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Future Need and Demand for Housing in Wales

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Alan Holmans was acknowledged as the UK's preeminent expert in projecting future housing need and demand. He conducted the analysis presented in this report shortly before his death in March 2015. Researchers from the Public Policy Institute for Wales edited Alan's draft submission in order to bring it to publication but the analysis and key findings are his.

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Summary

- This report presents new estimates of the need and demand for housing in Wales over the period 2011 to 2031. Two estimates are presented – one based on the Welsh Government’s official projections for household formation (the ‘principal projection’), the other based on a projection developed by the author (the ‘alternative projection’).
- The principal projection is based on data for the rate of household formation between 2001 and 2011. During this period, household formation was lower than historic trends, with the consequence that the projections which flow from these data are also lower than previously expected. The alternative projection assumes, instead, that eventually there is a return to ‘trend’ and that household formation is therefore higher than the principal projection.
- Based on the principal projection, it is estimated that over the period 2011 to 2031 an additional 174,000 ‘units’ (houses or flats) will be needed, or 8,700 a year; of which, 60% would be in the market sector (5,200 a year, 104,000 over the period), and 40% in the social sector (3,500 a year, 70,000 over the period). A regional breakdown of the principal projection is also presented.
- The alternative projection leads to a higher estimate of need and demand: 240,000 units over the period, or 12,000 a year; of which 58% would be in the market sector (7,000 a year, 140,000 over the period) and 42% in the social sector (5,000 a year, 100,000 over the period).
- Historic rates of house building in Wales help put these figures into context. Since 1991 building rates have been declining. The annual average between 1991/92 and 1995/96 was 9,500. This dropped to 8,660 between 1996/97 and 2000/01, and to 7,360 for the period 2006/07 – 2010/11.
- In contrast, the number of affordable houses in Wales has grown by 15,981 since 2007-08 and, over the last five years, at an annual average rate of almost 2,350. Planned and proposed increases for 2014/15 and 2015/16 are 2,829 and 3,129 respectively.
- This analysis suggests, therefore, that if future need and demand for housing in Wales is to be met, there needs to be a return to rates of house building not seen for almost 20 years, and an increase in the rate of growth of affordable housing.

Introduction

The Welsh Government asked the Public Policy Institute for Wales (PPIW) to update previous estimates of need and demand for housing in Wales to take account of the fact that estimates produced five years ago (Holmans and Monk, 2010) have been superseded by more recent data and new projections of household formation in Wales (Welsh Government, 2014).

Estimates of future need and demand give an indication of the likely future requirements on the housing stock – the additional flats and houses that will be needed to meet a growing population – in terms of both ‘market’ and ‘social’ housing. The latter is defined to include those renting from housing associations or authorities, or from private landlords with Housing Benefit.

Two estimates are presented in this analysis. The first is based on the Welsh Government’s official 2011-based projections of household formation (the ‘principal projection’). The second provides alternative estimates developed by the author (the ‘alternative projection’). The reasons for presenting an alternative projection are explained in detail below.

This remainder of the report provides:

- A description of the methodology used in the analysis;
- Analysis of the principal projection;
- A discussion of the alternative projection and the analysis based on this;
- An estimate of the ‘backlog of unmet need’; and
- A regional breakdown of the principal projection.

Methodology

The method used in this report seeks to predict future ‘unmet need’ (in both the social and market sectors), while also accounting for other factors that impact on available housing. Households in housing need are defined as those which:

- Have to live as part of someone else’s household;
- Have to share a dwelling with another household;
- Have insufficient space (overcrowding); or
- Are living in a dwelling with defects.

These households form a population with ‘unmet housing needs’.

Estimating Total Need and Demand

The main influence on estimates of future housing need and demand is the projection of future household growth (which is based on predicted demographic change). As the number of households increases, the housing supply needs to increase accordingly; otherwise the proportion of the population with unmet housing needs will grow. This is termed 'newly arising need'.

In addition to household formation, two other main factors contribute to housing needs and demands¹: changes in the number of dwellings used as second homes and in vacant dwellings. Increases in these lead to a decrease in the number of dwellings available for the predicted increase in households. Increases in the number of second homes are largely demand-determined. Changes in the number of vacant dwellings are a function of dwelling stock increases. Vacant dwellings are likely to rise gradually as a result of the number of moves within the dwelling stock, and departures from it.

Distinguishing between market and social sectors

The newly arising need for assisted housing (i.e. households unable to afford to rent or buy adequate housing from their own funds) is estimated by dividing a demographically-based total between the 'market' and 'social' sectors.

No method is currently available to estimate the need for social sector housing directly. It has to be derived from an estimate of the total of all tenures. The division between the market and social sectors is fundamentally between households able to afford to purchase or rent adequate housing from their own funds, and those who require assistance. In the present report, 'market' housing is defined as owner-occupied (including shared ownership) or rented from private owners without Housing Benefit (including renting with a job or business). The social sector comprises renting from a local housing authority or housing association or from a private landlord with Housing Benefit.

Estimating future change in market and social sectors – the ageing model

The overall division between market and social sectors in future years could be estimated by applying base year proportions (analysed by household type and age) to projected numbers

¹ The estimates of future newly arising need and demand for housing in this report are of the net increase. No attempt is made to include offsets to losses from the dwelling stock through demolition or disuse. This is because the information about the numbers is poor. The possibility of a return to policies of demolition and redevelopment during the next two decades cannot usefully be discussed here.

of households. There are, however, reasons for querying whether the relationship of housing tenure to type of household and age in the base year (2011) will remain the same in subsequent years. With an age distribution such as that in Wales in 2011, the relationship between housing tenure and type and age is set to change.

Therefore, this analysis estimates the change in the relationship between housing tenure, type and age using the 'ageing model'. This model depends on the observed fact that among those aged mid-40s and older, only low numbers of households move from renting to owner-occupation (other than by purchase as sitting tenants at reduced prices) and few leave owner-occupation². The tenure division among households aged 55-64 in 2011, for example, will be approximately the division among households aged 65-74 in 2021, and 75-84 in 2031. The tenure division can be 'rolled forward' or 'aged on' to predict tenure proportions in future years. In 2011, the market sector proportion in the 65-74 age group (or cohort) was 85%, and in the 75-84 cohort 84%. In 2021, the 65-74 cohort (in 2011) will have become 75-84 and the market sector proportion 85%. Ageing will cause the market sector proportion in the 75-84 age group to rise from 84% to 85% (derived from the 2011 census). Where the proportions of market sector households reduce with age, the ageing model (which rolls forward the market sector proportions of households) generates an overall rise in the proportion of households in the market sector.

The 'ageing model' applies to couple households and one person households aged 45 and over. It cannot be applied to lone parent households, because they are defined as households represented by a lone parent with one or more dependent children. Dependent children are aged 15 or under, or 16-18 if in full time education. So by the age at which the ageing model might apply, children will have ceased to be dependent. The ageing model does not apply also to 'other multi-person households' (i.e. multi-person households that are neither couples nor lone parent households). These are a heterogeneous group, with market sector proportions that vary erratically with age. For lone parent households and 'other multi person households', the base year proportions of households in the market and social sectors are taken to apply in future years as well. The base year proportions of households in the market

² The ageing model was worked out with household projections for England, and uses the types of household in those projections. It uses the concept of the household representative, who statistically 'represents' the household. Households are classified according to the age and sex of the household representative. A couple household aged 65 to 74 is a couple household whose representative, defined according to statistical rules, is aged between 65 and 74. The Welsh official household projections use a 'household membership' method, which does not designate any one household member to represent it. To use the ageing model, the household membership data and types of household used in the Welsh official projections have to be converted into households with a household representative or reference person. A method to do this was worked out for the 2006 based household projection and was included in the 2010 report on future need and demand. It has been used without change in this report.

and social sectors are also taken to apply to couple households and one person households under age 45.

Analysis of the Principal Projection

In order to estimate future need and demand, and the split between market and social sectors, the data need to be analysed to estimate:

- The division between market and social sectors in the base year. Categorisation of households according to age, type and tenure in the base year is used to determine how the divide between market and social sectors will evolve over the period; and
- The age and type of households over the period. For the data to be compatible with the ageing model, the household projections need to be adapted (i.e. reallocated according to different household categories and according to age ranges).

