

Section 9: Estimating the Mix of Housing Requirements

Introduction

- 9.1 This chapter draws on many sources of information including models used and developed by ORS.
- 9.2 Key features of the methodology include an analysis of the characteristics of household growth to estimate the need for additional social housing. This is deducted from the RSS housing growth target and the residual makes up the amount to be split between intermediate and market housing. The market housing element of this split is the amount considered affordable to purchase on the open market. Sensitivity testing has also been undertaken to see how borrowing and price trends affect the tenure, size and mix available. The end result is a breakdown of future housing requirements based upon 2007/08 prices and long-term trends.
- 9.3 Please note that throughout this section numbers have been rounded to the nearest 100. The aim of the rounding is to ease the reader's comprehension of the results and also to highlight that the model is a projection of future housing requirements, rather than a precise calculation of exact figures. A consequence of the rounding of numbers is that the components may not sum to the total. It should be remembered that throughout the modelling section the total housing requirement for each local authority sums to its RSS housing target unless otherwise stated.
- 9.4 In terms of the study's Core Outputs, Figure 87.1 of the Practice Guidance identifies core outputs that inform or are the basis of this model and are marked accordingly.

Figure 87.1: Strategic Housing Market Assessment core outputs

1	Estimates of current dwellings in terms of size, type, condition, tenure	○
2	Analysis of past and current housing market trends	○
	Balance between supply and demand in different housing sectors	○
	Balance between supply and demand in terms of price/affordability	○
	Description of key drivers underpinning the housing market	○
3	Estimate of total future number of households	●
	Breakdown of future number of households by age and type (where possible)	●
4	Estimate of current number of households in housing need	
5	Estimate of future households that will require affordable housing	●
6	Estimate of future households requiring market housing	●
7	Estimate of the size of affordable housing required	●
8	Estimate of household groups who have particular housing requirements, e.g. families, older people, key workers, black and minority ethnic groups, disabled people, young people, etc	

- This Chapter will be the foundation of this Core Output
- This Chapter will help inform this Core Output

- 9.5 Regarding core output 4, as is noted above the estimate of the number of households in housing need has been estimated in section 6, Figure 83. It is important to state that the ORS housing mix model does not use this information and to understand the reasons why. Firstly it must be recognised that

there will always be a number of households living in unsuitable housing and it is impossible to eliminate there will always be a backlog at any given time. Household circumstances change periodically due to factors such as illness and disability, the birth or birthday of a child or the breakup of an existing household and this may tip an individual household into the category of being in housing need. The ORS housing mix model uses the baseline of the backlog of housing need which existed in 2001, any additional backlog which has arisen since 2001 is considered in the housing need calculation, and is part of the estimate of requirements. For the reason explained the only area not explicitly considered in the model is backlog at 2001 – there will always be a backlog.

- ^{9.6} The affordable (intermediate and social) housing calculation compares total affordable supply with total affordable need based upon household income, so any household on a low income is also assessed as requiring affordable housing. Therefore, all low income households are assessed as requiring affordable housing by 2021.

Key Definitions

Housing Requirements and tenure

- ^{9.7} Understanding the following terms and how they relate to each other is crucial to understanding the steps taken in this paper to assess future housing requirements.
- ^{9.8} The term ‘housing requirement’ is a generic term and can be expressed in more than one way. It could be described as the future estimates of all housing that would be required to accommodate projected household growth, setting aside any local constraints or priorities. Alternatively, it could be described as the requirement for new housing, regionally, sub-regionally and locally, as set out in a strategic planning document such as the Regional Spatial Strategy.
- ^{9.9} An overall housing requirement can be broken down further with reference to housing need and housing demand:
- housing need is defined in Annex B of PPS3 as ‘the quantity of housing required for households who are unable to access suitable housing without financial assistance’; and
 - housing demand as ‘the quantity of housing that households are willing and able to buy or rent’.
- ^{9.10} A household who lives in unsuitable housing and cannot afford market housing is in need of affordable housing. However, this is only really apparent for existing households.
- ^{9.11} Our rationale for assessing the future requirement for affordable and market housing is based upon demographic change and trends in household income and house prices.

Estimating the tenure mix of the future housing requirement

- ^{9.12} In this section we firstly examine the population projections produced by ONS and household projections produced by the CLG. Although both estimate a rise in the number of households, the CLG estimates without taking into account the policy led housing growth of the RSS and has the advantage of being consistent with the RSS housing target for the study area. The household projections are used as the basis for the ensuing analysis. We further analyse the projections to understand how different household types relate to the tenures in order to estimate how the tenure balance may change over time.

- 9.13 We estimate the social housing requirement then estimate the residual requirement for other tenures, examining how the balance between the tenures changes if assumptions about borrowing and house prices change.
- 9.14 The model covers all housing requirements in the period 2001-2021. Therefore, any need which has arisen in the period 2001-2007 is already addressed by the model. This leaves the backlog of need which existed in 2001. This has not been included in the model, which is seeking to return the housing market to the conditions seen in 2001. We would note that recent primary data based surveys conducted by ORS have shown the backlog of housing need to be around 3% of households for surveys outside of London. However, much of this need will have arisen since 2001 as the affordability of housing has declined sharply since this time.
- 9.15 For LCB (West) the net level of backlog need in 2001 is unlikely to have been large. It should be remembered that anyone who was unsuitably housed in social housing and required to move to alternative social housing would not generate any extra need for affordable housing. Instead the property they vacate can be occupied by another household who require social housing.
- 9.16 Therefore, the only groups who generate a backlog of need which requires additional affordable housing to be provided are those in the private rented and owner occupied sectors. The private rented sector was comparatively small in LCB (West) in 2001 and while it would have contained some households who required affordable housing this is unlikely to be a larger number. Similar moves from owner occupation to affordable housing are not common. Repossessions average around 250 per local authority per annum, while a small number of owner occupiers will seek supported or sheltered housing. On this basis, we consider that the backlog of need in 2001 would not have been a large proportion of the total housing stock.

ONS 2006-based Sub-national Population Projections; CLG 2004-based Household Projections and the East of England Regional Spatial Strategy

- 9.17 Over the 15 year period between 2006 and 2021, there are projected to be an additional 75,600 people living within the study area (Figure 104). 7,400 of these people are projected to be aged 85 or over with a further 17,200 aged 65-84, together accounting for almost a third of the total population.

Figure 104

Net Change in Persons by Local Authority by age group (Source: ONS 2006-based sub-national population projections. Note: Figures may not sum due to rounding. Figures in brackets denote decrease in population)

Population	Dacorum	Hertsmere	St Albans	Three Rivers	Watford	Welwyn Hatfield	Total
Net Change 2006-2021							
0-4	500	1,400	1,200	900	700	2,600	7,300
5-9	100	1,500	1,800	800	700	2,400	7,300
10-14	(100)	800	1,900	800	200	1,200	4,800
15-19	(1,000)	(200)	1,000	200	(400)	(200)	(600)
20-24	(200)	400	0	500	200	1,300	2,200
25-29	800	1,200	500	600	800	3,100	7,000
30-34	700	1,700	800	1,000	500	4,000	8,700
35-39	(900)	400	(400)	200	(300)	1,900	900
40-44	(2,300)	(900)	(1,200)	(400)	(700)	200	(5,300)
45-49	(1,300)	(200)	200	400	200	100	(600)

50-54	1,200	700	1,900	1,300	1,100	1,300	7,500
55-59	1,300	700	1,100	700	800	1,300	5,900
60-64	1,900	1,000	1,100	900	500	1,000	6,400
65-69	1,600	1,200	1,200	900	200	700	5,800
70-74	2,000	1,400	1,700	1,200	500	400	7,200
75-79	1,000	500	700	500	100	(100)	2,700
80-84	600	(100)	400	300	200	100	1,500
85+	2,000	1,100	1,300	1,000	500	1,500	7,400
Total	7,800	12,700	14,900	11,800	5,700	22,700	75,600

9.18 According to the CLG projections, the extra population within the study area is due to generate an additional 35,000 households by 2021, with a further 19,000 households projected in the period in the 5 years to 2026. Figure 106 shows that much of the growth of extra households is expected to be single persons. There is anticipated to be a rise of almost 30,000 single person households in the sub-region over the period to 2021.

Figure 105
Household Projections to 2026 by Household Type: Totals by Type
(Source: ONS 2004-based Household Projections)

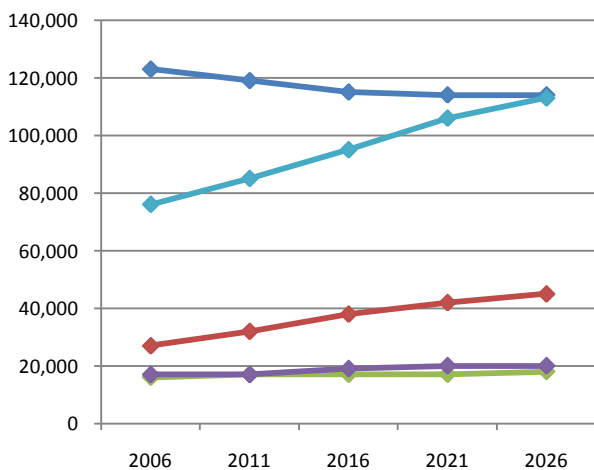
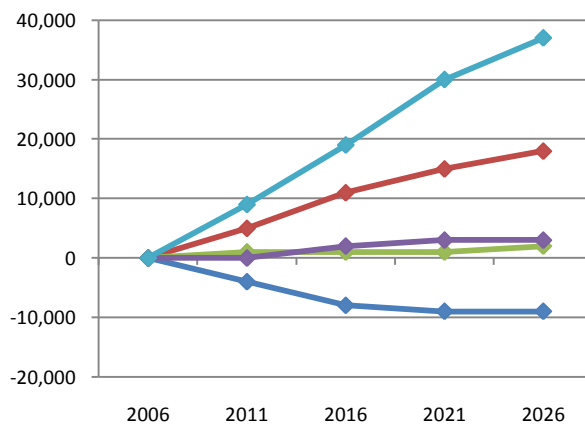
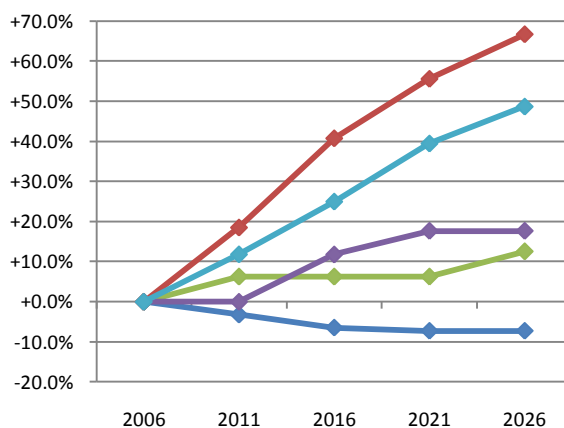


Figure 106
Household Projections to 2026 by Household Type: Absolute Change in Totals by Type
(Source: ONS 2004-based Household Projections)



- Married couple
- Cohabiting couple
- Lone parent
- Other multi-person
- Single person

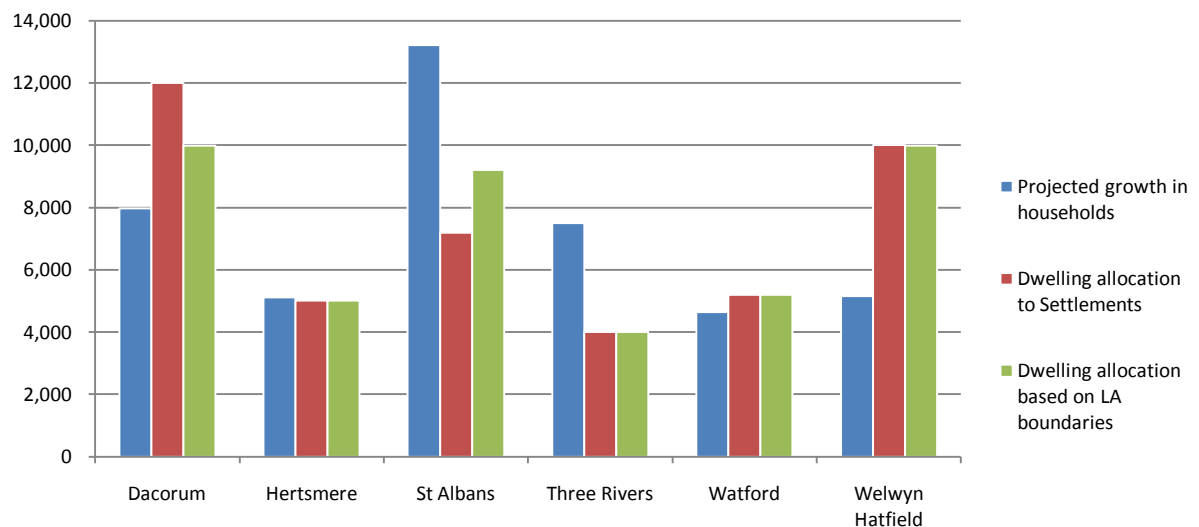
Figure 107
Household Projections to 2026 by Household Type: % Change in Totals by Type
(Source: ONS 2004-based Household Projections)



- 9.19 However the CLG (2004) household projections for the sub-region suggest that the number of households across the study area will rise from 252,000 at the time of the 2001 Census to a projected total of 296,000 households by 2021, an increase of 44,000 households. The Regional Spatial Strategy (RSS) for the East of England is planning for the provision of 43,400 additional dwellings over the same period.
- 9.20 Nevertheless, some of the planned growth for Dacorum's existing settlements is likely to happen in adjoining Local Authority areas, so assumptions within the population modelling undertaken for EERA allocated, pre High Court challenge, some of the Dacorum growth to St Albans.
- 9.21 Figure 108 compares the projected growth in households based on demographic forecasts against the strategic allocation of new housing provision for the 20-year period 2001-2021.
- 9.22 It is clear that the housing provision in Dacorum and Welwyn Hatfield will not only be satisfying their own housing requirements, but also the requirements of the rest of the sub-region and the wider regional requirement.
- 9.23 Nevertheless, some of the planned growth for Dacorum's existing settlements is likely to happen in adjoining Local Authority areas, so assumptions within the population modelling undertaken for EERA allocated, pre High Court challenge, some of the Dacorum growth to St Albans.

