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Technical notes and glossary
Introduction and main findings

1. The English Housing Survey (EHS) is a national survey of people's housing circumstances and the condition and energy efficiency of housing in England. It was first run in 2008-09. Prior to then, the survey was run as two standalone surveys: the English House Condition Survey and the Survey of English Housing. This report provides the findings from the 2015-16 survey.

2. This report is split into two sections. The first, on households, covers tenure (owner occupation and the social and private rented sectors) and the demographic and economic characteristics of the people who live in the three tenures. It then explores how affordability varies between tenures and how this has changed over time, buying expectations among renters, average rental costs in the private and social rented sectors and the extent to which private and social renters claim Housing Benefit to help meet the cost of their rent. Rates of overcrowding and under-occupation by tenure are then explored, followed by some analysis of personal well-being and the extent to which this varies by tenure.

3. The second section, on homes, provides an overview of the housing stock in England including: the age, size, and type of home; energy efficiency of the housing stock; decent homes; homes affected by damp and mould; and smoke alarms. Additional annex tables provide further detail to that covered in the main body of the report.

4. This is the first release of data from the 2015-16 survey. The report will be followed up with a series of more detailed topic reports in the summer.

Main findings

Owner occupation rates remain unchanged for the third year in a row.

- Of the estimated 22.8 million households in England, 14.3 million or 63% were owner occupiers. The proportion of households in owner occupation increased steadily from the 1980s to 2003 when it reached its peak of 71%. Since then, owner occupation gradually declined to its current level. However, the rate of owner occupation has not changed since 2013-14.

While the overall rate of owner occupation has not changed in recent years, the composition of the group has: there are more outright owners while the proportion of those buying with a mortgage is down.

- In 2015-16, 34% of households were outright owners while 29% were mortgagors. Since 2013-14 there have been more outright owners than mortgagors, and the proportion of mortgagors has declined (from 31% of
households in 2013-14 to 29% in 2015-16). The increase in the number and proportion of outright owners is at least partly explained by population ageing, with large numbers of baby boomers reaching retirement age, paying off their mortgages and moving into outright ownership.

**The private rented sector remains larger than the social rented sector.**

- In 2015-16, the private rented sector accounted for 4.5 million or 20% of households. The social rented sector accounted for 3.9 million households or 17% of households. There was no change in the size of either sector between 2014-15 and 2015-16.

**Over the last decade, the number of families in the private rented sector has increased; the number of families in the social rented sector has decreased.**

- Between 2005-06 and 2015-16, the proportion of households in the private rented sector with children increased from 30% to 36%. Given the sizeable growth in the overall number of private renters over this period, this six percentage point increase equates to about 945,000 more households in the private rented sector with children.

- Over the same ten year period, the proportion of households in the social rented sector with children decreased from 36% to 32%, which translates to around 123,000 fewer households in the social rented sector with children. There was no change in the proportion of outright owner and mortgagor households with children.

**The proportion of social renters who expect to buy has increased. No such increase was observed among private renters.**

- In 2015-16, 59% of private renters (2.6 million households) and 27% of social renters (1.0 million households) stated that they expected to buy a property at some point in the future.

- Between 2014-15 and 2015-16, there was no change in the proportion of private renters who expected to buy however the proportion of social renters who expected to buy increased from 24% to 27%.

**Private renters spend a significantly greater proportion of their income on their housing costs than social renters or those buying with a mortgage.**

- On average, those buying their home with a mortgage spent 18% of their household income on mortgage payments whereas rent payments were 28% of household income for social renters and 35% of household income for private renters.
Rates of overcrowding did not change in the private rented and owner occupied sectors, but increased in the social rented sector.

- In the social rented sector, overcrowding peaked at 7% in 2010-11, before dropping to 6% in 2012-13. It remained at 6% until 2014-15 but increased back up to 7% in 2015-16. In the private rented sector, 5% of households are overcrowded compared with 1% of owner occupier households.

Meanwhile, about half of owner occupied households are under-occupied.

- The number and proportion of under-occupied households in the owner occupied sector increased between 1995-96 and 2015-16 from 39% (5.3 million households) to 52% (7.4 million households).

- In contrast, the proportion of under-occupied households in the rented sectors decreased over this period. Under-occupation amongst private renters decreased from 18% in 1995-96 to 14% in 2015-16 and under-occupation amongst social renters decreased from 12% to 10%.

The proportion of dwellings with the highest energy efficiency rating has increased considerably in the last 10 years, particularly in the social rented sector.

- In 2015, 28% of dwellings had an energy efficiency rating of A-C, up from just 5% of dwellings in 2005.

- Almost half (48%) of dwellings in the social rented sector had an energy efficiency rating of A-C compared with 26% in the private rented sector and 24% of owner occupied homes.

While the majority of homes had at least one working smoke alarm, only about a quarter had a carbon monoxide alarm.

- In 2015-16, 89% of households had at least one working smoke alarm, up from 84% in 2008-09.

- In 2015, about a quarter of homes (28%) had a carbon monoxide alarm. Owner occupied dwellings (31%) were more likely than private rented (21%) or social rented dwellings (28%) to have a carbon monoxide alarm. Homes with a solid fuel burning appliance, such as a coal fire or wood burning stove, were more likely (33%) to have a carbon monoxide alarm than dwellings with no solid fuel appliance (28%).

Acknowledgements and further queries

5. Each year the English Housing Survey relies on the contributions of a large number of people and organisations. The Department for Communities and Local
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6. This report was produced by the EHS team at DCLG. If you have any queries about it, would like any further information or have suggestions for analyses you would like to see included in future EHS reports, please contact ehs@communities.gsi.gov.uk.

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Section 1
Households

1.1 There are three main housing tenures in England: owner occupation and the private and social rented sectors. Owner occupation includes households that own their home outright and households that have a mortgage. The social rented sector includes both local authority and housing association homes.

1.2 This section compares the demographic characteristics of the people who live in these three different tenures, how affordability varies between the sectors, and how this has changed over time. It also describes the characteristics of first time buyers, including details on how they funded the purchase of their first home.

1.3 It then explores buying expectations among renters, average rental costs in the private and social rented sectors and the extent to which private and social renters claim Housing Benefit to help meet the cost of their rent. Rates of overcrowding and under-occupation by tenure are then explored, followed by analysis of personal well-being and the extent to which this varies by tenure.

Trends in tenure

1.4 In 2015-16, there were an estimated 22.8 million households in England living in self-contained accommodation, Annex Table 1.1. This figure excludes those living in institutional accommodation such as nursing homes or halls of residence.

1.5 **Owner occupation** remained the largest tenure group, with 14.3 million households, representing 63% of all households in 2015-16. The proportion of households in owner occupation increased steadily from the 1980s to 2003 when it reached its peak of 71%. Since then, owner occupation gradually declined to its current level. However, the rate of owner occupation has not changed since 2013-14, indicating that the fall in owner occupation has abated, Figure 1.1.

1.6 Owner occupation is made up of two distinct groups: outright owners and those buying with a mortgage (referred to throughout this report as ‘mortgagors’). In 2015-16, 34% of households were outright owners while 29% were mortgagors.
1.7 While the overall rate of owner occupation has not changed in recent years, the composition of the group has: since 2013-14 there have been more outright owners than mortgagors, and the proportion of mortgagors has declined (from 31% in 2013-14 to 29% in 2015-16). The increase in the number and proportion of outright owners is at least partly explained by population ageing, with large numbers of baby boomers reaching retirement age, paying off their mortgages and moving into outright ownership.

1.8 In 2015-16, the **private rented sector** accounted for 4.5 million or 20% of households. Throughout the 1980s and 1990s, the proportion of private rented households was steady at around 10%. However, the sector has more than doubled in size since 2002.

1.9 The **social rented sector**, at 3.9 million households (17%), remained the smallest tenure, following a long downward trend which has stabilised in recent years.

**Figure 1.1: Trends in tenure, 1980 to 2015-16**

Base: all households  
Note: underlying data are presented in Annex Table 1.1  
Sources:  
1980 to 1991: DOE Labour Force Survey Housing Trailer;  
1992 to 2008: ONS Labour Force Survey;  
2008-09 onwards: English Housing Survey, full household sample
Households in London were fairly evenly distributed across the tenures, with half in owner occupation and half in the rented sectors. Outside of London, owner occupation was more prevalent than renting, Annex Table 1.2. The lower rate of owner occupation in London (49%) compared to the rest of England (65%) is most likely because of the younger age profile of the population of London.

In the last 10 years, owner occupation declined in and out of London, though the decline has abated over the past three years. In and out of London, the fall in owner occupation was driven by declines in the proportion of mortgagors. Outside London, the proportion of outright owners increased (from 32% to 36%). No such increase was observed in London. Over the same period, the private rented sector increased in and out of London. The proportion of households in the social rented sector did not change in either area, Figure 1.2.

Figure 1.2: Trends in tenure, London and outside London, 2005-06 to 2015-16

Base: all households
Note: underlying data are presented in Annex Table 1.2
Sources:
2003-04 to 2007-08: English House Condition Survey, full household sample;
2008-09 onwards: English Housing Survey, full household sample

Demographic and economic characteristics

In this section, the demographic and economic profile of the household reference person (HRP) is explored in more detail. The HRP is the ‘householder’ in whose name the accommodation is owned or rented (see the glossary for further information).
Age

1.13 Not surprisingly, outright owners were concentrated among the older age bands while mortgagors were typically in the middle age bands. In 2015-16, 61% of outright owner households had a HRP aged 65 or over while 62% of households with a mortgage had a HRP aged 35-54. About two thirds (67%) of households in the private rented sector had a HRP aged under 45 years, Annex Table 1.3.

