non-market sector's share of total need and demand in the constrained estimates (37 percent) is slightly higher than in the unconstrained estimates (35 percent). This is the arithmetical effect of calculating non-market sector proportions and hence non-market sector households in each area and then subtracting Right to Buy owner-occupiers and private sector tenants, instead of applying the non-market and market sector shares from the unconstrained calculation to the (lower) constrained household totals.

Annex A. 2006-Based Household Projections: Analysis by Household Type and Age

- A.1 The 2006-based household projections for Wales were made from calculated household membership rates, i.e. the proportion of members of the private household population in groups defined by age and sex who were members of each of 12 types of household. All members of the private household population must be a member of a household; so the household membership rates for a given sex/age group must sum to one. This household projection method does not make use of concepts of household head, representative or reference person, whose age in methods that employ these concepts can be used for age analysis of households. The household projection method used for Wales derives totals of households in each category from the number of members. The number of households of two adults and no children, for example, is the number of members of such households divided by two.
- A.2 This procedure does not identify the elder member of a two adult household, or indeed any other household. The household membership information is of the number of persons in each age ranges, males and females separately, who are members of each of the 12 household categories. Table A.1 shows as an example the household membership of men and women aged 35-39.

Table A.1 Household membership of men and women aged 35-39 in 2006

	Men	Women	Total
One person	15,069	6,611	21,680
Two persons, no children	16,586	11,513	20,899
Two persons, one adult, one child	1,031	6,693	7,724
Three persons, no children	6,369	2,567	8,936
Three persons, 2 adults 1 child	12,638	12,978	25,616
Three persons, 1 adult 2 children	667	7,551	8,218
Four persons, no children	1,625	667	2,292
Four persons, 2+ adults and 1+ children	27,143	32,435	59,578
Four persons, 1 adult 3 children	158	3,039	3,197
Five persons or more, no children	484	189	673
Five persons or more, 2+ adults and 1+ children	16,002	19,651	35,663
Five persons or more, 1 adult and 4+ children	45	1,209	1,254
Total	97,817	105,103	202,920

A.3 An attempt was made to estimate the number of households of each type in the 35-39 age range in 2006 from the number of adults who are members of each type of household, for instance 20,899 in households that comprise two adults but no children, divided by the number of adults in each household, which is two, by definition. That gives 14,450. With four person households comprising two or more adults and one or more children the number of adults is taken as two, so that the total number of adults aged 35-39 in households of this type is 59,578 and the number of households 29,789. A similar calculation is made for all age ranges that include adults, and the figures obtained for four person households comprising two or more adults and one or more households in each range summed and compared with the published total for all households of this type. This is the first stage only. Subsequently a comparison is made

with the 2003-based projections in which households are classified by age according to the age of the household representative. The *Living in Wales* survey works with the age of the household reference person.

- A.4 Households classified by type and by age (as estimated by the method just described) in 2006, 2011, 2016, 2021 and 2026 are shown in Tables A.2 to A.6. The twelve household types in Table A.1 are condensed to five: one adult; two adults with not children; two or more adults with children; three or more adults without children; and one adult with children.

Table A.2 Households in 2006: Analysis by type and age

(thousands)

	One adult	Two adults	Two or more adults plus children	One adult with children	Three or more adults, no children	Total
Age						
16-24	12	21	18	13	32	96
25-29	19	22	22	14	11	89
30-34	20	17	39	17	5	98
35-39	22	14	58	20	4	117
40-44	24	16	60	16	5	121
45-49	25	24	40	8	10	108
50-54	26	38	18	4	13	98
55-59	32	58	8	2	13	113
60-64	32	55	4	1	8	100
65-74	70	83	3	1	9	165
75-84	77	43	2	1	3	125
85 and over	32	8	0	0	1	42
Total	390	400	271	97	115	1,272

Notes: Small discrepancies are due to rounding

Table A.3 Households in 2011: Analysis by type and age

(thousands)

	One adult	Two adults	Two or more adults plus children	One adult with children	Three or more adults no children	Total
Age						
16-24	12	20	14	14	33	93
25-29	24	25	21	18	14	102
30-34	25	19	39	20	5	108
35-39	22	13	51	21	4	111
40-44	25	15	54	17	4	115
45-49	29	25	42	10	9	114
50-54	31	42	20	5	13	110
55-59	34	58	8	2	12	114
60-64	34	57	4	1	7	104
65-74	80	97	4	1	9	192
75-84	79	46	2	2	3	132
85 and over	37	10	0	0	1	48
Total	432	427	259	111	115	1,342

Table A.4 Households in 2016: Analysis by type and age

(thousands)

	One adult	Two adults	Two adults or more plus children	One adult with children	Three or more adults no children	Total
Age						
16-24	12	20	9	15	33	89
25-29	29	28	21	21	16	115
30-34	30	21	39	24	6	119
35-39	23	12	45	22	3	105
40-44	25	13	49	18	3	108
45-49	33	26	44	12	7	122
50-54	37	46	22	6	12	123
55-59	35	58	8	2	10	113
60-64	36	59	4	1	7	107
65-74	91	111	4	2	10	217
75-84	84	50	2	1	3	140
85 and over	44	11	0	0	1	58
Total	478	454	248	105	125	1,415

Table A.5 Households in 2021: analysis by type and age

(thousands)

	One adult	Two adults	Two or more adults plus children	One adult with children	Three or more adults no children	Total
Age						
16-24	11	18	10	17	32	89
25-29	26	27	17	21	16	106
30-34	33	22	35	26	7	123
35-39	29	14	46	27	3	119
40-44	30	14	51	21	2	119
45-49	33	24	39	12	5	114
50-54	36	42	20	6	10	114
55-59	38	61	9	3	9	120
60-64	40	66	4	2	7	118
65-74	92	114	4	2	9	221
75-84	100	60	3	2	2	168
85 and over	55	13	1	1	1	71
Total	523	475	239	140	104	1,482

Table A.6 Households in 2026: analysis by type and age

(thousands)

	One adult	Two adults	Two or more adults plus children	One adult with children	Three or more adults no children	Total
Age						
16-24	10	16	12	20	31	89
25-29	29	25	14	21	15	103
30-34	36	22	32	28	7	125
35-39	35	16	48	33	3	135
40-44	34	15	52	24	2	127
45-49	32	21	37	13	4	107
50-54	35	38	19	6	8	106
55-59	41	63	9	3	8	123
60-64	44	71	5	2	6	128
65-74	93	115	3	2	9	223
75-84	116	70	2	2	4	193
85 and over	65	15	1	1	1	83
Total	569	487	233	154	98	1,541

A.5 An approximate check on the age profile of households shown in Tables A.2 to A.6 may be made by comparison with the 2003-based household projections. A broad-brush comparison is made first, of households in 2006 and 2026. More detailed comparisons for individual household types are then considered.