Figure 108

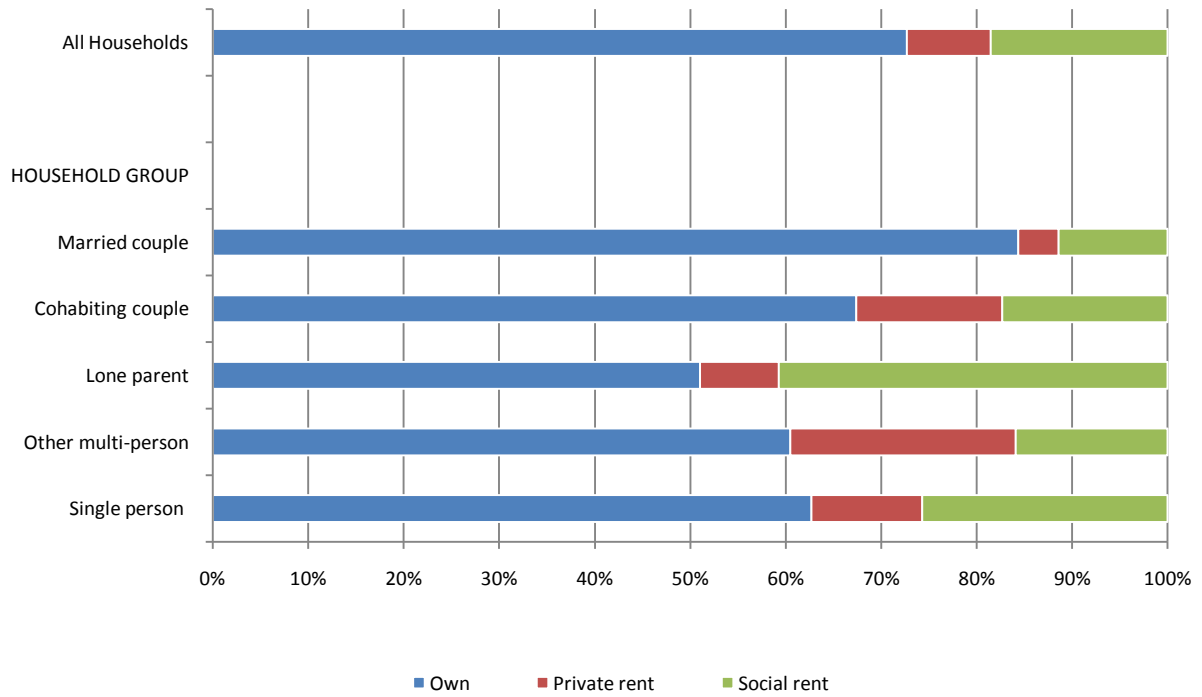
2004-based CLG Household Projections to 2021 compared with RSS Dwelling Allocation (Source: CLG 2004-based household projections; East of England RSS)



Housing Requirements of Household Groups

- 9.24 The following sections of this paper consider the mix of housing in the context of the planned housing provision of the RSS, rather than focusing exclusively on the demographic growth forecast by ONS.
- 9.25 Figure 109 shows the proportion of households in each tenure broken down by household type as at the time of the 2001 Census. It is apparent that lone parents were disproportionately found in social housing while married couples were concentrated in the owner occupied sector.

Figure 109
 Housing Tenure Mix by Household Type (Source: UK Census of Population 2001)

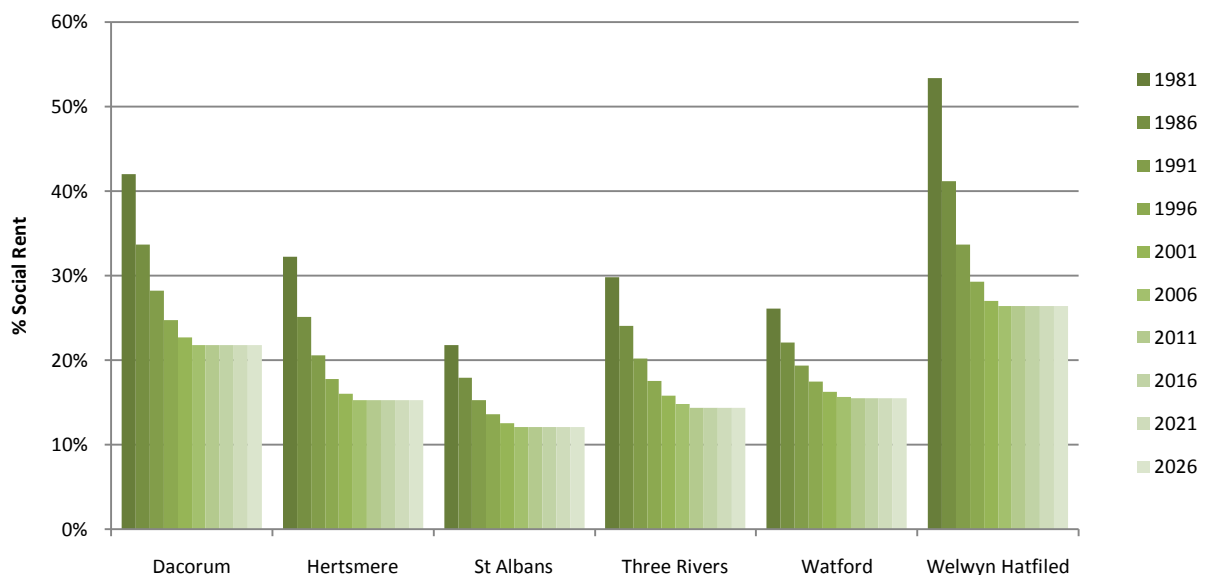


^{9.26} It is clear that the tenure mix differs quite markedly for each household type, therefore, as the number of households of each type changes in line with the earlier projections, this will influence the mix of tenure required.

Estimating the Future Requirement for Social Housing

- 9.27 In this section we estimate the social housing requirement to 2021. This is established by looking at the social housing requirement in terms of the overall housing requirement. Note that this is a trend based projection and does not build upon the earlier snapshot of affordability.
- 9.28 Figure 110 shows the proportion of all housing in the social rented sector identified in the 1981, 1991 and 2001 Census results. This information has then been modelled to identify the overall proportion of social rented housing in future years on the basis of the rate of decline and the change in the rate experienced in 1991-2001 compared to the rate in 1981-1991. While the proportions appear to remain almost constant in the future it should be emphasised that this is not an assumption of the model. The proportion predicted is the result of the observed trend toward the stability of the social rented sector.

Figure 110
Change in the Proportion of Households in Social Rented Housing by LA and Year (Source: Modelled based on UK Census of Population 1981, 1991 and 2001)



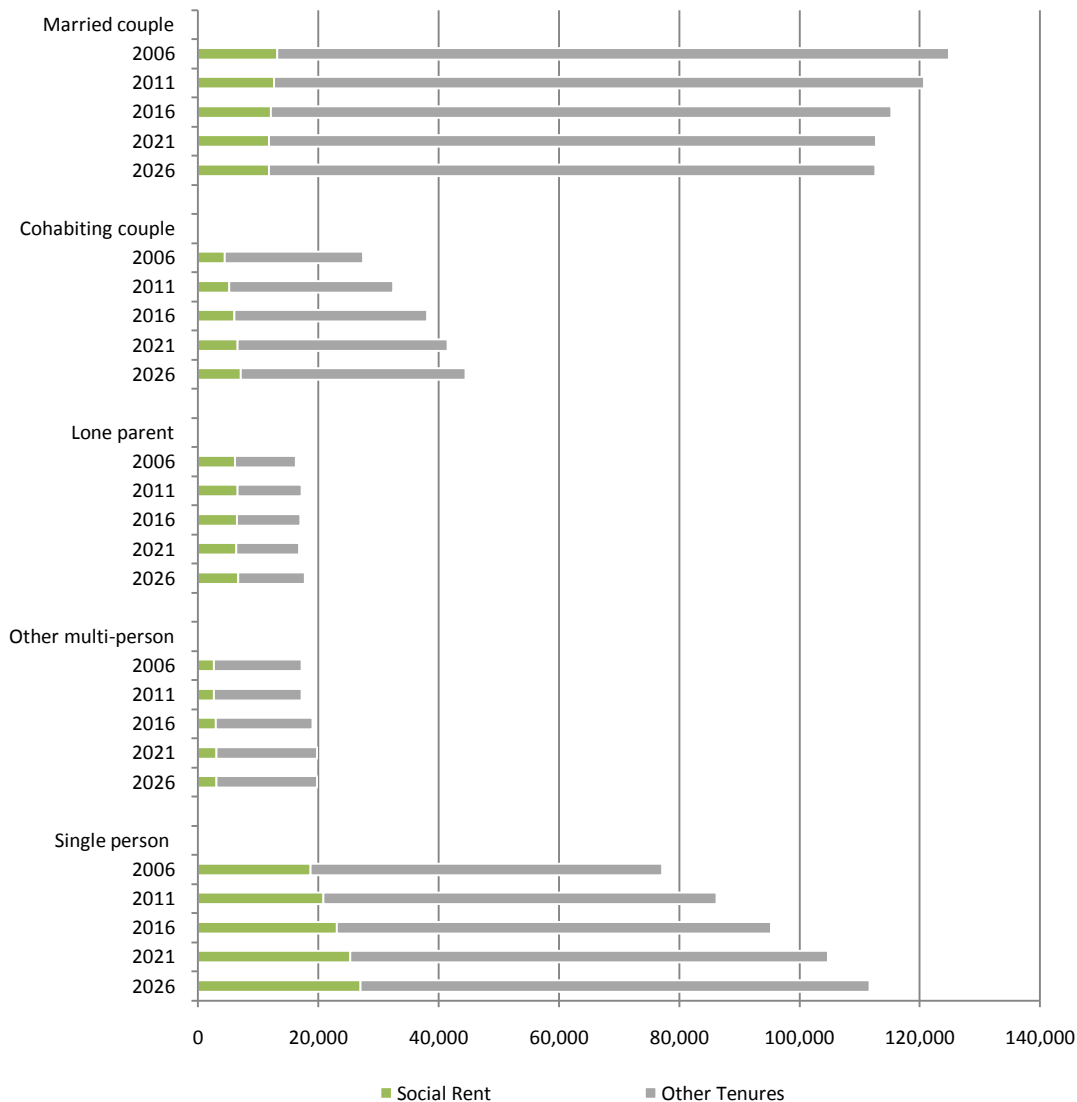
- 9.29 The notable decline in the proportion of households living in social rented housing from 1981 to 2001 was due to the effects of the 'right to buy'. The number of right to buy sales has declined in recent years and this has seen the decline in the relative size of the social sector slowdown. Figure 118 states the trajectory of recent right to buy sales and shows a diminishing trend.
- 9.30 Figure 111 shows the projected proportion of households in social rented housing for each household type.

Figure 111
Proportion of Households in Social Rented Housing by Household Type and Year (Source: Modelled based on UK Census of Population 1981, 1991 and 2001)



9.31 Figure 112 combines this with the projected demographic growth to show the number of households in social rented housing and those in other tenures.

Figure 112
Household Projections to 2026 by Household Type and Tenure (Source: ORS Housing Mix Model, 2008)



9.32 When the requirements of each household type are combined, the overall balance between social rented housing and other tenures can be summarised in Figure 113 to Figure 116.

Figure 113
Household Projections to 2026 by Housing Tenure (Source: ORS Housing Mix Model, 2008)



Figure 114
Household Projections to 2026 by Housing Tenure: Totals by Type (Source: ORS Housing Mix Model, 2008)

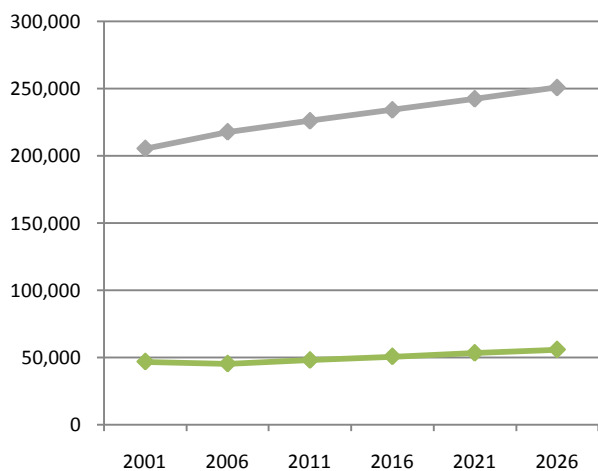
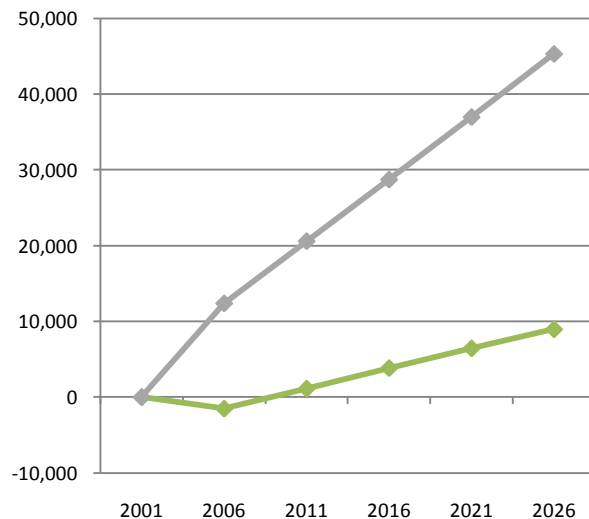
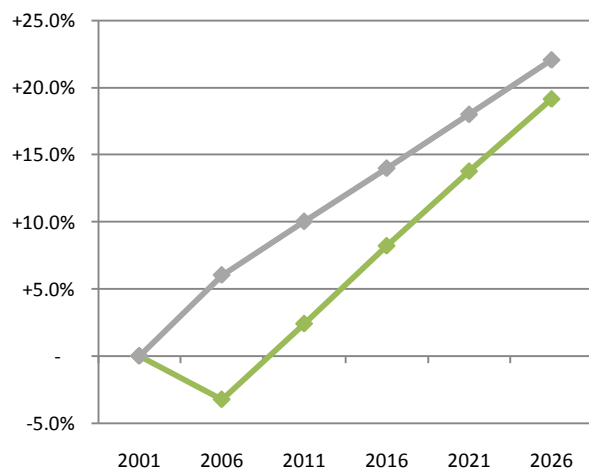


Figure 115
Household Projections to 2026 by Housing Tenure: Absolute Change in Totals by Type (Source: ORS Housing Mix Model, 2008)



—●— Social Rent
—●— Other Tenures

Figure 116
Household Projections to 2026 by Housing Tenure: % Change in Totals by Type (Source: ORS Housing Mix Model, 2008)



- 9.33 In the above section the overall increase in households between 2001 and 2021 is taken from the CLG household projections.
- 9.34 These projections, scaled to the study area's RSS dwelling target, have then been used to estimate the requirement for social rented housing and are shown in Figure 117. The net loss in social rented stock is from the census baseline minus losses due to the Right to Buy, details of which appear in Figure 118 below.

Figure 117

Change in Household Numbers 2001-2021 by Tenure (Source: ORS Housing Mix Model, 2008)

	Total Households	Increase in all households	Households in Social rent	Increase (decrease) in households in social rent
2001	252,100	-	46,700	-
2006	262,900	10,900	45,200	(1,500)
2011	273,800	21,700	47,900	1,100
2016	284,600	32,600	50,600	3,800
2021	295,500	43,400	53,200	6,400
	Increase 2001-21			6,400

- 9.35 The increasing volume of households suggests that there will be a requirement for the social rented stock to increase by 6,400 units, give or take changes in the vacancy rate, in the period 2001 to 2021. That is, an increase from 46,700 dwellings to 53,200 dwellings over the 20 years. However, only 43,400 new homes are planned to be delivered in line with the housing policies of the RSS. If this social housing is to be delivered then 15% (6,400/43,400) of the additional provision required for the period 2001-2021 will need to be social rented housing. Note that this is the social rent element of the affordable housing requirement. The requirement for intermediate affordable is estimated later in this chapter.
- 9.36 To refine this trend based estimate of the social housing requirement further, losses due to the Right to Buy and gains due to new building need to be taken into account.
- 9.37 These factors are now estimated and lead to a conclusion about the social housing requirement by Local Authority and housing sub-market.
- 9.38 Figure 118 describes the number of Right-to-Buy sales across the study area since 2001/02, where it is apparent that over 2,100 properties have transferred from social rent to owner occupation over the 6 year period. Nevertheless, changes in legislation, coupled with increasing house prices in the area, have led to lower sales rates in recent years.

Figure 118
Right-to-Buy Sales for London Commuter Belt West 2001/02 to 2006/07 by Local Authority (Source: CLG)

Local Authority	Year						Total
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	
Number of Right to Buy Sales							
Dacorum	104	214	134	64	60	35	611
Hertsmere	-	-	-	-	-	-	-
St Albans	53	60	91	52	28	27	311
Three Rivers	57	77	75	33	28	31	301
Watford	43	46	86	43	9	13	240
Welwyn Hatfield	122	124	114	68	43	34	505
Sub-Total	379	521	500	260	168	140	1,968
Number of Preserved RTB, RTA and RTM Sales of RSL properties							
Dacorum	1	2	2	2	1	1	9
Hertsmere	18	29	19	10	7	7	90
St Albans	2	1	-	-	-	-	3
Three Rivers	-	-	-	-	1	-	1
Watford	2	1	2	1	1	1	8
Welwyn Hatfield	-	-	-	1	1	3	5
Sub-Total	23	33	23	14	11	12	116
Total	402	554	523	274	179	152	2,084

^{9.39} By projecting forward the likely purchases through right-to-buy from 2007/8, we have assumed an average rate based on sales over the most recent two years of published data given the apparent change at this time.

