Ministry of Housing, Communities & Local Government

# English Housing Survey

## Floor Space in English Homes – main report

50th Anniversary ENGLISH HOUSING SURVEY 1967 - 2017

# Contents

# Introduction and main findings

1. This report, commissioned by the Ministry of Housing, Communities and Local Government (MHCLG), uses English Housing Survey (EHS) data to examine the internal floor space of the English housing stock, and to determine whether this has changed over time.

2. Introduction of the nationally described space standard in 2015 changed the way space standards are measured, and also increased the prominence of home space issues on the policy agenda. The *Floor Space in English Homes – technical report*[1] examines the impact of the new measurement on the calculation of home size.

3. This research demonstrates the difficulties in assessing the relative size of English homes over time. The position is a complex one not least because the types of homes built in different periods varies so much. Nonetheless this research concludes that there is no overriding evidence to suggest that our newest homes are getting smaller.

4. For the whole of the English housing stock, and for most dwelling types, average internal floor area has remained fairly constant over time, particularly if homes built before 1919 are excluded.

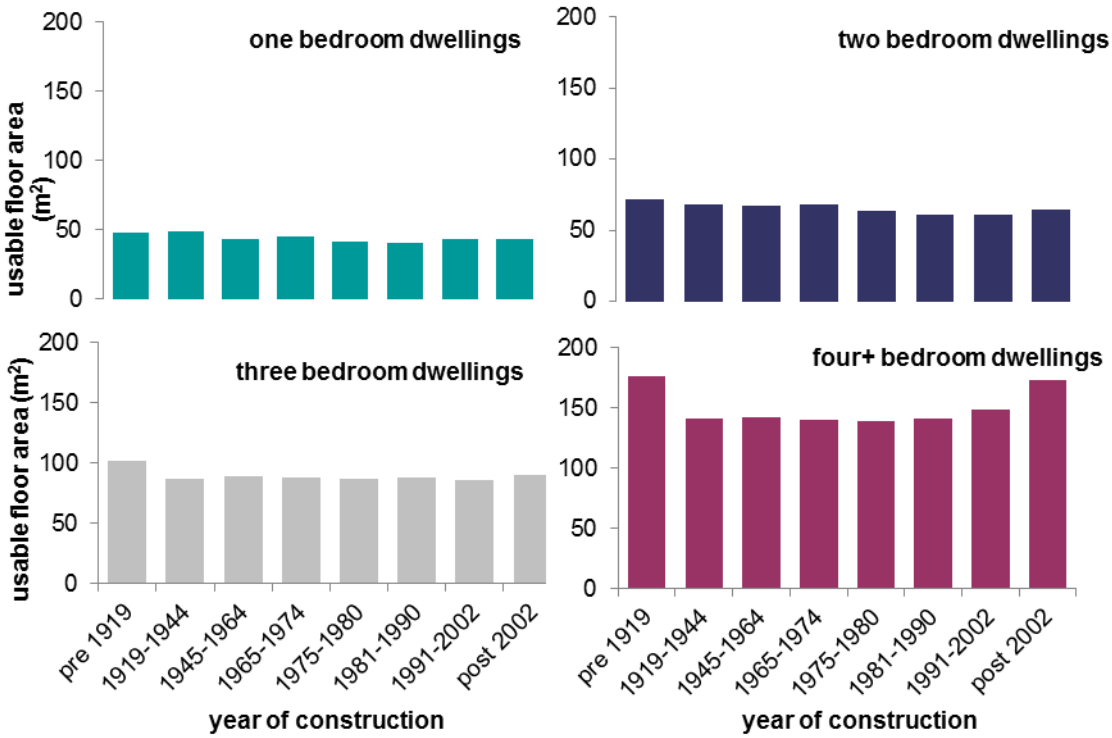
5. There is, however, evidence to suggest that during the 1970s, 1980s and 1990s average floor space fell for some types of houses when compared with older homes and the newest homes built after 2002. For example, average floor space among purpose built flats remained constant in those built from 1919 to 1974, but then fell from 1975 to 2002. The newest purpose built flats built after 2002 had an average floor space greater than those built from 1975 to 2002.

6. From the 1990s, diversity in dwelling sizes increased, returning to pre-1945 levels. After 2002, however, 43% of new homes built since were purpose built flats and the predominant bedroom size of new homes was two bedrooms. Not surprisingly, these types of homes tend to be smaller than the typical family sized semi-detached homes most commonly built from 1945 to the mid-1970s. Homes of the same type however tend not to show significant differences in size.

7. There is some evidence to suggest that for medium and larger sized family homes, there were generally more habitable rooms within properties of similar total floor area from around 1980. The inclusion of rooms such as *en suite* rooms and utility rooms, some of which may have been added after a home was originally constructed, may be making our modern homes feel smaller.

[1] The report is available from https://www.gov.uk/government/publications/floor-space-in-english-homes

### Mean usable floor area, by number of bedrooms and dwelling age, 2012




**Base: all dwellings**
**Source: English Housing Survey, dwelling sample**

8. The research finds a relationship between the size of a dwelling's private plot and its age, with rear plot areas in particular decreasing in size over time. This is likely due to the wish to maximise the use of plots for living space. Given the predominance of flats among the newest homes, it is not surprising that a higher proportion of households who live in homes built after 2002 only had access to shared plots rather than a private plot.

9. The amount of space needed in a home not only depends on the number of people living there, but basic lifestyle needs such as having enough space to store possessions, to cook safely, work from home, entertain friends or to enable family or carers to stay. Sufficient space is also important for healthy and safe homes, for example, enabling the installation of aids and adaptations where these are required. In more extreme cases, overcrowding in a home may have significant negative impacts on health, educational attainment and family relationships.

## Acknowledgements and further queries

10. Each year the English Housing Survey relies on the contributions of a large number of people and organisations. The Ministry of Housing, Communities and Local Government (MHCLG) would particularly like to thank the following people and organisations, without whom the survey and this report, would not have been possible: all the households who gave up their time to take part in

the survey, NatCen Social Research, the Building Research Establishment (BRE) and CADS Housing Surveys.

11. This report was produced by Helen Garrett of BRE in collaboration with MHCLG.

12. If you have any queries about this report, 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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# Chapter 1
# Background

1.1 The consideration of space standards is an ongoing area of interest for policy makers. Publications such as *Housing Space Standards* (commissioned in 1996 by the Greater London Authority from Housing Association Training and Consultancy – HATC) and the subsequent development of the *London Housing Design Guide* (London Development Agency, 2010) identified minimum space standards as key to the quality of housing.

1.2 Space in homes is also an important issue in media and public debate. Newspapers frequently feature articles claiming that new housing in the UK is the "smallest in Europe"[2], is getting smaller[3], and is too small for families[4]. The Royal Institute of British Architects has been particularly interested in this issue[5].