Table A.7 Ages of households in 2006 and 2026

(thousands)

	2006		2026	
	Derived from 2006 projection	2003-based projection	Derived from 2006 projection	2003-based projection
Under 25	96	54	89	54
25-29	89	74	103	85
30-34	98	92	125	113
35-39	117	116	135	125
40-44	121	124	127	118
45-49	108	113	107	105
50-54	98	108	106	108
55-59	113	122	123	127
60-64	100	108	128	138
65-74	165	181	223	233
75-84	125	137	193	196
85 and over	42	45	82	77
Total	1,272	1,275	1,541	1,479

Sources: Table A.2; and 2003-based household projections

A.6 The household figures derived from the 2006-based projection are much higher than those from the 2003-based projection at the younger ages (up to age 35), balanced by differences in the opposite direction at ages from 50 upwards. A comparison is made of 2006 figures for one-person households, lone parent households, and all other types of household combined. For 2006 there is a

difference of only 15,000 between the 2006-based and 2003-based figures for the private household population; and one-person and lone-parent or one adult plus children households are the categories least subject to differences of definition.

Table A.8 Ages of households in 2006: comparisons for types of households

(thousands)

	One-person households(a)		Lone-parent households(b)		All other households	
	2006-based	2003-based	2006-based	2003-based	2006-based	2003-based
Under 25	12	13	13	15	71	27
25-29	19	19	14	15	56	41
30-34	20	20	17	18	61	54
35-39	22	22	20	23	75	71
40-44	24	24	16	20	81	80
45-49	25	25	8	11	75	78
50-54	26	27	4	5	68	77
55-59	32	34	2	2	79	87
60-64	32	33	1	1	67	74
65-74	70	68	1	1	94	112
75-84	77	77	1	1	47	60
85 & over	32	32	0	0	10	9
Total	390	393	97	110	786	773

Source: As Table A.6

A.7 Table A.7 shows that the differences between the estimates of the age distribution of households in 2006 derived from household membership data and the 2003-based projections, which used household representative rates, are in households with two adults or more, with or without children. The comparisons in Table A.8 suggest that the figures for the ages of one-person and lone-parent households in 2001, 2016 and 2021 can be taken as they are shown in Tables A.3, A.4, and A.5. For the other categories of household see Part I, Table 5. Estimates may be made via age range totals for all types of households together. These totals are produced by ratios of households to private household population from the 2003-based projections, applied to the 2006-based projections of the private household population, and scaled to agree with the 2006-based projection for all households. "All other households" as in Table A.8 can then be derived by subtracting one-person and lone parent households. "All other households" have then to be divided between "couple" households and "other" households (see Part I, Table 5). The "other" households are apportioned between age ranges pro-rata to "other multi-person households" in the 2003-based projections. Age analyses produced in this way of households are shown in Tables A.9 to A.13.

Table A.9 Households in 2006: analysis by type and age

(thousands)

	"Couple" households	One-person households	Lone-parent households	"Other" households	Total
Under 25	21	12	13	9	55
25-29	37	19	14	4	74
30-34	53	20	17	2	92
35-39	71	22	20	3	116
40-44	81	24	16	4	125
45-49	75	25	8	6	114
50-54	71	26	4	7	108
55-59	81	32	2	8	123
60-64	70	32	1	6	109
65-74	89	70	1	11	171
75-84	50	77	1	11	139
85 & over	9	32	0	5	46
Total	709	390	97	76	1,272

Source: Table A.2 and see text

Table A.10 Households in 2011: analysis by type and age

(thousands)

	“Couple” households	One-person households	Lone-parent households	“Other” households	Total
Under 25	26	12	14	9	61
25-29	43	24	18	5	90
30-34	45	25	20	3	93
35-39	55	22	21	3	101
40-44	74	25	17	4	120
45-49	82	29	10	6	127
50-54	72	31	5	8	116
55-59	69	34	2	7	112
60-64	86	34	1	6	127
65-74	109	80	1	11	201
75-84	50	79	2	9	140
85 & over	12	37	0	5	54
Total	724	432	111	76	1,342

Source: Table A.3 and see text

Table A.11 Households in 2016: analysis by type and age

(thousands)

	“Couple” households	One-person households	Lone-parent households	“Other” households	Total
Under 25	25	12	15	8	60
25-29	43	29	21	5	98
30-34	56	30	24	3	113
35-39	54	23	22	3	102
40-44	59	25	18	3	105
45-49	72	33	12	5	122
50-54	80	37	6	8	131
55-59	76	35	2	8	121
60-64	74	36	1	5	116
65-74	129	91	2	12	234
75-84	58	84	1	9	152
85 and over	12	44	0	5	61
Total	738	478	125	74	1,415

Source: Table A.4 and see text

Table A.12 Households in 2021: analysis by type and age

(thousands)

	“Couple” households	One-person households	Lone-parent households	“Other” households	Total
Under 25	22	11	17	7	57
25-29	43	26	21	5	95
30-34	61	33	26	3	123
35-39	63	29	27	3	122
40-44	50	30	21	4	105
45-49	58	33	12	4	107
50-54	77	36	6	7	126
55-59	85	38	3	8	134
60-64	79	40	2	5	126
65-74	134	92	2	12	240
75-84	65	100	2	8	175
85 and over	12	55	1	4	72
Total	749	523	140	70	1,482

Source: Table A.5 and see text

Table A.13 Households in 2026: analysis by type and age

(thousands)

	“Couple” households	One-person households	Lone-parent households	“Other” households	Total
Under 25	22	10	20	6	58
25-29	35	29	21	4	89
30-34	52	36	28	3	119
35-39	61	35	33	3	132
40-44	64	32	24	3	125
45-49	59	32	13	3	107
50-54	63	35	6	6	110
55-59	78	41	3	7	129
60-64	89	44	2	5	140
65-74	134	93	2	10	239
75-84	79	116	2	9	206
85 and over	16	65	1	5	87
Total	753	569	154	65	1,541

Source:

Annex B Housing Tenure in 2006 and Division Between Social and Market Sectors

- B.1 The work reported in this Annex uses the information from *Living in Wales* 2005-2007 to estimate a division between the market sectors of households according to type and age. The division between the sectors in 2006 is then used to estimate the numbers of households in each sector in 2011, 2016, 2021, and 2026. The “ageing model” is used for this purpose. It depends on the fact that only small numbers of households move between owner-occupation and renting at ages above 40, other than by purchase as sitting tenants at favourable prices. In consequence the proportions of couple households in the market sector in the 50-54 age range (for example) in 2006 will be close to the proportion in the market sector in the 60-64 age range in 2016 and in the 70-74 age range in 2026. The “ageing” model is applicable as well to one-person households as they age. The ageing model’s application to couple households also reads across to the tenure proportions of one-person households as they are formed through the deaths of members of couple households. Increases in the proportion of owner-occupiers among couple households carry through to increase in owner-occupier proportions among one-person households.
- B.2 The “ageing model” is used for estimating future tenure proportions for couple households and one-person households. It cannot be used for households of one-parent and dependent children, as their numbers diminish with age as children cease to be dependent in the technical sense. “Other” households are a miscellany, for which the ageing model is not suitable.
- B.3 Housing tenure is used to divide households between the market and non-market sectors. In this report the market sector is defined as owner-occupiers other than those who came into owner-occupation through purchase as sitting tenants, colloquially Right-to-Buy or “RTB” owner-occupiers; and private sector tenants who are not receiving Housing Benefit. The non-market sector consists

of tenants of local authorities and housing associations (or Registered Social Landlords, “RSLs”) plus RTB owner-occupiers plus private sector tenants receiving Housing Benefit, “HB private sector tenants”. The private rented sector in this context includes accommodation occupied by virtue of employment, including public employment.

- B.4 The first stage in dividing households between the social and market sectors in the base year (2006) and in the projection years is to use survey data from *Living in Wales* about the numbers of households in the owner-occupied, private rented, and social rented sectors in 2005-07 in age ranges for the four household categories distinguished in Part I, Table 5. Renting from local authorities and renting from housing associations are combined into the “social rented sector”. In this stage the household tenure figures are taken as they stand. Expression as proportions of households in each group defined by household type and age is part of the second stage. In this stage “RTB” owner-occupiers and “HB” private sector tenants are transferred to form the “non-market sector” along with social rented sector tenants.
- B.5 The four household types are one-person households, one adult with one or more children, “couple households”, and “other” households. The household types used in *Living in Wales* that comprise these categories are listed in paragraph 9 of Part I. That the totals for these household categories derived from *Living in Wales* are different from those in Part I, Table 5 does not cause problems. For the second stage it is the tenure proportions (within household type and age range) that are important. Housing tenure by age for each of the four household types (derived from *Living in Wales*) is shown in Tables B.1 to B.4. For the ageing model in which tenure proportions are “rolled forward” to future years, survey data in five year age ranges are needed. Tables B.1 (for one-person households) and B.3 (for couple households) therefore show five year age ranges from 40-44 upwards. For households of one-parent with dependent children and “other” households, where the proportions of households in the social and market sectors in the base period are taken to

apply in subsequent years, ten year ranges are sufficient. In the tables the figures are shown to the first decimal place of thousands (i.e. the nearest hundred) to reduce rounding discrepancies.

Table B.1 One-person households in 2005-07: housing tenure by age

(thousands)

	Owner- occupiers	Private sector tenants	Social sector tenants	Total
Age				
Under 30	9.0	10.3	3.8	23.1
30-39	17.3	6.9	5.2	29.4
40-44	9.8	4.1	3.5	17.4
45-49	9.9	2.3	4.4	16.6
50-54	12.6	3.5	5.6	21.8
55-59	18.4	2.8	7.4	28.6
60-64	22.0	3.3	7.9	33.2
65-69	22.8	2.3	7.7	32.9
70-74	23.1	1.6	8.3	32.9
75-79	29.0	2.2	9.0	40.2
80-84	23.9	2.3	8.0	34.2
85 and over	19.3	2.0	7.7	29.0
Total	217.1	43.5	78.6	339.2

Source: *Living in Wales* tables supplied

Table B.2 Households of one adult plus children in 2005-07: housing tenure by age

(thousands)

	Owner-occupiers	Private sector tenants	Social sector tenants	Total
Age				
Under 30	1.4	6.5	13.0	20.9
30-39	11.4	5.8	12.8	30.0
40-49	10.4	3.2	6.8	20.5
50-59	2.4	0.7	0.8	3.9
60-69	0.3	0	0.2	0.5
70 and over	0	0	0	0
Total	25.9	16.2	33.6	75.8

Source: As Table B.1

Table B.3 “Couple” households in 2005-07: housing tenure by age

(thousands)

	Owner- occupiers	Private sector tenants	Social sector tenants	Total
Age				
Under 30	32.4	20.2	10.0	62.5
30-39	103.7	15.1	13.7	132.5
40-44	68.2	6.5	7.5	82.3
45-49	75.1	3.9	5.5	78.9
50-54	66.8	3.4	6.1	76.6
55-59	75.1	3.9	7.0	86.0
60-64	65.3	2.5	5.8	73.5
65-69	51.9	1.7	5.2	58.8
70-74	40.3	1.3	3.8	45.4
75-79	29.8	1.5	2.7	34.0
80-84	15.4	0.8	1.5	17.7
85 and over	7.4	0.2	0.6	8.1
Total	625.0	61.8	69.3	756.0

Source: As Table B.1

Table B.4 “Other” households in 2005/07: analysis by age and tenure

(thousands)

	Owner- occupiers	Private sector tenants	Social sector tenants	Total
Age				
Under 30	1.9	9.8	0.7	12.2
30-39	4.2	1.2	2.6	8.1
40-49	12.9	1.8	6.4	21.1
50-59	12.7	1.7	3.7	18.0
60-69	7.9	0.5	1.4	9.8
70 and over	9.0	0.3	2.4	11.6
Total	48.6	15.2	17.0	81.1

Source: Living in Wales tables supplied.

Market and Non-market sectors

B.6 To derive numbers of households in the market and non-market sectors from the tenure sectors in Tables B.1 to B.4, “Right-to-Buy” owner-occupiers must be subtracted from owner-occupiers and “HB” private sector tenants subtracted from private sector tenants. As in *Who’s Counting*¹² this has to be done with survey information for England, scaled to Wales. To use housing survey information for “HB” tenants is essential, because data from the Department for

¹² See reference (1) in Part I

Work and Pensions (DWP) and predecessors include with tenants of private landlords Housing Benefit paid to lodgers and hostel residents. *Living in Wales* does not collect this information, nor does it distinguish owner-occupiers who because homeowners by purchase as sitting tenants from other owner-occupiers. The Survey of English Housing did so, and is therefore the primary source for the estimates of “RTB” owner-occupiers and “HB” tenants in Wales that are used to construct estimates of households in the market and non-market sectors.