^{9.40} Figure 119 summarises the impact of housing delivery since 2001 and the Right-to-Buy programme on the earlier analysis of the overall net change in social housing.

Figure 119
Requirement for Social Rented Housing 2007-2021 (Source: ORS Housing Mix Model, 2008. Note: Figures may not sum due to rounding)

Housing Type	Social Rent	Other Tenures	Overall Total
Dwelling Stock			
As at April 2001	46,700	205,300	252,100
Required by 2021	53,200	242,300	295,500
Net change 2001-21	6,400	37,000	43,400
Less Changes in Stock 2001-07			
Dwelling delivery 2001-07	2,400	9,800	12,200
Right to Buy Sales 2001-07	(2,100)	2,100	-
Residual requirement 2007-21	6,100	25,100	31,300
Less Projected Changes in Stock			
Right to Buy Sales 2007-21	(2,300)	2,300	-
Adjusted Requirement 2007-21	8,500	22,800	31,300

^{9.41} Note that now that delivery of new dwellings to 2006/7 has been taken into account we can focus upon the net or 'residual' amount of housing to be delivered 2007/8 to 2020/1. Accordingly, social

rented housing is estimated to account for 8,500 of the 31,300 residual requirement (2007/8-2020/21), equivalent to 27% of the total growth envisaged by the RSS for the period 2008-2021.

- 9.42 This still requires interpretation before a policy target for affordable housing can be derived, in particular, by properly understanding the role of delivering social rented housing through mechanisms outside the planning system and by understanding how much social rented housing can be expected to be delivered from existing or projected commitments within the planning system.
- 9.43 The above analysis has focused upon the overall increase in households and the likelihood that such households will be dependent on social rented housing.
- 9.44 It is possible to consider the same analysis at a borough level. The overall requirement figures are detailed in Figure 120 below.

Figure 120

Overall Housing Requirement and Requirement for Social Rented Housing by LA 2007-2021 (Note: Figures may not sum due to rounding)

Housing Type	Local Authority					
	Dacorum	Hertsmere	St Albans	Three Rivers	Watford	Welwyn Hatfield
Housing Requirement						
Total Requirement 2001-21	10,000	5,000	9,200	4,000	5,200	10,000
LESS Actual dwelling delivery 2001-07	2,200	1,400	2,200	1,300	1,700	3,400
Residual Requirement 2007-21	7,800	3,600	7,000	2,700	3,600	6,600
Social Rent						
Requirement: demographic change 2001-21	2,100	600	900	200	400	2,700
PLUS Actual/projected losses (RTB etc) 2001-21	1,300	200	700	700	400	1,100
LESS Actual dwelling delivery 2001-07	300	300	400	300	200	900
Residual Social Rent Requirement 2007-2021	3,100	500	1,300	700	600	2,800
Other Tenures						
Requirement: demographic change 2001-21	7,900	4,400	8,300	3,800	4,800	7,300
LESS Actual/projected gains (RTB etc) 2001-21	1,300	200	700	700	400	1,100
LESS Actual dwelling delivery 2001-07	1,900	1,100	1,800	1,100	1,400	2,500
Residual Requirement for Other Tenures 2007-2021	4,800	3,100	5,700	2,000	3,000	3,800
Social Rent as % of Total	39.3%	12.8%	18.1%	26.0%	15.7%	42.4%

- 9.45 It is apparent that the requirement for additional social rented housing is highest in Dacorum and Welwyn Hatfield, where there is a projected requirement from demographic growth alongside the need to replace the loss of existing stock. Three Rivers also has a significant proportion of social rented housing (26%) as the identified requirement for social rented housing has to be delivered from a smaller housing delivery programme.

- 9.46 Whilst the identified requirement in St Albans is higher than other areas in terms of the number of units, proportionately it represents only 18% of overall delivery given the relatively large build programme when the housing allocated to Dacorum's settlements is included in the modelling.
- 9.47 Proportionately, the requirement is lowest in Hertsmere and Watford.

The Requirement for Intermediate Affordable and Market Housing

- 9.48 Having arrived at the social housing requirement, the requirement for other tenures is estimated using an affordability based method. The findings of Chapter 7 are used as the basis for this method. The income band that can service intermediate affordable housing is by definition the difference between social rents and market prices, whether market renting or owning.

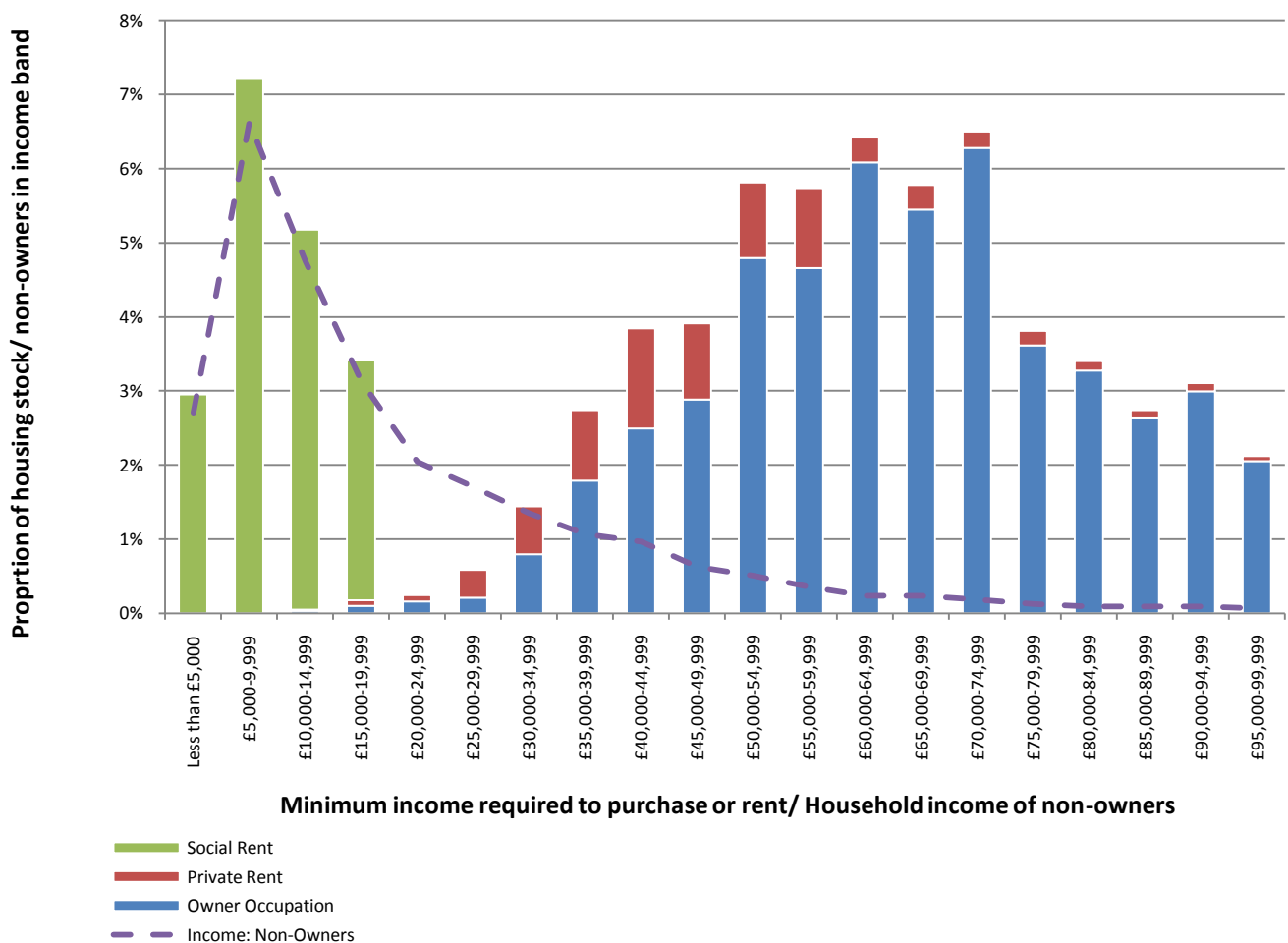
Affordability of the supply of housing available locally

- 9.49 Figure 121 illustrates the relationship between housing costs and household income. It should be noted that all references to income are for household and not individual incomes. It should also be noted that the chart shows the affordability of all housing across LCB (West) based upon recent housing transactions, the size of the social rented stock and a modelled profile of the private rented sector.
- 9.50 The bars indicate the supply of housing that became available in the year to March 2008 affordable to household income bands using an income to mortgage multiplier of 3.5 and if renting, 25% of gross income. The multiplier of 3.5 is used rather than the 2.9 as CML data suggests that lending to first time buyers is on average nearer to 3.5 (3.33 in June 2008 as discussed in the previous chapter). That said, entry level market rents are a more significant factor than purchase prices in the context of this analysis entry level market rents are cheaper than entry level purchase prices. In practice, it is the lower market rents that define the line between intermediate affordable and open market prices.
- 9.51 The dotted line in Figure 121 estimates the percentage of local households who are not already home owners who were likely to be able to afford the housing in each band. This information is derived from the ORS model based upon CACI Paycheck data. This data has been adjusted by ORS to match the profile of household income from a household survey collected by ORS in Bedfordshire in 2004-05. The reason for the adjustment is that CACI Paycheck assumes that household income follows a normal distribution. However, all primary data evidence collected by ORS shows income following a skewed distribution.
- 9.52 The model uses the recent data on the distribution of income to cover the whole period 2001-2021. As is shown in Figure 131 later in this chapter, income levels are much more stable than house prices. Therefore, we consider it a reasonable assumption that income distribution of LCB (West) will remain relatively stable over time.
- 9.53 In using the current income profile as a proxy for the income profile of newly forming households we are following the same assumption which has been used historically in primary data based models. These have taken the income profile from a household survey and projected this forward based on the current affordability profile of an area. ORS's model is taking the income profile of households derived from secondary data sources and projecting this forward.
- 9.54 The number of households only able to afford social rents has been estimated on the basis of 25% of their gross income. Figure 121, below, clearly indicates that in general there is a clear point at which

households can afford more than a social rent. This is an important finding when we come to estimate intermediate affordable and market housing requirements in the next section.

- 9.55 The size of the private rented sector is based upon the number of private rented dwellings on an output area basis at the time of the 2001 Census. The cost of private rented dwellings is obtained by applying a fixed rental yield of 5.9% to property transactions in each output area. Therefore, all properties sold in the output area have a 5.9% yield applied to them and the results are then applied to the size of the private rented sector in that output area.
- 9.56 Evidence for how rental yields for owner occupied dwellings is a good proxy for private rents is shown in 'Cambridge Centre for Housing and Planning Research', August 2008 Private rents and rental rates of return 1996/97 to 2006/07, which shows a strong positive correlation between private rents and lower quartile house prices.
- 9.57 It is apparent that there is likely to be a slightly greater proportion of the housing stock available for those with incomes below £20,000, i.e. the existing social rented stock, than the proportion of households who do not have existing equity that fall into this income bracket. Provided reasonable assumptions about vacancy rates hold, this implies that some of the existing social rented housing stock is occupied by households with incomes that are higher than £20,000 per annum.

Figure 121
Affordability of Housing Stock for Non-owners in LCB (West) based on 3.5x mortgage to household income multiplier and 25% of household income for rent (Modelled based on HM Land Registry, All sale prices applied across the entire stock based upon the value of transactions from April 2007 to March 2008 and Modelled Income Data based on CACI Paycheck adjusted in line with evidence from ORS housing surveys in Bedfordshire & Luton. Social rent figures relate to the total stock which is available)



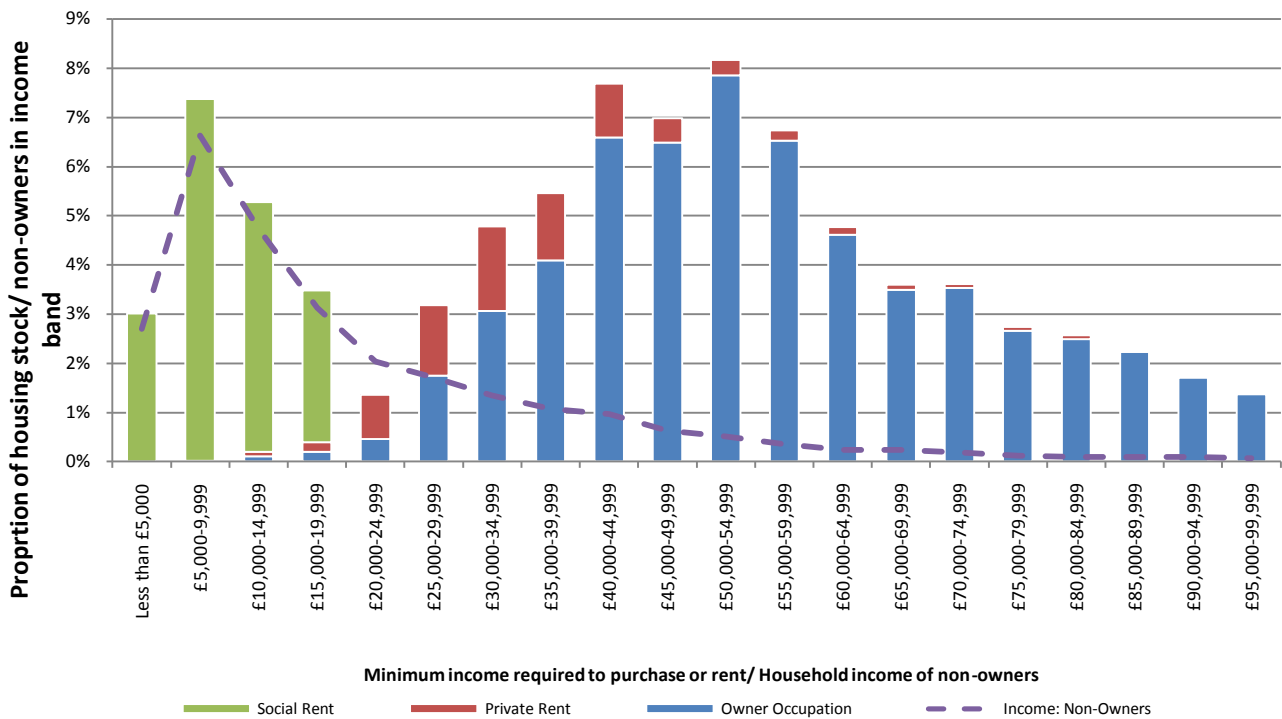
- ^{9.58} In this context, it is perhaps not surprising that almost 2,100 properties have been sold to tenants in the period 2001-07 and that up to a further 2,300 properties are projected to be sold in the period 2007-21.
- ^{9.59} Other than the fact that most landlords seek a declaration that the applicant does not own a dwelling, access to social housing is not specifically means tested by many social landlords. There are many reasons why higher income households apply to be housed by a local authority or registered social landlord, e.g. quality of stock, fear of unemployment, affordable housing costs, security of tenure, proximity to family networks. Further, it cannot be assumed that existing higher earning tenants would be willing to move from their social rented home to an alternative tenure option, in order for households that are less well off to be offered the property. Given the continuing number of new households that are likely to be dependent on the provision of social rented housing, it will be necessary to provide additional social housing for these households.
- ^{9.60} There is a virtually complete absence of housing options affordable to households within incomes of £20,000-29,999 and limited options for those with incomes of £30,000-34,999. This is a potential market for intermediate affordable housing. It must also be recognised that even higher income households may not be able to access the type or size of housing appropriate to their housing requirements on the open market and the potential market for intermediate housing products may therefore extend beyond the £20,000 - £35,000 income groups.