1.3 In August 2013, MHCLG issued a consultation seeking views on the results of a review of local housing standards. The main consultation document contained questions focused around eight key issues including space standards, specifically, whether there was a need for the introduction or use of space standards applied to new housing in the future. The results of this consultation were published in 2014 (MHCLG, 2014)[6].

1.4 In response, the Government announced a building standards review in March 2015[7], which included the introduction of the nationally described space standard (NDSS) alongside a range of other housing-policy related measures.

1.5 The NDSS deal with internal space of dwellings, and set out requirements for the gross internal floor area (GIFA) of properties with different numbers of bedrooms and different intended levels of occupancy i.e. it sets minimum

[2]Tahir T, 'Britain has the smallest homes in Europe and getting smaller, claims RIBA', *Metro,* 23 April 2013 http://metro.co.uk/2013/04/23/britain-has-smallest-homes-in-europe-and-getting-smaller-claims-riba-3662318/
[3]Robinson M & Peeve G, 'The incredible shrinking houses', *Daily Mail,* 21 August 2013 http://www.dailymail.co.uk/news/article-2398714/The-incredible-shrinking-houses-British-homes-built-just-HALF-size-1920s.html
[4]Winston A, 'More than half of homes in the UK are too small, says RIBA', *Dezeen*, 3 December 2015 https://www.dezeen.com/2015/12/03/new-build-homes-uk-too-small-riba-architecture/
[5]'Over half of new build homes are too small', *RIBA*, 2 December 2015 https://www.architecture.com/RIBA/Contactus/NewsAndPress/PressReleases/2015/Over50ofnew-buildhomesaretoosmallforfamilies.aspx
[6]*Housing Standards Review: Summary of Responses*, MHCLG, March 2014 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/289144/140225_final_hsr_summary_of_responses.pdf
[7]Pickles, E *Planning Update 2015* https://www.gov.uk/government/speeches/planning-update-march-2015

sizes for properties with two bedrooms intended to house two people; those with two bedrooms intended to house three people; one bedroom intended to house two people etc. It also takes into account the relationship of other rooms and storage space to potential occupancy. It applies only to *new* properties and properties undergoing modification, at the point of planning permission for their construction.

1.6 As the NDSS prescribes minimum standards for newly-constructed dwellings, it is likely to impact on the size of new residential units approved during the planning process, and, to a lesser degree, the average size of dwellings overall. Thus, as well as bringing residential building sizes into the policy spotlight, the NDSS gives further imperative to the need to understand the size of existing stock, and historical trends in stock size, so its impact can be assessed in future.

1.7 All of this underlines the importance of understanding current and historical trends in home sizes, both to inform policy and public, and to understand the impact of future policy changes.

## Technical details

1.8 For ease, the report uses the terms ‘floor area’ and ‘floor space’ interchangeably to refer to usable internal floor area.

1.9 Results for this report are based on the 2012 EHS data. The sample comprises 12,763 occupied or vacant dwellings which were inspected by a qualified surveyor between April 2011 and March 2013 (a mid-point of April 2012).

1.10 The report provides:

- A breakdown of dwelling types by property age to provide background of the stock, together with some analysis on the prevalence of extensions and conversions to homes.
- Average and range of total floor area of different dwelling types (end and mid terraced houses, bungalows, converted flats, purpose built flats, semi-detached and detached houses) by dwelling age.
- For the generally larger family sized homes (semi and detached houses), average room sizes for the surveyed bedroom and living room by dwelling age.
- Floor area of different types of homes by number of bedrooms and dwelling age.
- Floor area by the number of habitable rooms by dwelling age.

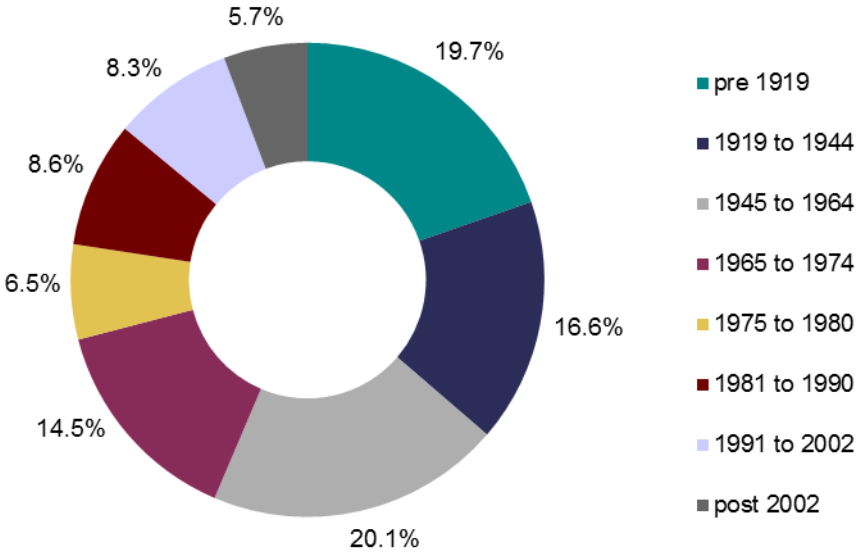
- Plot area by dwelling age.
- A comparison of the size of English homes and other features to those in selected European and international countries.

1.16 For the newest dwelling age band, the homes built after 2002 were grouped together. This age band was chosen as these cases allowed a sufficiently large sample size with which to undertake useful analysis.

# Chapter 2
# Overview of the English housing stock

2.1 In 2012, there were 22.7 million dwellings in England, 20% of which were built prior to 1919. Some 23% of the stock was built after 1980, Figure 2.1.