1.14 As in previous years, the age profile of the social rented sector in 2015-16 was close to that of the population as a whole. About one fifth (18%) of social rented households had a HRP aged 16-34, with 18% aged 35-44 and 21% aged 45-54. Most common in the social rented sector were households with a HRP aged 65 or over (27%).

1.15 While younger people have always been overrepresented in the private rented sector, over the last decade the increase in the proportion of younger households in the private rented sector has been particularly pronounced. In 2005-06, 24% of those aged 25-34 lived in the private rented sector. By 2015-16 this had increased to 46%. Over the same period, the proportion of 25-34 year olds buying with a mortgage decreased from 53% to 35%. In other words, households with a HRP aged 25-34 are more likely to be renting privately than buying their own home, a continuation of a trend first identified in 2012-13. Over the same 10 year period, rates of younger households in the social rented sector also declined, from 20% to 16%, Figure 1.3.
Figure 1.3: Households with a HRP aged 25-34, by tenure, 2005-06 to 2015-16

Base: all households with a HRP (Household Reference Person) aged 25-34
Notes:
1) based on the age of the HRP. The HRP is the person in whose name the accommodation is owned or rented.
2) underlying data are presented in Annex Table 1.4
Sources:
2003-04 to 2007-08: English House Condition Survey, full household sample;
2008-09 onwards: English Housing Survey, full household sample

Alongside the decline in the proportion of 25-34 year olds in social housing, there were also decreases among the younger and older age groups. The proportion of 16-24 year olds in the social rented sector declined from 33% to 25% and the proportion of social renters aged 65+ also decreased, from 22% to 16%. Meanwhile, the proportion of 45-54 year olds in social housing increased from 14% to 18%. Rates remained stable for other age groups.

Household type

Household type varied widely by tenure. Reflecting their older age profile, outright owner households were predominately couples with no dependent children (45%) and one person households (33%), Annex Table 1.3.

Couples with and without dependent children predominate among mortgagors while the social rented sector had the highest proportion of single person households. One in five (20%) social renters were lone males, 22% were lone females.

Not surprisingly, the proportion of households with children varied by tenure. Almost half (47%) of households buying with a mortgage had dependent children compared with just 8% of outright owners. Around a third of private (36%) and social (32%) renters had dependent children, Annex Table 1.5.
1.20 Between 2005-06 and 2015-16, the proportion of outright owners and mortgagors with dependent children did not change. However, in the private rented sector, the proportion of households with children increased from 30% to 36%. Given the sizeable growth of the private rented sector over this period, this six percentage point increase equates to about 945,000 more households with dependent children in the private rented sector.

1.21 Over the same ten year period, the proportion of households with children in the social rented sector decreased from 36% to 32% which translates to around 123,000 fewer households with children in the social rented sector.

**Economic status and income**

1.22 In 2015-16, 62% of households that owned outright had a retired HRP, consistent with the older age profile of this group. A third (34%) of outright owners were working (either full or part-time). In contrast, most (92%) mortgagors were working, with 85% in full-time work and 8% in part-time work. Just 4% of mortgagors were retired, Annex Table 1.3.

1.23 The majority (74%) of private renters were working, with 62% in full-time work and 12% in part-time work. Smaller proportions of private renters were retired (8%), in full-time education (5%), or unemployed (4%).

1.24 Among social renters, 42% were working, with 30% in full-time work and 13% in part-time work. Over a quarter (28%) of social renters were retired. One in five (21%) were ‘inactive’ a group which includes those who have a long-term illness or disability and those who were looking after the family or home.

1.25 Social renters were over-concentrated in the lower income quintiles (45% were in the lowest income quintile; 27% in the second lowest) while mortgagors were over-concentrated in the highest income quintiles (38% were in the top income quintile; 29% in the second). This is not surprising given the economic statuses of the two groups. Private renters and outright owners were fairly evenly spread across the quintiles, Figure 1.4.

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1 Unrounded figures sum to 92%.
2 Unrounded figures sum to 42%.
First time buyers

In 2015-16, there were around 654,000 first time buyers in England. That is, buyers who had bought for the first time in the last three years, up from about 564,000 in 2014-15. While numbers have fluctuated over last decade, the number of first time buyers in 2015-16 was roughly the same as the number in 2005-06 (675,000), Annex Table 1.6.

Age

In 2015-16, the average age of first time buyers was 32 years, up from 31 in 2005-06. First time buyers in London were, on average, older than first time buyers outside London (33 years compared with 32 years), Annex Table 1.7.

Nearly two thirds (64%) of first time buyers were aged 25-34. Just 8% were younger than this (aged 16-24) while 29% were older (aged 35+), Annex Table 1.8.
Household type

1.29 In 2015-16, 38% of first time buyer households were couples without dependent children. About a third (36%) were couples with dependent children, while 21% were one person households, Annex Table 1.8.

Income and mortgage type

1.30 With an average (mean) deposit of £48,831 (£22,000 median), it is not surprising that two thirds (65%) of first time buyers were in the upper income quintiles, Annex Tables 1.8 and 1.9. The distribution of first time buyers across income quintiles was not dissimilar to the distribution of mortgagors as a whole, Figure 1.5.

Figure 1.5: Weekly gross household income (quintiles), first time buyers and all mortgagors, 2015-16

Base: recent first time buyers and mortgagors
Note: underlying data are presented in Annex Tables 1.3 and 1.8
Source: English Housing Survey, full household sample

1.31 Almost all first time buyers (98%) had a repayment mortgage. Over half (54%) had 20-29 year mortgages while 40% had a mortgage of 30 years or more, Annex Table 1.9.

1.32 Around two thirds (64%) of first time buyers paid a deposit of less than 20% of the purchase price of their property. A small number (37,000 or 6%) bought their first home outright.
1.33 Most (81%) first time buyers funded the purchase of their first home with savings; 29% had help from family or friends while 7% used an inheritance. Many first time buyers used a combination of sources.

1.34 About half (52%) of first time buyers had bought their first home jointly with a partner or spouse while 45% bought in their name only.

Future buying expectations

1.35 In 2015-16, 59% of private renters (2.6 million households) and 27% of social renters (1.0 million households) stated that they expected to buy a property at some point in the future, Annex Table 1.10.

1.36 Between 2014-15 and 2015-16, there was no change in the proportion of private renters who expected to buy however the proportion of social renters who expected to buy increased from 24% to 27%, Figure 1.6.

Figure 1.6: Percentage of private and social renters who expect to buy, 2008-09 to 2015-16

![Graph showing percentage of private and social renters who expect to buy]

Base: all renting households
Note: underlying data are presented in Annex Table 1.11
Source: English Housing Survey, full household sample

1.37 Among social renters who expected to buy, over half (54%) of local authority tenants and 43% of housing association tenants expected to buy their current

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3 The apparent increase between 2014-15 and 2015-16 in the proportion of private renters who expect to buy (from 57% to 59%) is not statistically significant.
home, Annex Table 1.10. The overall proportion of social tenants who expected to buy their current home increased from 35% in 2010-11 to 47% in 2015-16, Annex Table 1.10.

1.38 Renters who expected to buy a home were also asked how long they thought it would be before they would do so. In 2015-16, 25% of private renters and 18% of social renters said they expected to buy within two years. Meanwhile, 42% of private renters and 54% of social renters expecting to buy thought that it would be five years or more before they did so.

Rents

1.39 In 2015-16, the average (mean) rent (excluding services but including Housing Benefit) for households in the social sector was £101 compared with £184 per week in the private rented sector\(^4\), a difference of £83 per week, Annex Table 1.12.

1.40 Social and private rents are higher in London than outside of London. Moreover, the gap between social and private rents is greater in London than it is in the rest of England, Figure 1.7.

1.41 In 2015-16, the average private rent in London was £300 per week, about twice the average rent outside London (£153 per week). Social renters in London paid, on average, £129 per week compared with £95 per week outside of London. Since 2008-09 both social and private rents have increased in and out of London. While social rents increased between 2014-15 and 2015-16, private rents did not.

\(^4\) There are differences in the methodology of the English Housing Survey compared with ONS experimental quarterly Index of Private Housing Rental Prices (IPHRP). The English Housing Survey average weekly private rents over time reflect changes in price, quality and composition of the private rented stock. In contrast, the IPHRP specifically excludes both changes in composition and quality to ensure only pure price change is captured. See: [http://www.ons.gov.uk/ons/rel/hpi/index-of-private-housing-rental-prices/index.html](http://www.ons.gov.uk/ons/rel/hpi/index-of-private-housing-rental-prices/index.html) for more information.
Figure 1.7: Mean weekly rents, London and outside London, 2008-09 to 2015-16

Base: all households paying rent
Notes:
1) figures exclude services but include Housing Benefit
2) underlying data are presented in Annex Table 1.12
Source: English Housing Survey, full household sample

Affordability

1.42 In this section, affordability is explored. A simple measure of housing affordability has been derived by calculating the average proportion of income spent on housing. The proportion of income spent on mortgage payments (both the repayment element and the interest element) is compared with the proportion spent on rents in the social and private rented sectors. Housing-related costs, such as water and fuel bills, insurance, maintenance costs and council tax are not included in calculation. Income is taken to be the gross weekly household income, including and excluding benefits. Outright owners are excluded from this analysis as they have no mortgage costs.