- B.7 The starting point for estimating the number of “RTB” owner-occupiers in Wales is the cumulative totals of completed Right-to-Buy sales in Wales and England. The total of sales in Wales from 1980 to 2005/06 is 133,000¹³, which is equal to 6.2 percent of sales in England; a very similar proportion of the local authority housing stock was sold to that in England. The number of RTB owner-occupiers in England as estimated from the Survey of English Housing (SEH) in 2003/04, 2004/05, and 2005/06 combined was 1,298,000, so the figure for Wales is put at 77,000. In proportion to the SEH figures, 46,000 would be couple households, 21,000 one-person households, 3,000 lone parent households, and 7,000 “other” households. The one-person households are predominantly former members of couple households that bought through the Right-to-Buy. The apportionment between age ranges of these RTB owner-occupiers, pro-rata to the age distribution in England, is shown in summary form in Table B.5.

¹³ *Welsh Housing Statistics* 2006, Table 6.1

Table B.5 Right-to-Buy owner-occupiers in Wales: type of households and age

(thousands)

	Couple households	One-person households	Lone-parent household	Other households
Age				
Under 30	0.7	0.2	0.3	0.1
30-39	4.7	0.7	1.3	0.5
40-49	9.4	2.2	1.2	1.8
50-59	11.8	3.6	0.2	2.0
60-69	10.0	4.1	0	1.3
70 and over	9.4	10.2	0	1.3
Total	46.0	21.0	3.0	7.0

Source: See text

B.8 For couple households and one-person households, the 40-49 and higher age ranges are divided into five year periods to facilitate use of the “ageing” model. This further sub-division increases the possible effect of sampling variation.

Table B.6 Right-to-buy owner-occupiers: finer age ranges for couple and one-person households

(thousands)

	Couple households	One-person households
Age		
40-44	4.8	1.0
45-49	4.7	1.2
50-54	5.8	1.6
55-59	6.0	2.0
60-64	4.6	2.0
65-69	5.3	2.1
70-74	4.2	3.0
75-79	3.2	3.4
80-84	1.7	2.3
85 and over	0.3	1.5

Source: See text

B.9 The age profile of Right-to-Buy owner-occupiers is the result of the timing of Right-to-Buy sales and the ages of purchasers. Most of the one-person households are former members of households that were couple households when they exercised the Right-to-Buy.

B.10 Private sector tenants receiving Housing Benefit (“HB” sector tenants) in Wales are also estimated from information from England, scaled pro-rata. The scaling

is based on the number of private rented sector dwellings in 2006 in Wales and England, 137,000 and 2,673,000. The private rented sector in Wales was thus equal to 5.1 percent of that in England, and this proportion is taken to apply to households in the private rented sector. This assumption puts the total of HB tenants in Wales at 23,000. This total is apportioned between the four household categories and between the age ranges made by reference to estimates for England derived from the Survey of English Housing. A summary age analysis is in Table B.7, with five year age ranges in Table B.8.

Table B.7 Private sector tenants in Wales receiving housing benefit: type of household and age

(thousands)

	Couple households	One-person households	Lone-parent household	Other households
Age				
Under 30	1.5	2.1	2.1	1.2
30-39	1.4	1.5	2.5	0.3
40-49	0.8	0.9	1.7	0.1
50-59	0.4	0.7	0.2	0.1
60-69	0.7	1.1	0	0
70 and over	1.0	2.7	0	0
Total	5.7	9.1	6.5	1.7

Source: See text

Table B.8 Tenants with housing benefit: finer age ranges for couple and one-person households

(thousands)

	Couple households	One-person households
Age		
40-44	0.4	0.6
45-49	0.4	0.3
50-54	0.3	0.4
55-59	0.2	0.4
60-64	0.4	0.6
65-69	0.3	0.5
70-74	0.4	0.6
75-79	0.3	0.8
80-84	0.2	0.7
85 and over	0.1	0.6

Source: See text

B.11 From Tables B.1 to B.8 it is possible to construct a division between the market and non-market sectors of household totals, analysed by age, in 2006. The first stage is to construct proportions from the tenure figures in Tables B.1 to B.4, and apply them to the household numbers in Tables A.8 to A.11. The second stage is to subtract the RTB owner-occupiers in Tables B.5 and B.6 HB private tenants in Tables B.7 and B.8 from the figures for owner-occupiers and private sector tenants to leave the market sector as defined in this report; and add them to social sector tenants to give the non-market sector. The market sectors and non-market sectors are then expressed as proportions of all households. The proportions for couple households and one-person

households are shown in Table B.9, with five year age ranges from 40-44 upwards. The proportions for households of one-adult with children and “other” households are in Table B.10. For convenience the proportions of households in the market sector are shown.

Table B.9 Proportions of couple and one-person households in the market sector in 2006

(percent)

	Couple households	One-person households
Age		
Under 30	80.3	76.1
30-39	84.7	77.1
40-44	84.4	73.3
45-49	86.3	68.6
50-54	83.4	66.4
55-59	84.2	66.6
60-64	84.9	68.1
65-69	80.0	68.7
70-74	80.0	65.0
75-79	81.0	67.0
80-84	82.1	68.5
85 and over	88.8	66.9

Source: See text

Table B.10 Proportions of households of one-adult plus children and other households in the market sector in 2006

	One-adult plus children	Other households
Age		
Under 30	28.9	84.6
30-39	47.2	52.0
40-49	54.3	51.0
50-59	73.3	65.3
60-69	80.0	75.0
70 and over	80.0	73.3

Source: See text

- B.12 The proportions in Table B.10 are used as they stand to estimate the numbers of households in the market sector in future years. The proportions for one-adult households aged 50-59 and above are notional only. To use the proportions in table B.90 for the ageing model, smoothing of erratic-looking differences between adjacent age groups is necessary.
- B.13 For couple households the proportions in the market sector vary only slightly from year to year between 40-44 and 60-64, followed by a reduction to a lower level. The high figures in the 80-84 and 85 and above age ranges, especially the latter look erratic. For purposes of the ageing model the proportions in the 40-44 to 45-64 age ranges are similar in each range and so may be averaged as they stand, to 84.6 percent, which may be rounded to 85 percent. From 65-69 upwards the number of couple households in each range diminishes, so a weighted average is necessary. This average is 81.0 percent, so for all age ranges from 65 upwards the market sector proportion for couple households is taken to be 81 percent in 2006.
- B.14 For one-person households there is a steep fall in the proportion in the market sector between ages 40-44 and 45-49, and then small falls and rises, with a 68.7 percent in at ages 65-69, and the irregular year to year changes up to 66.9

percent at ages 85 and over. For a sequence of market sector proportions for use in the ageing model, the proportion of 73 percent in at ages 40-44 is taken as the starting point, with a gradual reduction to 69 percent at age 65-69 and then to 67 percent at ages 85 and over. The market sector proportions for one-person households derived in this way are shown in Table B.11, as are the market sector proportions for couple households