**Figure 2.1: English dwellings, by age, 2012**



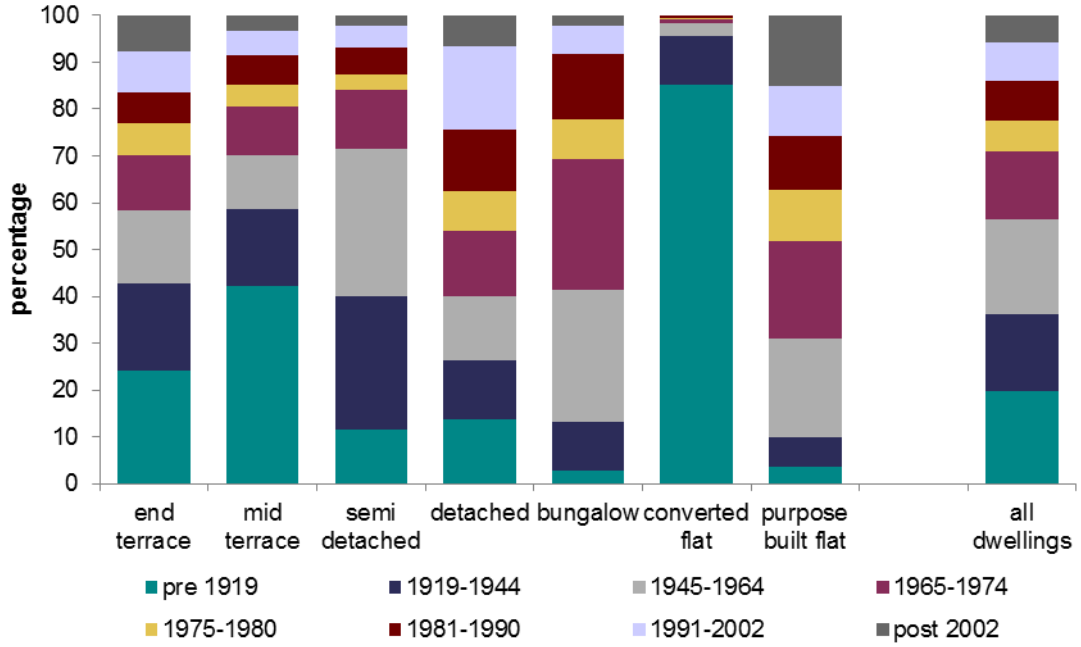

**Base: all dwellings**
**Source: English Housing Survey**

2.2 The type of dwelling is linked to dwelling age, Figures 2.2 and 2.3. This relationship is fundamental to this report since the distribution in the types of homes built in each age band impacts on the distribution and average floor area found for these years. Some summary findings are as follows:

- Around a third (35%) of terraced homes were built before 1919; 7% of such homes were built from 1981 to 1990.
- Some 60% of semi-detached homes were built between 1919 and 1964.
- Although purpose built flats comprised 16% of the whole stock, such homes comprised 43% of homes built after 2002.

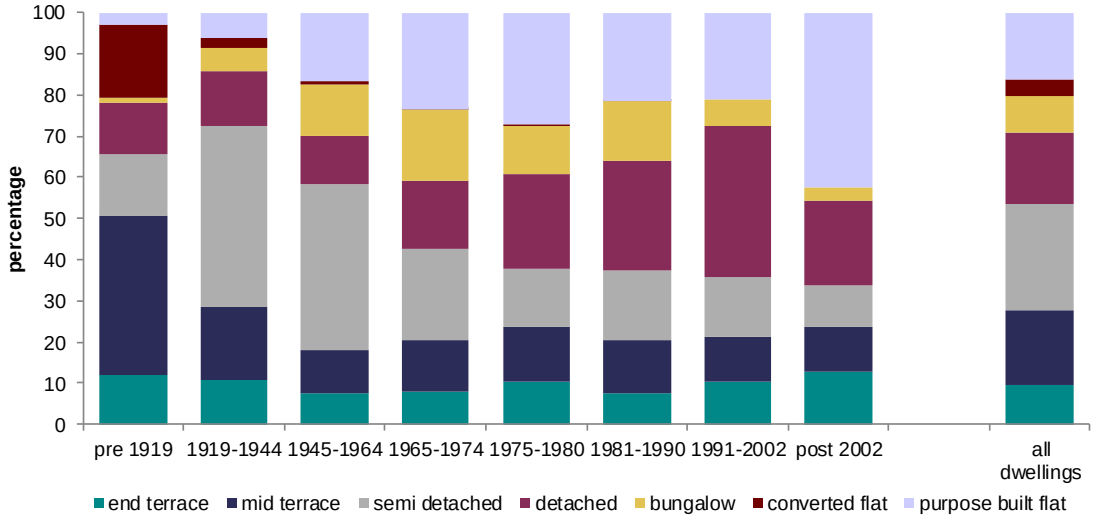
- Over half (56%) of bungalows were built between 1945 and 1975.
- 85% of converted flats were originally constructed before 1919[8].

## Figure 2.2: Dwelling type, by age, 2012




**Base: all dwellings**
**Source: English Housing Survey, dwelling sample**

## Figure 2.3: Dwelling age, by type, 2012




**Base: all dwellings**
**Source: English Housing Survey, dwelling sample**

[8] Further information on the age and design of English homes can be found in Nicol *et al*, *The age and construction of English Homes*, BRE 2014.

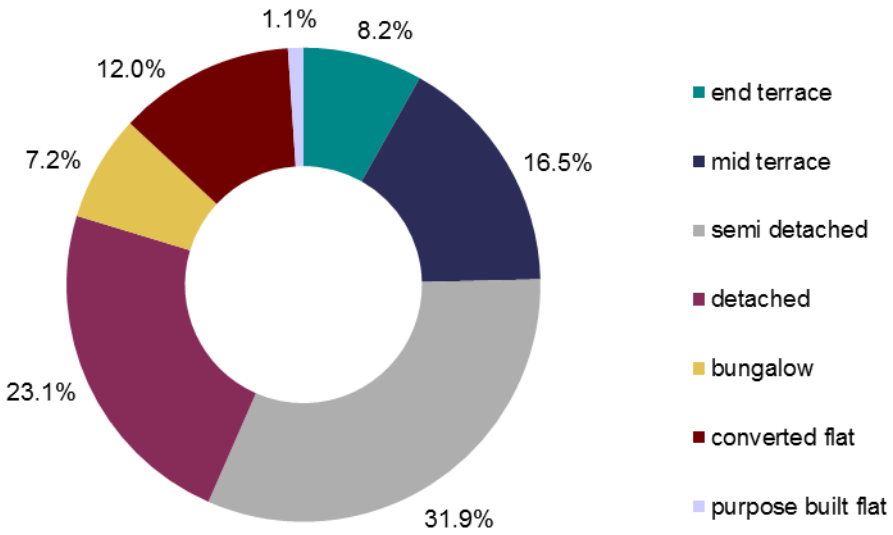
2.3 When comparing homes built in different time periods, it is important to recognise that the floor area, particularly for the oldest homes, may not be the same as when these dwellings were originally built.

2.4 There were 6.6 million dwellings (34% of the total stock) where major improvements and/or alterations have been undertaken. These major improvements and/or alterations include:

- extensions (added for amenities or living space)
- loft conversions
- conversions to more than one dwelling
- combining two or more dwellings

2.5 The most common improvements/alterations were the provision of an extension for amenities such as kitchen or bathroom (in 19% of homes) and for living space (in 18% of homes). Not surprisingly, semi-detached (32%) and detached homes (23%) comprised the majority of homes with some form of alteration, Figure 2.4.