The first is used to determine the proportion of households likely to be in market and social sectors over the period (using the ageing model). The second then enables these proportions to be applied to the projections of household formation to give estimates of need and demand over the period.

The distribution between market and social sectors in the base year

As explained, the market sector comprises owner-occupiers (including shared ownership) other than those who become owner-occupiers by purchasing as sitting tenants from local housing authorities and other public bodies; and private sector tenants who are not receiving Housing Benefit. 'Private sector tenants' in the statistical sense used here are a broad group that includes occupiers by virtue of employment, renters with business premises, and rent-free occupiers. The social sector comprises tenants of local authorities and housing associations, plus owner-occupiers who came into the tenure by purchasing as sitting tenants from local authorities and other public bodies (including housing associations), termed for convenience 'Right to Buy' or RTB owner-occupiers; and private sector tenants receiving Housing Benefit, termed for convenience 'Housing Benefit' or HB tenants.

Tables provided by the Office for National Statistics of households' housing tenure according to type of household and age of the reference person from the 2011 census were used in preference to data from the National Survey for Wales (used in Holmans and Monk, 2010). There is a problem, however, with the census figures for lone parent households. Lone parent households are defined as comprising one adult and one or more dependent children. 'Dependent' here means under school leaving age or, if in full time higher or further education,

16 to 18. When children reach these ages, they become non-dependent (technically) and the household of which they are part becomes an 'other multi-person household'. The lone parent is by definition the household reference person. So it is not to be expected that there would be many people at the higher ages that count as lone parents. Nevertheless, in the census tables received, 6.4% of all households aged 75-84 were lone parent households. In household estimates for 2011 based on official household projections for Wales the proportion is under 1%. Investigating the causes of the census lone parent figures is beyond the scope of the work reported here. Since they are official census figures, they have to be used in a census-based division of households between market and social sectors.

Owing to a lack of information about 'RTB owner-occupiers' or about 'HB tenants' relating to Wales, figures for owner-occupiers, social sector tenants and private sector tenants are taken from the English Housing Survey for 2008/09 to 2010/11 on numbers of all owner-occupiers and RTB owner-occupiers in categories of households defined by age and type³. The calculated ratios were then applied to the Welsh census housing figures in these categories to obtain estimates of RTB owner-occupiers in Wales. A similar procedure was used for tenants receiving Housing Benefit.

Table 1 shows the composition of the market and social sectors in 2011. Of a total of 1,303,000 households, 113,000 (9%) are transferred from the market to the social sector through being RTB owner-occupiers or HB tenants. This appears sufficient for there to be a risk of distortion of comparison between age groups if the number of RTB owner-occupiers varies erratically. This possibility is looked at for owner-occupier couples and one-person households. Table 2 shows market sector households as defined as proportions of all households; and market sector households with RTB owner-occupiers added back.

³ It could be argued that the use of the English Housing Survey 2008/2009 to 2010/2011 data is inappropriate for estimating the recent number of Right to Buy owner occupiers in Wales. This is because Right to Buy Sales have reduced significantly in Wales since 2008 thus assumptions based on continuing trends from 2008 may therefore result in inflated estimates of Right to Buy owner occupiers in Wales (for more details readers are referred to <https://statswales.wales.gov.uk/Catalogue/Housing/Social-Housing-Sales/TotalSocialHousingSales-by-Period-SaleType>). Similarly, social housing sales in Wales have not followed the same pattern as seen in England, hence use of the English Housing Survey data could once again be called into question (for more details readers are referred to <https://www.gov.uk/government/statistical-data-sets/live-tables-on-social-housing-sales>). The same is true of estimates of Housing Benefit tenants as it could be speculated that the proportion on housing benefits is higher in Wales than in England.

Table 1. Components of Estimates of Market and Social Sector Households in Base Year ('000s)

		Couple households	One person households	Lone parent households	Other multi-person households	Total
(1)	All owner-occupiers	536	236	64	46	883
(2)	Social sector tenants	63	91	49	11	215
(3)	All private sector tenants	70	73	34	27	205
(4)	RTB owner-occupiers	32	13	6	5	57
(5)	HB tenants	9	20	24	3	56
(6)	<u>Market sector</u> = (1) + (3) minus (4) minus (5)	565	276	68	66	975
(7)	<u>Social sector</u> = (2) + (4) + (5)	104	124	79	19	326
(8)	<u>All households</u>	669	400	147	85	1303

Note: Small discrepancies are due to rounding. Source: 2011 Census and English Housing Survey.

Table 2. Couple and One Person Owner-Occupier Households in the Market Sector as Defined and with RTB Owner-Occupiers Added Back ('000s)

		45 – 54	55 – 64	65 – 74	75 – 84	85 and over
<u>Couples</u>						
(1)	Market sector	124.4	120.6	87.9	47.0	9.9
(2)	RTB owner-occupiers	6.3	8.6	9.0	4.2	0.6
(3)	(1) + (2)	130.7	129.2	96.9	51.2	10.5
(4)	All couple households	146.4	137.5	99.8	53.6	11.8
(5)	(1) as percent of (4)	85.0	87.7	88.1	87.8	84.6
(6)	(3) as percent of (4)	89.3	94.0	97.1	95.6	89.7
<u>One person households</u>						
(7)	Market sector	31.5	42.2	47.7	50.2	25.1
(8)	RTB owner-occupiers	1.7	4.6	6.4	6.5	2.2
(9)	(7) + (8)	33.2	46.8	53.7	56.7	27.3
(10)	All one person households	58.0	68.9	70.5	70.8	37.1
(11)	(7) as percent of (10)	54.4	61.3	67.2	71.0	67.7
(12)	(9) as percent of (10)	57.3	67.9	76.2	80.1	73.6

Note: Figures are shown to one decimal place to reduce rounding discrepancies. Source: ONS, 2011 census, special tables and see text.

Table 2 shows that the sequence of market sector proportions of both couple and one person households is very similar whether Right to Buy (RTB) owner-occupiers are included (as a negative item) or not. Overall the proportion of couple and one person households in the market sector is estimated at 75.7%. If RTB owner-occupiers were not treated as part of the

market sector, the division of households between the market and social sectors would be 80.2:19.8.

The proportion of households in the market and social sectors

Table 3 shows market sector proportions according to type of household and age of the household reference person.

Table 3. Proportions of Households in the Market Sector in 2011 (percentage)

Age	Couple households	One person households	Lone parent households	Other multi-person households
Under 25	68	65	10	88
25 - 34	83	78	41	85
35 - 44	85	71	46	70
45 - 54	86	65	59	74
55 - 64	85	64	55	73
65 - 74	84	65	60	70
75 - 84	83	69	67	66
85 & over	82	69	69	63
<u>All households</u>	<u>84</u>	<u>69</u>	<u>46</u>	<u>78</u>

Source: ONS, 2011 census, special tables.

What does this mean for the ageing model?

For couple households, the profile of market sector proportions is that on which the 'ageing' model (also known as 'rolling forward') was based, though now only at high ages. With there being no increase in the market sector share at the younger ages, the ageing effect takes effect at successively higher ages. For one person households the 'rolling forward' pattern is not apparent.

The principal projection: age and type of households over the period

The Welsh Government's 2011 based household projection for Wales⁴ is summarised in Table 4.

⁴ For the 2011-based household projections, variant projections have been produced based on the high, low, and zero migration variant population projections (for more details readers are referred to

Table 4. Main 2011 based Household Projection for Wales, 2011–2031 (000s)

	2011	2016	2021	2026	2031
One person households	402	428	456	485	510
One adult, one or more children	88	91	96	100	103
Two adults, no children	405	419	432	440	446
Three or more adults, no children	131	136	137	136	138
Two or more adults, one or more children	278	275	274	274	272
All households	1,304	1,349	1,394	1,435	1,467

Source: Welsh Government 2011 based Principal Projections, Household Forecast Summary Report (2014)

To use the ‘ageing model’ to divide projection households between the market and social sectors, the Welsh household projections must be adapted to make them compatible with the ageing model. For this households must be re-allocated into couples, lone parents, other multi-person households and one person households; and into age ranges according to the age of the ‘household representative’. The first stage is to group the households in Table 4 in a way that resembles as closely as possible the household categories for the ageing model. This is shown in Table 5.