1.43 Two different calculations are made: one based on the household income (i.e. the income of all the members of the household), and another based on HRP and partner income only (irrespective of whether there are other adults in the household). For both measures it is not known which members of the household contribute to the rent or mortgage. For the household measure, it is assumed that all household members contribute to the rent or mortgage; for the HRP and partner measure, it is assumed that only the HRP and partner contribute.

1.44 On average, those buying their home with a mortgage spent 18% of their household income on mortgage payments whereas rent payments were 28% of household income for social renters and 35% of household income for private renters. Excluding Housing Benefit, the average proportion of income
spent on rent was 37% for social renters and 41% for private renters, Annex Table 1.13 and Figure 1.8.

**Figure 1.8: Mortgage/rent as a proportion of household income (including and excluding Housing Benefit), by tenure, 2015-16**

Base: all households making mortgage or rent payments

Notes:
1) underlying data are presented in Annex Table 1.13
2) excludes households without a mortgage (i.e. outright owners), those with part-mortgage and part-rent (i.e. shared owners) and zero rent households
3) includes income from all household members irrespective of whether or not they contribute to the rent or mortgage

Source: English Housing Survey, full household sample

1.45 Between 2010-11 and 2015-16, the proportion of household income that mortgagors spent on their mortgage did not change. Nor did the proportion of household income that private renters spent on their rent change.

1.46 However, between 2010-11 and 2014-15, the proportion of household income that social renters spent on their rent increased from 27% to 29%, before declining to 28% in 2015-16.

1.47 When HRP and partner income is used, those buying their home with a mortgage spent, on average, 19% of their income on mortgage payments whereas rent payments were 31% of income for social renters and 41% of household income for private renters. Excluding Housing Benefit, the average proportion of income spent on rent was 40% for social renters and 48% for private renters.
Rent arrears

1.48  In 2015-16, 25% of social renters were either currently in arrears or had been in the last 12 months (around 685,000 households), unchanged from 2011-12, Annex Table 1.14.

1.49  A smaller proportion (9%) of private renters were either currently in arrears or had been in the last 12 months (around 376,000 households), unchanged from 2011-12.

Housing Benefit

1.50  Housing Benefit is a means-tested benefit provided by the state to low income households living in the two rented sectors. The benefit is usually administered by the local authority in which the rented property is located. This section compares take up of Housing Benefit by households in the social and private rented sectors.

1.51  In 2015-16, 59% of social renters and 24% of private renters received Housing Benefit to help with the payment of their rent. Between 2014-15 and 2015-16, the proportion of social renters in receipt of Housing Benefit declined from 63% to 59%. No such change was observed among private renters, Annex Table 1.15.

1.52  Social renters in receipt of Housing Benefit received an average of £81 per week, lower than the average amount received by private renters (£111). Between 2008-09 and 2015-16, the average weekly amount of Housing Benefit received increased for both social and private renters (from £62 and £100 per week respectively).

Housing Benefit, by economic status

1.53  The increase in the proportion of renters in receipt of Housing Benefit was driven by an increase in the proportion of working social and private renters in receipt of the benefit. In 2008-09, 7% of working private renters received Housing Benefit. By 2015-16, this had increased to 13%, although this was lower than the proportion of working private renters in receipt of Housing Benefit in 2014-15 (18%), Annex Table 1.16.

1.54  Over the same period, the proportion of working social renters in receipt of Housing Benefit increased from 19% to 29%. There was no change in the proportion of working social renters in receipt of Housing Benefit between 2014-15 and 2015-16.
**Length of time in current accommodation and tenure**

1.55 In 2015-16, owner occupiers had, on average, lived at their current address for 17.8 years. Not surprisingly, outright owners had lived in their current home for longer than mortgagors (24.4 years compared with 10.2 years).

1.56 Social renters had lived at their current address for an average of 11.6 years, while for private renters the average length of residence was 4.3 years, Annex Table 1.17. This was unchanged from previous years.

1.57 In 2015-16, half (50%) of private renters had lived in the private rented sector for less than 5 years while 25% had been in the sector for 5-9 years and 24% for more than 10 years, Annex Table 1.18

**Household moves**

1.58 In 2015-16, 2.1 million households had moved home in the previous 12 months. Of these, 317,000 were new households, 1.3 million (63%) were moves within tenure and the remaining 483,000 were moves between tenures, Annex Table 1.19.

1.59 The greatest number of household moves occurred within, into or out of the private rented sector. In total, 787,000 households moved within the tenure (i.e. from one privately rented home to another) and 196,000 new households were created. There were 187,000 moves into the sector, of which 72%, (135,000) were from owner occupation. There were 256,000 moves out of the sector, with 67% (172,000) of these moving to owner occupied accommodation, Figure 1.9.

1.60 There was much less movement in the social rented sector. In 2015-16, 158,000 households moved from one social rented property to another and 60,000 new households were created. There were 105,000 households that moved into the sector, with 84,000 households moving from the private rented sector. Around 52,000 households left the social rented sector to move to the private rented sector.

1.61 In the owner occupier sector, 400,000 households moved within the tenure and 62,000 new households were created. There were 172,000 households that moved into the tenure from the private rented sector. Around 157,000 households moved out of the sector, with 86% of these (135,000) moving to the private rented sector.
Figure 1.9: Household moves, by tenure, 2015-16

Figures and arrows indicate the number of households (thousands) moving into, out of, and within each sector in the 12 months before interview. Figures in the tenure boxes indicate the total number of households (thousands) in the tenure in 2015-16. These figures only relate to households that moved from one property to another. They do not include sitting tenant purchasers.

Base: households resident less than a year
Notes:
1) underlying data are presented in Annex Table 1.19
2) a small number of cases with inconsistent responses have been omitted
3) * the survey cannot identify the number of households which have ended
Source: English Housing Survey, full household sample

Overcrowding and under-occupation

1.62 Levels of overcrowding and under-occupation are measured using the bedroom standard (see glossary). This is essentially the difference between the number of bedrooms needed to avoid undesirable sharing (given the number, ages and relationship of the household members) and the number of bedrooms actually available to the household.

1.63 Since the number of overcrowded households included in each survey year is too small to enable reliable overcrowding estimates for any single year, data from the three most recent survey years were combined to produce the overcrowding estimates in this section.

1.64 The overall rate of overcrowding in England in 2015-16 was 3%, with approximately 678,000 households living in overcrowded conditions, Annex Table 1.20.
1.65 Overcrowding was more prevalent in the rented sectors than for owner occupiers. Only 1% of owner occupiers (191,000 households) were overcrowded in 2015-16 compared with 7% of social renters (258,000) and 5% of private renters (229,000).

1.66 The number and proportion of overcrowded households in the owner occupied sector has remained relatively stable since 1995-96. In the social rented sector, overcrowding peaked at 7% in 2010-11, before dropping to 6% in 2012-13. It remained at 6% until 2014-15 but increased back up to 7% in 2015-16, Figure 1.10.

1.67 The proportion of overcrowded households in the private rented sector increased from 3% in 1995-96 to a peak of 6% in 2011-12, and since then has decreased to 5%. The rapid overall growth in private renters between 1995-96 and 2015-16 explains the more pronounced increase in actual numbers of overcrowded households from 63,000 in 1995-96 to 229,000 in 2015-16.

**Figure 1.10: Overcrowding, by tenure, 1995-96 to 2015-16**

Base: all households
Notes:
1) data are based on three year averages, which are the average of the three years up to and including the labelled date
2) underlying data are presented in Annex Table 1.20
Sources:
1995-96 to 2007-08: Survey of English Housing;
2008-09 onwards: English Housing Survey, full household sample

1.68 The overall rate of under-occupation in England in 2015-16 was 37%, unchanged from 2014-15, with around 8.5 million households living in under-occupied homes, Annex Table 1.21.
1.69 Under-occupation was much more prevalent amongst owner occupiers than in the rented sectors. Half (52%) of owner occupied households (7.4 million households) were under-occupied in 2015-16 compared with 14% of private rented (654,000) and 10% of social rented (390,000) households.

1.70 The overall number and proportion of under-occupied households in England increased between 1995-96 and 2015-16 from 31% (6.2 million households) to 37% (8.5 million households). This was driven mainly by an increase in under-occupied households in the owner occupied sector, from 39% (5.3 million households) in 1995-96 to 52% (7.4 million households) in 2015-16, Figure 1.11.

1.71 In contrast, the proportion under-occupied households in the rented sectors decreased over this period. Under-occupation amongst private renters decreased from 18% in 1995-96 to 14% in 2015-16 and under-occupation amongst social renters decreased from 12% to 10%. The rapid overall growth in the private rented sector between 1995-96 and 2015-16 explains the increase in actual numbers of under-occupied households from 370,000 to 654,000.
Well-being

1.72 Personal well-being remained relatively high in 2015-16 and the average life satisfaction score was 7.7 (out of ten), although this varied by tenure, Figure 1.12. Average life satisfaction among outright owners was nearly a unit higher than for those living in the social rented sector (8.0 compared with 7.2). Annex Table 1.22.