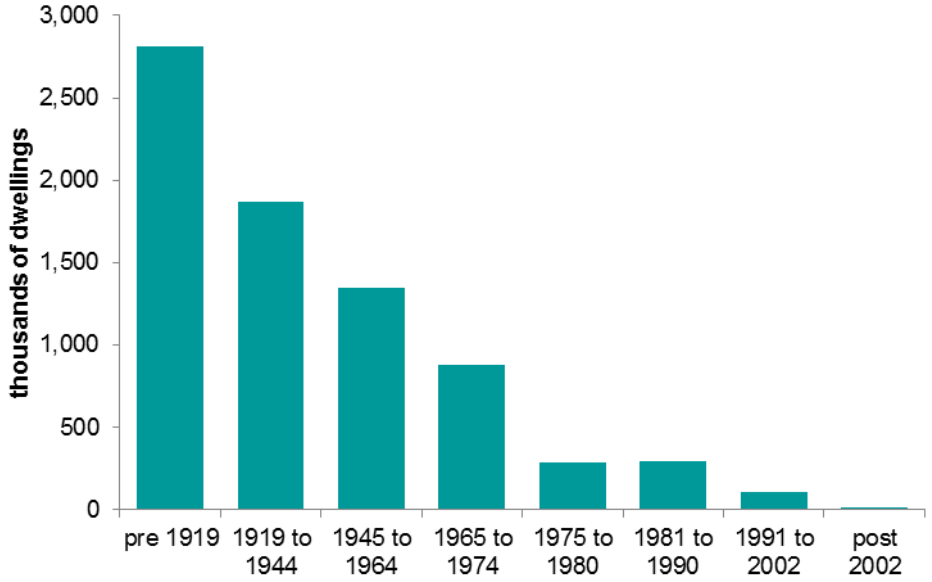
**Figure 2.4: Distribution of dwellings with major alterations, by dwelling type, 2012**




**Base: dwellings with major alternations**
**Source: English Housing Survey, dwelling sample**

2.6 Around 2.8 million alterations/improvements (37% of all those undertaken) occurred among the oldest homes built before 1919. Fewer than 10% of alterations (700,000) were in homes built from 1975, Figure 2.5.

## Figure 2.5: Number of dwellings with alterations, by dwelling age, 2012

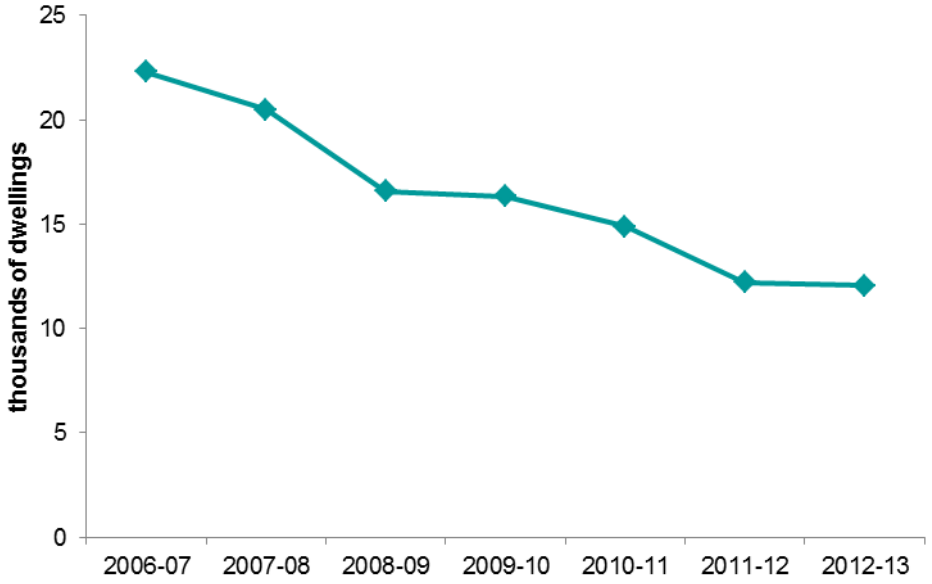



**Base: dwellings with alterations**
**Source: English Housing Survey, dwelling sample**

**Photos: loft conversion for a bungalow (left) and an extension for additional living room amenities in a semi-detached house (right)**

2.7 There has also been on-going demolition or refurbishment of older and poorer housing as part of, for example Housing Market Renewal Initiative and neighbourhood renewal policies. Small homes are more likely to be demolished, as they are unappealing and land inefficient. These measures will impact, to some extent, on the average floor area figures for older homes, although the rate of demolition has fallen more recently, Figure 3.6.

## Figure 2.6: Dwellings demolished, 2006-07 to 2012-13



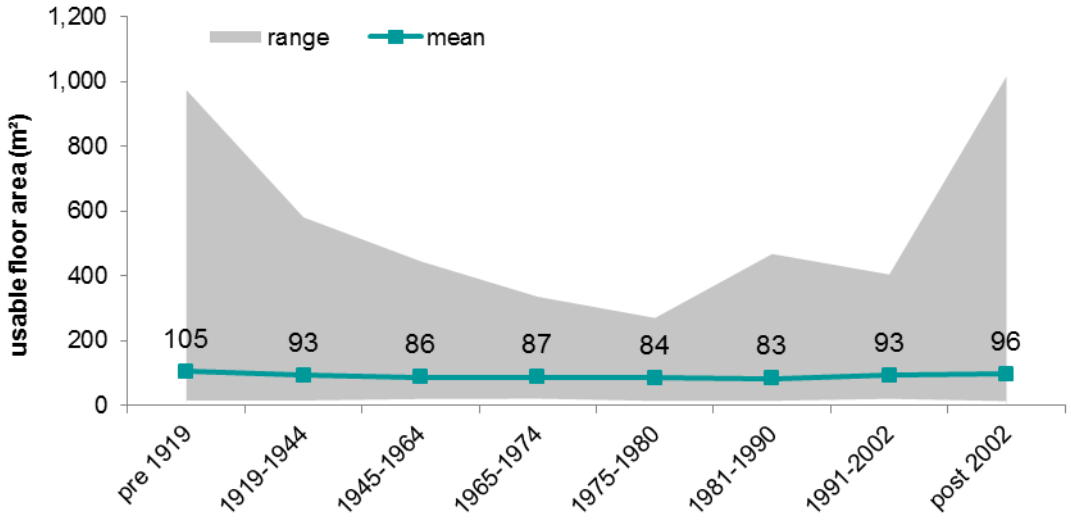

**Base: dwellings demolished**
**Source: MHCLG, Live tables on dwelling stock, Table 120 Components of net housing supply**
**https://www.gov.uk/government/statistical-data-sets/live-tables-on-net-supply-of-housing**

# Chapter 3

# Average floor area, by dwelling type and age

3.1 In 2012, the average floor area of the English housing stock was around 92m². Although floor space varied by dwelling age, average floor space remained fairly constant (83-96m²) over time with the notable exception of the oldest homes built before 1919, which were, on average, larger (105m²), Figure 3.1. The range of floor sizes increased among dwelling built after 2002, to similar levels seen among pre-1919 homes.