Table 5. Households in Wales in 1991, 2001 and 2011 (000s)

	1991 (census)	2001 (census)	2011 (projected)	2011 (census)
One person households	284	354	432	402
One adult, one or more children	48	82	111	88
Two adults, no children	345	376	428	405
Three or more adults, no children	133	117	114	131
Two or more adults, one or more children	304	284	258	278
All households	1,113	1,213	1,342	1,304

<https://statswales.wales.gov.uk/Catalogue/Housing/Households/Projections/National/2011-Based/HouseholdProjections-by-Year-Variant>).

One person households are the same in both the ageing model grouping and in the principal projections for Wales. One adult plus one or more children resemble lone parents but are not identical. 'Adults' include persons aged 16 and upwards if not in full time education, but are 'children' if in full time education. This would mean, for example, that a household comprising a 17 year old employed person and a full time student aged 18 would count as one adult plus one child. No means is to hand to identify lone parents with dependent children, and the age distribution of households of one adult and one or more children is problematic. For the purposes of this analysis, therefore, the number of 'one adult plus one or more children' households is taken to be equivalent to the number of 'lone parent' households.

Households with two adults or more, with or without children, are couple households or 'other multi-person households'. A method for a division between couple households and other multi-person households and their age distribution was worked out for use in the estimates of need and demand for housing in Wales published in 2010: *Housing Need and Demand in Wales 2006 to 2026* (Holmans and Monk, 2010). The method is described in Annex A of that report and in more summary form in paragraphs 13 and 14 of the main text. It is used without change in the present report. The method depended on the close match between the 2003 based projection for 2006 (with an ageing model household types) and the 2006 base year estimate of households in the household membership rate system (as in Table 5). Use was also made in the 2010 report of survey data from *Living in Wales* about types of household. The division of projected households between ageing model categories that corresponds to Table 4 is shown in Table 6.

Table 6. Analysis by Type of Household of 2011 based Household Projections (000s)

	2011	2016	2021	2026	2031
One person households	402	428	456	485	510
One adult, one or more children ('lone parent' households)	88	91	96	100	103
Couple households	749	765	775	782	786 ⁵
'Other' households	65	66	67	68	68
Total	<u>1,304</u>	<u>1,349</u>	<u>1,394</u>	<u>1,435</u>	<u>1,467</u>

Source: Table 4 and see text

⁵ The figures for couple households and other households were calculated using the same method as was deployed in Holmans and Monk (2010)

The totals in Table 6 have to be distributed by age range. Ages of one person households are taken directly from the 2011 based projection. The age distribution of 'other' households is taken from the 2010 report *Housing Need and Demand in Wales* with numbers of couple households in each range derived by subtraction. The ages of households of one adult and one or more children, when taken as if they were lone parent households, were taken from the official 2011 based projection with an adjustment (based on data for England⁶) for an improbably high figure for the 16 – 18 age range. Table 7 shows the estimate of numbers of households according to age and type of household compatible with the ageing model. Tables 8 to 10 show similar data for 2016, 2021, 2026 and 2031.

Table 7. Households in Wales in 2011 by Type of Household and Age Group – Compatible with Ageing Model

Age	All households	One person households	Lone parent households	Couple households	Other households
Under 25	58	12	12	29	5
25 - 29	83	18	13	47	5
30 - 34	95	20	13	59	3
35 - 39	101	20	14	64	3
40 - 44	119	25	15	75	4
45 - 49	124	28	11	81	4
50 - 54	114	30	5	72	7
55 - 59	107	31	2	67	7
60 - 64	122	38	1	79	4
65 - 74	193	71	1	110	11
75 - 84	135	71	1	55	8
85 & over	53	37	-	11	5
Total	<u>1,304</u>	<u>402</u>	<u>88</u>	<u>749</u>	<u>66</u>

Note: discrepancies are due to rounding. Source: see text

⁶ From unpublished tables from Department for Communities and Local Government, *Household Interim Projections 2011 to 2021*, April 2013

Table 8. Households in Wales in 2016 by Type of Household and Age Group – Compatible with Ageing Model (000s)

Age	All house-holds	One person house-holds	Lone parent house-holds	Couple house-holds	Other house-holds
Under 25	56	12	17	22	5
25 - 29	93	20	13	55	5
30 - 34	101	22	13	63	3
35 - 39	99	22	13	61	3
40 - 44	101	24	13	61	3
45 - 49	118	30	11	73	4
50 - 54	126	35	6	78	7
55 - 59	115	36	2	70	7
60 - 64	110	35	1	70	4
65 - 74	224	79	1	133	11
75 - 84	146	72	1	65	8
85 & over	60	41	0	14	5
<u>Total</u>	<u>1,349</u>	<u>428</u>	<u>91</u>	<u>765</u>	<u>66</u>

Note and source: as Table 7

Table 9. Households in Wales in 2021 by Type of Household and Age Group – Compatible with Ageing Model ('000s)

Age	All households	One person households	Lone parent households	Couple households	Other households
Under 25	52	11	11	25	5
25 - 29	94	20	14	55	5
30 - 34	112	26	15	67	4
35 - 39	105	25	16	62	3
40 - 44	99	25	15	55	4
45 - 49	101	27	13	57	4
50 - 54	120	36	7	71	6
55 - 59	126	42	3	74	7
60 - 64	119	38	1	75	5
65 - 74	229	78	1	139	11
75 - 84	167	80	1	78	8
85 & over	70	48	0	17	5
Total	1,394	456	96	775	67

Table 10. Households in Wales in 2026 by Type of Household and Age Group – Compatible with Ageing Model ('000s)

Age	All households	One person households	Lone parent households	Couple households	Other households
Under 25	52	11	11	24	6
25 - 29	87	19	13	50	5
30 - 34	113	27	16	66	4
35 - 39	118	30	18	66	4
40 - 44	105	29	17	56	3
45 - 49	99	29	13	54	3
50 - 54	103	32	6	59	6
55 - 59	122	42	3	71	6
60 - 64	129	43	1	81	4
65 - 74	226	76	1	139	10
75 - 84	197	90	1	95	11
85 & over	84	57	0	21	6

Total	<u>1,435</u>	<u>485</u>	<u>100</u>	<u>782</u>	<u>68</u>
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Table 11. Households in Wales in 2031 by Type of Household and Age Group – Compatible with Ageing Model (000s)

Age	All house-holds	One person house-holds	Lone parent house-holds	Couple house-holds	Other house-holds
Under 25	52	12	12	23	5
25 - 29	87	18	12	51	6
30 - 34	112	26	15	67	4
35 - 39	117	33	17	63	4
40 - 44	104	36	17	48	3
45 - 49	105	33	15	54	3
50 - 54	99	34	7	55	3
55 - 59	120	38	3	72	7
60 - 64	127	42	2	78	5
65 - 74	227	80	2	135	10
75 - 84	217	88	1	115	13
85 & over	100	71	0	25	4
Total	1,467	510	103	786	67

The Principal Projection: An Estimate of Future Housing Need and Demand

The principal 2011-based household projection for Wales is presented above (Tables 4 to 11). The data on housing tenure according to type of household and age in the base year is used here to divide the principal projection between a market and a social sector. Table 12 below shows the market sector proportions in the base year (2011).

Table 12. Proportions of Households in the Market Sector: Type of Household and Age in 2011 (percentages)

Age	Couple households	One person households	Lone parent households	Other multi-person households
Under 25	68.1	65.0	10.0	87.5
25 - 29	80.8	78.0	20.4	85.5
30 - 34	84.8	78.4	28.3	84.7
35 - 39	84.9	71.9	41.0	70.7
40 - 44	85.8	69.6	49.1	70.2
45 - 49	85.3	66.0	57.4	72.7
50 - 54	86.1	67.3	60.5	74.5
55 - 59	85.2	63.7	54.4	73.5
60 - 64	85.4	64.6	55.9	72.5
65 - 74	84.2	65.1	60.4	69.9
75 - 84	83.4	69.3	67.1	66.4
85 & over	81.9	68.6	69.2	62.5

Source: 2011 Census, special tables

As discussed above, market sector proportions for couple households vary with age in the base year (2011) in the way on which the ageing model depends, but for one person households they do not. As a result, the percentages in Table 12 may be applied to household projections for 2021 and 2031 as well as 2011. The same applies for market sector proportions for couple households up to 60–64. After that, ‘ageing’ or ‘rolling forward’ applies, as shown in Table 13.