How the Affordability of Housing Changes if Households Borrow More Money

- ^{9.61} Up until recently it has been possible for households to borrow more money than the income multipliers used above, whilst others have had to spend more than 25% of their income to pay their rent. It is useful to see how the surpluses and shortfalls change if households can borrow more money or spend more money based upon their income.
- ^{9.62} Figure 122 is based on the same data, but assuming up to 35% of income to service rents and allowing borrowing at rates of up to 4.5 times a household's income. Whilst these assumptions may be extreme across the population as a whole, the chart helps to demonstrate the difficulties still faced by households in certain income brackets.

Figure 122

Affordability of Housing Stock for Non-owners in LCB (West) based on 4.5x mortgage multiplier for purchase and 35% of income for rent
 (Modelled based on HM Land Registry, All Transactions from April 2007 to March 2008 and Modelled Income Data based on CACI Paycheck adjusted in line with evidence from ORS housing surveys in Bedfordshire & Luton)



9.63 It is apparent that even at these borrowing levels, housing options remain very limited for households in the £20,000-24,999 bands and the amount of stock affordable to those with incomes of £25,000-39,999 is more limited than the stock available to those with incomes of at least £40,000.

9.64 Of course, whilst households have been able to borrow at these higher levels over recent years, the current economic climate (in late 2008) and in particular the “Credit Crunch” has caused lenders to re-evaluate their lending practices. Even if households are prepared in principle to borrow higher amounts to bridge the affordability gap, lenders are no longer prepared to lend at these levels. Figure 121 reflects the current position rather than the situation shown in Figure 122. In practice, many of those households with little or no deposit may not even be able to secure advances of 3.5x income, so the original analysis may actually understate the current problem.

9.65 It is interesting to note how borrowing levels and income multipliers have changed from data published by the Council of Mortgage Lenders (CML). Figure 123, suggests that income multipliers are on average a little over 3.1 for first time buyers. The table contains other interesting information about recent trends affecting first time buyers.

9.66 Further, in relation to local median incomes we note that in 2007 residents in full time employment had incomes ranging from £27,788 to £34,096 depending upon where they lived (Figure 54). In relation to our estimated income for local households who are non earners we note that 60% of households are likely to have income of under £35,000 (Figure 96 (data table)). The increasing size of the deposit required represents an additional challenge for households seeking to become homeowners.

Figure 123

Income multiple for first time buyers in the UK for the year to September 2008 (abstract of CML table ML2 <http://www.cml.org.uk/cml/statistics>)

Month	Number of loans	Age of borrower	Median Advance £	Median Income £	% advance	Income Multiple
2007						
October	30,000	29	117,910	35,342	90	3.36
November	28,800	29	116,437	35,000	90	3.35
December	22,600	28	117,921	35,285	90	3.38
2008						
January	18,000	29	115,000	35,000	89	3.33
February	17,400	29	114,000	34,900	89	3.35
March	17,800	28	114,950	34,840	89	3.35
April	18,800	28	114,277	35,000	89	3.33
May	19,700	28	114,645	35,000	89	3.35
June	18,200	29	113,854	35,000	87	3.33
July	16,500	29	110,250	34,500	86	3.27
August	14,600	29	107,953	34,380	85	3.21
September	13,400	29	104,500	33,960	84	3.18

^{9.67} We believe that the evidence supports our use of using the 3.5x multiplier as first time buyers on average borrow at a higher ratio than 2.9x. The effect of using this larger multiple is to reduce the requirement for affordable housing in our model as households have greater purchasing power against their income and more households will therefore be able to afford market prices.

Estimating intermediate affordable and market requirements

^{9.68} Given the absence of housing options for households with incomes of £20,000 up to at least £30,000, it is not surprising that households with incomes above £20,000 are continuing to live in social rented housing. Furthermore, emerging households with incomes in this range are currently faced with a lack of housing options, which will over time cause them to look further afield for housing which is more affordable to them. Therefore, alongside the need for additional social rented housing there is also a need to examine the potential role that intermediate affordable housing could play within the LCB (West).

^{9.69} However the following evidence suggests that at prices prevailing at 2007/8, households with income up to £35,000 have very limited choice in the market. When considered cumulatively, the proportion of households who have incomes of up to £35,000 and who do not currently have equity in their own home accounts for 16.3% (Figure 98) of all households in the area, whereas only 1.3% of dwellings in the area would be affordable for purchase by this group and 1.2% would be affordable to this group through renting in the private sector (Figure 121).

^{9.70} When the total stock of housing is considered including the social rented stock, the proportion of housing currently available to these households is 21.0%. In this context, there are currently more households in this group than there is housing available. Therefore, some households are having to pay more in housing costs than is considered affordable (on the basis of assumptions within the CLG SHMA Practice Guidance) to support their housing costs.

^{9.71} Note that the model does not assume that all households with incomes of over £35,000 will purchase a dwelling. Instead, the model notes that for households with incomes of £35,000 or more there is

sufficient market housing available when both renting and owner occupation are considered. Under PPS3 definitions, intermediate housing is any dwelling provided at a cost of above social rents, but below the cost of market housing. In the case of LCB (West), the most expensive target social rents are affordable to households with incomes of £20,000. The start of market housing is for households who earn at least £35,000 because this is when sufficient market housing is available for households who have no existing equity. This leaves a gap to be potentially filled with intermediate housing for households with incomes of £20,000-£35,000 who can afford more than target social rents, but for whom there is currently insufficient housing available. The model says that those with incomes of more than £35,000 will occupy market housing which could be either private rent or owner occupation.

^{9.72} The ORS model has, therefore, established the affordability and the supply of dwellings available to this group in the year to March 2008 remembering that most of the existing supply available to this group will be in the form of cheaper private rented dwellings. Next we project the position in 2021. However, we need to consider the effective demand for Intermediate Affordable Housing in order to develop policy implications and this is discussed in the following chapter.

^{9.73} Over the period to 2021, the proportion of owner occupiers will change. The earlier demographic modelling suggests that the proportion of households requiring social rented housing will remain constant over that period. However, if new households are unable to afford the cost of purchasing their home, the proportion in home ownership could be lower than the current 73%. This is illustrated in Figure 124.

^{9.74} The steps taken in Figure 124 can be summarised as:

- from a known baseline according to the census 2001 we know the proportion of households that are owning and renting;
- we deduct the estimated number of households that will die by 2021, 68% of whom are estimated to be owner-occupiers based upon 68% of pensioner households being owner occupiers at the time of the 2001 census;
- we add the estimated increase in households that will form and apportion these households between those likely to afford home ownership and those not from our model based upon the household income profile of all households; and
- we calculate the net increase in households by tenure and show the new proportion of households that are owning or renting.

Figure 124

Exemplification of Projected change in Home Ownership for the LCB West Sub-region 2001-2021 (Note: Figures may not sum due to rounding)

	Owned	Rented	Overall Total
Existing Households			
As at April 2001	183,300	68,800	252,100
	73%	27%	100%
Projected Impact of Death			
Proportion of pensioner households (as at 2001)	68%	32%	100%
Household dissolution following death 2001-2021	37,500	17,400	54,900
Projected Impact of New Households			
Proportion of all households able to afford home ownership/ residual assigned to rented (as at 2007)	41%	59%	100%
New household formation 2001-2021	40,900	57,400	98,300
Net change 2001-21 based on affordability modelling	3,400	40,100	43,400
Projected Households			
Projected by 2021 based on affordability modelling	186,600	108,900	295,500
% of households	63%	37%	100%

^{9.75} Figure 125 is taken from ORS modelled data derived from CACI Paycheck. It shows that 41% of all households are able to afford home ownership. This proportion is derived by taking the 58.5% of households with incomes of up to £34,999 from 100% leaving a residual of 41% (rounded) of households who have incomes in excess of £35,999 and can therefore afford home ownership.

Figure 125

Affordability of Home Ownership by Household Income for the LCB West Sub-region 2001-2021 (Note: Figures may not sum due to rounding)

Income Band	All Households	Cumulative %
Less than £5,000	4.2%	4.2%
£5,000-9,999	12.4%	16.6%
£10,000-14,999	10.5%	27.1%
£15,000-19,999	9.1%	36.2%
£20,000-24,999	8.2%	44.4%
£25,000-29,999	7.2%	51.6%
£30,000-34,999	6.9%	58.5%
£35,000-39,999	5.8%	64.3%
£40,000-44,999	5.5%	69.8%
£45,000-49,999	4.5%	74.3%
£50,000-54,999	3.8%	78.1%
£55,000-59,999	3.1%	81.2%
£60,000-64,999	2.5%	83.7%
£65,000-69,999	2.2%	85.9%
£70,000-74,999	1.9%	87.8%
£75,000-79,999	1.6%	89.4%
£80,000-84,999	1.4%	90.8%
£85,000-89,999	1.3%	92.1%
£90,000-94,999	1.1%	93.2%
£95,000-99,999	0.9%	94.1%

- 9.76 Again referring to Figure 124, on the assumption that the relationship between housing costs and household income remains constant, the affordability modelling suggests that the proportion of households who are homeowners is projected to fall to from 73% in 2001 to 63% by 2021.
- 9.77 The model is projecting that if current affordability persists until 2021, only an extra 3,400 households will be able to afford owner occupation when compared with 2001. However, based upon the existing pattern of home ownership and market renting combined with the current levels of affordability, another 20,000 households will have incomes of over £35,000 but will occupy private rented dwellings rather than owner occupied ones.
- 9.78 This means the balance of the requirement between market and intermediate affordable housing will change by 2021 therefore we need to estimate the requirement for intermediate affordable housing.
- 9.79 Based upon our affordability model, by 2021, we estimate that 30% of all households would have incomes of less than £35,000, at current values, with no equity available from existing property, which equates to 88,900 households across the sub-region (Figure 126):

Figure 126
Number and proportion of households unable to afford market housing for the LCB West Sub-region at 2021

	Housing Tenure	Number	%
Households at 2021			
	Owned	186,600	63.0%
	Rented	108,900	37.0%
	All Households	295,500	100%
Income of Non-owners			
	Above £35,000	20,000	7%
	£20,000 up to £35,000	20,300	7%
	Up to £20,000	68,600	23%
	All Non-Owners	108,900	37%
Able to afford Market Housing			
	Current owners	186,600	63%
	Non-owners with income above £35,000	20,000	7%
	Sub-total	206,600	70%
	Total Unable to Afford Market Housing	88,900	30%

- 9.80 As noted earlier, the household income profile for all households in LCB (West) is based upon CACI Paycheck figures which have been adjusted using Bedfordshire primary data. The income profile for non-owners is obtained for each output area by using the adjusted CACI Paycheck data for that output area and matching this to the proportion of non-owners at the time of the 2001 Census. As was shown earlier, by 2021 the model is projecting that 37% of households will not be owner occupiers in 2021. If we apply the estimated income distribution for non-owners to this group, 7% of all households (18% of non-owning households) have incomes of more than £35,000 and can therefore afford market rent housing. Meanwhile, 23% of all households (63% of non-owning households) will have incomes of less than £20,000 and will require social housing. This leaves 7% of all households (19% of non-owning households) who have incomes between £20,000 and £35,000

who can afford intermediate, but not market housing. The needs of this group now require to be compared with the level of supply of housing in this price range.

- 9.81 There would be 9,000 dwellings in the private sector affordable to this group, on the assumption that the relationship between housing costs and income remains constant and on the assumption that the type and size of property match the housing requirements of those in this group. This is arrived at by multiplying the proportion of dwelling stock available in the year to March 2008 affordable to this group by the projected number of households at 2021.
- 9.82 The social rented sector would need to grow to 53,200 units (Figure 119). Meanwhile, there was the delivery of 700 intermediate affordable homes across the sub-region over the period 2001 to 2007, this provides a total stock of 62,900 dwellings affordable to those with incomes below £35,000.
- 9.83 Given an overall total of 88,900 households with incomes of less than £35,000 an overall stock of 62,900 dwellings affordable to this group, there is an implied shortfall of 26,000 intermediate affordable housing units.
- 9.84 This requirement for intermediate affordable housing is in addition to the 8,500 social rented homes previously identified, yielding an overall requirement for 34,500 affordable homes across the sub-region over the period to 2021. This actually exceeds the total dwelling delivery 2007-2021 as we identified in Figure 119 that 12,200 of the RSS target for additional housing had been delivered leaving a net target of 31,300 still to be delivered by 2021.
- 9.85 The overall housing tenure mix required for the sub-region based on affordability at 2007-08 levels and growth constrained to the residual RSS target of 31,300 homes can be summarised as in Figure 127.

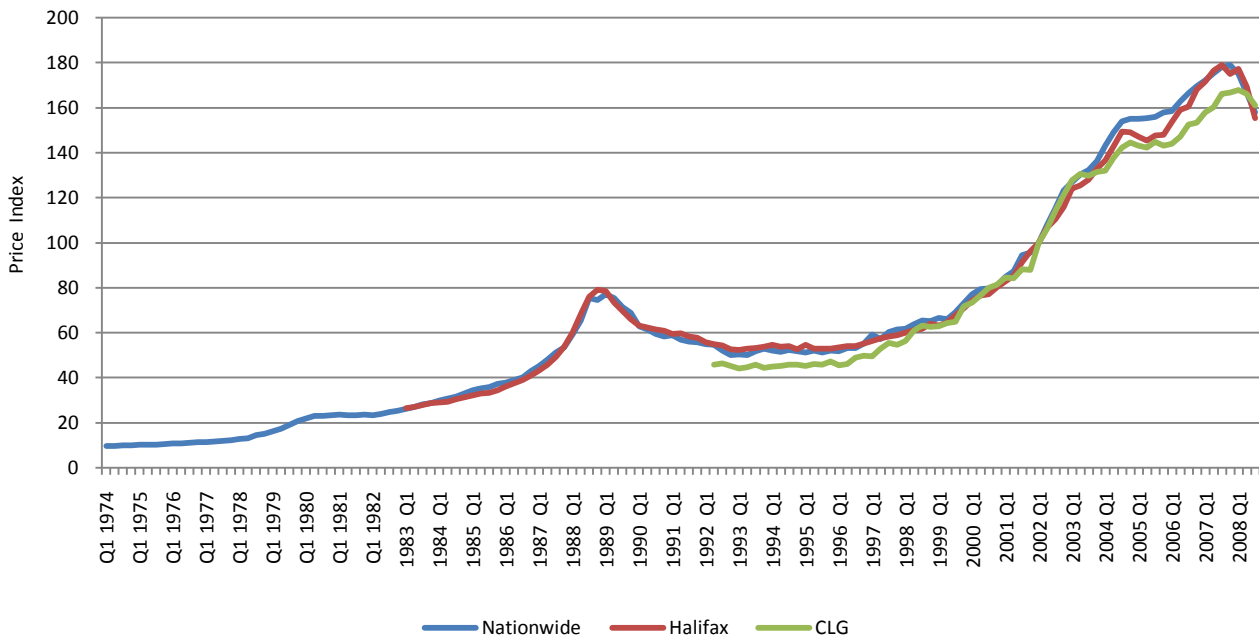
Figure 127

Overall Housing Requirement for the LCB West Sub-region 2007-2021 (Note: Figures may not sum due to rounding)

Housing Tenure	Requirement 2007-2021	
	Number of Units	%
Market Housing	(3,200)	(10.2%)
Intermediate Affordable Housing	26,000	83.2%
Social Rented Housing	8,500	27.1%
Overall Housing Requirement	31,300	100.0%