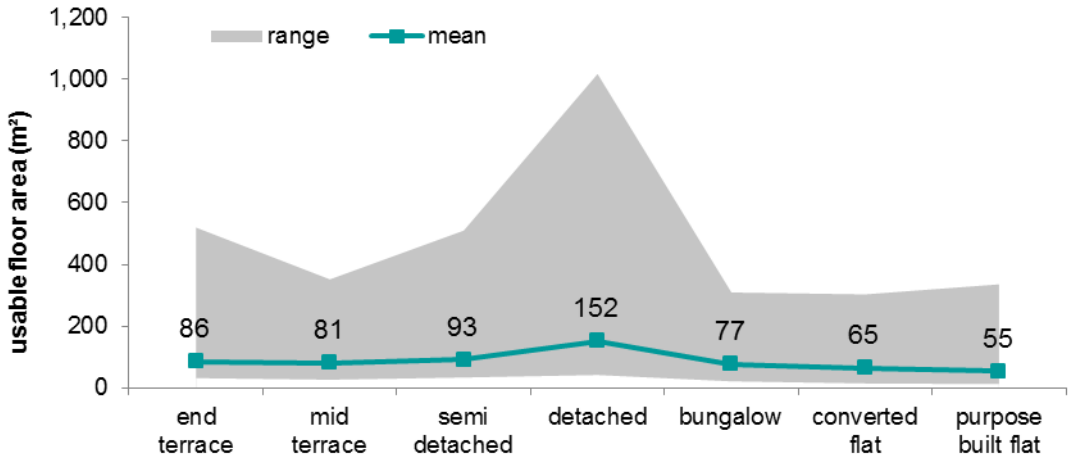
**Figure 3.1: Usable floor area, by dwelling age, 2012**




**Base: all dwellings**
**Source: English Housing Survey, dwelling sample**

3.2 Not surprisingly the range in total floor space available to households was greater for some dwelling types than others and was also affected by the feasibility of providing additional space through alterations, Figure 3.2. Each of these dwelling types is examined in more detail below.

## Figure 3.2: Usable floor area, by dwelling type, 2012




**Base: all dwellings**
**Source: English Housing Survey, dwelling sample**

**Photos: the changing nature of the English Housing Stock, from large pre-1919 detached homes to smaller cluster homes of the 1980s.**

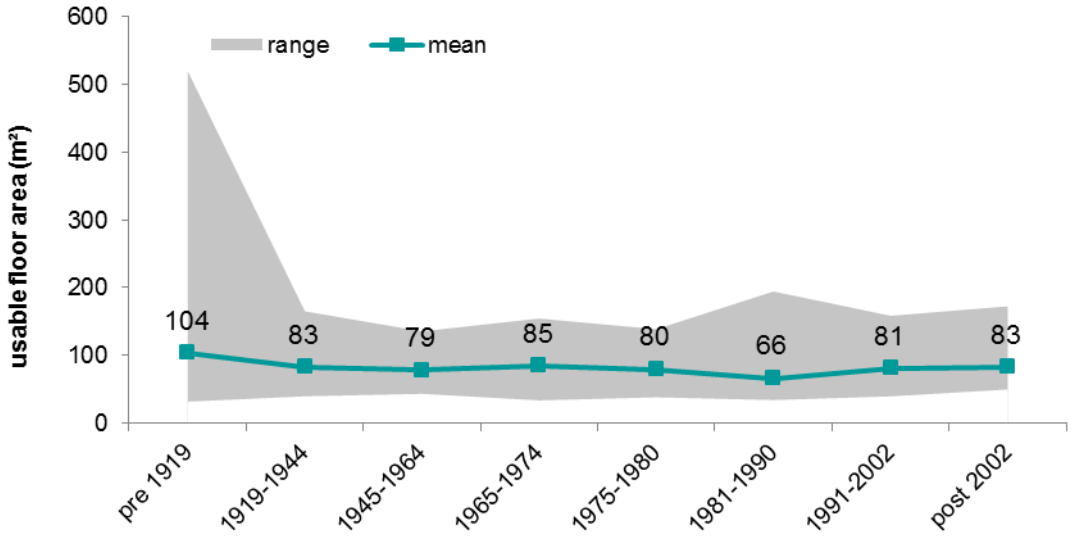
## Terraced Homes

3.3 The style of terraced homes has changed greatly over time ranging from traditional Victorian and Edwardian rows connected by rear passageways, to more modern terraces, smaller blocks of town houses and those often indistinguishable in frontage from a typical semi-detached home.

**Photos: The varied design of terraced houses from rows of Victorian (top left) and Edwardian (bottom left) homes to modern townhouses (top right) and large end terraces (bottom right) with the floor space of typical semi-detached homes.**

3.4 For end terraces, excluding homes built before 1919, the average floor area and the range of total floor area remained fairly consistent within dwellings of different ages (79-85m²) with the apparent exception of homes built in the 1980s (66m²). However, there was no statistically-significant difference between homes built in the 1980s compared with many other aged homes. Only the oldest pre 1919 built homes had internal floor space exceeding 100m², Figure 3.3.

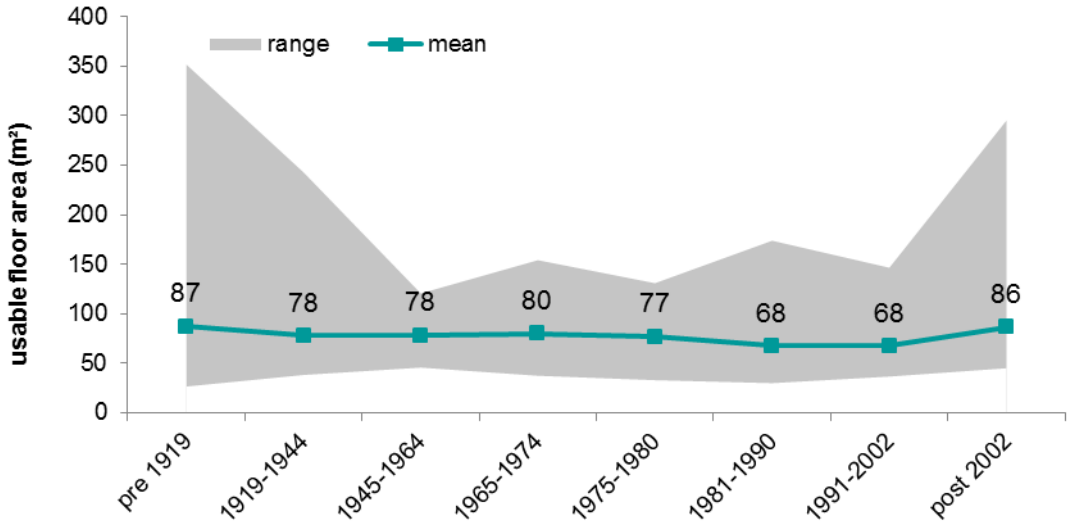
## Figure 3.3: Usable floor area among end terrace homes, by dwelling age, 2012




**Base: end terrace homes**
**Source: English Housing Survey**

3.5 Mid terraced homes had, on average, around 5m² less internal floor space compared with end terraced homes, although this difference was not statistically significant. More modern mid terraces built after 2002 had similar average space compared with the oldest pre 1919 built homes. The range of floor area was also greater among newest homes built after 2002 compared with end terraced properties. Average floor area was smaller for mid terraced homes built in the 1980s and 1990s when compared to the oldest homes (pre 1919), the newest homes (post 2002) and those built from 1965 to 1974, Figure 3.4. For all post 2002 built mid terraced homes, average floor area (86m²) is very similar to that of semi-detached homes built during the same period (85m²).