Table 13. Market Sector Proportions for Couple Households Aged 65 – 74 and above (percentages)

Age	<u>2011</u>	<u>2021</u>	<u>2031</u>
55 – 64	85.3	85.3	85.3
65 – 74	84.2	85.3	85.3
75 – 84	83.9	84.2	85.3
85 and over	81.9	83.4	84.2

Source: As Table 12

The proportions in Tables 12 and 13 are applied to the households in Tables 7, 9 and 11. The division of the principal projection between the market and social sectors produced in this way is shown in Table 14.

**Table 14. Projected Division of Households between Market and Social Sectors
in 2011 to 2031: Principal Projection ('000s)**

	Couple house- holds	One person house- holds	Lone parent house- holds	Other multi- person house- holds	All house- holds
<u>2011</u>					
Market sector	627	273	33	48	981
Social sector	122	129	55	17	323
<u>Total</u>	<u>749</u>	<u>402</u>	<u>88</u>	<u>65</u>	<u>1,304</u>
<u>2021</u>					
Market sector	651	311	38	49	1049
Social sector	124	145	58	18	345
<u>Total</u>	<u>775</u>	<u>456</u>	<u>96</u>	<u>67</u>	<u>1,394</u>
<u>2031</u>					
Market sector	664	348	40	47	1099
Social sector	122	162	63	21	368
<u>Total</u>	<u>786</u>	<u>510</u>	<u>103</u>	<u>68</u>	<u>1,467</u>

Source: Tables 7, 9 and 10 and see text. There are differences of 1 from Tables 7 and 10 due to elimination of rounding discrepancies.

Part of the increase in the number of couple households in the market sector is due to the effect of ageing, expressed in the 'rolling forward' of market sector shares.

Table 15. Projected Division of Couple Households between Sectors 2011 to 2031: Principal Projection (000s)

	<u>With Ageing Effect</u>			<u>Without Ageing Effect</u>		
	Market sector	Social sector	Total	Market sector	Social sector	Total
2011	627	122	749	627	122	749
2021	651	124	775	646	129	775
2031	664	122	786	657	129	786

Source: see text

The division of households between the market and social sectors for one person households, lone parent households, and other multi-person households is shown in Table 14.

The change in the numbers of households in the market and social sectors can be analysed into three components:

- a) the effect of the increase in households in total, i.e. the increases that there would be if the sector shares remained as in the base year;
- b) the effect of ageing on the proportion of older couple households in the market sector; and
- c) the effect of changes in the mix of household types and ages.

Table 16. Components of Change in Projected Market and Social Sector Households: Principal Projection ('000s)

	<u>2011 - 2021</u>			<u>2021 - 2031</u>		
	Market sector	Social sector	Total	Market sector	Social sector	Total
Increase in households in total	+ 68	+ 22	+ 90	+55	+ 8	+ 73
Effect of ageing	+ 5	- 5	0	+ 2	- 2	0
Mix of household types and ages	- 5	+ 5	0	- 7	+ 7	0
<u>Total</u>	+ 68	+ 22	+ 90	+ 50	+ 23	+ 73

Source: calculations from Tables 14 and 13

That the effect of changes in the mix of household types and ages is to increase the proportion of social sector households is caused primarily by a slower rise in the number of couple

households, particularly between 2021 and 2031. Couple households have the highest proportion of households in the market sector. They comprise 57.4% of all households in 2011, 55.6% in 2021, and 53.6% in 2031.

The projected net increases of 118,000 households in the market sector and 45,000 in the social sector are the central core of the estimate of the net addition to the housing stock required to meet future need and demand for housing in Wales, as derived from the Welsh Government's official 2011 based household projections.

The other components are: (a) second homes and other secondary residences; (b) an increase in vacant dwellings to maintain a margin for mobility; and (c) an offset to the loss of re-lets in the social sector stock caused by historical 'sitting tenant' sales. If these dwellings had remained in the social sector stock, there would have been a vacancy for letting to a new tenant. For secondary residences and vacant dwellings, the same figures have to be used as in the previous 2010 estimates (Holmans and Monk 2010). The data source used then, Council Tax information, is no longer available. The 2011 census data on residents of Wales with a second address, divided into addresses within the United Kingdom and outside it, are of no use; there are not even specific figures for addresses in Wales. In the absence of fresh information, the figure used in the 2010 report of 30,000 for the offset for 'lost' re-lets is shaded down to 25,000 in the two decades as the number of Right to Buy owner-occupiers in the population declines.

Table 17. Two-sector Estimate of Newly Arising Need and Demand for Housing in Wales in 2011 – 2031 ('000s)

	Market sector	Social sector	Total
Net increase in households	+ 118	+ 45	+ 163
Second homes etc.	+ 6	0	+ 6
Vacant dwellings	+ 5	0	+ 5 ⁷
Offset to re-lets 'lost' by past Right to Buy sales	- 25	+ 25	0
<u>Total net additional housing required</u>			
Two decades	104	70	174
Annual average	5.2	3.5	8.7

Source: see text

The total need and demand for additional dwellings in Wales in 2011 – 2031 is put at 8,700 a year, of which 60% is in the market sector and 40% in the social sector. The estimate made in 2010 from the 2006 based household projection was 14,200 a year, divided in proportions 64:36 between the market and social sectors. The higher proportion in the social sector in the 2011 based estimate of need is due to the arithmetical effect of the offset for 'lost' re-lets being proportionally larger in relation to the projected net increase in social sector households.

Discussion and Analysis of the Alternative Projection

The Welsh Government's current projections for household formation (termed the 'principal projection' here) fall short of previous projections for household formation in Wales. The reasons for this are explored below, and an alternative projection is presented.

This alternative is then analysed using the method above to give an alternative estimate of future need and demand.

⁷ Excludes the potential impact of the Houses into Homes Scheme in Wales. (Welsh Government data suggest that 2,178 empty homes were brought back into use through direct action by local authorities in 2013/2014).

The rationale behind the consideration of an alternative projection

A critique of the principal projection

The current principal projection for household formation is a two-point projection. That is to say, it depends on two data points – the 2001 and 2011 censuses – to specify the changes that are projected in the future. Changes before 2001 do not enter into the projection of changes post 2011.

This is significant because the changes in the total and mix of households between 2001 and 2011 were very different from 1991 – 2001 and earlier. Before 2001, there was a rising trend in household membership rates; between 2001 and 2011 they were well below this trend. Based on the previous rate of growth (from 1981 to 2001) the number of households in 2011 was expected to be 1,342,000. In fact, the 2011 census revealed that there were 38,000 fewer than this (see Table 18).

Assuming that the rate of growth seen between 2001 and 2011 censuses will persist implies that the influences that caused the departure from previous trends will continue throughout the projection period. This is a strong assumption. The causes of the lower than previously projected household membership rates are hard to ascertain; but a comparison of the previous and current projections suggests that some of the influences might be temporary (see below)⁸.

⁸ In addition to temporary influences not reflected in earlier trends (such as the economic situation), other less transitory factors may have impacted on household composition during this period. The number of university students and the type of student accommodation provided could affect the number of multi-adult households at younger ages. Increasing life expectancy among men and convergence in life expectancy between men and women may lead to an increase in couple households in older age groups and fewer lone person households. However, this has to be balanced against an increasing rate of divorce and separation amongst older age groups.

Table 18. Households in Wales in 1991, 2001 and 2011 (000s)

	1991 (census)	2001 (census)	2011 (projected)	2011 (census)
One person households	284	354	432	402
One adult, one or more children	48	82	111	88
Two adults, no children	345	376	428	405
Three or more adults, no children	133	117	114	131
Two or more adults, one or more children	304	284	258	278
All households	1,113	1,213	1,342	1,304

Source: Welsh Assembly Government, *Household Projections for Wales (2006 based), Summary Report 2009*

Comparing previous and current projections

Table 19 compares the 2006 based projection⁹ (which had 1991 and 2001 as the two data points for the projections) with the 2011 based projection; showing estimated numbers of households for 2011, 2016, 2021 and 2026.

The 2011 based projected increase is much smaller, and the mix of types of household is different. One person households are a smaller proportion of the total increase in the 2011 based projection, 63% as compared with 69%. Three-adult households (which can include a son or daughter aged 16 or over (19 or over if in full time education) are projected to rise by 5,000 instead of falling by 16,000, a net difference of 21,000. Multi-adult households with children are projected to fall by only 4,000 instead of 25,000.