1.73 This finding may lead to the conclusion that the relationship between life satisfaction and tenure is direct. However, there were important differences between the types of household that typically live in each tenure groups, and these differences related to life satisfaction. For example, social renters were more likely to be unemployed or ‘other inactive’ (this includes long-term sick or carers) than owner occupiers or private renters, Annex Tables 1.3 and 1.22.
Figure 1.12: Mean life satisfaction score, by tenure, 2015-16

Base: all household reference persons
Note: underlying data are presented in Annex Table 1.22
Source: English Housing Survey, full household sample
Section 2
Housing stock

2.1 This section begins with an overall profile of the English housing stock, including the age, type and size of dwellings by tenure, including some analysis of the number of bedrooms. It then reports on house condition, including the prevalence of damp and the extent to which the English housing stock meets the Decent Homes Standard.

2.2 The energy efficiency of the English housing stock is then explored, with new analysis of cavity wall insulation, smart meters and the extent to which residents report their dwellings being uncomfortably hot. This is followed by a section on smoke alarms and carbon monoxide alarms.

Stock profile

2.3 In 2015, there were an estimated 23.5 million dwellings in England, including both occupied and vacant homes. Of these, 14.8 million (63%) were owner occupied, 4.7 million (20%) were private rented, 1.7 million (7%) were local authority and 2.4 million (10%) were housing association homes, Figure 2.1 and Annex Table 2.1.

Figure 2.1: Dwellings, by tenure, 2015

Base: all dwellings
Note: underlying data are presented in Annex Table 2.1
Source: English Housing Survey, dwelling sample
2.4 The age of dwellings varied by tenure. Privately rented dwellings were more likely to be older with a third (34%) built before 1919, compared with 20% of owner occupied and 6% of social sector homes, Figure 2.2.

2.5 Just under three quarters (72%) of local authority housing stock was built between 1945 and 1980, compared with 47% of housing association homes. Just 8% of local authority stock was built after 1980, compared with 37% of housing association homes.

Figure 2.2: Dwelling age, by tenure, 2015

Base: all dwellings
Note: underlying data are presented in Annex Table 2.1
Source: English Housing Survey, dwelling sample
2.6 The majority of owner occupied dwellings were houses and bungalows (92%), in comparison with 62% of private rented and 57% of social rented stock. There were very few detached houses in the social sector (less than 1%) or private rented sector (5%), but a quarter (25%) of owner occupied properties were detached, Figure 2.3.

2.7 The private rented sector had a comparatively high proportion of converted flats (11% compared with 3% of social rented and 1% of owner occupied stock). The proportion of low rise purpose built flats was lower in the owner occupied (6%) and private rented (24%) sectors than in the local authority (36%) or housing association (35%) sectors. High rise flats were more common in local authority (7%) than housing association (3%) stock.
The average (mean) usable floor area of dwellings in 2015 was 94m$^2$. Homes in the social sector tended to be smaller (67m$^2$) than homes in the private rented sector (76m$^2$). Owner occupied homes (108m$^2$) were larger than social and private rented homes.
2.9 Only 11% of dwellings in the social rented sector had a usable floor area of 90m$^2$ or over, in contrast with 23% of homes in the private rented sector and 53% of owner occupied homes, Figure 2.4.

Figure 2.4: Usable floor area, by tenure, 2015

Base: all dwellings  
Note: underlying data are presented in Annex Table 2.1  
Source: English Housing Survey, dwelling sample

2.10 Greater proportions of social rented sector dwellings had one or two bedrooms, making them smaller on average, Annex Table 2.2 and Figure 2.5.
Figure 2.5: Selected types of bedrooms, by tenure, 2015

Base: all dwellings
Notes:
1) Chart only includes the most common types of bedrooms, e.g. among one bedroom dwellings, one twin is more common than one single so figures for one twin dwellings are displayed. A full breakdown of all bedroom types is provided in Annex Table 2.2.
2) underlying data are presented in Annex Table 2.2
Source: English Housing Survey, dwelling sample

2.11 In addition, social rented sector dwellings were smaller than owner occupied dwellings with the same types of bedrooms. For example, a social rented sector dwelling with one twin bedroom was smaller than an owner occupied dwelling with one twin bedroom (45m$^2$ compared to 50m$^2$).

2.12 Private rented sector dwellings were also smaller than owner occupied dwellings with the same number of bedrooms. For example, a private rented dwelling with two twin bedrooms and one single bedroom had a mean size of 85m$^2$ whereas an owner occupied dwelling with the same number of bedrooms averaged 93m$^2$.

House condition

Decent homes

2.13 In 2015, a fifth of dwellings (19% or 4.6 million homes) failed to meet the Decent Homes Standard, a reduction of 3.1 million homes since 2006, when 35% of homes failed to meet the Decent Homes Standard, Annex Table 2.3.

2.14 The private rented sector had the highest proportion of non-decent homes (28%) while the social rented sector had the lowest (13%). Among owner
occupied homes, 18% failed to meet the Decent Homes Standard in 2015, Figure 2.6.

2.15 Across all tenures, the proportion of non-decent homes declined steadily between 2006 and 2015, with year-on-year improvements each year until 2014. No such decline was observed between 2014 and 2015.

**Figure 2.6: Non-decent homes, by tenure, 2006 to 2015**

Base: all dwellings
Notes:
1) 2010-2012 uses SAP09 instead of SAP05
2) 2013 uses SAP12 instead of SAP09
3) underlying data are presented in Annex Table 2.3
Sources:
2006 to 2007: English House Condition Survey, dwelling sample;
2008 onwards: English Housing Survey, dwelling sample

**Damp**

2.16 In 2015, about a million homes (4%) had problems with damp, compared with 2.6 million (13%) homes in 1996, Figure 2.7 and Annex Table 2.4.
The most common damp problem was condensation and mould, affecting 586,000 (2%) homes. Fewer homes were affected by rising damp (439,000, also 2%) or by penetrating damp (393,000, 2%), Annex Table 2.4.

Owner occupied dwellings were less likely to have any damp problems than private or social rented dwellings. Some 9% of private rented dwellings had some type of damp problem, compared with 5% of social rented dwellings and 3% of owner occupied dwellings, Figure 2.8 and Annex Table 2.5.
2.19 Between 2014 and 2015, there was an increase in the proportion of homes with rising damp. This was driven by an increase in the incidence of rising damp in the private rented sector, which increased from 3% to 4%, Annex Table 2.5. The incidence of the other damp problems did not change.

2.20 Private rented dwellings were, on average, older and therefore more likely to have defects to the damp proof course, roof covering, gutters, or down pipes, which could lead to problems with rising or penetrating damp affecting at least one room in the property.

Energy efficiency

Energy efficiency rating

2.21 The Government’s Standard Assessment Procedure (SAP) is used to monitor the energy efficiency of homes. It is an index based on calculating annual space and water heating costs for a standard heating regime and is expressed on a scale of 1 (highly inefficient) to 100 (highly efficient with 100 representing zero energy cost).

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2.22 The energy efficiency of the English housing stock has increased and in 2015 the average SAP rating of English dwellings was 62 points, up from 45 points in 1996, Annex Table 2.6. The increase since 1996 was evident in all tenures, Figure 2.9.

**Figure 2.9: Mean SAP rating, by tenure, 1996 to 2015**

![Mean SAP rating by tenure, 1996 to 2015](image)

Base: all dwellings
Note: underlying data are presented in Annex Table 2.6
Sources:
- 1996 to 2007: English House Condition Survey, dwelling sample
- 2008 onwards: English Housing Survey, dwelling sample

2.23 In general, the social sector was more energy efficient than the private sector, in part due to wider use of wall insulation, but also because of dwelling type. In particular, the social sector contained a higher proportion of flats, which have less exposed surface area (external walls and roofs) through which heat can be lost, than detached or semi-detached houses, Annex Table 2.1.

2.24 The proportion of dwellings in the highest energy efficiency rating (EER) bands A to C increased considerably between 2005 and 2015 (5% to 28%), Annex Table 2.7. The proportion of dwellings in the lowest F and G bands fell from 19% to 5% between 2005 and 2015. In 2015, the majority of dwellings (77%) were in EER bands C or D.

2.25 Owner occupied and private rented stock both had an average SAP rating of 60 in 2015, but the distribution of EER bands varied, Figure 2.10 and Annex Tables 2.6 and 2.7. More private rented dwellings were in EER band C (25%) than owner occupied dwellings (23%), while there were more EER band D homes in the owner occupied sector (52%) than in the private rented sector.
(49%). This was in part due to the private rented sector containing a larger proportion of flats than the owner occupied sector and these flats, especially newer purpose built ones, tend to be more energy efficient than the average dwelling.

**Figure 2.10: Energy efficiency rating bands, by tenure, 2015**

There are two key methods of increasing the energy efficiency of existing dwellings: upgrading the dwelling’s heating system and increasing insulation.

**Heating system**

2.27 Between 1996 and 2015, the proportion of homes with central heating increased (from 80% to 92%) while the proportion of homes with room heaters as their main heating source – the least cost-effective and most inefficient method of heating – decreased from 12% to 2%. The proportion of homes
with storage heaters also decreased over this period from 8% to 5%, Annex Table 2.8.