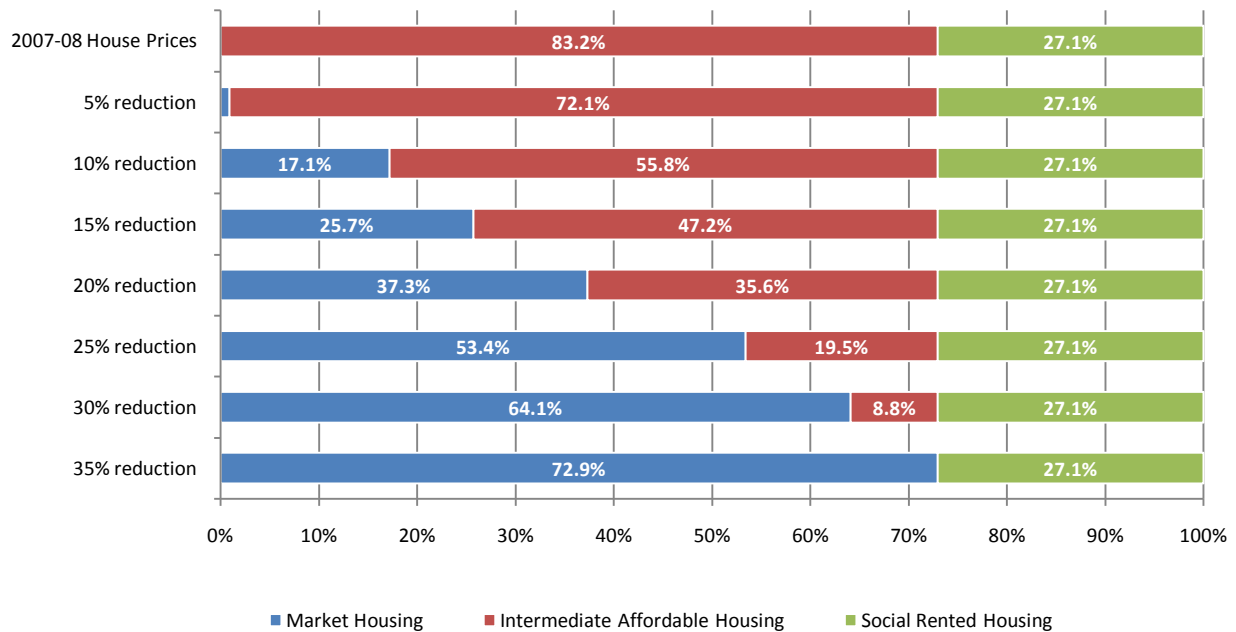
- 9.86 This is an extreme conclusion. The results show that the need for both social rented housing and intermediate affordable housing cannot be satisfied by the existing stock, hence the identified requirement for additional provision and the negative value for market housing. The overall level of affordable housing provision required exceeds the overall build programme for the sub-region.
- 9.87 However this is at 2007/8 house prices which were approaching the peak of their cycle. Because of recent changes in house prices as illustrated in Figure 128, we have developed another scenario for the estimation of the housing requirement to 2021.

Figure 128
Average House Prices in the East of England (Note: April 2002 = 100. Source: Nationwide House Price Index, Seasonally Adjusted; Halifax House Price Index, Seasonally Adjusted; CLG Live Tables)



- 9.88 As house prices fall, more dwellings in the private sector will become affordable to households without equity and with incomes below £35,000, consequently, the need for intermediate affordable housing will reduce. Furthermore, lower house prices will lead to more households being able to afford market housing and the requirement for additional market housing will increase. It should also be noted that as house prices fall and more stock becomes affordable for households on lower incomes the threshold for intermediate housing falls. Therefore, when we reduce house prices to their long-term price level, the income band for intermediate affordable housing narrows to £20,000-£30,000 rather than the £20,000-£35,000 at 2007/8 house prices.
- 9.89 The requirement for social rented housing will not change as it is always the cheapest housing available and the margin between social rents and market housing is by definition, intermediate affordable housing. The social housing requirement is independent of market prices. Social rented housing is normally occupied by a group of people who have neither the income nor the status to consider market housing or home ownership, i.e. those on very low income and state benefit get housing benefit help described in the lowest income bands in Figure 99. Evidence published by the HCA and CLG show that target rents rise slowly and show none of the volatility of purchase prices. For this reason, and the fact that it is and probably always will be in short supply, a trend based assessment of social housing requirement is the most appropriate and realistic methodology.
- 9.90 It is possible to test the housing mix given a range of differing house price scenarios. The outcome of these scenarios is detailed in Figure 129 below.

Figure 129
Scenario Testing of Overall Housing Requirement for the LCB (West) Sub-region 2007-2021



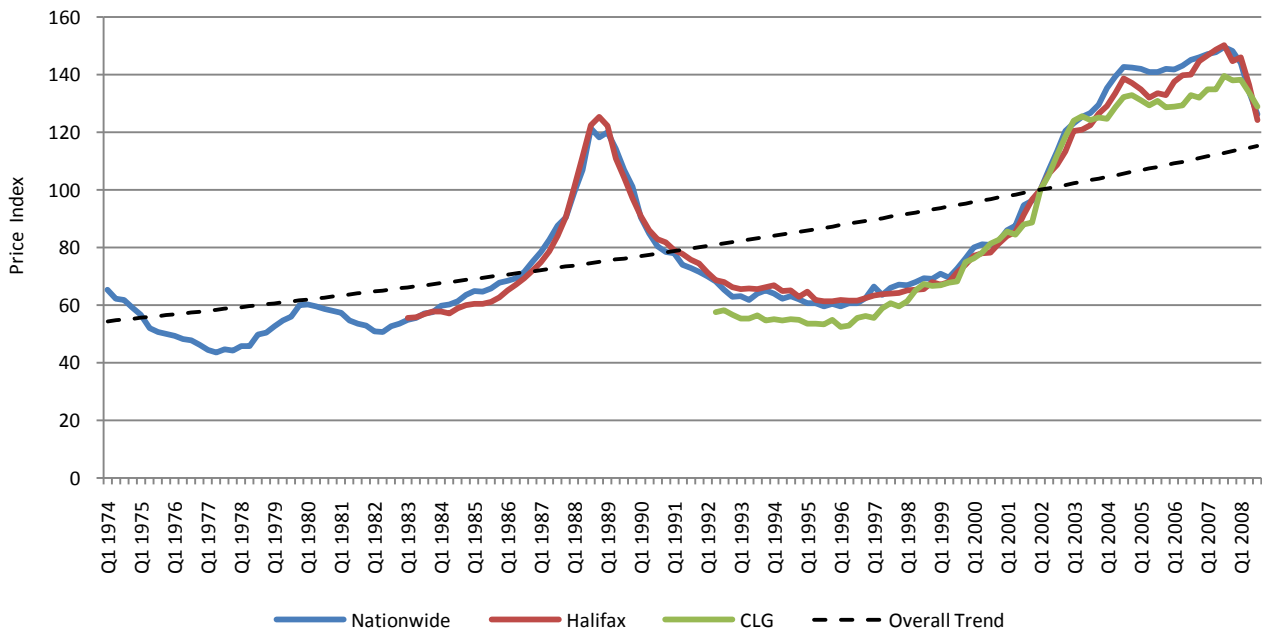
- 9.91 Whilst intermediate affordable housing constitutes a significant proportion of the housing requirement based on 2007-08 prices, it is clear that the level of intermediate affordable housing requirement is sensitive to changes in house prices. It is estimated that house prices have already fallen at least 10% from their peak but at current prices intermediate affordable housing still accounts for a significant proportion of the overall requirement (in addition to the 27.1% requirement for social rent).
- 9.92 Nevertheless, if house prices fall to 25% below their 2007-08 peak prices, the need for intermediate housing falls to 19.5% of the overall requirement. If house prices were to reduce by 35% and did not increase again from this level, there would be no requirement for additional intermediate affordable housing in the sub-region.
- 9.93 However, prices will probably recover, so there is likely to be an ongoing requirement for intermediate affordable housing products in the sub-region.

Assessing the Affordable Housing Requirement against Long Term Price Trends

9.94 As previously noted, house prices are very volatile in the short term. Figure 130 shows the change in house prices adjusted to take account of inflation. Also shown is the long-term trend of growth in house-prices.

Figure 130

Real House Price Trends in the East of England after inflation (Note: April 2002 = 100. Source: Nationwide House Price Index, Seasonally Adjusted; Halifax House Price Index, Seasonally Adjusted; CLG Live Tables; Retail Price Index, ONS)



9.95 As our latest analysis is based on housing transactions and income in the period April 2007 to March 2008, and is therefore not necessarily sufficiently representative to be projected forward, we have calculated a long term trend between appropriate points in the cycle and based on a weighted average of house price indices and discovered this to be on average 21.5% lower than the actual house price indices for the period.

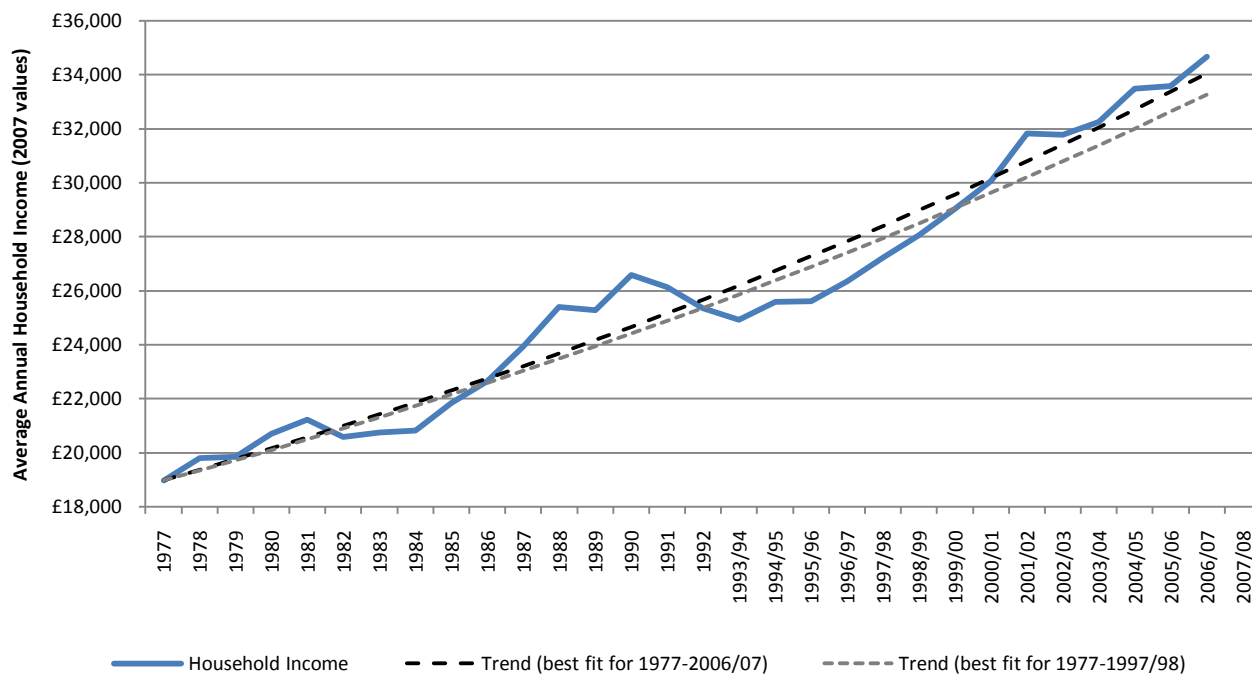
9.96 In calculating affordability, we are not only interested in the cost of housing but we are interested in the relationship between house prices and incomes. If house prices and incomes are expected to change at the same rate over the period to 2021, then it is appropriate to consider the current relationship between the two when considering the requirements over the full period. Nevertheless, where house prices and incomes are anticipated to change at different rates, it is important to also consider the relative differences between the two.

9.97 Figure 131 (overleaf) shows that average household incomes across the UK have increased from just below £19,000 in 1977 to £34,700 in 2006/07. The chart also shows the two possible trends in income growth, calculated on the following basis:

- the first trend (with results shown as a dashed black line on the chart) considers the trend based on the observed data for the whole period from 1977 to 2006/07. This shows that actual incomes are currently only slightly above the long term trend; and
- the second trend (with results shown as a dotted grey line on the chart) considers the trend based on the observed data for the first twenty years of the period from 1977 to 1997/98. This shows a more conservative trend, suggesting that current incomes are higher than the

expected long term, though this difference is less marked than observed at the time of the last peak in 1991. It would still be expected that average household incomes will “correct” themselves with a slow-down in growth or possible reduction over the next few years.

Figure 131
Average UK Household Income Trends 1977-2007 (Source: ONS)

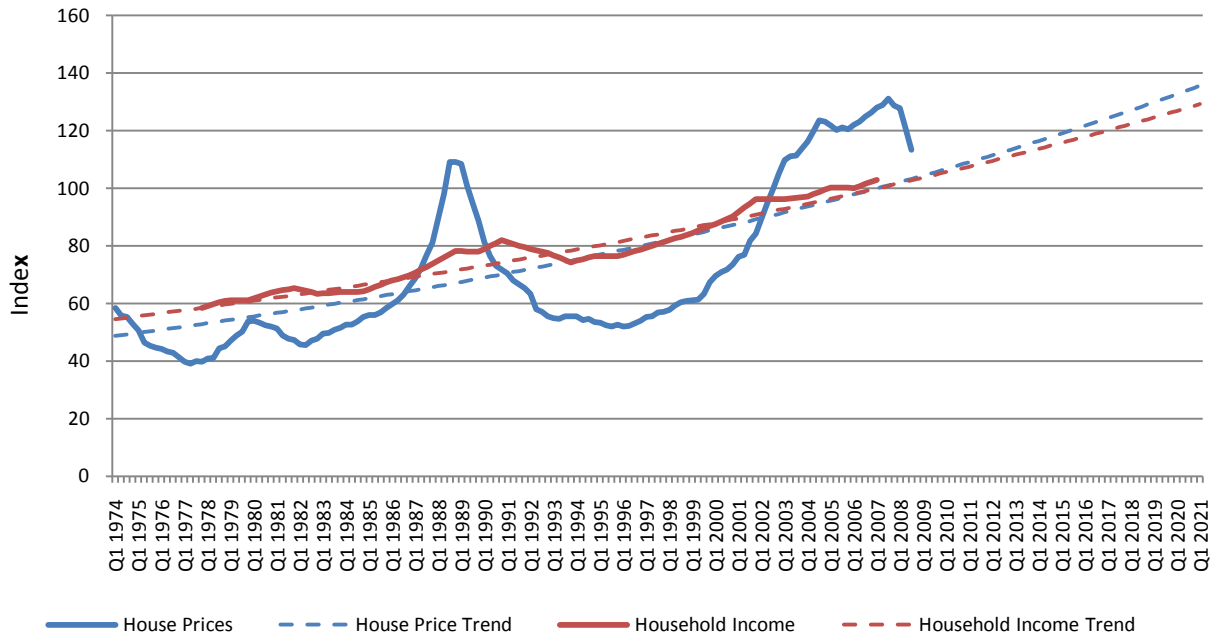


^{9.98} Because the first trend begins in a trough and ends near the peak before the 2008/9 economic recession, it is likely that the long term trend for incomes will be lower than might have been projected. In comparing long-term income growth with long-term house price growth, we have considered the second approach outlined above as the most realistic.

9.99 Figure 132 illustrates the relative trends in incomes and house prices for the Eastern region together with the projections for the index to 2021 based on the identified trends.

Figure 132

Average House Price and Average Household Income Trends (Note: Long-term trends at Q1 2007 = 100. Source: Nationwide House Price Index, Seasonally Adjusted; Halifax House Price Index, Seasonally Adjusted; CLG Live Tables; Retail Price Index, ONS; Social Trends ONS, Regional Trends ONS)



9.100 On the basis of Figure 132, by 2021, the house price index is projected to reach 135.7 whilst the income index is projected to be lower at 129.3, so the assumption that the relationship remains constant appears inappropriate.