Table B.11 Proportions of couple and one-person households in the market sector in 2006: smoothed proportions for the ageing model

(percent)

	Couple households	One-person households
Age		
Under 30	80	76
30-39	85	77
40-44	85	73
45-49	85	72
50-54	85	71
55-59	85	70
60-64	85	70
65-69	81	69
70-74	81	69
75-79	81	68
80-84	81	68
85 and over	81	67

Source: As Table B.9 and see text

Annex C Future Numbers of Households in the Market and Non-market sectors of Housing

C.1 In this Annex the estimates of future numbers of households analysed by type and age (Annex A) and base year (2005/07) market and non-market sector proportions by type of household and age (Annex B) are brought together to estimate a division of projected future numbers of households between the market and non-market sectors. The starting point is the proportions of households in 2005/07 in each category that were in the market sector. These are shown in Tables B.9, B.10 and B.11 in Annex B. The “ageing model”, i.e. rolling forward sector proportions in the base year for household in their 40s and upward is only applicable to couple households and one-person households. Numbers of lone parent households diminish rapidly from age 40 upwards as children cease to be dependent in the technical sense, which makes rolling forward inapplicable. In Table B.9 the market sector proportions in the top three age ranges for lone parent households are notional only, calculated from very small samples. The same is true of “other” households, which are a changing mix of household types, with small numbers. For lone parents (or one-adult households with dependent children) and “other” households, the best that can be done is to apply the base year proportions in future years as well. The division between the market sector and non-market sector for these categories is shown in Table C.1.

Table C.1 Division between market and non-market sectors for households of one adult and children and other households in 2006-2026

(percent)

	2006	2011	2016	2021	2026
One-adult with children					
Market sector	45	52	57	66	73
Non-market sector	52	59	68	74	81
Total	97	111	125	140	154
Other households					
Market sector	53	53	52	49	45
Non-market sector	23	23	22	21	19
Total	76	76	74	70	64

Source Table B.9 and see text

C.2 For couple households and one-person households the “ageing” model is used with five year age ranges from 40-44 upwards. Smoothed proportions in 2006 for rolling forward are in Tables B.10 and B.11. They are “rolled forward” to 2026 in Tables C.2 and C.3.

Table C.2 Projected market sector proportions for couple households in 2006 to 2026

(percent)

	2006	2011	2016	2021	2026
Age					
Under 30	80	80	80	80	80
30-39	85	85	85	85	85
40-44	85	85	85	85	85
45-49	85	85	85	85	85
50-54	85	85	85	85	85
55-59	85	85	85	85	85
60-64	85	85	85	85	85
65-69	81	85	85	85	85
70-74	81	81	85	85	85
75-79	81	81	81	85	85
80-84	81	81	81	81	85
85 and over	81	81	81	81	81

Source: Table B.10 and see text

C.3 Market sector proportions for one-person households have a different profile with respect to age, hence the way in which “rolling forward” work is different from that for couples.

Table C.3 Projected market sector proportions for one-person households in 2006 to 2026

(percent)

	2006	2011	2016	2021	2026
Age					
Under 30	76	76	76	76	76
30-39	77	77	77	77	77
40-44	73	73	73	73	73
45-49	72	73	73	73	73
50-54	71	72	73	73	73
55-59	70	71	72	73	73
60-64	70	70	71	72	73
65-69	69	70	70	71	72
70-74	69	69	70	70	71
75-79	68	69	69	70	70
80-84	68	68	69	69	70
85 and over	67	68	68	69	69

Source: Table B11 and see text

C.4 Table C.4 shows the number of couple households and one-person households in the social and market sectors as calculated from the household totals and the proportion in Tables C.2 and C.3

**Table C.4 Households in the market and non-market sector of housing in Wales
2006-2026**

(thousands)

	2006	2011	2016	2021	2026
Couple households					
Market sector	592	607	621	631	636
Non-market sector	117	117	117	118	117
Total	709	724	738	749	753
One-person households					
Market sector	277	308	344	377	411
Non-market sector	113	124	134	146	158
Total	390	432	478	523	569

Source: Tables 6, and C.2 and C.3

C.5 Households in the market and non-market sectors in the four categories of households are brought together in Table C.5.

Table C.5 Households in the market and non-market sectors in 2006 to 2026

(thousands)

	2006	2011	2016	2021	2026
Market sector					
Couple households	592	607	621	631	636
One-person households	277	308	344	377	411
Households of one adult with children	45	52	57	66	73
Other households	53	53	52	49	45
Total	967	1,020	1,074	1,123	1,165
Non-market sector					
Couple households	117	117	117	118	117
One-person households	113	124	134	146	158
Households of one adult with children	52	59	68	74	81
Other households	23	23	22	21	19
Total	305	323	341	359	375
All households	1,272	1,342	1,415	1,482	1,541

Source: Tables C.1 and C.4

C.6 The proportions of households in the market and non-market sectors in 2006 may be compared with the estimated tenure of the housing stock with the same figures (see Annex B) for Right-to-Buy owner-occupiers and “HB” tenants to take out of owner-occupiers and private sector tenants and transfer to the non-market sector. Table C.6 shows the comparison.

Table C.6 Market sector and non-market sector proportions and households and the housing stock in 2006

(thousands)

	Market sector	Non-market sector	Total
Owner-occupied	955	---	955
Private rented	137	---	137
Local authorities and housing associations	---	222	222
Published stock totals	1,092	222	1,314
RTB owner-occupiers	-77	+77	0
HB private sector tenants	-23	+23	0
Market and non-market sector stocks	992	322	1,314
Households (Table C.5)	967	305	1,272
Difference	25	17	42
Proportions			
Stock	76.0	24.0	100.0
Household	75.6	24.4	100.0

Source: *Welsh Housing Statistics 2006*, Table 1.1; and Tables B.6, B.7, and C.5

C.7 Totals of dwellings and households can differ owing to vacant dwellings and second homes which are part of the dwelling stock but have no resident households; but also owing to households that share a dwelling, where the number of shared dwellings is exceeded by the number of households that live there. Sharing households are mostly in the market sector, because local authorities and housing associations do not normally make lettings of parts of houses. If a local authority tenant lets off part of his house to sub-tenant, the sub-tenant is renting from a private owner, i.e. is in the market sector. But

second homes are all in the market sector, and there is evidence (discussed in Part II) that vacancy rates are higher in the market sector. A calculation is made in Table C.7 below with estimates of second dwellings and vacant dwellings in the social and market sectors (see Part II) of their likely effect on the relationship between the tenure of the dwelling stock and of households. For purposes of the calculation, households, the dwelling stock, second dwellings and vacant dwellings are taken as they stand, with sharing households and shared dwellings as the balancing item.