2.28 In 2015, the private rented sector had the lowest proportion of homes with central heating (84%), followed by housing association homes (88%). Owner occupied and local authority homes had the highest (both 95%). The proportion of dwellings in the private rented sector with fixed room heaters were higher than in other tenures (6% compared to 2% of owner occupied dwelling and 1% of dwellings in the social rented sector), Annex Table 2.9.

2.29 Condensing boilers are generally the most efficient boiler type and since the mid-2000s have been mandatory for new and replacement boilers. As expected, the proportion of dwellings with condensing or condensing-combination boilers has increased considerably since 2001. In 2001, just 2% of homes had these boilers types. By 2015 this had increased to 59%, Figure 2.11 and Annex Table 2.10.

Figure 2.11: Boiler types, 1996 to 2015

Base: all dwellings
Notes:
1) Condensing and condensing-combination boilers were rare in 1996, so data on these types were not collected. Values of zero have been assumed to reflect this.
2) underlying data are presented in Annex Table 2.10
Sources:
2008 onwards: English Housing Survey, dwelling sample

2.30 Older, less energy efficient boiler types were more prevalent in the private sector. In 2015, 21% of owner occupied dwellings and 13% of private rented
dwellings had a standard boiler, compared with 8% of social sector dwellings, Annex Table 2.11.

Insulation

2.31 The second main method of increasing a dwelling’s energy performance is by increasing insulation. Standard insulation measures include cavity or solid wall insulation, loft insulation and double glazing.

2.32 In 2015, the English Housing Survey introduced a new measure of cavity wall insulation. This new measure incorporates more up-to-date information regarding the insulation of buildings built since 1991 and aligns the English Housing Survey methodology to a common method for calculating energy efficiency of buildings. See the glossary for more information.

2.33 Since 2008, insulation levels increased in all dwellings, Figure 2.12 and Annex Table 2.12. This is likely due to initiatives such as the Decent Homes programme, energy efficiency requirements on new build properties and an increased awareness of energy efficiency and ways of increasing it.
Figure 2.12: Insulation measures, 2008 to 2015

Base: all dwellings
Notes:
1) Percentages are based on all dwellings, including those with no loft or other wall type. In 2015, only 87% of all dwellings have lofts (the rest are flats not on the top floor), and 98% have cavity or solid walls.
2) Underlying data are presented in Annex Table 2.12. See footnotes in this table for further detail on methodology for cavity and solid wall insulation.
Sources: English Housing Survey, dwelling sample

2.34 The increase in wall insulation across the stock from 38% in 2008 to 49% in 2015 was mostly driven by an increase in the prevalence of insulated cavity walls. Taking dwellings with predominantly cavity or solid walls separately, 68% of dwellings with predominantly cavity walls had insulation installed compared with only 9% of dwellings with predominantly solid walls.

2.35 Solid wall insulation is either applied externally (e.g. insulated board attached to the external face with a render finish), changing the appearance or the dwelling, or internally (e.g. insulated plasterboard fitted to the external walls inside each room, with a plaster finish), somewhat reducing floor size. It can also be more expensive than cavity wall insulation.

2.36 Among dwellings with solid walls, the social rented sector had a higher proportion of solid walls with insulation (27%) than the private sector (7%), Figure 2.13 and Annex Table 2.13. This is likely to be due to funding arrangements, including initiatives such as the Decent Homes programme, enabling investment in energy efficiency measures in the social sector.
Figure 2.13: Wall insulation, by main wall type and tenure, 2015

Base: dwellings with predominantly cavity walls (green); dwellings with predominantly solid walls (blue)
Note: underlying data are presented in Annex Table 2.13
Source: English Housing Survey, dwelling sample

Smart meters

2.37 The government has a target that, by 2020, all households should have been offered a smart meter by their energy supplier. Smart meters are the next generation of gas and electricity meters and offer a range of new functions. For example, they can tell residents how much energy they are using through an in-home display. They also communicate directly with the energy supplier, so that the supplier does not need to visit the home to read the meter. The English Housing Survey now captures information on the presence of gas and electricity smart meters.

2.38 In 2015, 6% of dwellings with mains electricity had an electricity smart meter and 4% of dwellings with mains gas supply had a gas one. The lower figure for gas smart meters reflects that some energy suppliers are currently choosing to install only electricity smart meters, Annex Table 2.14.\(^6\)

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\(^6\) The EHS results are broadly in line with statistics from the Department for Business, Energy and Industrial Strategy (BEIS) on smart meters stating that 5.8% of all domestic meters operated by large suppliers were smart meters by 31 March 2016. Differences are likely to reflect the differing time periods for data collection and e.g. the definition of smart meters (EHS surveyors may not differentiate between the most modern ‘SMETS-compliant’ smart meters and ‘smart-type meters’). Department of Energy and Climate Change, 30 June 2016, Smart Meters Quarterly Report to end March 2016 Great Britain, at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/533060/2016_Q1_Sma rt_Meters_Report.pdf.
2.39 Housing association (7%) and owner occupied dwellings (6%) were more likely to have an electricity smart meter than local authority (5%) or private rented (3%) dwellings. Gas smart meters are more evenly spread but were less prevalent in the private rented sector than other tenures, Figure 2.14.

Figure 2.14: Dwellings with a smart meter, by tenure, 2015

Base: all dwellings with mains electricity or mains gas
Note: underlying data are presented in Annex Table 2.14
Source: English Housing Survey, dwelling sample

Subjective overheating

2.40 The English Housing Survey now includes a subjective measure for gauging whether residents feel that any part of their home gets uncomfortably hot, and, if so, which parts. This is in addition to the surveyor’s objective assessment of excess heat risk as part of the housing health and safety rating system (HHSRS).

2.41 In 2015, 7% of residents reported that at least one part of their home got uncomfortably hot, Annex Table 2.15.\(^7\)

2.42 Owner occupiers (8%) were more likely than private renters (6%) or social renters (6%) to say that their dwelling got uncomfortably hot.

\(^7\) The difference between this finding and that in the 2011 Energy Follow-Up Survey (EFUS) is likely to be due to differences in the questions. The EHS asked whether residents feel their home gets ‘uncomfortably hot’ whereas EFUS asked if they experienced difficulty keeping particular rooms ‘comfortably cool’, with 20% saying they did. On EFUS findings, see, BRE for DECC, 28/1/2014, Report 7: Thermal comfort & overheating, at https://www.gov.uk/government/statistics/energy-follow-up-survey-efus-2011.
2.43 Those living in detached houses were more likely to say their dwelling got uncomfortably hot than those living in small terraced houses (9% compared to 5%), as were those in newer dwellings (9% of residents in buildings built in 1991 and after compared to 6% of those built before 1919), see Figure 2.15.

Figure 2.15: Subjective overheating, by dwelling age, 2015

![Graph showing subjective overheating by dwelling age]

Base: all dwellings  
Note: underlying data are presented in Annex Table 2.15  
Source: English Housing Survey, dwelling sample

2.44 This topic will be explored in more detail in the English Housing Survey annual reports, which will be published in the summer.

Smoke and carbon monoxide alarms

Smoke alarms

2.45 In 2015-16, 89% of households had at least one working smoke alarm. The proportion of households with working smoke alarms varied depending on tenure. Private renters were least likely to have at least one working smoke alarm (84%), compared with 89% of owner occupiers, 93% of local authority renters and 95% of households in housing association properties, Annex Table 2.16.

2.46 Between 2008-09 and 2015-16, the proportion of households with a working smoke alarm increased from 84% to 89%. This increase was observed across all tenures.
In 2015-16, around three quarters (78%) of households had tested their alarm at some point, though 22% had never tested their smoke alarm, Annex Table 2.17.\(^8\)

Owner occupiers were more likely to have tested their smoke alarm at least once (with 18% never doing it) compared with private renters (30% never) and social renters (28% never), Figure 2.17.

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Carbon monoxide alarms

2.49 The English Housing Survey now captures information on the presence of carbon monoxide alarms. In 2015, just over a quarter (28%) of all dwellings had a carbon monoxide alarm, Annex Table 2.18.

2.50 Owner occupied dwellings (31%) were more likely than private rented sector (21%) or social rented dwellings (28%) to have a carbon monoxide alarm. Social rented dwellings are also more likely than private rented dwellings to have one.

2.51 In addition, dwellings with a solid fuel burning appliance, such as a coal fire or wood burning stove, were more likely (33%) to have a carbon monoxide alarm than dwellings with no solid fuel appliance (28%).

2.52 From October 2015, private sector landlords were required to install a carbon monoxide alarm in any room containing a solid fuel burning appliance. They were also required to ensure the alarm was working at the beginning of each new tenancy.
In 2015, 25% of private rented sector dwellings with a solid fuel appliance had a carbon monoxide alarm. We expect this to increase in the future.\(^9\) Because so few dwellings have a solid fuel appliance it is not possible to make meaningful cross tenure comparisons. The apparent difference between private rented sector dwellings with and without a solid fuel appliance is not statistically significant.

\(^9\) This report is based on data collected between April 2014 and March 2016 (a mid-point of April 2015), so the data collection period covers a considerable time period before the legislation came into force.
Technical notes

1. Results for the first section of this report, on households, are presented for ‘2015-16’ and are based on fieldwork carried out between April 2015 and March 2016 on a sample of 13,468 households. Throughout the report, this is referred to as the ‘full household sample’.