9.101 It is important to recognise that one of the key drivers to increasing house prices is the growth in incomes. The reasons for house prices growing faster than incomes is inevitably complex but contributing factors include:

- **New housing supply** – across the UK over recent years, the estimated number of additional households has exceeded the number of new homes provided, so there has been increased demand for the available housing, both the existing stock and new housing, which will have contributed to higher prices. Work by the National Housing and Planning Advisory Unit (NHPAU) has identified a supply range for new housing for each England region to counter the impact of constrained supply on affordability, but it is recognised that this is unlikely to have an impact on affordability until a step-change in housing delivery has been achieved at a national level;
- **Access to capital** – either through inheritance or equity, capital provides extra purchasing power, although this does not normally apply to younger households/first time buyers; and
- **Access to finance** – in recent years, financial institutions had become increasingly more prepared to lend larger amounts of money to households than had historically been available to them. This increased borrowing power led to households being able to afford more for their housing, which in turn is likely to have contributed to higher house prices. In the light of the “credit crunch” it is believed that lending will not be available to the same extent in the future, especially to borrowers with poor credit ratings. This could suppress house price growth.

Nevertheless, whilst the restrictions on finance should avoid house prices climbing to the actual levels seen in 2007/08, these are considerably higher than those observed in the long-term trend so at this stage it would seem premature to suggest any change was required.

- ^{9.102} As described in Figure 130, house prices in 2007-08 were 21.5% above the long-term house price trend. When considering the growth in house price and income trends over the period 2007-21, it is estimated that the growth in house prices would be 3.6% more than the growth in income as an average for the whole period.
- ^{9.103} Therefore, in considering the projected housing mix for the period 2007-21, house prices used for the affordability have been reduced from the 2007/08 level by 21.5% to take account of long-term house price trends. This lower figure has then been increased by 3.6% to take account of faster growth in the trend of house prices than the trend for household income. This is equivalent to an 18.7% reduction in prices with static incomes.
- ^{9.104} Figure 133 and all subsequent figures and charts unless stated otherwise show the housing mix on the basis of the adjusted affordability analysis at the sub-regional level. Growth is constrained to the residual RSS target, that planned less already built. All the key tables and graphs based on the 2007/8 price level have been reproduced with an estimated 18.7% price cut taken into account.
- ^{9.105} As was stated earlier in paragraph 98, in this reduced price scenario, the income band for intermediate affordable housing has narrowed to a £10,000 band with household incomes between £20,000 and £30,000 p.a.

Figure 133

Overall Housing Requirement 2007-2021 based on Long-term house price trends LCB (West) Sub-region (Note: Figures may not sum due to rounding)

Housing Tenure	Requirement 2007-2021	
	Number of Units	%
Market Housing	10,900	34.9%
Intermediate affordable Housing	11,900	38.0%
Social rented Housing	8,500	27.1%
Overall Housing Requirement	31,300	100.0%

- ^{9.106} Figure 134 and Figure 135 demonstrate the modelled requirement for each district and the sub-markets. Note that the social housing requirement is unaltered. The tables demonstrate how the balance between market housing and intermediate affordable housing varies as average prices change. As notes above, the income band for intermediate affordable housing differs between the two scenarios described in Figure 134. In the second scenario it has changed from £20,000 to £35,000 to £20,000 to £30,000 p.a. as at lower market prices more people will be able to afford market housing (Figure 129).
- ^{9.107} The local results below do not necessarily sum to match the sub-regional figures. This assumes that households' needs are addressed within their own LA area whereas the sub-regional figure considers the areas as a whole. For example, at a sub-regional level, the cheaper housing stock of Dacorum is assumed to help to meet the intermediate affordable housing requirements of the whole sub-region. However, when analysed from a local authority perspective, Dacorum is only assumed to meet the needs of Dacorum residents. The consequence of this distinction is that the intermediate affordable housing requirement is lower for the sub-region as a whole than it is if we sum together the requirements for each individual authority.

Figure 134
Housing Requirement by LA 2007-2021 (Note: Figures may not sum due to rounding)

Housing Tenure	Local Authority					
	Dacorum	Hertsmere	St Albans	Three Rivers	Watford	Welwyn Hatfield
House Prices at 2007-08 levels						
Market housing	2,100	(1,500)	(2,000)	(1,800)	(1,100)	600
Intermediate affordable housing	2,600	4,700	7,700	3,800	4,100	3,300
Social rented housing	3,100	500	1,300	700	600	2,800
Total Housing Requirement	7,800	3,600	7,000	2,700	3,600	6,600
Market housing	27.3%	-	-	-	-	8.4%
Intermediate affordable housing	33.3%	91.1%	86.0%	84.6%	88.0%	49.2%
Social rented housing	39.3%	8.9%	14.0%	15.4%	12.0%	42.4%
House prices based on long-term trends						
Market housing	4,800	400	400	(400)	800	3,400
Intermediate affordable housing	0	2,700	5,300	2,300	2,100	500
Social rented housing	3,100	500	1,300	700	600	2,800
Total Housing Requirement	7,800	3,600	7,000	2,700	3,600	6,600
Market housing	60.7%	11.3%	6.2%	-	23.9%	50.8%
Intermediate affordable housing	-	75.9%	75.8%	77.1%	60.4%	6.9%
Social rented housing	39.3%	12.8%	18.1%	22.9%	15.7%	42.4%

Figure 135
Housing Requirement by Sub-Market 2007-2021 (Note: Figures may not sum due to rounding)

Housing Tenure	Housing Sub-Market			
	Hemel Hempstead	St Albans	Watford	Welwyn Garden City & Hatfield
House Prices at 2007-08 levels				
Market housing	1,500	(2,500)	(4,500)	(700)
Intermediate affordable housing	3,100	8,000	11,800	5,800
Social rented housing	3,000	1,400	2,100	2,400
Total Housing Requirement	7,600	6,900	9,500	7,600
Market housing	19.2%	-	-	-
Intermediate affordable housing	41.0%	85.3%	84.7%	70.7%
Social rented housing	39.7%	14.7%	15.3%	29.3%
House prices based on long-term trends				
Market housing	6,100	200	2,400	4,000
Intermediate affordable housing	0	3,600	4,900	1,100
Social rented housing	3,400	1,100	2,100	2,400
Total Housing Requirement	9,500	5,000	9,500	7,500
Market housing	63.8%	4.3%	25.7%	52.8%
Intermediate affordable housing	-	72.9%	51.9%	15.3%
Social rented housing	36.2%	22.8%	22.4%	32.0%

^{9.108} It is important to understand the significance of apparent surpluses of dwellings in the above figures in certain scenarios and the practical implications of these outputs. This does not mean that new build housing in Watford or Three Rivers should not be built or that there will be no demand for it. Firstly, delivery of affordable housing will be generated by new build market housing development on qualifying sites. In addition, in recent years there has been a large growth in households in the private rented sector. Investors have been active in the new build market. New-build stock that sells

to existing owner occupiers will result in a chain of second hand housing being released. Such housing will tend to be smaller and cheaper and accessible to a wider group of people thus helping to meet part of the overall housing requirement. The ORS Housing Mix Model should be interpreted as saying that if the affordability profile of households in Watford and Three Rivers does not improve, there will be significant requirement for additional affordable housing.

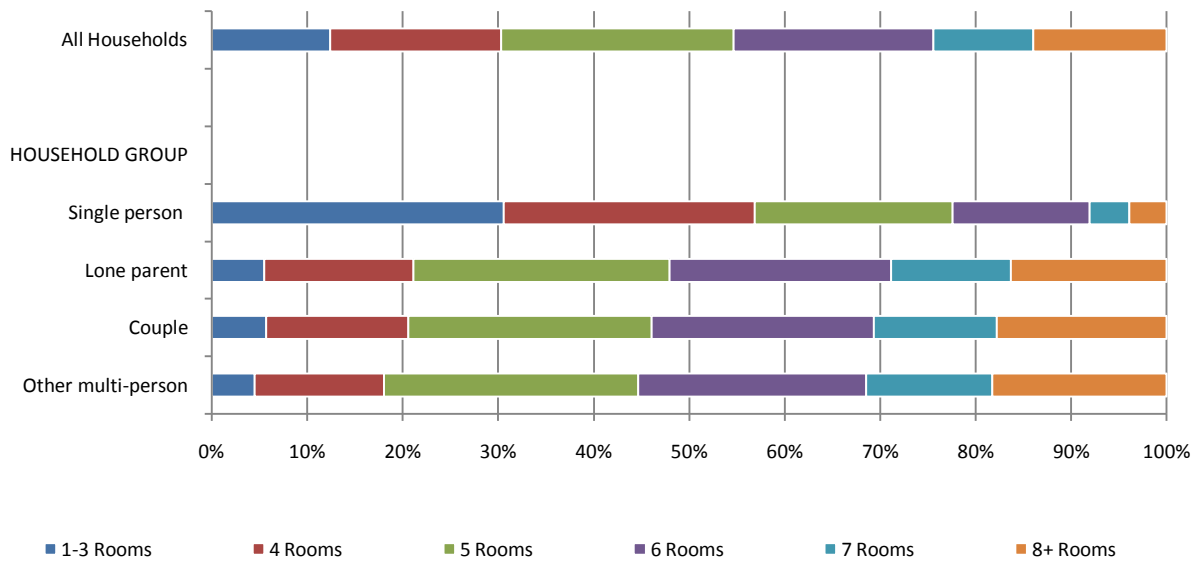
Estimating the future balance between market housing for sale and rent

- ^{9.109} Note that Figure 133 to Figure 135 refer to market housing which is a mix of private rented housing and owner occupied housing. It is very difficult to predict how the proportions will change in the period between 2008 and 2021. The private rented sector is understood to have grown rapidly in the period between year 2001 and 2008. An accurate number will not be available until the 2011 census results are available. Our assumptions built into the requirements analysis were based upon affordability trends. In reality the proportion is a market response to a range of possible scenarios and these are now briefly considered.
- ^{9.110} The balance between owning and renting market housing will inevitably depend on a range of factors.
- ^{9.111} Ignoring the credit crunch, the drivers for the private rented sector can be considered in terms of supply and demand.
- ^{9.112} Demand is likely to be robust especially from younger households. Even allowing for some downward adjustment in purchase prices, it is unlikely that the affordability gaps described above will be met from an adequate supply of affordable housing. Other cost of living factors will also present a barrier to aspiring home owners on lower incomes as they have less disposable income to absorb increasing costs.
- ^{9.113} Change of supply of rented housing will be more volatile depending upon returns for investors compared to other investments. This will also be dependent on a wide range of fiscal and economic factors.
- ^{9.114} If the credit crunch is considered we see both the fall in house prices and credit restrictions constraining demand for home ownership but overall no reduction in demand for housing per se.
- ^{9.115} On the supply side it is unlikely that landlords will sell existing stock unless absolutely forced to. Even if no new investment occurs for the time being it is hard to see that the size of the sector will diminish. If the cost of borrowing becomes low and prices are cheap, landlords with cash may be inclined to seize the opportunity to invest further.

Size Mix of Future Housing Requirements

- ^{9.116} Figure 136 shows the size of properties occupied by different household groups at the time of the 2001 Census. This shows that single person households in particular were disproportionately likely to be found in smaller housing, over 30% having three rooms or fewer, and almost a further 30% occupying dwellings with four rooms. Multi-person households tended to occupy larger properties and lone parents tended to occupy smaller properties, the differences between these groups are less marked than for single person households.

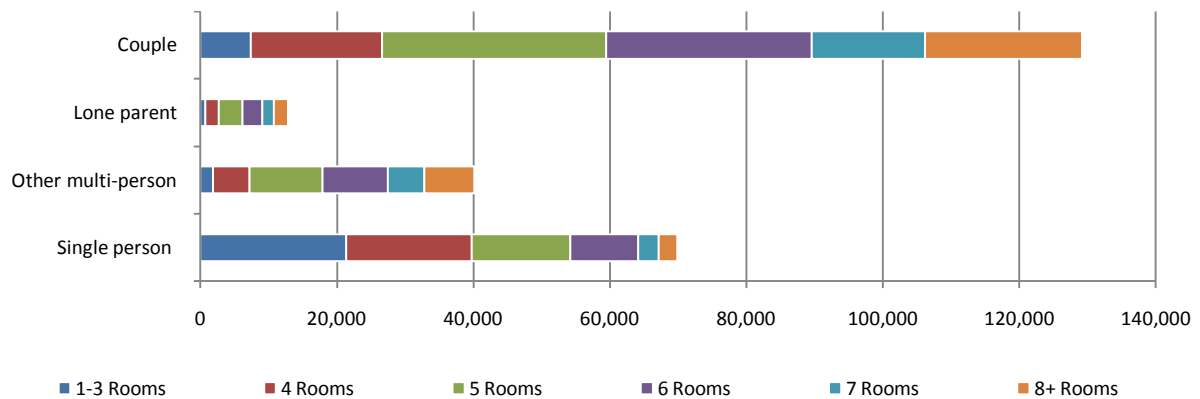
Figure 136
 Housing Size Mix by Household Type (Source: UK Census of Population 2001)



9.117 It is clear that the size mix differs quite markedly for each household type, so as the proportion of households of each type changes in line with the earlier projections, this will influence the mix of sizes required.

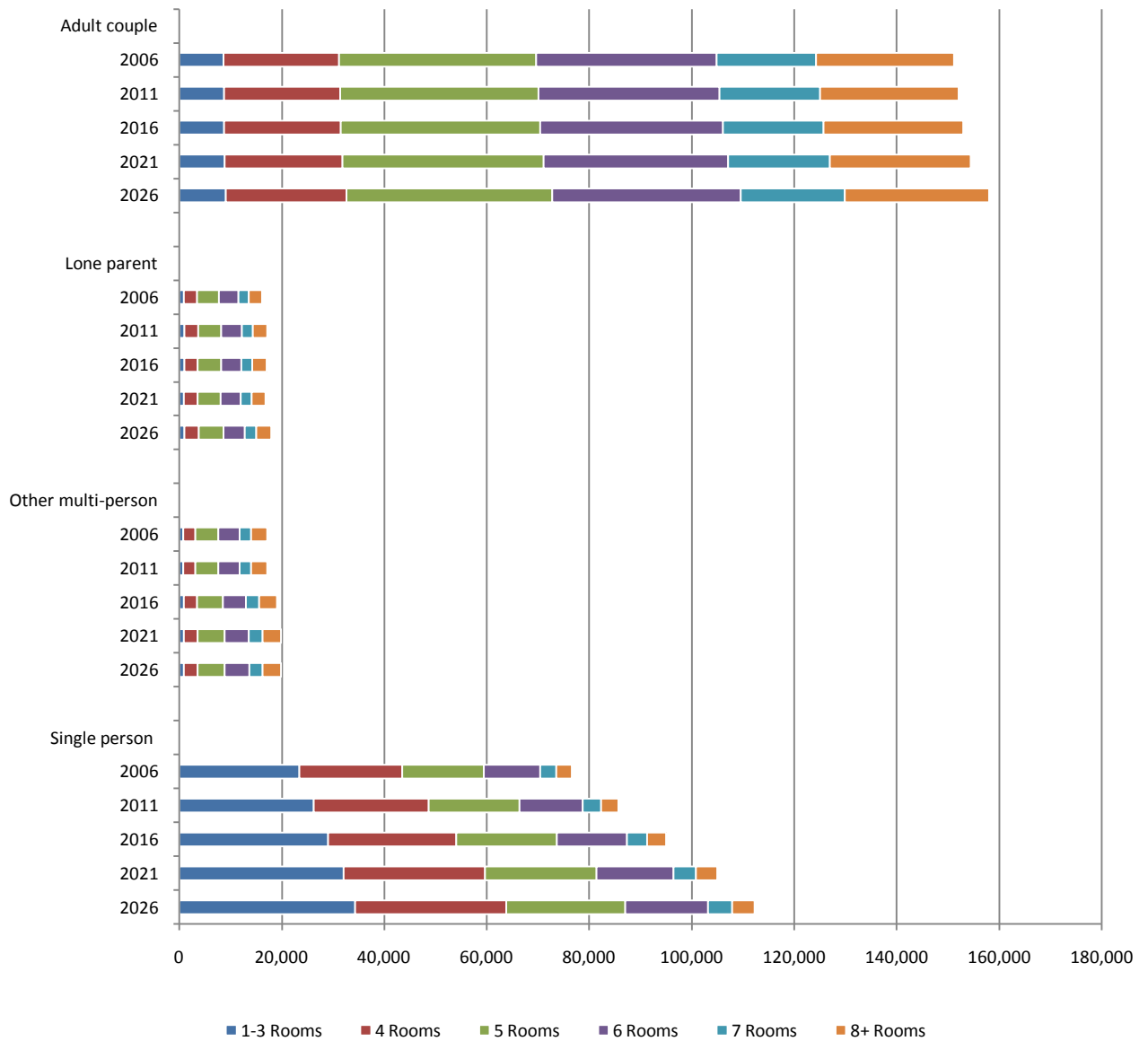
9.118 Figure 137 shows the numbers of households in each property size broken down by household type as at the time of the 2001 Census.