Table C.7 Dwellings and households in the market and non-market sectors in 2006

(thousands)

		Market sector	Social sector	Total
	Total stock	992	322	1,314
less	Second homes	-18	---	-18
less	Vacant dwellings	-43	-4	-47
	Occupied dwellings	931	318	1,249
	Households	967	305	1,272
	Difference between occupied dwellings and households	-36	+13	-23
	With 3 households per shared dwelling			
	Shared dwellings	18	0	18
	Sharing households	54	0	54

C.8 In considering how plausible are figures of 18,000 shared dwellings and 54,000 sharing households, it is necessary to note that instances of two owner-occupiers owing parts of a dwelling are likely to be rare, and lettings to sub-tenants by social sector tenants are uncommon also. At least 40,000 of sharing households therefore are in the private rented sector, which looks large

in relation to 137,000 dwellings in the private rented sector (Table C.6). This does not in itself imply that market sector households are over-stated as a proportion of households, because it is possible that the household total of 1,272,000 could be an over-estimate.

Annex D Estimate of Future Demand and Need for Local Authority Areas

D.1 At local authority level, as in Wales as a whole, the estimate of demand for additional market sector housing comprises:

- (a) Projected net increase in households in the market sector
- plus** (b) Increase in the number of second homes and other dwellings that are not main residences
- plus** (c) Increase in vacant dwellings in the market sector
- Minus** (d) Need for additional non-market sector dwellings to offset the “loss” of re-lets due to past Right-to-Buy sales

The need for additional non-market sector dwellings comprises:

- (e) Projected net increase in households in the non-market sector
- plus** (f) Increase in the number of vacant dwellings in the non-market sector
- plus** (g) Need for additional non-market sector dwellings to offset the “loss” of re-lets in the social sector due to past Right-to-Buy sales

The rationale for (d) and (g), offsetting the effect of past Right-to-Buy sales on the number of dwellings in the social sector becoming available for letting to new tenants, was explained on pages 17-18 above. It is entered as a minus item in the market sector to balance the total increase in the needed supply of housing in both sectors combined with the total increase in households. It is more problematic at local authority level than at national level, because movements of population may mean that not all the lost re-lets need to be replaced in the locality where Right-to-Buy sales took place.

D.2 The central core of estimates of both need and demand is the future increase in the number of households in each sector. For both sectors together the projected increase in households comes from projections published by the Welsh Assembly Government in June 2009 *Household Projections for Wales (2006-based) Summary Report Table 2*). Tables of projected numbers of

households analysed by type of household made available by the Welsh Assembly Government's Statistical Directorate show that there are considerable differences in the mix of housing tenures between the projected rates of increase in the mix of housing tenures between types of households (see Annex B). Separate estimates were made of the net increase in households in the market and non-market sectors for one-person households, households of one adult plus children, and all other households, for the most part "family" households (see Annex A).

D.3 Households in each of the three categories of household in each local authority area in 2006, taken from the 2006-based household projections were first divided between owner-occupiers plus private sector tenants (the market sector) and local authority tenants plus housing association tenants (the non-market sector). To produce figures for the market and non-market sectors as defined in this report, "Right-to-Buy" owner-occupiers and private sector tenants with Housing Benefit have to be subtracted from the market sector, and added to the non-market rented sector. To do this the figures for Wales as a whole (Tables B.5 and B.7) have to be divided between local authority areas, and between types of household. The total of Right-to-Buy owner-occupiers in Wales is apportioned between local authority areas half pro-rata to the number of owner-occupier households and half pro-rata to the number of social rented sector households. The rationale for this procedure is that a large owner-occupied housing stock could be partly due to numerous Right-to-Buy sales, and a large social rented stock is evidence of an even larger stock in the past out of which sales could be made. The figures for each area produced in this way are then divided between the three household categories pro-rata to the totals in Tables B.5 and B.7. "All other households" (i.e. other than one-person households or one adult plus children) are the sum of couple households and "other households". The calculations for three sectors and 22 local authority areas are not shown here in full owing to length. An example of one area, Cardiff, will illustrate the method. In the table items are shown to the first

decimal place (i.e. nearest hundred). There is no claim to this degree of accuracy; the reason is keep rounding discrepancies as small as possible.

Table D.1 Division of households in Cardiff in 2006 between market and non-market sectors

		One-person households	One- adult plus children	All other household	Total
(a)	All household	40.5	11.5	78.7	130.7
(b)	Owner-occupiers and private rented sector	32.2	6.5	70.4	109.1
(c)	Social rented sector	8.3	5.0	8.3	21.6
(d)	Right-to-Buy owner-occupiers	2.0	0.3	5.4	7.7
(e)	Private sector tenants with Housing Benefit	1.2	0.8	0.9	2.9
(f)	<i>Market sector</i> (=b) minus (d) minus (e)	29.0	5.4	64.1	98.5
(g)	Non-market sector (c) plus (d) plus (e)	11.5	6.1	14.6	32.2

D.4 Defining the market sector to exclude Right-to-Buy owner-occupiers and private sector tenants with Housing Benefit has a considerable effect on the comparative size of the two sectors at local authority level, just as it does at national level.

D.5 The next stage is to estimate the number of households in the market and non-market sectors in each household category in 2026, so that the total net increase in households in each category between 2006 and 2026 may be calculated. The starting point is the proportions of households of each type in the market and non-market sectors in 2006. In the example of Cardiff, the proportions in the market sector are 71.6 percent for one-person household, 47.0 percent for households of one adult plus children, and 81.4 percent for all other households. The proportions for all local authority areas are in Table D.2. For households of one-adult plus children the same proportions in 2026 as in 2006 are assumed. This is in line with the assumption for Wales (Annex C, paragraph 1). The procedure used for estimating the net increase in households in each sector between 2006 and 2026 is illustrated in Table D.3 for Cardiff.