2. Results in the second section of the report, which relate to the physical dwelling, are presented for ‘2015’ and are based on fieldwork carried out between April 2014 and March 2016 (a mid-point of April 2015). The sample comprises 12,351 occupied or vacant dwellings where a physical inspection was carried out. Throughout the report, this is referred to as the ‘dwelling sample’.

3. Where the numbers of cases in the sample are too small for any inference to be drawn about the national picture, the cell contents are replaced with a “u”. This happens where the cell count is less than 5. When percentages are based on a row or column total with unweighted total sample size of less than 30, the figures are italicised. Figures in italics are therefore based on a small sample size and should be treated as indicative only.

4. Where comparative statements have been made in the text, these have been significance tested to a 95% confidence level. This means we are 95% confident that the statements we are making are true.

5. Additional annex tables, including the data underlying the figures and charts, are published on the website: https://www.gov.uk/government/collections/english-housing-survey alongside many supplementary tables, which are updated each year (in the summer) but are too numerous to include in our reports. Further information on the technical details of the survey, and information and past reports on the Survey of English Housing and the English House Condition Survey, can also be accessed via this link.

Weighting methodology

6. The publication of the 2015-16 English Housing Survey (EHS) Headline Report was delayed to enable analysts at the Department for Communities and Local Government (DCLG) to revise the weighting process. The aim of the revision was to improve the stability of year-on-year estimates including household numbers. This new approach to weighing was approved by two ‘external’ experts on the EHS Technical Advisory Group.
7. The improved weighting methodology was necessary because the initial weighted household counts increased considerably between 2014-15 and 2015-16 (by 361,583 additional households, 344,921 of which were in the private rented sector). The provisional ‘grossed’ dwelling and household estimates showed that, between 2014-15 and 2015-16, there were two additional households for every one additional dwelling (the number of dwellings increased by 180,814). This appeared implausible when compared with an expected household growth of up to 200,000 per year as indicated by the Household Projections.\(^\text{10}\)

8. NatCen (the current EHS contractor) investigated and advised that some of the year-on-year variation in the initial weighted household counts was due to sampling variation in the data used in the weighting. The household weights are dependent on estimates of ‘dwelling-to-household’ ratios, which are subject to sampling variation. (This differs from the weighted dwelling counts that are controlled to ‘external’ DCLG estimates of dwellings by tenure and region.)

9. ‘Dwelling-to-household’ ratios vary by tenure and by year, Table T.1. In 2015-16, the average ratio increased from 1.0062 to 1.0129, resulting in a large increase in the grossed household counts between 2014-15 and 2015-16.

<table>
<thead>
<tr>
<th></th>
<th>2013-14</th>
<th>2014-15</th>
<th>2015-16 (before revision)</th>
</tr>
</thead>
<tbody>
<tr>
<td>owner occupiers</td>
<td>1.0039</td>
<td>1.0013</td>
<td>1.0013</td>
</tr>
<tr>
<td>private rented</td>
<td>1.0600</td>
<td>1.0239</td>
<td>1.0670</td>
</tr>
<tr>
<td>local authority</td>
<td>1.0092</td>
<td>1.0103</td>
<td>1.0053</td>
</tr>
<tr>
<td>housing association</td>
<td>1.0091</td>
<td>1.0033</td>
<td>1.0079</td>
</tr>
<tr>
<td>total</td>
<td>1.0139</td>
<td>1.0062</td>
<td>1.0129</td>
</tr>
</tbody>
</table>

Source: English Housing Survey, full household sample

10. To reduce the year-on-year variation, the dwelling-to-household ratio was recalculated by smoothing across two years of the EHS (2015-16 and 2014-15). The revised (smoothed) weights were used for producing the published EHS findings.\(^\text{11}\). Smoothing across two years was preferred to smoothing across more years because the EHS sample uses a two year cycle whereby England is divided into 1,808 primary sampling units (PSUs) and interviewing takes places in the same 904 PSUs every other year.

\(^{10}\) https://www.gov.uk/government/collections/household-projections

\(^{11}\) Both the household and the dwelling weights were revised because the dwelling-to-household ratio also has a minor role in the computation of the latter. The impact of the revision of the dwelling weights was very small.
11. When smoothed across two survey years, the average dwelling-to-household ratio reduced from 1.0129 to 1.0096, Table T.2. To assess the stability of the new methodology in producing less variable ratios across years, the 2014-15 ratio was also re-calculated using the same methodology (i.e. smoothing over 2 years: 2013-14 and 2014-15). As can be seen in the table below, the ratio appears quite stable (1.0100 in 2014-15 compared with 1.0096 in 2015-16).

Table T.2: Dwelling-to-household ratios, smoothed over two years, by tenure, 2014-15 and 2015-16

<table>
<thead>
<tr>
<th>Tenure</th>
<th>2014-15</th>
<th>2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>owner occupiers</td>
<td>1.0012</td>
<td>1.0022</td>
</tr>
<tr>
<td>private rented</td>
<td>1.0467</td>
<td>1.0425</td>
</tr>
<tr>
<td>local authority</td>
<td>1.0087</td>
<td>1.0102</td>
</tr>
<tr>
<td>housing association</td>
<td>1.0049</td>
<td>1.0059</td>
</tr>
<tr>
<td>total</td>
<td><strong>1.0096</strong></td>
<td><strong>1.0100</strong></td>
</tr>
</tbody>
</table>

Source: English Housing Survey, full household sample

12. This new approach to weighting was approved by two external experts on the EHS Technical Advisory Group. It is considered to be the most robust and practical solution to the year-on-year inconsistencies observed in the household estimates. We expect to continue to smooth the weights in future waves of the EHS. The EHS team at DCLG, with NatCen and the EHS Technical Advisory Group, will review the further options to improve the weighting methodology. If you would like to share your views on the EHS weighting strategy, please contact: ehs@communities.gsi.gov.uk.

13. More detail on the EHS methodology can be found in the technical report\textsuperscript{12}.

\textsuperscript{12} https://www.gov.uk/government/collections/english-housing-survey-technical-advice
Glossary

**Arrears:** If the HRP or partner are not up to date with rent or mortgage payments they are considered to be in arrears.

**Bedroom standard:** The ‘bedroom standard’ is used by government as an indicator of occupation density. A standard number of bedrooms are calculated for each household in accordance with its age/sex.marital status composition and the relationship of the members to one another. A separate bedroom is allowed for each married or cohabiting couple, any other person aged 21 or over, each pair of adolescents aged 10-20 of the same sex, and each pair of children under 10. Any unpaired person aged 10-20 is notionally paired, if possible, with a child under 10 of the same sex, or, if that is not possible, he or she is counted as requiring a separate bedroom, as is any unpaired child under 10.

This notional standard number of bedrooms is then compared with the actual number of bedrooms (including bed-sitters) available for the sole use of the household, and differences are tabulated. Bedrooms converted to other uses are not counted as available unless they have been denoted as bedrooms by the respondents; bedrooms not actually in use are counted unless uninhabitable.

Households are said to be overcrowded if they have fewer bedrooms available than the notional number needed. Households are said to be under-occupying if they have two or more bedrooms more than the notional needed.

**Boiler type:** The report covers a number of boiler types:

- **standard:** provides hot water or warm air for space heating with the former also providing hot water via a separate storage cylinder.

- **back:** located behind a room heater and feeds hot water to a separate storage cylinder. They are generally less efficient than other boiler types.

- **combination:** provides hot water or warm air for space heating and can provide hot water on demand negating the need for a storage cylinder, therefore requiring less room.

- **condensing:** standard and combination boilers can also be condensing. A condensing boiler uses a larger, or dual, heat exchanger to obtain more heat from burning fuel than an ordinary boiler, and is generally the most efficient boiler type.

**Damp and mould:** There are three main categories of damp and mould covered in this report:
• **rising damp**: where the surveyor has noted the presence of rising damp in at least one of the rooms surveyed during the physical survey. Rising damp occurs when water from the ground rises up into the walls or floors because damp proof courses in walls or damp proof membranes in floors are either not present or faulty.

• **penetrating damp**: where the surveyor has noted the presence of penetrating damp in at least one of the rooms surveyed during the physical survey. Penetrating damp is caused by leaks from faulty components of the external fabric e.g. roof covering, gutters etc. or leaks from internal plumbing, e.g. water pipes, radiators etc.

• **condensation or mould**: caused by water vapour generated by activities like cooking and bathing condensing on cold surfaces like windows and walls. Virtually all dwellings have some level of condensation. Only serious levels of condensation or mould are considered as a problem in this report, namely where there are extensive patches of mould growth on walls and ceilings and/or mildew on soft furnishings.

**Decent home**: A home that meets all of the following four criteria:

- it meets the current statutory minimum standard for housing as set out in the Housing Health and Safety Rating System (HHSRS – see below).

- it is in a reasonable state of repair (related to the age and condition of a range of building components including walls, roofs, windows, doors, chimneys, electrics and heating systems).

- it has reasonably modern facilities and services (related to the age, size and layout/location of the kitchen, bathroom and WC and any common areas for blocks of flats, and to noise insulation).

- it provides a reasonable degree of thermal comfort (related to insulation and heating efficiency).