The figures for one person households and three or more adults are consistent with the increase of younger men and women living in their parents' home instead of leaving to live independently. This could logically be the result of social changes that reduced the wish to live independently; or it could be the result of more difficult housing markets – a rise in house prices and rents more rapid than income and then difficulties in obtaining mortgages; or of course both. Other social changes such as tuition fees and student loans are also likely to affect behaviour.

⁹ The alternative and slightly more recent 2008-based household projections would not have produced a substantially different pattern of household types to the 2006 projections.

There are thus reasons why the abrupt change of trend in household formation might be in part at least due to causes that could be transitory. Before 2001, the rising trend in household formation appears to have been well established. But because the Welsh official household projections are two point projections, the course of household formation before 2001 can make no difference at all to the 2011 based projection. It is therefore considered useful to look at an alternative projection which, on the basis of the pre-2001 rising trend not having been completely extinguished, will in time reappear in an attenuated form.

Table 19. 2006 based and 2011 based Projections of Households in Wales in 2011 to 2026 (000s)

	2011	2016	2021	2026
2006 based projections				
One person households	432	478	523	569
One adult, one or more children	111	125	140	154
Two adults, no children	427	454	475	487
Three or more adults, no children	115	111	104	98
Two or more adults, one or more children	258	247	239	233
All households	1,342	1,415	1,482	1,541
2011 based projections				
One person households	402	428	456	485
One adult, one or more children	88	91	96	100
Two adults, no children	405	419	432	440
Three or more adults, no children	131	136	137	136
Two or more adults, one or more children	278	275	274	274
All households	1,304	1,349	1,394	1,435

Source: As Table 18; and Welsh government, *2011 based Principal Projections, Household Forecast Summary Report*

An alternative projection

Various possible alternatives could be considered, but the assumption made here is that one half of the pre-2001 long term trend will not reappear; but that all but 2,000 a year of the other half will gradually return. Table 20 shows the 'alternative' projection compared with the 2011 based projection and the pre-2001 trend. The full working is in the table in Annex 1 at the end of this report.

Table 20. Trend, Official and Alternative 2011 based Household Projections ('000s)

	Long term trend 2006 based projection	Official 2011 based projection	Alternative 2011 based projection	Difference between projections
1981	1,017	-	-	-
1991	1,113	-	-	-
2001	1,213	-	-	-
2011	1,342	1,304	1,304	0
2016	1,415	1,349	1,373	24
2021	1,482	1,394	1,442	48
2026	1,541	1,435	1,493	58
2031	1,589	1,467	1,531	64

Source: Annex 1 Table and see text

Table 20 shows that the 'alternative' household projection is 48,000 (3.4%) higher than the official 2011 based projection for 2021, and 64,000 higher than the official projection for 2031.

Analysing the alternative projection

To be used for a different assessment of future housing need and demand, the 'alternative' projection totals must be sub-divided by household type and by age. The 2011 based projections are divided for this purpose into one person households, households of one adult and one or more children (taken to represent lone parent households), couple households, and other households. The last two are pro-rata divisions of a total of all multi-person households other than lone parent households. Comparison of the official 2006 and 2011 based projections (Table 19) shows that 30,000 of the difference between projected and actual households in 2011 was one person households, and only 14,000 multi-person households excluding one adult and one or more children. It seems reasonable, therefore, to assume that most of the difference between the 'alternative' projection and the principal projection is in there being more one person households in the 'alternative' projection. The number of lone parent households is likely to be governed by social attitudes. The total difference between the two projections is divided between one person households and multi-person households excluding one adult plus children households in proportions, i.e. 30 : 14.

Table 21 shows the estimated numbers of households by type in the 'alternative' projection, to correspond to the analysis of the principal projection in Table 6.

Table 21. Analysis of Households by Type: Alternative Projection (000s)

	2011	2016	2021	2026	2031
One person households	402	443	489	525	554
One adult, one or more children	88	90	96	100	103
Couple households	749	774	790	800	806
'Other households'	65	66	67	68	68
<u>Total</u>	<u>1,304</u>	<u>1,373</u>	<u>1,442</u>	<u>1,493</u>	<u>1,531</u>

Source: see text

Analyses of the projected numbers of households in Table 21 by type and age are needed. For households of one adult and one or more children, no changes are needed to the age distribution in Tables 8 to 11. For couple households and 'other multi-person households', the differences from the principal projection are distributed pro-rata.

Table 22. Projected Households in Wales in 2016 by Type of Household and Age Compatible with the Ageing Model: Alternative Projection (000s)

Age	All households	One person households	Lone parent households	Couple households	Other households
Under 25	57	14	17	21	5
25 - 29	94	21	13	55	5
30 - 34	102	21	13	65	3
35 - 39	101	22	13	63	3
40 - 44	104	25	13	63	3
45 - 49	120	31	11	74	4
50 - 54	127	36	6	78	7
55 - 59	117	37	2	71	7
60 - 64	114	36	1	73	4
65 - 74	226	82	1	132	11
75 - 84	150	75	1	66	8
85 & over	61	42	0	14	5
<u>Total</u>	<u>1,373</u>	<u>443</u>	<u>91</u>	<u>773</u>	<u>66</u>

Source: Tables 6, 8 and 21, and see text

Table 23. Projected Households in Wales in 2021 by Type of Household and Age Compatible with the Ageing Model: Alternative Projection (000s)

Age	All house-holds	One person house-holds	Lone parent house-holds	Couple house-holds	Other house-holds
Under 25	53	12	11	25	5
25 - 29	95	21	14	55	5
30 - 34	116	28	15	69	4
35 - 39	111	27	16	64	4
40 - 44	101	27	15	56	3
45 - 49	104	29	13	58	4
50 - 54	126	39	7	73	7
55 - 59	130	44	3	76	7
60 - 64	123	41	1	77	4
65 - 74	237	84	1	141	11
75 - 84	173	86	0	79	8
85 & over	73	51	0	17	5
Total	<u>1,442</u>	<u>489</u>	<u>96</u>	<u>790</u>	<u>67</u>

Source: Tables 6, 9 and 21, and see text

Table 24. Projected Households in Wales in 2026 by Type of Household and Age Compatible with the Ageing Model: Alternative Projection ('000s)

Age	All house-holds	One person house-holds	Lone parent house-holds	Couple house-holds	Other house-holds
Under 25	54	12	11	25	6
25 - 29	90	21	13	51	5
30 - 34	117	29	16	68	4
35 - 39	122	32	18	68	4
40 - 44	108	31	17	57	3
45 - 49	103	32	13	55	3
50 - 54	107	35	6	60	6
55 - 59	127	45	3	73	6
60 - 64	135	47	1	83	4
65 - 74	235	82	1	142	10
75 - 84	206	97	1	97	11
85 & over	89	62	0	21	6

Total	<u>1,493</u>	<u>525</u>	<u>100</u>	<u>800</u>	<u>68</u>
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Source: Tables 6, 10 and 21, and see text

Table 25. Projected Households in Wales in 2031 by Type of Household and Age Compatible with the Ageing Model: Alternative Projection ('000s)

Age	All house-holds	One person house-holds	Lone parent house-holds	Couple house-holds	Other house-holds
Under 25	54	13	12	24	5
25 - 29	90	20	12	52	6
30 - 34	116	28	15	69	4
35 - 39	122	36	17	65	4
40 - 44	108	39	17	49	3
45 - 49	109	36	15	55	3
50 - 54	104	37	7	56	4
55 - 59	125	41	3	74	7
60 - 64	132	45	2	80	5
65 - 74	237	87	2	138	10
75 - 84	227	95	1	118	13
85 & over	107	77	0	26	4
Total	<u>1,531</u>	<u>554</u>	<u>103</u>	<u>806</u>	<u>68</u>

Source: Tables 6, 11 and 21, and see text

The alternative projection: An estimate of future housing need and demand

The 'alternative' projection described above is based on the assumption that about half of the shortfall of household formations in 2001 – 11, relative to the 2006 based projection, was the result of temporary influences. Assuming these influences were to be reversed after 2011, the increase in households would come back part way towards the probable long term trend. The alternative projected totals of households in 2021 and 2031 are shown in Tables 23 and 25. Couple and one person households are higher than in the principal projection; lone parent and 'other' (multi-person) households are the same. The division of the alternative projection of couple households is shown in Table 26.