Table D.2 Proportions of households in each category who were in the market sector in 2006

(Percent)

	One-person households	One adult plus children	All other households
Isle of Anglesey	67.7	45.5	83.5
Gwynedd	73.8	26.5	79.1
Conwy	76.0	50.0	86.5
Denbighshire	75.5	60.7	85.8
Flintshire	66.3	45.0	84.0
Wrexham	58.9	36.4	75.9
Powys	73.5	48.4	85.4
Ceredigion	73.5	73.8	85.6
Pembrokeshire	70.8	48.8	80.8
Carmarthenshire	71.8	43.1	83.3
Swansea	67.2	28.9	82.9
Neath Port Talbot	66.0	35.3	78.4
Bridgend	71.8	59.1	84.8
Cardiff	72.2	61.9	87.3
Vale of Glamorgan	71.6	47.0	81.5
Rhondda Cynon Taf	70.1	61.3	85.5
Merthyr Tydfil	63.9	52.2	76.6
Caerphilly	61.5	49.2	79.3
Blaenau Gwent	52.0	46.7	74.4
Torfaen	56.8	34.5	75.2

Monmouthshire	67.6	38.1	85.4
Newport	70.1	43.9	78.4
Wales	71.0	46.4	82.2

Source: *Wales from Table C.5*

D.6 Regard must be had to the effects of sampling variation, even with three years' data from *Living in Wales* combined together, on the proportions shown in Table D.2. Particularly is this so for households of one adult plus children.

D.7 To estimate the net increase in households between 2006 and 2026 in the market and non-market sectors separately, the projected household totals in 2026 must be divided between the sectors. For this purpose tenure proportions in 2026 are required, estimated in a way consistent with the projected tenure proportions in Wales as a whole. The estimated number of households in each sector in 2026 in Wales is shown in Table C.5, for one-person households, households of one adult plus children, couple households, and other household separately. For one-person and couple household increases compared with 2006 are shown, which results from the 'ageing' model. The assumption is made that in each local authority area the difference between the market sector share in 2026 and 2006 will be the same, in percentage point terms, as in Wales. For one-person households the proportion in Wales as a whole in 2026 is 72.2 percent, as compared with 71.0 in Table D.2. For couple household and other households, which equate to "all other households" in Table D.2, the proportion is 83.4 percent as compared with 82.2 in 2006. Market sector shares for one-person household and "all other households" in 2026 are therefore taken to be 1.2 percentage points higher than the proportions in Table D.2. For households of one adult plus children the same proportions in Table D.2. For households of one adult plus children the same proportions in 2026 as in 2006 are assumed. This is in line with the assumption for Wales (Annex C, paragraph 1). The procedure used for estimating the net increase in

households in each sector between 2006 and 2026 is illustrated in Table D.3 for Cardiff.

Table D.3 Estimating the net increase in households in each sector between market and non-market sectors in Cardiff in 2006 to 2026

(thousands and percentages)

	One-person households	One-adult plus children	All other households	Total
Proportions of households in the market sector				
2006	71.6	47.0	81.5	---
2026	72.8	47.0	82.7	---
Projected households in 2026	59.0	20.8	87.1	166.8
Households in market sector in 2026	43.0	9.8	72.0	124.8
Households in market sector in 2006	---	---	---	98.5
Net increase in households in the market sector between 2006 and 2026	---	---	---	26.3
Net increase in households in the non-market sector	---	---	---	9.8

Source: Table D.1 (households in the market sector in 2006) and Table D.2 (market sector proportions in 2006)

The net increase in households in total and in households in the market sector.

D.8 Apart from the net increase in households in the non-market and market sectors, the components of estimates of newly arising need and demand for additional housing are the net increase in dwellings used as second homes, increases in the number of vacant dwellings, and the need for non-market sector housing to offset the loss of vacancies in the stock for re-letting as a consequence of past Right-to-Buy sales (see paragraph 1 above). The totals for Wales in Table 14 have to be apportioned between the local authority areas.

Those for 2006 to 2026 are: the increase in second homes; all in the market sector, 6,000; the increase in vacant dwellings, 8,000 in the market sector and 1,000 in the non-market sector; and dwellings needed in the non-market sector to offset the loss of vacancies for re-letting 30,000.

The increase in second homes is apportioned pro-rata to second homes, etc as reported in the 2001 census, though consideration might be given to using Council Tax figures. These vary erratically from year to year, however.

The increase in vacant dwellings in the market sector is apportioned pro-rata to the increase in the market sector dwelling stock, represented by the increase in the number of households in the market sector plus the increase in second homes.

The increase in vacant dwellings in the non-market sector, 1,000 is too small to apportion formally. 0.2 thousand is attributed to Cardiff, which has the largest increase in the non-market sector housing stock (represented by the increase in households, and 0.1 thousand each to the eight areas with the net largest increases in the non-market sector households.

The offset to social sector re-lets "lost" as a consequence of past RTB sales is apportioned pro-rata to the estimated number of Right-to-Buy owner-occupiers (see paragraph 3 and Table D.1) in each local authority area. These figures themselves come from pro-rata apportionments.

- D.9 Table D.4 shows the estimates made for local authority areas of newly arising need and demand for additional housing in 2006 to 2026.

Table D.4 Newly arising demand and need for housing in market and non-market sectors 2006 to 2026

	Market sector					Non-market sector		Total, both sectors		
	Increase in households	Second homes	Vacant dwellings	Offset to "loss" of re-lets	Total	Increase in households	Vacant dwellings	Offset to "loss" of re-lets	Total	Total, both sectors
Isle of Anglesey	3.2	0.4	0.2	-0.7	3.1	1.5	---	0.7	2.2	5.2
Gwynedd	7.0	1.7	0.3	-1.2	7.8	3.0	---	1.2	4.2	12.0
Conwy	8.9	0.5	0.3	-1.0	8.7	2.3	---	1.0	3.3	12.0
Denbighshire	9.6	0.1	0.3	-0.9	9.1	2.4	---	0.9	3.3	12.0
	8.3	---	0.4	-1.5	7.2	3.5	-	1.5	5.0	12.2
Wrexham	8.4	---	0.4	-1.5	7.3	4.4	0.1	1.5	6.0	13.3
Powys	12.6	0.5	0.5	-1.2	12.8	3.5	0.1	1.2	4.8	17.6
Ceredigion	6.6	0.4	0.2	-0.7	6.5	1.4	---	0.7	2.1	8.6
Pembrokeshire	9.4	1.3	0.3	-1.2	9.8	3.4	---	1.2	4.6	14.4
Carmarthenshire	17.1	0.2	0.4	-1.8	15.9	6.2	0.1	1.8	8.1	24.1
Swansea	14.6	0.3	0.5	-2.3	13.1	7.3	0.1	2.3	7.9	22.8
Neath Port Talbot	11.2	---	0.4	-1.6	10.0	6.0	0.1	1.6	7.7	17.7
Bridgend	11.5	0.1	0.4	-1.3	10.7	3.3	---	1.3	4.6	15.3