The detailed definition for each of these criteria is included in *A Decent Home: Definition and guidance for implementation*, Department for Communities and Local Government, June 2006.\(^\text{13}\)

**Dependent children**: Any person aged 0 to 15 in a household (whether or not in a family) or a person aged 16 to 18 in full-time education and living in a family with his or her parent(s) or grandparent(s). It does not include any people aged 16 to 18 who have a spouse, partner or child living in the household.

**Double glazing:** This covers factory made sealed window units only. It does not include windows with secondary glazing or external doors with double or secondary glazing (other than double glazed patio doors, which are surveyed as representing two windows).

**Dwelling:** A unit of accommodation which may comprise one or more household spaces (a household space is the accommodation used or available for use by an individual household). A dwelling may be classified as shared or unshared. A dwelling is shared if:

- the household spaces it contains are ‘part of a converted or shared house’, or
- not all of the rooms (including kitchen, bathroom and toilet, if any) are behind a door that only that household can use, and
- there is at least one other such household space at the same address with which it can be combined to form the shared dwelling.

Dwellings that do not meet these conditions are unshared dwellings.

The EHS definition of dwelling is consistent with the Census 2011.

**Dwelling age:** The date of construction of the oldest part of the building.

**Dwelling type:** Dwellings are classified, on the basis of the surveyor’s inspection, into the following categories:

- **small terraced house:** a house with a total floor area of less than 70m² forming part of a block where at least one house is attached to two or more other houses. The total floor area is measured using the original EHS definition of useable floor area, used in EHS reports up to and including the 2012 reports. That definition tends to yield a smaller floor area compared with the definition that is aligned with the Nationally Described Space Standard and used on the EHS since 2013. As a result of the difference between the two definitions, some small terraced houses are reported in the 2014 Housing Supply Report as having more than 70m².

- **medium/large terraced house:** a house with a total floor area of 70m² or more forming part of a block where at least one house is attached to two or more other houses. The total floor area is measured using the original EHS definition of useable floor area which tends to yield a small floor area compared with the definition used on the EHS since 2013.

- **end terraced house:** a house attached to one other house only in a block where at least one house is attached to two or more other houses.

- **mid terraced house:** a house attached to two other houses in a block.

- **semi-detached house:** a house that is attached to just one other in a block of two.
• **detached house**: a house where none of the habitable structure is joined to another building (other than garages, outhouses etc.).

• **bungalow**: a house with all of the habitable accommodation on one floor. This excludes chalet bungalows and bungalows with habitable loft conversions, which are treated as houses.

• **converted flat**: a flat resulting from the conversion of a house or former non-residential building. Includes buildings converted into a flat plus commercial premises (such as corner shops).

• **purpose built flat, low rise**: a flat in a purpose built block less than six storeys high. Includes cases where there is only one flat with independent access in a building which is also used for non-domestic purposes.

• **purpose built flat, high rise**: a flat in a purpose built block of at least six storeys high.

**Economic status**: Respondents self-report their situation and can give more than one answer.

• **working full-time/part-time**: full-time work is defined as 30 or more hours per week. Part-time work is fewer than 30 hours per week. Where more than one answer is given, ‘working’ takes priority over other categories (with the exception that all those over State Pension Age (SPA) who regard themselves as retired are classified as such, regardless of what other answers they give).

• **unemployed**: this category covers people who were registered unemployed or not registered unemployed but seeking work.

• **retired**: this category includes all those over the state pension age who reported being retired as well as some other activity. For men the SPA is 65 and for women it is 60 if they were born before 6th April 1950. For women born on or after the 6th April 1950, the state pension age has increased incrementally since April 201014.

• **full-time education**: education undertaken in pursuit of a course, where an average of more than 12 hours per week is spent during term time.

• **other inactive**: all others; they include people who were permanently sick or disabled, those looking after the family or home and any other activity.

On occasions, **full-time education** and **other inactive** are combined and described as **other economically inactive**.

14 For further information see: [www.gov.uk/browse/working/state-pension](http://www.gov.uk/browse/working/state-pension)
**Energy efficiency rating:** A dwelling’s energy costs per m$^2$ of floor area for standard occupancy of a dwelling and a standard heating regime and is calculated from the survey using a simplified form of SAP. The energy costs take into account the costs of space and water heating, ventilation and lighting, less cost savings from energy generation technologies. They do not take into account variation in geographical location. The rating is expressed on a scale of 1-100 where a dwelling with a rating of 1 has poor energy efficiency (high costs) and a dwelling with a rating of 100 represents zero net energy cost per year. It is possible for a dwelling to have a SAP rating of over 100 where it produces more energy than it consumes, although such dwellings will be rare within the English housing stock.

The detailed methodology for calculating SAP to monitor the energy efficiency of dwellings was updated in 2012 to reflect developments in the energy efficiency technologies and knowledge of dwelling energy performance. These changes in the SAP methodology were relatively minor compared with previous SAP methodology updates in 2005 and 2009. It means, however that a SAP rating using the 2009 method is not directly comparable to one calculated under the 2012 methodology, and it would be incorrect to do so. All SAP statistics used in reporting from 2013 are based on the SAP 2012 methodology and this includes time series data from 1996 to the current reporting period (i.e. the SAP 2012 methodology has been retrospectively applied to 1996 and subsequent survey data to provide consistent results in the 2013 and following reports).

**Energy efficiency rating (EER) bands:** The 1-100 SAP energy efficiency rating is also presented in an A-G banding system for an Energy Performance Certificate, where Band A rating represents low energy costs (i.e. the most efficient band) and Band G rating represents high energy costs (the least efficient band). The break points in SAP (see below) used for the EER Bands are:

- Band A (92–100)
- Band B (81–91)
- Band C (69–80)
- Band D (55–68)
- Band E (39–54)
- Band F (21–38)
- Band G (1–20)

**Heating system:** There are three main types of heating covered in this report:

- **central heating system:** most commonly a system with a gas fired boiler and radiators which distribute heat throughout the dwelling (but also included in this definition are warm air systems, electric ceiling/underfloor and communal heating). It is generally considered to be a cost effective and relatively efficient method of heating a dwelling. Communal systems use heat generated in a centralized location for residential space and water heating. This could be from
- a central boiler using any fuel which supplies a number of dwellings
- waste heat from power stations distributed through community heating schemes
- heat from a local CHP (combined heat and power) system

- **storage heaters**: predominately used in dwellings that have an off-peak electricity tariff. Storage heaters use off-peak electricity to store heat in clay bricks or a ceramic material, this heat is then released throughout the day. However, storage heating can prove expensive if too much on peak electricity is used during the day.

- **room heaters**: this category includes all other types of heaters such as fixed gas, fixed electric or portable electric heaters. This type of heating is generally considered to be the least cost effective of the main systems and produces more carbon dioxide emissions per kWh.

**Household**: One person or a group of people (not necessarily related) who have the accommodation as their only or main residence, and (for a group) share cooking facilities and share a living room or sitting room or dining area.

The EHS definition of household is slightly different from the definition used in the 2011 Census. Unlike the EHS, the 2011 Census did not limit household membership to people who had the accommodation as their only or main residence. The EHS included that restriction because it asks respondents about their second homes, the unit of data collection on the EHS, therefore, needs to include only those people who have the accommodation as their only or main residence.

**Household reference person (HRP)**: The person in whose name the dwelling is owned or rented or who is otherwise responsible for the accommodation. In the case of joint owners and tenants, the person with the highest income is taken as the HRP. Where incomes are equal, the older is taken as the HRP. This procedure increases the likelihood that the HRP better characterises the household’s social and economic position. The EHS definition of HRP is not consistent with the Census 2011, in which the HRP is chosen on basis of their economic activity. Where economic activity is the same, the older is taken as HRP, or if they are the same age, HRP is the first listed on the questionnaire.

**Household type**: The main classification of household type uses the following categories, some categories may be split or combined in different tables:

- couple no dependent child(ren)- married/cohabiting couple with no dependent child(ren)
- couple with dependent child(ren)- married/cohabiting couple with dependent child(ren) only
- couple with dependent and independent child(ren)- married/cohabiting couple with dependent and independent child(ren)
• couple with independent child(ren)- married/cohabiting couple with independent child(ren) only
• lone parent with dependent child(ren)- lone parent family with dependent child(ren) only
• lone parent with dependent and independent child(ren)- lone parent family with dependent and independent child(ren)
• lone parent with independent child(ren)- lone parent family with independent child(ren) only
• two or more families
• lone person sharing with other lone persons
• one male
• one female

**Housing Benefit**: A benefit administered by local authorities, which is designed to assist people who rent their homes and have difficulty meeting their housing costs. Council tenants on Housing Benefit receive a rent rebate which means that their rent due is reduced by the amount of that rebate. Private and social housing tenants usually receive Housing Benefit (or rent allowance) personally, although sometimes it is paid direct to the landlord.

**Housing Health and Safety Rating System (HHSRS)**: A risk assessment tool used to assess potential risks to the health and safety of occupants in residential properties in England and Wales. It replaced the Fitness Standard in April 2006.