Table 26. Projected Division of Couple Households between Sectors 2011 to 2031: Alternative Projection (000s)

	<u>With Ageing Effect</u>			<u>Without Ageing Effect</u>		
	Market sector	Social sector	Total	Market sector	Social sector	Total
2011	643	106	749	643	106	749
2021	666	124	790	664	126	790
2031	681	125	806	676	130	806

Source: 2011 census, special tables

A projected division between the market and social sectors of the alternative projection is shown in Table 27.

Table 27. Projected Division of Households between Market and Social Sectors in 2011 to 2031: Alternative Projection (000s)

	Couple households	One person households	Lone parent households	Other multi-person households	All households
<u>2011</u>					
Market sector	643	279	37	48	1,007
Social sector	106	123	51	17	297
<u>Total</u>	<u>749</u>	<u>402</u>	<u>88</u>	<u>65</u>	<u>1,304</u>
<u>2021</u>					
Market sector	666	334	38	49	1,092
Social sector	124	155	58	18	350
<u>Total</u>	<u>790</u>	<u>489</u>	<u>96</u>	<u>67</u>	<u>1,442</u>
<u>2031</u>					
Market sector	681	373	44	51	1,149
Social sector	125	181	59	17	382
<u>Total</u>	<u>806</u>	<u>554</u>	<u>104</u>	<u>68</u>	<u>1,531</u>

An analysis of components of the increase with numbers of households in the market and social sectors is shown in Table 28.

Table 28. Components of Change in Projected Market and Social Sector Households: Alternative Projection (000s)

	<u>2011 - 2021</u>			<u>2021 - 2031</u>		
	Market sector	Social sector	Total	Market sector	Social sector	Total
Overall increase in households	+ 105	+ 33	+ 138	+67	+ 22	+89
Effect of ageing	+ 2	- 2	0	+ 4	- 2	0
Mix of household types and ages	- 12	+ 12	0	- 14	+ 14	0
<u>Total</u>	+ 95	+ 43	+ 138	+ 57	+ 32	+ 89

The estimate of housing need and demand based on the alternative household projection is shown in Table 29.

Table 29. Two-sector Estimate of Newly Arising Need and Demand for Housing in Wales in 2011 – 2031 (000s)

	Market sector	Social sector	Total
Net increase in households	+ 152	+ 75	+ 227
Second homes etc.	+ 6	0	+ 6
Vacant dwellings	+ 7	0	+ 7
Offset to re-lets 'lost' by past Right to Buy sales	- 25	+ 25	0
<u>Total net additional housing required</u>			
Two decades	+ 140	+ 100	+ 240
Annual average	7.0	5.0	12.0

Source: see text

Estimating the Backlog of Unmet Housing Need

In considering the future need and demand for housing in Wales, it is important to include the existing unmet housing needs (conventionally termed the 'backlog of unmet need'). These households should form part of the analysis of required new supply.

Information about the backlog of housing need in Wales was reviewed in *Housing Need and Demand in Wales 2006 to 2026*. Information was available about three recognised components of the backlog:

- (a) households living in temporary accommodation;
- (b) households in shared accommodation; and
- (c) households whose accommodation was overcrowded.

There was no information about the fourth component, concealed households.

For the 2010 report, the Living in Wales Survey provided an estimate of sharing households: 25,901. A similar survey estimate is not available for the present report. The 2011 census information was looked at. It is shown in Table 30.

Table 30. Shared and Unshared Dwellings in Wales in the 2011 Census

Unshared dwellings	1,383,164
Shared dwellings: two household spaces	265
Shared dwellings: three or more household spaces	385
<u>All categories of dwellings</u>	1,383,814

Source: Census Table KS401EW

Such low figures for sharing lack credibility, and are assumed to be a function of differing definitions. How 'sharing' was defined to produce figures as low as those in Table 30 cannot be investigated here.

Numbers of homeless households in temporary accommodation are shown in Table 31. They comprise dwellings occupied on a short-term basis, as well as accommodation such as hostels and bed and breakfast, which are not self-contained dwellings.

Table 31. Homeless Households in Temporary Accommodation in Wales

	2006	2010	2011	2012
Local authority or housing association dwellings	625	420	350	365
Private sector letting or leasing	650	1,090	1,040	1,055
Hostels and women's refuges	395	385	460	460
Bed and breakfast	375	235	245	210
Other	240	-	5	15
'Homeless at home'	815	470	425	300
Total	3,105	2,595	2,530	2,410

Note: figures are as at 31 December each year, and are rounded independently to the nearest 5 to protect the identity of individuals. Source: Welsh Government Homelessness data collection

'Overcrowding' in census terms is taken to be having an 'occupancy rating' of minus 1 or lower, i.e. one or more fewer bedrooms than a standard defined by number of bedrooms occupied and the size and composition of the household. The total of households in each tenure is shown for comparison.

Table 32. Overcrowded Households in Wales in 2011 (000s)

	Owner-occupied (a)	Social rented	Private rented	Total
All households	883.1	214.9	204.6	1,302.7
Occupancy rating of minus 1 or less	14.8	12.7	10.7	38.2
Proportion 'overcrowded' (percent)	1.7	5.9	5.2	2.9

Note: (a) Includes shared ownership (part owned and part rented). Source: Census 2011, Table DC4105EW1a

That the proportion of social renting households' accommodation shown as 'overcrowded' is higher than in the private rented sector is due to the number of comparatively large households in the social sector having to live in ordinary sized houses and flats.

A recent statistical analysis from the 2011 census suggests that there may be some 1.5% of households in Wales in 2011 (13,000) that could be classed as 'concealed households',

defined as a household living in a multi-household dwelling, up from 9,000 in 2001. In the 2010 report (Holmans and Monk, 2010) survey data was used to estimate what proportion of such households were genuinely ‘concealed’ i.e. would prefer to live independently. There is no updated information to estimate this proportion from the 2011 census figure.

All these components of current unmet housing need are themselves estimates and, as noted above, the census figures for sharing are unfeasibly low. All they provide is evidence that there is unmet housing need but its extent is impossible to quantify with any confidence. It would give a spurious accuracy to the data if the different components were to be summed and termed ‘the estimate of current unmet need’.

Need and Demand for housing in Wales 2011-2031: District Analysis

The central core of an estimate of future need and demand for housing in the local government districts of Wales is the official household projections for these districts. These are part of the 2011-based household projections used in this report. 2011 census data was used to divide households into each district in the base year between market and social sectors. The census data divide between owner-occupiers plus private sector tenants (including rent-free occupiers) – market sector; and local authority and housing association tenants – social sector. The social sector includes, and the market sector excludes, owner-occupiers who entered the tenure by purchase as sitting tenants from public authorities (‘RTB owner-occupiers’) and private sector tenants receiving Housing Benefit (‘HB tenants’) – see Tables 1 and 2 for figures for Wales. Figures at district level for RTB owner-occupiers and HB tenants have to be derived from the figure for Wales pro-rata, for all owner-occupiers and private sector tenants respectively. Adding these to district totals of social sector tenants and subtracting them from owner-occupiers plus private sector tenants gives the social and market sectors as defined in this report. Sector shares in 2011 are then calculated.

Sector shares in 2031 are estimates by reference to the difference between sector shares in 2011 and 2031 for Wales as a whole. The market sector proportion in 2011 is put at 77.2% and in 2031 at 77.0% (Table 13). The change in the market sector share between 2011 and 2031 is taken to apply at district level. For instance, the market sector share of households in Cardiff in 2011 is estimated at 72.4%. Subtracting the change in the market sector proportions in Wales as a whole (0.2%) gives an estimated market share for Cardiff in 2031 of $72.4 - 0.2 = 72.2\%$. This estimated market sector share in 2031 is applied to the projected total of households in 2031 to give the estimated total of market sector households in 2031.

This method gives the net increase in the total of market sector households between 2011 and 2031 and, by subtraction, the net increase in the total of social sector households. The other, minor, components of need and demand for housing are second homes, the increase in vacant dwellings, and provision in the social sector to offset the loss of re-lets to past RTB sales (the figure is not affected by recent sales). For second homes, the same figure as in the 2010 projection is taken for Wales as a whole, so the 2010 figures for second homes in individual districts can reasonably be used. The increase in market sector vacants and the offset to 'lost' re-lets are apportioned between districts pro rata.