Vale of Glamorgan	11.3	0.1	0.4	-1.1	10.7	3.0	---	1.1	4.1	14.8
Cardiff	26.3	0.2	0.8	-3.0	24.3	9.8	0.2	3.0	13.0	37.3
Rhondda Cynon Taf	13.4	0.1	0.6	-2.2	11.9	4.2	0.1	2.2	6.5	18.4
Merthyr Tydfil	1.5	---	0.1	-0.6	1.0	0.8	---	0.6	1.4	2.5
Caerphilly	9.4	---	0.4	-1.9	7.9	4.8	0.1	1.9	6.8	14.7
Blaenau Gwent	2.6	---	0.2	-0.9	1.9	2.3	---	0.9	3.2	5.1
Torfaen	3.6	---	0.2	-1.1	2.7	1.1	---	1.1	2.2	4.9
Monmouthshire	7.2	0.1	0.2	-0.8	6.7	2.4	---	0.8	3.2	9.9
Newport	8.6	---	0.4	-1.5	7.5	3.6	0.1	1.5	5.2	12.7
Wales total	212.7	6.0	8.0	-30.0	196.7	80.2	1.0	30.0	111.2	307.9

- D.10 It is necessary to repeat here the caveats about the effect of sampling variation on the estimates of market sector households, and hence on market sector proportions in 2006, and the national total of dwellings needed to offset losses of social sector re-lets being allocated between local authority areas by a pro-rata formula, without reference to local circumstances.
- D.11 Two further tables are added, a comparison between the number of households in the social rented sector and the non-market sector dwelling stock, net of vacant dwellings, and a comparison between the proportion of households in the market sector in 2006 and the projected increase in households between 2006 and 2026. A partial check on the market and non-market sector proportions estimated primarily from *Living in Wales* data can be made by comparing with the official estimate of the tenure of the housing stock in local authority areas in 2006 (Welsh Housing Statistics 2006, Table 1.2), which distinguished dwellings belonging to local authorities, housing associations, and private owners. Households should be compared with dwellings occupied as main residences, i.e. excluding second homes and vacant dwellings. Lack of any estimates of privately owned vacant dwellings in 2006 prevents a useful comparison of owner-occupiers plus private sector tenants with the private sector housing stock. Local authorities and housing associations do not own second homes; and official figures are available for vacant local authority dwellings in 2006 (*Welsh Housing Statistics* 2006, Table 5.8). Housing associations' vacant dwellings are not included.
- D.12 For that reason local authority and housing association stock totals minus local authority vacants slightly over-states the number of local authority and housing association dwellings occupied as main residences. But since the total of vacant housing association dwellings in Wales in 2006 was only 821, the effect of not taking them off the local authority and housing association total at local authority level can only be small. The household figures are scaled to agree with the totals for Wales and therefore shown in Table D.5 to the first decimal place of thousands (i.e. the nearest hundred). For comparison the figures of

local authority and housing association dwellings minus local authority vacants are similarly rounded, though published to the final digit.

D.5 Estimates of local authority and housing association tenant households compared with occupied dwellings as at March 2006

(thousands)

	(a)	(b)	(c)
	Households	Occupied dwellings	Difference
			=(b) – (a)
Isle of Anglesey	4.4	4.4	0.0
Gwynedd	8.6	8.2	-0.4
Conwy	5.3	5.9	0.6
Denbighshire	4.8	5.4	0.6
Flintshire	9.4	9.7	0.3
Wrexham	12.4	13.1	0.7
Powys	7.7	7.9	0.2
Ceredigion	3.8	3.6	-0.2
Pembrokeshire	7.9	7.7	-0.2
Carmarthenshire	11.8	11.8	0
Swansea	16.1	20.2	4.1
Neath Port Talbot	11.6	12.0	0.4
Bridgend	7.6	8.3	0.7
Cardiff	20.0	23.7	3.7
Vale of Glamorgan	5.7	6.0	0.3
Rhondda Cynon Taf	12.6	14.8	2.2

Merthyr Tydfil	4.9	5.9	1.0
Caerphilly	13.8	14.1	0.3
Blaenau Gwent	7.4	7.8	0.4
Torfaen	9.6	9.7	0.1
Monmouthshire	5.0	5.1	0.1
Newport	11.0	12.6	1.6

Source: *Welsh Housing Statistics 2006*, Tables 1.2 and 5.7; and *Living in Wales*

D.12 In four local authority areas (Swansea, Cardiff, Rhondda Cynon Taf, and Newport) the number of local authority plus housing association tenants looks low in relation to the housing stock. The causes cannot be investigated here, but include sampling variation in *Living in Wales*, and perhaps local authority administrative procedures not identifying all vacant dwellings, particularly short term vacants. In view of the way in which local authority area figures are scaled to agree with figures for Wales, putting in higher figure for local authority and housing association tenants in local authority areas where they look low in relation to occupied dwellings would require offsetting changes to the figures for the other areas. The alternative would be to raise the estimate of local authority and housing association tenants in Wales that is derived from *Living in Wales*.

D.13 Table D.6 brings together for each local authority area the estimated proportion of households in 2006 that were in the market sector and the projected percentage increase in households between 2006 and 2026. The areas are listed in descending order of proportions of households in the market sector, from Conwy the highest 81 percent to Blaenau Gwent the lowest (64 percent).

Table D.6 Proportions of households in the market sector in 2006 and projected increase in households in 2006-2026

	Proportion of households in the market sector (percent)	Projected increase in households (thousands)
Conwy	81.0	22.4
Vale of Glamorgan	80.9	27.6
Denbighshire	28.3	80.7
Powys	79.8	28.5
Ceredigion	79.8	24.5
Rhondda Cynon Taf	79.2	18.0
Bridgend	79.0	26.1
Monmouthshire	77.6	25.6
Carmarthenshire	76.7	29.9
Flintshire	76.5	18.6
Isle of Anglesey	76.2	15.2
Cardiff	75.4	27.6
Pembrokeshire	75.0	25.0
Gwynedd	73.8	19.5
Swansea	73.7	22.3
Newport	72.6	20.6
Caerphilly	71.7	22.3
Neath Port Talbot	71.0	28.2
Merthyr Tydfil	70.3	10.2

Wrexham	68.5	22.9
Torfaen	66.8	12.2
Blaenau Gwent	64.3	16.1
Wales (a)	75.3	23.0

Note: (a) Calculated from aggregate of local authority areas and hence differs from percentages calculated from national data

D.14 In twelve local authority areas the proportion of households in the market sector in 2006 was higher than the proportion in Wales in total, and in ten it was lower. Among the areas where the proportion of households in the market sector was higher than the national figure, the projected increase in households is greater in percentage terms than in Wales in total in eight areas, and smaller in four. In the ten areas where the proportion of households in the market sector was lower than in Wales in total, it was greater in percentage terms in only two, and lower in the other eight. There is thus evidence of an association between a high proportion of households in the market sector and a higher than average projected increase in households. It would be out of place here to speculate about possible reasons for this association. It is noted as an arithmetical fact.