## Figure 3.4: Usable floor area among mid terraced homes, by dwelling age, 2012




**Base: mid-terrace homes**
**Source: English Housing Survey, dwelling sample**

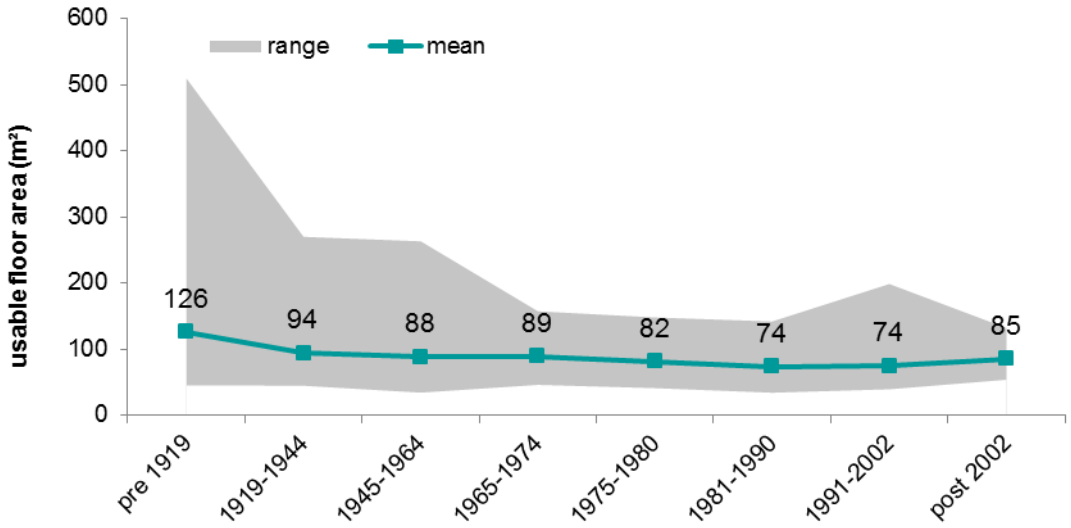
## Semi-detached Homes

**Photos: two 1945-1960 three bedroom semi-detached houses with very different internal floor space**

3.6 A large proportion of semi-detached houses were built between 1919 and 1964 (60%). The higher average floor area in older semi-detached homes is influenced by the large number of extensions.

3.7 Although both the range of total floor area and average floor area reduced over time, the average floor area remained fairly constant from 1945 to 1980. As found among end terraced houses, average floor area in semi-detached homes were notably lower among homes built from 1981 to 2002. These differences were statistically significant except when compared with homes built between 1975 and 1980 and after 2002, Figure 3.5.

**Figure 3.5 Usable floor area among semi-detached homes, by dwelling age, 2012**



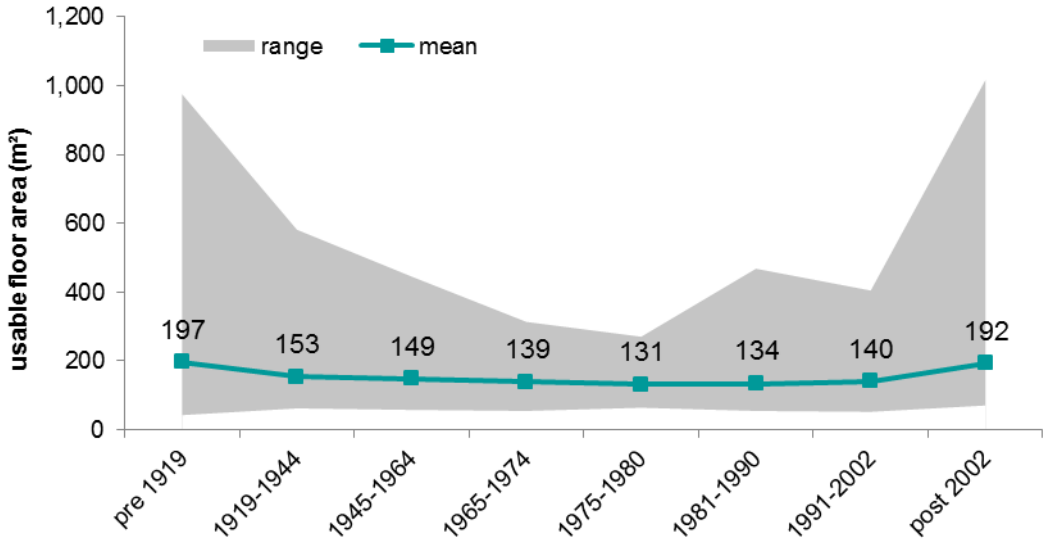

**Base: all households**
**Source: English Housing Survey, dwelling sample**

## Detached Homes

3.8 Detached houses are, on average, much larger (152m²) than other types of homes and, like semi-detached homes, more easily allow for alterations/extensions which impact on time line analysis. From 1945 to 2002, the average sized detached home ranged between 131m² to 149m², around 50m² bigger than the average for terraced and semi-detached houses. Detached houses exceeding 400m² were evident in most of the timeframe except from 1965-1980. Interestingly, the newest homes built since 2002 had similar average floor areas to pre 1919 built detached homes[9], and the range in total floor space increased notably in homes built from around 1990, Figure 3.6. This may reflect increased demand for large homes and maximisation of plot size e.g. building up to the full extent of a boundary or the inclusion of additional floors or conversion of the loft area into bedrooms.

[9] The difference in the means between dwellings of these ages was not statistically significant

## Figure 3.6 Usable floor area among detached homes, by dwelling age, 2012



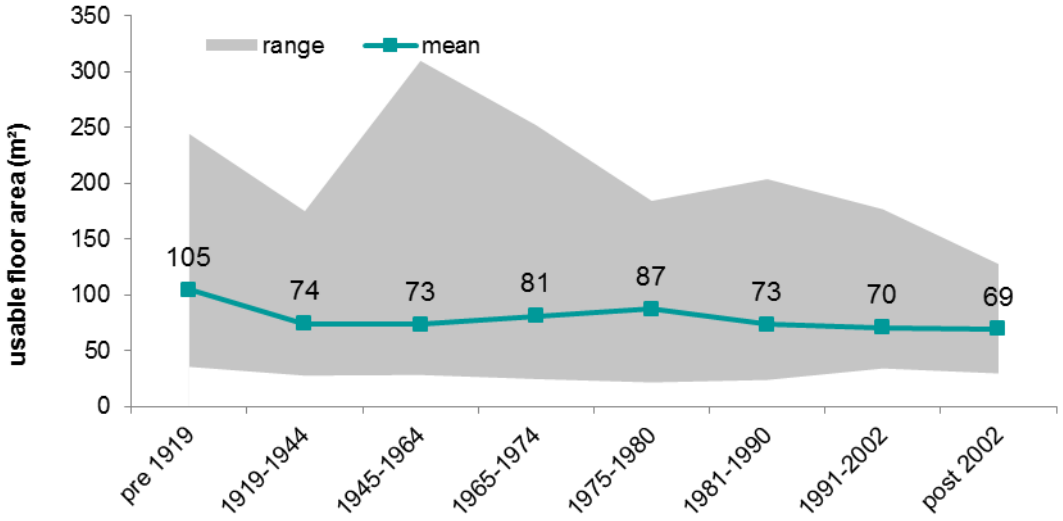

**Base: detached homes**
**Source: English Housing Survey, dwelling sample**

**Photo: Two recently-built detached homes. The one of the left has been designed to maximise the use of the available plot.**