The purpose of the HHSRS assessment\(^\text{15}\) is not to set a standard but to generate objective information in order to determine and inform enforcement decisions. There are 29 categories of hazard, each of which is separately rated, based on the risk to the potential occupant who is most vulnerable to that hazard. The individual hazard scores are grouped into 10 bands where the highest bands (A-C representing scores of 1,000 or more) are considered to pose Category 1 hazards. Local authorities have a duty to act where Category 1 hazards are present, and may take into account the vulnerability of the actual occupant in determining the best course of action. For the purposes of the decent homes standard, homes posing a Category 1 hazard are non-decent on its criterion that a home must meet the statutory minimum requirements.

The EHS is not able to replicate the HHSRS assessment in full as part of a large scale survey. Its assessment employs a mix of hazards that are directly assessed by surveyors in the field and others that are indirectly assessed from detailed related information collected. For 2006 and 2007, the survey (the then English House Condition Survey) produced estimates based on 15 of the 29 hazards. From 2008, the survey is able to provide a more comprehensive assessment based on 26 of the hazards.

29 hazards. See the EHS Technical Note on Housing and Neighbourhood Conditions\textsuperscript{16} for a list of the hazards covered.

**Income:** Two measures of income are used in this report.

- **gross income of the HRP and partner:** The gross annual income of the HRP and partner from wages, pensions, other private sources, savings and state benefits. This does not include any housing related benefits or allowances. This measure is divided by 52 to calculate weekly income. Income is presented in quintiles throughout this report (see income quintiles definition – below).

- **gross household income:** The gross annual income of all adults living in a household from wages, pensions, other private sources, savings and state benefits. This does not include any housing related benefits or allowances. This measure is divided by 52 to calculate weekly income. Income is presented in quintiles throughout this report (see income quintiles definition – below).

**Income quintiles:** All households in the EHS sample are divided into five equal groups based on their income (i.e. those in the bottom 20%, the next 20% and so on). These groups are known as quintiles. These can be used to compare income levels of particular groups to the overall population.

**Insulation:** There are two main types of insulation covered in this report:

- **wall insulation**

  *cavity walls:* where a dwelling has external walls of predominantly cavity construction, it is defined as having cavity wall insulation if at least 50% of the cavity walls are filled with insulation. This could have been fitted during construction or retrospectively injected between the masonry leaves/skins of the cavity wall.

  This report includes a new measure of cavity wall insulation which incorporates more up-to-date information regarding the insulation of buildings built in or after 1991 and aligns the English Housing Survey methodology to a common method for calculating energy efficiency of buildings.

  In compliance with Building Regulations, an increasing proportion of dwellings built in or after 1991 with cavity walls had insulation fitted at the time of construction (known as ‘as built’ cavity wall insulation), although compliance could also be achieved through other techniques. The non-intrusive survey undertaken in the EHS would not always be able to identify as built insulation, and therefore the Survey methodology makes assumptions about the presence of as built cavity wall insulation in newer dwellings. The assumption is now made

that properties built in and after 1996 have such insulation. This brings the EHS measure in line with current RdSAP\textsuperscript{17} methodology, which in turn reflects that as built cavity wall insulation was the predominant method used to comply with Building Regulations after this time.

Before this change, the EHS measure for cavity wall insulation included a category that identified cavity walled dwellings built in 1991 or after where no evidence of cavity wall insulation was seen by the surveyors and where no modelling assumptions had been made based on the construction date. For EHS reporting purposes, dwellings in this category were combined with those with known insulation (where either physical signs e.g. drill holes or visible insulation material in certain locations, information from the occupant or the age of the dwelling if built in 2003 or after was taken as evidence of insulation). Due to the uncertainty surrounding the presence of as built cavity wall insulation during this period, the combination of the two categories was thought to provide a broadly reliable estimate of the total number of insulated dwellings in the stock.

Due to changes in data collection the new measure can only be taken back to 2008. Trends from earlier reports hold, though the exact numbers produced by the new measure are lower (as properties built between 1991 and 1995 without evidence of retrofitted cavity wall insulation are no longer assumed to be insulated).

This new measure will be included in forthcoming datasets (accessible via the UK Data Service) as variable \textit{wins95x}.

\textit{solid walls}: where a dwelling has external walls of predominantly masonry solid construction, it is defined as having solid wall insulation if at least 50\% of the solid walls are fitted with insulation. This could be applied either externally (e.g. insulated board attached to the external face with a render finish) or internally (e.g. insulated plasterboard fitted to the external walls inside each room, with a plaster finish).

\textit{other walls}: these are any dwellings with predominantly non-cavity or masonry solid walls (e.g. timber, metal or concrete frames).

\begin{itemize}
  \item \textbf{loft insulation}: the presence and depth of loft insulation is collected for all houses and top-floor flats. Insulation could be found between joists above the ceiling of the top floor of the dwelling or between the roof timbers where the loft has been converted to a habitable space. Where insulation could not be observed, information was taken from the householder or from imputed estimates based on the age and type of the dwelling.
\end{itemize}

\textsuperscript{17} RdSAP is a simplified version of SAP for existing dwellings. Please see the SAP entry of this glossary.
**New household:** Where neither the household reference person (HRP) nor their spouse/partner occupied the HRP’s previous permanent accommodation, in either of their names. The EHS does not differentiate between previous accommodation within England and outside of England (including abroad).

**Non-dependent children:** any person aged over 18 or those aged 16-18 who are not in full-time education living in a family with his or her parent(s) or grandparent(s).

**Overcrowding:** Households are said to be overcrowded if they have fewer bedrooms available than the notional number needed according to the bedroom standard definition. See bedroom standard.

**Private accommodation:** The majority of homes in all three tenures, excluding hotels, bed and breakfast accommodation and institutional residences such as student halls, army barracks and care homes. The EHS only covers private accommodation.

**SAP:** The energy cost rating as determined by Government’s Standard Assessment Procedure (SAP) and is used to monitor the energy efficiency of dwellings. It is an index based on calculated energy costs for a standard heating regime and is expressed on a scale of 1 (highly inefficient) to 100 (highly efficient with 100 representing zero energy cost). It is possible for a dwelling to have a SAP rating of over 100 where it produces more energy than it consumes although such dwellings will be rare within the English housing stock.

The method for calculating SAP was comprehensively updated in 2005 and in 2009 with an update of a more minor nature in 2012. This new SAP 2012 methodology is used in this report.

**Social housing rents:** Most social housing rents are calculated according to ‘rent restructuring’ policy, introduced in 2001. The overall intention of the policy was that similar properties in similar areas should have similar levels of rents. The formula calculates rents for each individual property based on 30% of the relative property values at 1999 levels, 70% on relative local earnings and the size of the property. The formula rent had been increased annually at the rate of Retail Price Index inflation at the previous September + 0.5% until 2015-16 when it was increased by CPI +1%.

In 2012, the Government introduced Affordable Rent as another main type of social housing rents, which can be set at up to 80% of the market rate of the property, inclusive of service charges.

Between 2016-17 and 2019-20, social housing rents will be reduced by 1% a year, for 4 years except from supported housing, almshouses, community land trusts and fully mutual housing co-ops which will be excepted during the first year.
There is also a different arrangement for rents for intermediate rent properties (which falls within the statutory definition of social housing).

**Tenure:** In this report, households are typically grouped into three broad categories known as tenures: owner occupiers, social renters and private renters. The tenure defines the conditions under which the home is occupied, whether it is owned or rented, and if rented, who the landlord is and on what financial and legal terms the let is agreed.

- **owner occupiers:** households in accommodation which they either own outright, are buying with a mortgage or as part of a shared ownership scheme.

- **social renters:** this category includes households renting from Local Authorities (including Arms’ Length Management Organisations (ALMOs) and Housing Action Trusts) and Housing Associations, Local Housing Companies, co-operatives and charitable trusts.

  A significant number of Housing Association tenants wrongly report that they are Local Authority tenants. The most common reason for this is that their home used to be owned by the Local Authority, and although ownership was transferred to a Housing Association, the tenant still reports that their landlord is the Local Authority. There are also some Local Authority tenants who wrongly report that they are Housing Association tenants. Data from the EHS for 2008-09 onwards incorporate a correction for the great majority of such cases in order to provide a reasonably accurate split of the social rented category.

- **private renters:** this sector covers all other tenants including all whose accommodation is tied to their job. It also includes people living rent-free (for example, people living in a flat belonging to a relative).

**Under-occupation:** Households are said to be under-occupying their property if they have two or more bedrooms more than the notional number needed according to the bedroom standard definition. See bedroom standard.

**Usable floor area:** The total usable internal floor area of the dwelling as measured by the surveyor, rounded to the nearest square metre. A new modelling approach since the 2013 report uses assumptions aligned with the Nationally Described Space Standard which was published as part of the Housing Standards Review. It excludes integral garages, balconies, stores accessed from the outside only and the area under external walls. The area remaining represents the total of all room areas, hallways and circulation space including cupboards and stairs. The area under internal partition walls is also included. Loft space is not included unless the loft is habitable, with a fixed stair in place to access it. Dwellings are also grouped into the following five categories:

- less than 50m²
• 50 to 69m²
• 70 to 89m²
• 90 to 109m²
• 110m² or more.

**Vacant dwellings:** The assessment of whether or not a dwelling is vacant is made at the time of the interviewer’s visit. Clarification of vacancy is sought from neighbours. Surveyors are required to gain access to vacant dwellings and undertake full inspections.
In accordance with the Statistics and Registration Service Act 2007 the United Kingdom Statistics Authority has designated these statistics as National Statistics, signifying that they are fully compliant with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

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

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