Figure 137
 Number of Households by Housing Size and Household Type (Source: UK Census of Population 2001)



9.119 Figure 138 illustrates the projected change in size of each household group, and the implied size mix on the basis of maintaining the proportions constant.

Figure 138
Household Projections to 2026 by Household Type and Size (Source: LCB West SHMA, 2008)



^{9.120} When the requirements of each household type are combined, the overall size mix can be summarised as follows in Figure 139, Figure 140 and Figure 141.

Figure 139
Household Projections to 2026 by Housing Size (Source: LCB East SHMA, 2008)

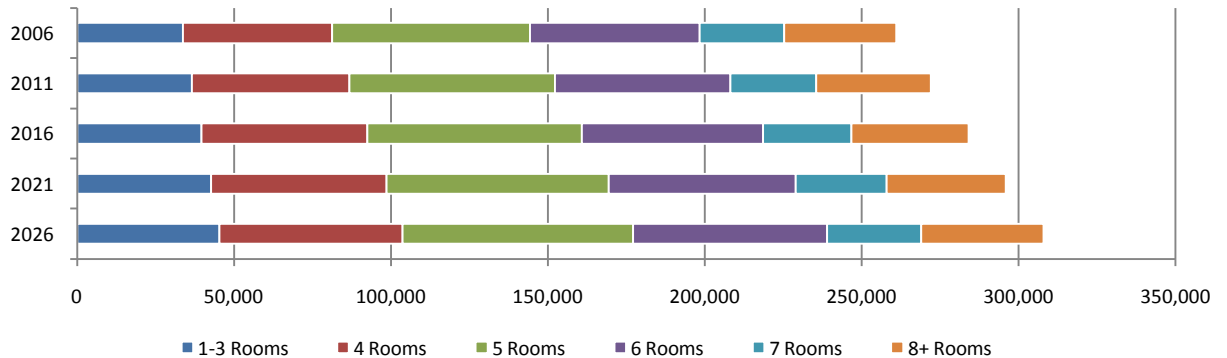


Figure 140
Housing Size Mix as at 2001 compared to Projected Housing Size Mix 2021

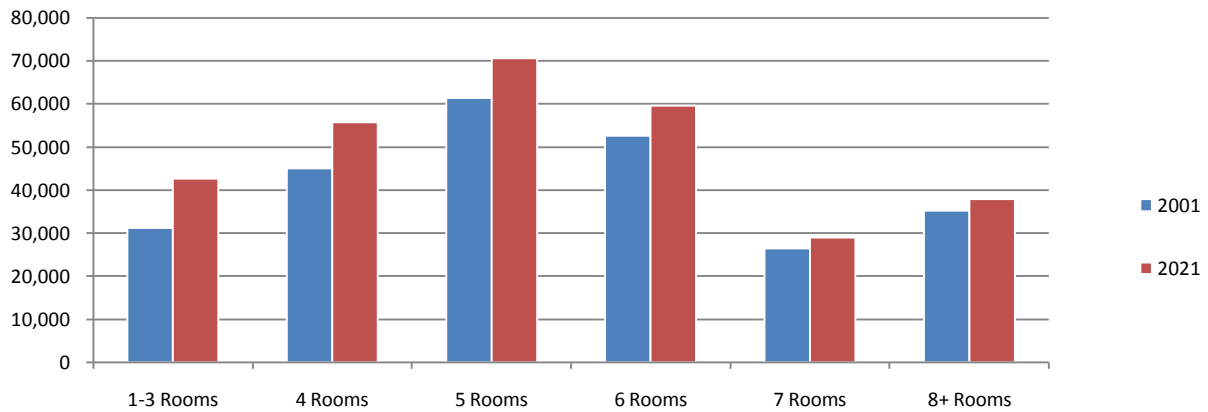
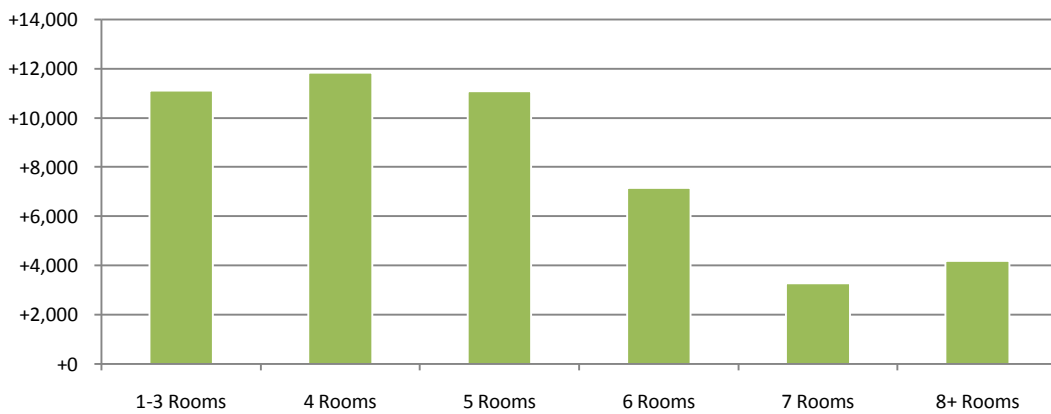
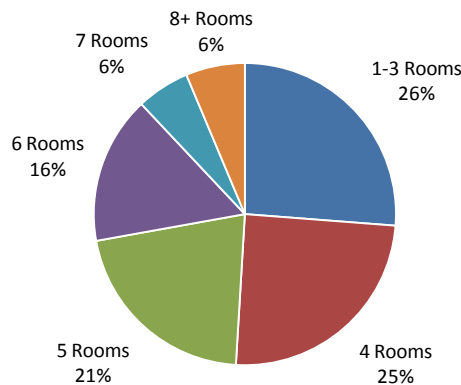


Figure 141
Net Change in Required Housing Size Mix 2001- 2021



^{9.121} When we consider this mix proportionately, across the whole of the sub-region the size-mix balance needs to become; just over a quarter (26%) as having 1-3 rooms, a further quarter (25%) with four rooms, 21% with 5 rooms, 16% with 6 rooms and 6% for both 7 room and 8+ room properties.

Figure 142
Net Change in Required Housing Size Mix 2001- 2021

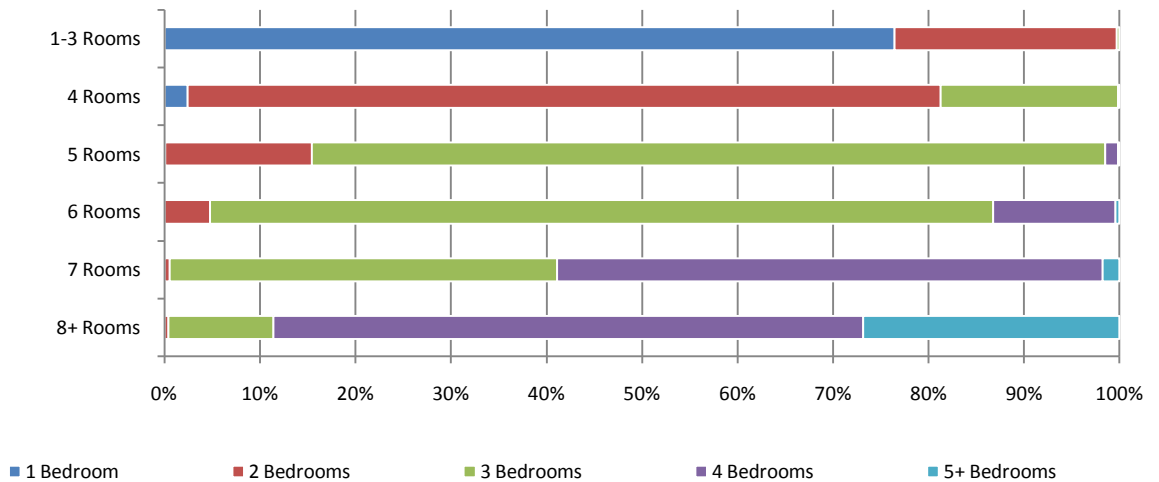


Relating room requirements to bedroom requirements

9.122 Of course, when considering dwelling mix it is often the case that the number of bedrooms is considered in favour of the overall number of rooms in a property, despite data sources such as the Census and Survey of English Housing typically reporting on the total number of rooms.

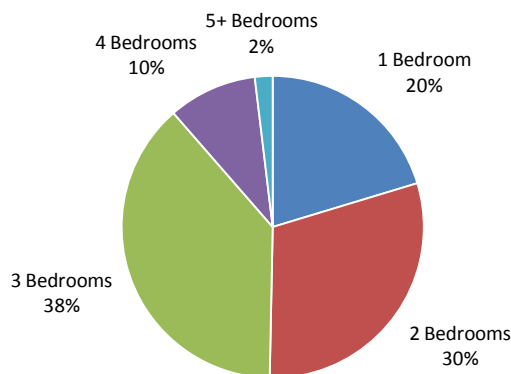
9.123 Figure 143 summarises the relationship between property size and number of bedrooms from an amalgamated dataset from household interviews completed by ORS. Whilst the data does not relate directly to the LCB (West) area, it provides a reasonable mechanism for translating between the number of rooms and the number of bedrooms in a property.

Figure 143
Number of Bedrooms by Number of Rooms (Source: ORS Household Surveys)



9.124 Using the above information, it is possible to consider the additional housing requirement in terms of the number of bedrooms required. Figure 144 shows that it is apparent that half of the additional housing should be provided as 1 or 2-bed homes (20% and 30% respectively) with 38% being 3-bed properties, 10% being 4-bed homes and 2% of properties requiring 5 or more bedrooms.

Figure 144
Net Change in Required Housing Size Mix by Number of Bedrooms 2001- 2021



9.125 When we consider this requirement to 2001 to 2021 alongside the supply of housing delivered over the period 2001-07, it is apparent that there is a considerable delivery deficit of 3 bedroom homes and a lesser deficit of one and two bedroom homes.

Figure 145
Housing Size Mix 2001- 2021 and Dwelling Delivery 2001-07 by Number of Bedrooms

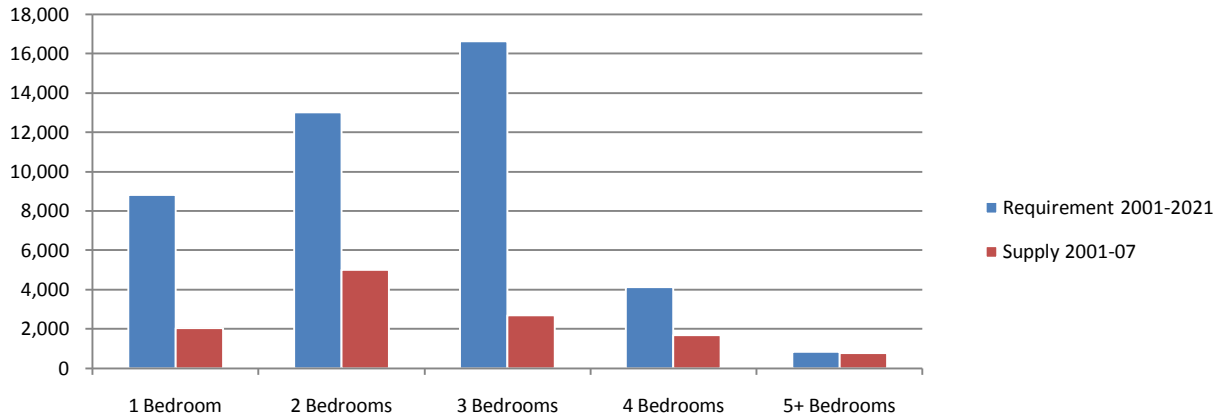
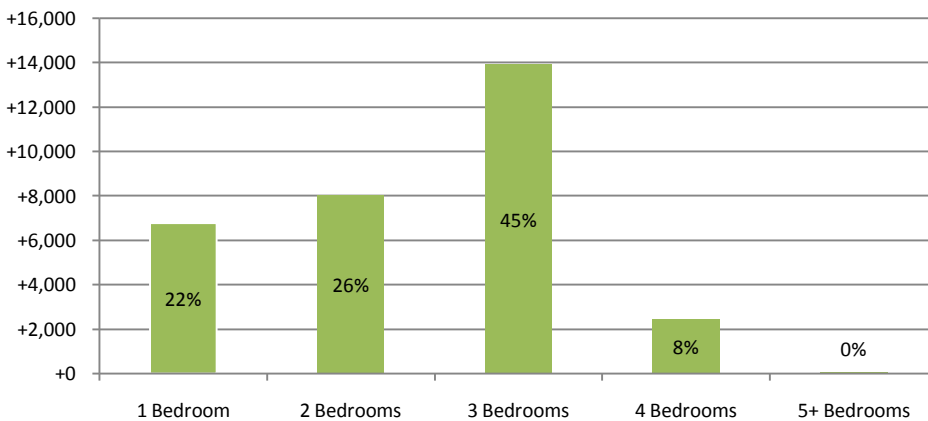


Figure 146
Required Housing Size Mix 2007- 2021



9.126 The size mix for each of the districts is detailed below.

Figure 147
Size Mix of the Housing Requirement to 2021 by LA (Note: Figures may not sum due to rounding)

Housing Type	Dacorum	Hertsmere	St Albans	Three Rivers	Watford	Welwyn Hatfield
1 bedroom	1,600	800	1,400	900	900	1,100
2 bedrooms	1,800	1,100	2,100	1,000	700	1,400
3 bedrooms	3,500	1,600	3,000	1,000	1,700	3,400
4 bedrooms	800	200	500	-	200	700
5+ bedrooms	100	-	-	(200)	-	100

How the size mix will change according to house prices

9.127 As we have noted earlier, the tenure mix of the overall housing requirement changes with house prices and we have modelled overall requirements based upon 2007/8 average prices and long term

trends. The size mix requirement differs by tenure, and is also dependent on the prevailing house prices.