## Bungalows

3.9 There were very few bungalows in the stock that were built before 1919 and very few have been built since 2002. Findings on the average and range in total floor area for these age bands should be treated with caution due to small sample sizes. From 1919 average floor area was similar for all aged homes (69-74m²) with the apparent exception of bungalows built from 1965 to 1980 (81-87m²). This difference, however, was not found to be statistically significant. Most bungalows had a floor area of less than 200m², Figure 3.7.

## Figure 3.7 Usable floor area among bungalows, by dwelling age, 2012




**Base: bungalows**
**Source: English Housing Survey, dwelling sample**

# Flats

**Photos: post 2000 flats, from large expensive homes (top left) and new flats in the grounds of a stately home (top right) to more common and modest-sized flats and apartments (bottom).**

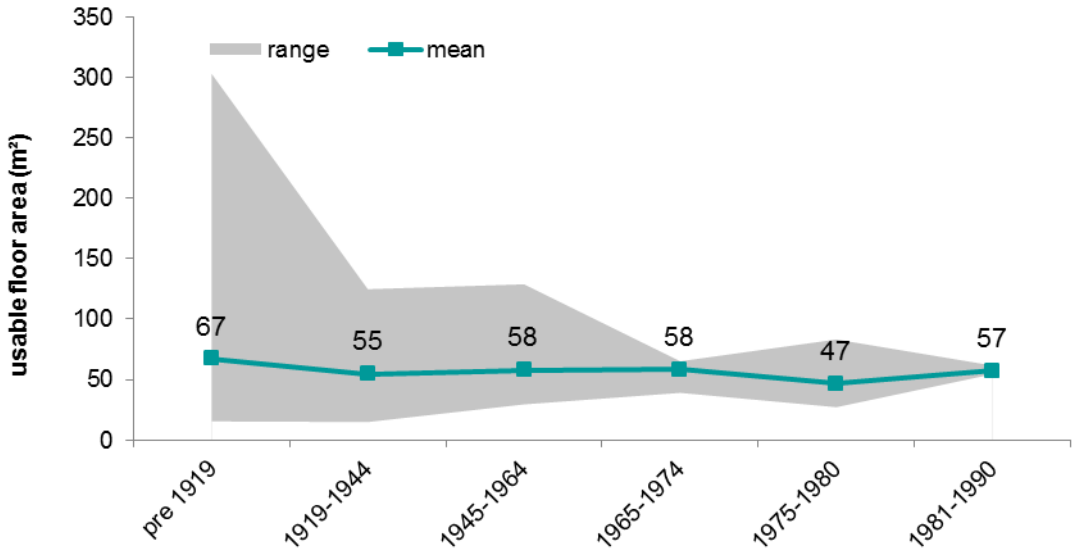
3.10 Overall, flats had the lowest average floor space compared with houses, with a typical floor area of around 50m² to 60m². In considering the findings in Figure 3.8 and Figure 3.9, it is important to bear in mind that very few converted flats were built after 1945 and there are

relatively fewer purpose built flats built before 1945. Some 43% of all homes built after 2002 were purpose built flats.

3.11 Pre 1919 built converted flats had the widest range of total floor area; the majority of these flats were built in this era (85%). As a smaller proportion of converted flats were built after 1945, findings in trends after this time are not reliable due to small sample sizes.

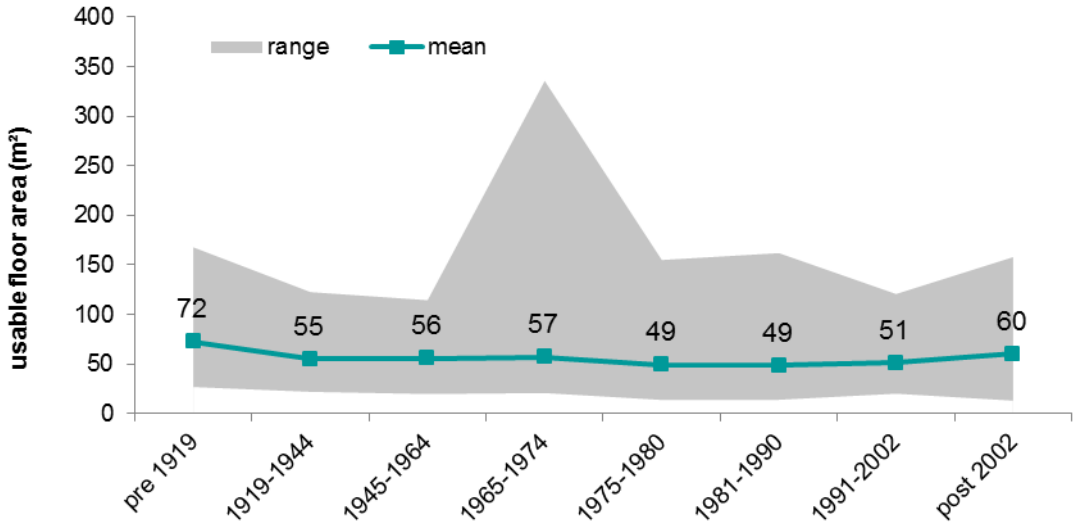
3.12 Average floor area remained constant among purpose built flats built from 1919 to 1974 (55-57m²), but then fell to an average of 49-51m² from 1975 to 2002. The newest purpose built flats built after 2002 had an average floor space (60m²), significantly higher than those built from 1975 to 2002. The range of floor area varied most greatly for purpose built flats built from 1965 to the mid-1970s when 40% of these types of homes were built.