Household projections

Official 2011-based household projections for the districts of Wales are shown in Table 33.

Table 33. Official 2011-based household projections for districts of Wales (000s)

	2011	2031	Increase 2011-2031	
			Total	Percent
Anglesey	30.7	31.5	0.8	1.4
Gwynedd	52.4	57.9	5.5	10.5
Conwy	51.3	53.2	2.0	3.9
Denbigh	40.6	44.5	3.8	9.4
Flintshire	63.9	68.8	4.9	7.6
Wrexham	57.1	70.0	12.8	22.5
Powys	58.4	63.3	4.9	8.4
Ceredigion	31.4	33.8	2.4	7.6
Pembrokeshire	53.2	57.5	4.3	8.1
Carmarthenshire	78.9	88.8	9.9	12.5
Swansea	103.5	121.5	18.0	14.7
Neath Port Talbot	60.4	63.1	2.7	4.4
Bridgend	58.6	66.1	7.5	12.8
Vale of Glamorgan	53.6	60.3	6.7	12.5
Cardiff	142.8	189.6	46.8	37.7
Rhondda Cynon Taff	99.6	108.1	8.4	8.5
Merthyr Tydfil	24.3	26.1	1.8	7.5
Caerphilly	74.5	79.9	5.4	7.3
Blaenau Gwent	30.4	30.8	0.3	1.0
Torfaen	38.6	40.7	2.1	5.5
Monmouthshire	38.3	40.2	1.9	4.8
Newport	61.3	71.7	10.4	16.8
Wales	1,303.80	1,467.30	163.5	12.5

Source: Welsh Government 2011-based official household projections

There are wide variations between the magnitude of the projected increases in households in the 22 districts. The size of the increase projected for Cardiff merits note, nearly 30% of the total for Wales. The next step is to divide the 2011 and 2031 totals of households into market and social sectors. Table 34 shows the calculation. It starts with the market sector proportions for each district in 2011. Proportions in 2031 are obtained by subtracting the increase/decrease between 2011 and 2031 in Wales as a whole. The market sector proportions in 2031 are then applied to the totals of households in 2031 (Table 33); and the net change in the number of market sector households between 2011 and 2031 is calculated. The calculation is presented in terms of market sector households for convenience; the social sector figures could be derived by subtraction.

Table 34. Estimates of market sector households in districts of Wales in 2011 and 2031 (000s)

	Market sector share %		Market sector total		Net change
	2011	2031	2011	2031	2011-2031
Anglesey	76.1	75.9	23.4	23.9	0.5
Gwynedd	74.1	74.5	38.8	43.1	4.3
Conwy	78.7	78.5	40.4	41.8	1.4
Denbigh	77.8	77.6	31.6	34.5	2.9
Flintshire	79.2	79.0	50.6	54.4	3.7
Wrexham	69.6	69.4	39.7	48.6	8.8
Powys	77.0	76.8	45.0	48.6	3.6
Ceredigion	78.5	78.3	24.6	26.5	1.8
Pembrokeshire	75.6	75.3	40.2	43.3	3.1
Carmarthenshire	76.8	76.6	60.6	68.0	7.4
Swansea	72.1	71.9	74.6	87.4	12.7
Neath Port Talbot	74.0	73.8	44.7	46.6	1.9
Bridgend	77.8	77.6	45.6	51.3	5.7
Vale of Glamorgan	78.9	78.7	42.3	47.5	5.2
Cardiff	72.4	72.2	103.4	136.9	33.5
Rhondda Cynon Taff	78.9	78.7	78.6	85.1	6.5
Merthyr Tydfil	70.8	70.6	17.2	18.4	1.2
Caerphilly	73.3	73.1	54.6	58.4	3.8
Blaenau Gwent	68.1	68.0	20.7	20.9	0.2
Torfaen	69.4	69.2	26.8	28.2	1.4
Monmouthshire	78.3	78.1	30.0	31.4	1.4

Newport	71.7	71.5	44.0	51.3	7.3
Wales	77.2	77.0	977	1095	118

Source: Table 33 and 2011 Census

The net increase of 118,000 households in the market sector implies an increase of 45,000 in the social sector. The other components of need and demand for housing are taken from Table 16. These are (in 20 year totals) 6,000 second homes (all in the market sector); net increase in vacant dwellings, 5,000 in the market sector, nil in the social sector; and the offset to re-lets lost by past Right to Buy sales, minus 25,000 in the market sector, plus 25,000 in the social sector. In the absence of later information, the distribution of second homes between local authority districts is taken to be pro-rata to the district totals of market sector dwellings. The dwellings needed in the market sector to offset lost relets are distributed pro rata to owner-occupied dwellings.

Estimates of newly arising future demand and need for housing in Wales are shown in Table 35. The working that lies behind them is in the Annex table.

Table 35 has a negative value in one cell: the market sector in Blaenau Gwent. This is the consequence of the effect of allowing for the assumed loss of re-lets due to earlier Right to Buy sales. It does not necessarily imply a surplus of housing. If the value is set to zero the totals for Wales as a whole become 110,000 dwellings needed in the market sector in 2011-2031, 65,000 (unchanged) in the social sector; and 175,000 in total.

The key assumptions for all sub-national demographically based estimates of future housing need and demand are those in the household projection. These are taken as they stand. Users may want to challenge them on grounds of local knowledge. However no account can be taken of that here.

Table 35. Future demand and need for housing in Welsh districts in 2011-2031

	Market sector		Social sector		Total	
	requirement in '000s	% of district total	requirement in '000s	% of district total	requirement in '000s	% of national total
Anglesey	0.7	47%	0.8	53%	1.4	0.8%
Gwynedd	5.0	67%	2.5	33%	7.4	4.3%
Conwy	2.0	65%	1.1	35%	3.1	1.8%

Denbigh	2.1	51%	2.0	49%	4.1	2.4%
Flintshire	3.0	57%	2.3	43%	5.2	3.0%
Wrexham	8.3	64%	4.6	36%	12.9	7.4%
Powys	3.6	64%	2.0	36%	5.7	3.2%
Ceredigion	1.6	56%	1.3	44%	2.9	1.7%
Pembrokeshire	3.0	50%	2.9	50%	5.9	3.4%
Carmarthenshire	5.5	53%	4.8	47%	10.4	5.9%
Swansea	11.3	61%	7.3	39%	18.6	10.6%
Neath Port Talbot	1.1	37%	1.9	63%	3.1	1.8%
Bridgend	4.9	61%	3.1	39%	8.0	4.6%
Vale of Glamorgan	5.8	83%	1.2	17%	7.0	4.0%
Cardiff	32.2	70%	13.9	30%	46.0	26.3%
Rhondda Cynon Taff	4.1	45%	5.0	55%	9.1	5.2%
Merthyr Tydfil	0.9	44%	1.1	56%	1.9	1.1%
Caerphilly	2.1	37%	3.6	63%	5.7	3.2%
Blaenau Gwent	-1.0	n.a	2.2	n.a	1.1	0.6%
Torfaen	0.9	35%	1.6	65%	2.5	1.4%
Monmouthshire	1.0	49%	1.1	51%	2.1	1.2%
Newport	6.7	63%	4.0	37%	10.7	6.1%
Wales	104	60%	70	40%	174	100.0%

Source: Table 34 and see Annex



Conclusion

This report presents new estimates of the need and demand for housing in Wales over the period 2011 to 2031.

Based on official projections for household formation, it is estimated that Wales will need an additional 174,000 units between 2011 and 2031 (8,700 a year) to avoid households living in unsatisfactory housing (see Table 36).

Table 36. Two-sector Estimate of Newly Arising Need and Demand for Housing in Wales in 2011 – 2031 ('000s) Principal Projection

	Market sector	Social sector	Total
Net increase in households	+ 118	+ 45	+ 163
Second homes etc.	+ 6	0	+ 6
Vacant dwellings	+ 5	0	+ 5
Offset to re-lets 'lost' by past Right to Buy sales	- 25	+ 25	0
<u>Total net additional housing required</u>			
Two decades	104	70	174
Annual average	5.2	3.5	8.7

Source: see text

As Table 35 above shows, this is unevenly distributed across the country. Although all areas have some projected requirements, over half of the total projected requirement is concentrated in four areas – Cardiff (26.3%), Swansea (10.6%), Wrexham (7.4%), and Newport (6.1%).