^{9.128} On the basis of 2007/08 house prices, (Figure 148):

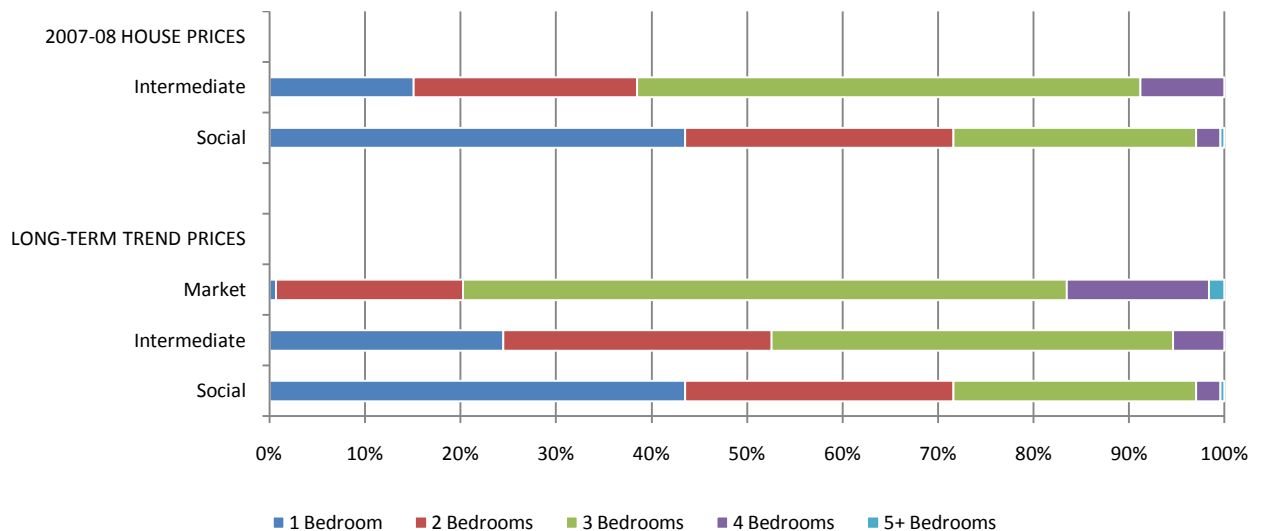
- 70% of the future requirement for social rented housing is for smaller homes;
- 40% of the requirement for intermediate housing is for smaller homes; and
- There is no identified requirement for additional market housing.

^{9.129} On the basis of house prices at long term trend rate (Figure 148):

- 70% of the future requirement for social rented housing is for smaller homes;
- 50% of the future requirement for intermediate affordable housing is for smaller homes; and
- 80% of the future requirement for market housing is for larger homes.

Figure 148

Comparison of Net Change in Required Housing Size Mix by Number of Rooms and Tenure using 2007/8 and long term prices (ORS)



^{9.130} Notes to the figure:

- the above outputs have been applied at the LCB (West) sub-regional level. This is done to present a high level picture of the sensitivity of the tenure and size mix to price. As such, there is some false cancelling of requirements. Accordingly, data in the next section is presented at the District level. The process being described here is that as prices fall, market and intermediate housing becomes affordable to more non owners, especially the smaller households; and
- the text aggregates 1 and 2 bedroom dwellings and describes them as smaller dwellings. Larger dwellings are 3 bedrooms plus. This is done to provide a high level output for the sub-region and because of concerns being expressed about the sustainability of 1 bedroom dwellings for both social and market housing given the rising aspirations of households. Again, district level tables are produced stating actual bedroom size. There is no certainty that market housing will be occupied to its capacity.

Tenure and Size Mix Requirement by Local Authority and Housing Sub-market (Long term trend prices)

^{9.131} The size mix for each of the districts and the identified housing sub-markets is detailed below. These findings are discussed in the context of other outputs in the next section. To enable us to provide a set of outputs for each Local Authority and housing market area, we must turn the sub totals into percentages of the total requirement. Firstly, we present a high level summary of tenure mix by Local Authority. Then we present the detailed tables showing the size and tenure mix of the future housing requirement in terms of numbers and proportions.

Figure 149

Tenure Mix of Housing Requirement 2007 to 2021 by LA based upon prices at long term trends (Note: Figures may not sum due to rounding)

Housing Tenure	Local Authority					
	Dacorum	Hertsmere	St Albans	Three Rivers	Watford	Welwyn Hatfield
Market housing	4,800	400	400	(400)	800	3,400
Intermediate affordable housing	-	2,700	5,300	2,300	2,100	500
Social rented housing	3,100	500	1,300	700	600	2,800
Total Housing Requirement	7,800	3,600	7,000	2,700	3,600	6,600
Market housing	60.7%	11.3%	6.2%	-	23.9%	50.8%
Intermediate affordable housing	-	75.9%	75.8%	77.1%	60.4%	6.9%
Social rented housing	39.3%	12.8%	18.1%	22.9%	15.7%	42.4%

^{9.132} In Figure 150 we turn the required delivery for each tenure 2007-2021, into an annual target.

Figure 150

Annual delivery target by tenure for the period 2007 to 2021 by LA

Housing Tenure	Local Authority						Total
	Dacorum	Hertsmere	St Albans	Three Rivers	Watford	Welwyn Hatfield	
Market housing	339	29	31	-26	61	240	780
Intermediate affordable housing	0	195	379	168	153	32	848
Social rented housing	220	33	90	50	40	200	605
Total Housing Requirement	559	257	500	191	254	472	2,233

Figure 151

Size Mix of Housing Requirement 2007-2021 by LA (Note: Figures may not sum due to rounding)

Housing Tenure	Local Authority					
	Dacorum	Hertsmere	St Albans	Three Rivers	Watford	Welwyn Hatfield
Market Housing						
1 bedroom	400	-	-	(400)	-	100
2 bedrooms	1,000	100	100	-	100	500
3 bedrooms	2,600	300	300	-	600	2,200
4 bedrooms	700	-	100	-	100	500
5+ bedrooms	100	-	-	-	-	100
Sub-total	4,800	400	400	(400)	800	3,400
Intermediate Affordable Housing						
1 bedroom	-	600	900	1,000	600	100
2 bedrooms	-	800	1,600	800	400	100
3 bedrooms	-	1,200	2,400	700	1,000	300
4 bedrooms	-	100	400	-	100	-
5+ bedrooms	-	-	-	-	-	-
Sub-total	-	2,700	5,300	2,300	2,100	500
Social Rented Housing						
1 bedroom	1,300	200	600	200	300	900
2 bedrooms	900	100	300	200	100	800
3 bedrooms	800	100	300	300	100	900
4 bedrooms	100	-	-	-	-	100
5+ bedrooms	-	-	-	-	-	-
Sub-total	3,100	500	1,300	700	600	2,800
All Housing						
1 bedroom	1,600	800	1,400	900	900	1,100
2 bedrooms	1,800	1,100	2,100	1,000	700	1,400
3 bedrooms	3,500	1,600	3,000	1,000	1,700	3,400
4 bedrooms	800	200	500	-	200	700
5+ bedrooms	100	-	-	(200)	-	100
Total	7,800	3,600	7,000	2,700	3,600	6,600

^{9.133} The low number or complete absence of the requirement for 4 bedroom and larger social rented housing in some areas requires further consideration. The future bedroom size outputs of the model are based upon the distribution of existing households and the likely nature of newly arising households. The analysis of family requirements (see section 11 below) will demonstrate that the additional households in LCB (West) will not be families with children, but will instead be single persons, couples without children and other multi adult households. These households will typically not require larger social rented units and this is reflected in the model.

^{9.134} Further, due to rounding, a requirement of less than 50 homes required will show as a zero requirement. In practice, the small number of households with such requirements will be known to housing officials and rural enablers. Their requirements may feature in individual S106 negotiations.

Figure 152
Size Mix of Housing Requirement 2007 to 2021 by LA, proportion for each Local Authority area

Housing Tenure	Local Authority					
	Dacorum	Hertsmere	St Albans	Three Rivers	Watford	Welwyn Hatfield
Market Housing						
1 bedroom	7.6%	-	-	-	-	2.1%
2 bedrooms	20.3%	28.7%	26.3%	-	16.8%	15.0%
3 bedrooms	55.8%	65.0%	58.8%	-	70.5%	65.5%
4 bedrooms	15.0%	6.4%	14.9%	-	11.7%	14.9%
5+ bedrooms	1.3%	-	-	-	1.0%	2.5%
Intermediate Affordable Housing						
1 bedroom	-	20.9%	16.6%	41.9%	30.0%	11.9%
2 bedrooms	-	30.3%	30.2%	31.3%	17.8%	18.3%
3 bedrooms	-	44.1%	44.9%	26.8%	45.7%	57.7%
4 bedrooms	-	4.7%	8.3%	-	5.9%	10.3%
5+ bedrooms	-	-	-	-	0.6%	1.8%
Social Rented Housing						
1 bedroom	41.9%	48.6%	45.2%	27.0%	48.9%	34.4%
2 bedrooms	28.1%	30.0%	26.8%	27.7%	25.5%	29.2%
3 bedrooms	26.4%	19.4%	25.2%	41.0%	23.4%	32.0%
4 bedrooms	3.0%	1.7%	2.4%	3.8%	2.0%	3.7%
5+ bedrooms	0.6%	0.2%	0.3%	0.5%	0.2%	0.7%
All Housing						
1 bedroom	21.0%	22.1%	20.7%	30.2%	25.8%	16.3%
2 bedrooms	23.3%	30.1%	29.3%	34.7%	18.7%	21.2%
3 bedrooms	44.3%	43.3%	42.3%	34.1%	48.2%	50.9%
4 bedrooms	10.3%	4.5%	7.6%	1.0%	6.7%	9.9%
5+ bedrooms	1.0%	0.0%	0.1%	0.1%	0.6%	1.7%

^{9.135} We have arrived at a summary table of housing requirements based upon Figure 151 to Figure 152.

^{9.136} Clearly the large amount of data here can be summarised in many forms. We believe these are the most useful description of the overall housing requirement, but other Local Authority level outputs can easily be arrived at from the above tables.

^{9.137} Note that in Figure 153 overleaf the Affordable column is a sum of social rent and intermediate affordable requirements. This and the market requirement sum to 100%, as do the size requirements. Size requirements are for the additional housing requirement as a whole. We have used the same convention as earlier in the chapter for summary purposes, simplifying the size mix into smaller (1 and 2 bedrooms) and larger (3 bedrooms and larger).

Figure 153

Summary of the Housing Requirement to 2021 by Local Authority, HMA and Sub-region based upon prices at long term price trends..

	Affordable Housing			Market Housing	All Housing	
	Social Rent	Intermediate	Total		Smaller	Larger
Local Authority						
Dacorum	39%	-	39%	61%	44%	56%
Hertsmere	13%	76%	89%	11%	52%	48%
St Albans	18%	76%	94%	6%	50%	50%
Three Rivers	23%	77%	100%	-	65%	35%
Watford	16%	60%	76%	24%	44%	56%
Welwyn Hatfield	42%	7%	49%	51%	38%	62%
Sub-Market						
Hemel Hempstead	36%	-	36%	64%	-	-
St Albans	23%	73%	96%	4%	-	-
Watford	22%	52%	74%	26%	-	-
Welwyn Garden City and Hatfield	32%	15%	47%	53%	-	-
Overall Sub-region	27%	38%	65%	35%	48%	52%

^{9.138} Affordable housing outputs should not be taken as policy targets unless tested by economic viability assessments in accordance with PPS3.

Unconstrained Outputs

^{9.139} The results produced above are based upon constraining the delivery in each local authority to its RSS dwelling delivery targets. However, we can produce an alternative scenario where we assume that household projections are met. Figure 154 shows that in the period 2001-2021, CLG 2004 based household projections shows that there will be an extra 43,900 households in LCB West.

Figure 154

Growth in Household Number 2001-2021 (Source: CLG 2004 Based Household Projections. Note Figures may not sum due to rounding)

Local authority	Projected Growth in Household Numbers 2001-2021
Dacorum	8,100
Hertsmere	5,100
St Albans	13,300
Three Rivers	7,600
Watford	4,700
Welwyn Hatfield	5,200
LCB West	43,900

^{9.140} If we apply the ORS Housing Mix Model to these projections, then it identifies that the split between market, intermediate and social housing requirements in LCB (West) for 2007-2021 is 35:38:27 (Figure 155). Therefore, this is very similar to the position obtained by constraining dwelling delivery to RSS delivery targets Figure 133.

^{9.141} A more detailed explanation is now given. The household projections estimate that there will be an additional 43,927 (rounded to 43,900) households between 2001 and 2021. The supply of additional housing was 12,151 dwellings in the period 2001-7. The net growth required is therefore 31,776

(rounded to 31,800) dwellings if estimates are based upon the household projections. Rounded numbers have been used in the figures.

^{9.142} In comparison the RSS requirement 2001-21 is 43,400 dwellings, again the total build 2001-7 is 12,151 dwellings so a net 32,249 (rounded to 33,300) dwellings are required if estimates are based upon the RSS target, (Figure 133).

Figure 155

Overall Housing Requirement 2007-2021 based on Household Projections and long-term house price trends LCB (West) Sub-region (Note: Figures may not sum due to rounding)

Housing Tenure	Requirement 2007-2021	
	Number of Units	%
Market Housing	11,300	35.4%
Intermediate affordable Housing	12,000	37.6%
Social rented Housing	8,600	26.9%
Overall Housing Requirement	31,800	100.0%

^{9.143} Figure 156 demonstrates the modelled requirement for each district based upon its own household projections and long-term house prices.

Figure 156

Housing Requirement by LA 2007-2021 for Household Projections using prices at long term trend level (Note: Figures may not sum due to rounding)

Housing Tenure	Local Authority					
	Dacorum	Hertsmere	St Albans	Three Rivers	Watford	Welwyn Hatfield
Long-term House Prices						
Market housing	3,300	500	3,200	1,900	500	300
Intermediate affordable housing	0	2,800	6,200	3,100	2,000	0
Social rented housing	2,700	500	1,800	1,200	500	1,500
Total Housing Requirement	5,900	3,700	11,100	6,200	3,000	1,800
Market housing	55.2%	13.0%	28.6%	30.5%	16.6%	15.4%
Intermediate affordable housing	0.0%	74.2%	55.6%	49.9%	67.5%	0.0%
Social rented housing	44.8%	12.9%	15.9%	19.6%	15.8%	84.6%

Summary of Key Points

- ORS modelling is used together with data from many sources to arrive at estimates of the future housing requirement to 2021 to achieve the outputs required by CLG Practice Guidance.
 - The characteristics of the projected household growth and the requirement for additional social housing and other tenures.
 - Sensitivity testing to see how borrowing and price trends affect the requirements in terms of tenure and size mix.
 - A breakdown of future housing requirements by tenure and size mix.
- The social housing requirement is calculated using a demographic method.
- Because intermediate affordable housing requirements depend (partly) upon affordability we examine the affordability of the housing that became available in the year to March 2008.
- We note that the proportion of home owners is likely to fall by 2021 due to affordability problems.
- We use our model to assess the number of households that are not already home owners to afford the available housing,
- We project these forward to 2021 using a number of assumptions. We have made an assumption regarding long term price trends based upon the evidence regarding past price trends. This is to ensure that assessments are not misleading due to fluctuating house prices. We have also constrained the overall growth in the number of households to the growth in new build housing envisaged by the regional plan.
- We note that the requirement for intermediate affordable housing reduces as market housing prices fall.
- We arrive at the overall tenure and size mix required for 2007-2021, but results vary considerably by Local Authority.
- For LCB (West) as a whole using long term price trends, an estimated 31,300 additional homes are required 2007-2021, of which 8,500 (27%) should be social rent, 11,900 (38%) intermediate affordable and 10,900 (35%) market. Note that if these long term price levels are applied the target household income band for intermediate affordable housing narrows due to lower house prices from £20,000-£35,000 to £20,000-£30,000 p.a.
- The number of dwellings required and their tenure and size mix varies by Local Authority. It is notable that Dacorum and Welwyn Hatfield require the greatest proportion of new dwellings to be social housing with very little intermediate affordable housing. St Albans require little market housing but a large amount of intermediate affordable housing.
- Finally, we have developed a different set of tenure mix outputs that are not constrained to RSS new build targets but instead match the projected growth in the number of households. In this scenario, again using prices at long term trend, an estimated 31,800 additional homes are required 2007-2021, of which 8,600 (27%) should be social rent, 12,900 (38%) intermediate affordable and 11,300 (35%) market.