These estimates rely on the 'principal' projection for household formation. As outlined in the discussion above, that projection assumes that the departure from past trends in household formation in the 2001 – 11 decade was due to permanent changes in household behaviour. And, by extension, that the increase in the proportion of younger men and women continuing to live in their parents' household was the result of permanent social changes.

The alternative hypothesis is that at least in part these changes were the result of economic and housing market pressures that inhibited the formation of independent households. If so, an easing of these pressures could result in at least a partial return towards long term trends. The 'alternative' projection put forward gives an indication of the possible effects on future

numbers of households if economic conditions in the long term move back towards 'normal' (not of course a certainty).

Table 37. Two-sector Estimate of Newly Arising Need and Demand for Housing in Wales in 2011 – 2031 ('000s) Alternative Projection

	Market sector	Social sector	Total
Net increase in households	+ 152	+ 75	+ 227
Second homes etc.	+ 6	0	+ 6
Vacant dwellings	+ 7	0	+ 6
Offset to re-lets 'lost' by past Right to Buy sales	- 25	+ 25	0
<u>Total net additional housing required</u>			
Two decades	+ 140	+ 100	+ 240
Annual average	7.0	5.0	12.0

Source: see text

Using this alternative projection, housing need and demand in Wales between 2011 and 2031 is estimated to lead to a need for 240,000 units over the period (12,000 a year).

Considering rates of house building in Wales since 1991¹⁰, increasing the supply of housing to meet estimated future need and demand (under either scenario) would require a significant reversal of trend. The main estimate suggests a need to return to the kind of build rates seen in the early 1990s. The alternative estimate, which implies 12,000 additional units a year are needed, suggests a return to build rates not seen since the late 1970s.

Table 38. Historic rates of house building in Wales

Period	Average annual increase in housing stock
1991/92 – 1995/96	9,500
1995/96 – 2000/01	8,660
2001/02 – 2005/06	8,325
2006/07 – 2010/11	7,360

Source: Statswales, new dwellings completed by period and tenure <https://statswales.wales.gov.uk/v/ijj>

¹⁰ Source: Statswales, <https://statswales.wales.gov.uk/v/ijj>

Similarly, although there has been steady growth in the supply of housing in the social sector, the rate of growth falls below the estimated annual need; under either the main or the alternative projection.

Table 39. Additional affordable housing provision in Wales 2007-08 to 2015-16

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 Planned	2015-16 Proposed
Number of additional units	1692	2543	2370	2486	2432	2042	2416	2829	3129

Source: Welsh Government Statistics

Overall, these estimates suggest that meeting future need and demand for housing in Wales is going to be challenging, and will require an above trend increase in housing supply.

Annex 1: Calculating the Alternative Household Projection

Detail of Calculation of Alternative Household Projection for Wales ('000s)

Year	Trend of projections (2006 based)	Effects of social change	Effect of adverse economic conditions	Alternative projection
2011	1,342	-19	-19	1,304
2012	1,357	-21	-19	1,317
2013	1,372	-23	-19	1,330
2014	1,387	-25	-19	1,343
2015	1,401	-27	-16	1,358
2016	1,415	-29	-13	1,373
2017	1,429	-31	-11	1,387
2018	1,443	-33	-8	1,402
2019	1,457	-35	-6	1,416
2020	1,470	-37	-4	1,429
2021	1,482	-38	-2	1,442
2022	1,495	-40	0	1,455
2023	1,508	-42	0	1,466
2024	1,519	-44	0	1,475
2025	1,531	-46	0	1,485
2026	1,541	-48	0	1,493
2027	1,551	-50	0	1,501
2028	1,561	-52	0	1,509
2029	1,571	-54	0	1,517
2030	1,580	-56	0	1,524
2031	1,589	-58	0	1,531

Source: Official Welsh 2006 and 2011 based projections.

Annex 2: Calculating the demand and need for housing in Welsh districts 2011-2031

Detailed estimates of newly arising demand and need for housing in 2011 in districts of Wales (thousands)

	Anglesey	Gwynedd	Conwy	Denbigh	Flintshire
(1) Net increase in households market sector	0.7	4.1	1.8	3.1	4.0
(2) Net increase in households social sector	0.1	1.4	0.2	0.7	0.9
(3) Total net increase in households	0.8	5.5	2.0	3.8	4.9
(4) Increase in vacant dwellings market sector	0.2	0.3	0.3	0.3	0.4
(5) Increase in second homes	0.4	1.7	0.8	0.1	0.0
(6) Replacement of 'lost' re-lets	0.6	1.0	0.8	1.3	1.3
(7) Newly arising need in market sector (1) + (4) + (5) - (6)	0.7	5.1	2.1	2.2	3.1
(8) Newly arising need in social sector (2) + (6)	0.7	2.4	1.0	2.0	2.2
(9) Total newly arising demand and need (7) + (8)	1.4	7.5	3.1	4.2	5.3

	Wrexham	Powys	Ceredigion	Pembroke	Carmarthen
(1) Net increase in households market sector	9.3	3.9	1.7	2.5	6.8
(2) Net increase in households social sector	3.5	1.0	0.7	1.8	3.1
(3) Total net increase in households	12.8	4.9	2.4	4.3	9.9
(4) Increase in vacant dwellings market sector	0.3	0.4	0.2	0.3	0.3
(5) Increase in second homes	0.0	0.5	0.4	1.3	0.2
(6) Replacement of 'lost' re-lets	1.0	1.0	0.6	1.0	1.6
(7) Newly arising need in market sector (1) + (4) + (5) - (6)	8.6	3.8	1.7	3.1	5.7
(8) Newly arising need in social sector (2) + (6)	4.5	2.0	1.3	2.8	4.7
(9) Total newly arising demand and need (7) + (8)	13.1	5.8	3.0	5.9	10.4

	Swansea	Neath	Bridgend	Vale of G	Cardiff
(1) Net increase in households market sector	12.8	2.0	6.0	6.6	34.9
(2) Net increase in households social sector	5.2	0.7	1.5	0.1	11.2
(3) Total net increase in households	18.0	2.7	7.5	6.7	46.1
(4) Increase in vacant dwellings market sector	0.4	0.4	0.4	0.3	0.6
(5) Increase in second homes	0.3	0.0	0.1	0.2	0.1
(6) Replacement of 'lost' re-lets	1.9	1.2	1.5	1.1	2.3
(7) Newly arising need in market sector (1) + (4) + (5) - (6)	11.6	1.2	5.0	6.0	33.3
(8) Newly arising need in social sector (2) + (6)	7.1	1.9	3.0	1.2	13.5
(9) Total newly arising demand and need (7) + (8)	18.7	3.1	8.0	7.2	46.8

	Rhondda	Merthyr	Caerphilly	Blaenau	Torfaen
(1) Net increase in households market sector	5.6	1.3	3.4	-1.1	1.6
(2) Net increase in households social sector	2.8	0.5	2.0	1.6	0.5
(3) Total net increase in households	8.4	1.8	5.4	0.5	2.1
(4) Increase in vacant dwellings market sector	0.5	0.1	0.3	0.2	0.2
(5) Increase in second homes	0.1	0.0	0.0	0.0	0.0
(6) Replacement of 'lost' re-lets	2.0	0.5	1.5	0.5	1.1
(7) Newly arising need in market sector (1) + (4) + (5) - (6)	4.2	0.9	2.2	-1.4	0.7
(8) Newly arising need in social sector (2) + (6)	4.8	1.0	3.5	2.1	1.6
(9) Total newly arising demand and need (7) + (8)	9.0	1.9	5.7	0.7	2.3

	Monmouth	Newport
(1) Net increase in households market sector	1.6	7.6
(2) Net increase in households social sector	0.3	2.8
(3) Total net increase in households	1.9	10.4
(4) Increase in vacant dwellings market sector	0.2	0.4
(5) Increase in second homes	0.1	0.0
(6) Replacement of 'lost' re-lets	0.8	1.1
(7) Newly arising need in market sector (1) + (4) + (5) - (6)	1.1	6.9
(8) Newly arising need in social sector (2) + (6)	1.1	3.9
(9) Total newly arising demand and need (7) + (8)	2.2	10.8

Source: see text.

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