**Figure 3.8: Usable floor area among converted flats, by dwelling age, 2012**




**Base: converted flats**
**Source: English Housing Survey, dwelling sample**

## Figure 3.9: Usable floor area among purpose built flats, by dwelling age, 2012




**Base: purpose built flats**
**Source: English Housing Survey, dwelling sample**

# Chapter 4

# Average floor area of bedrooms and living rooms by age

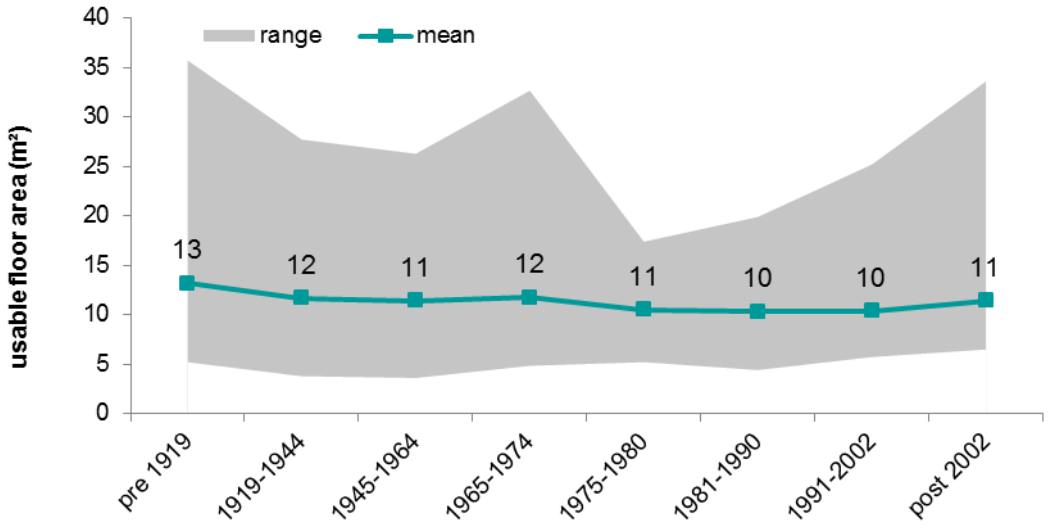
## Bedrooms[10]

4.1 The average size of surveyed bedrooms in semi-detached and detached homes was around 12m² and 14m² respectively. These average values do not vary a great deal by the age of the dwelling, although there were some statistically significant differences between age bands, Figures 4.1 and 4.2.

4.2 For semi-detached homes, the range of bedroom sizes was smallest for homes built between 1975 and 1990 (15m²). This compares to ranges between 19m² and 31m² for other periods and may be related to the smaller proportion of semi-detached homes built at the time. The average bedroom size in pre 1919 built homes was significantly higher when compared with homes built later. The average bedroom size in homes built in the 1980s and 1990s was significantly lower than homes built prior to 1975. Interestingly the smallest bedrooms were found in homes built from 1919 to the mid-1960s (under 4m²).

[10] Annex A contains background information on how bedrooms sizes are recorded for the EHS and how the data have been modelled for this report. In considering these findings, we need to bear in mind that some bedroom sizes may have changed since the original date of construction, for example, due to the installation of an *en suite* bathroom.

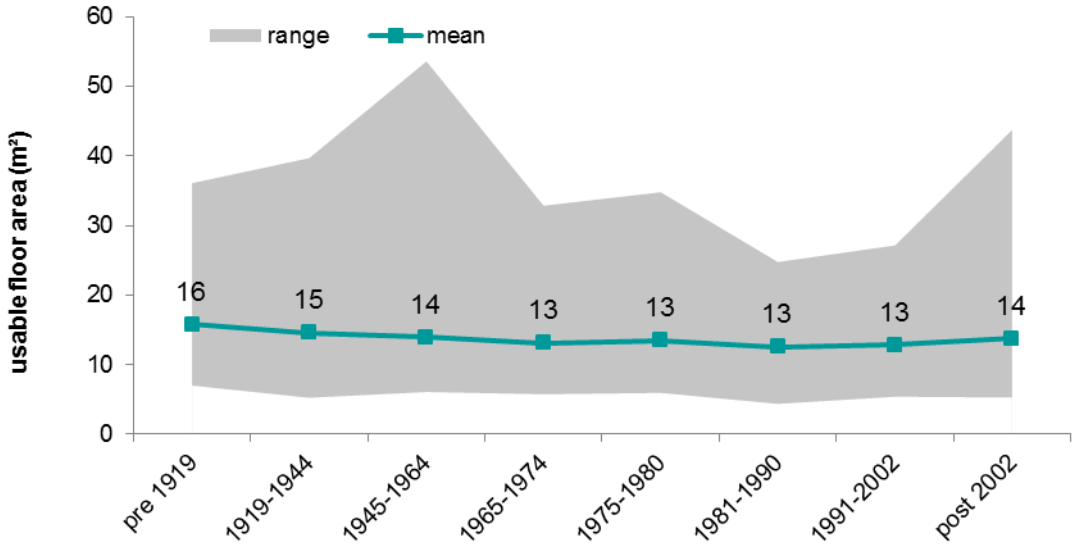
## Figure 4.1: Usable floor area of bedrooms in semi-detached homes, by dwelling age, 2012




**Base: semi-detached homes**
**Source: English Housing Survey, dwelling sample**

4.3 The range in bedroom floor area decreased in detached homes built in the 1980s and 1990s (range of bedroom size of 20m² to 22m²) compared with other aged homes. The most recently built homes had the highest range of internal bedroom space (38m²). The average bedroom size in pre 1919 built homes was significantly higher when compared to all homes built after 1945.

## Figure 4.2: Usable floor area of bedrooms in detached homes, by dwelling age, 2012



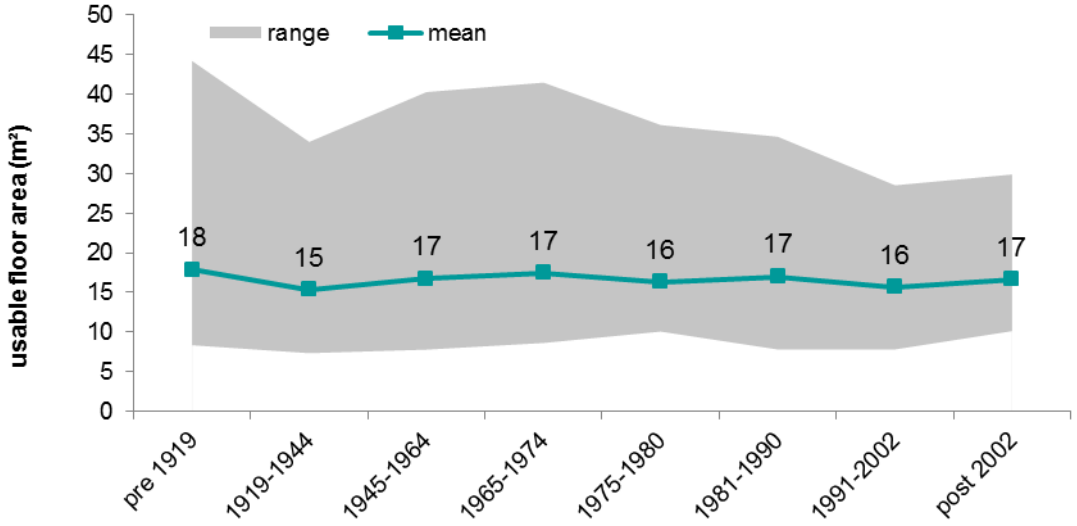

**Base: detached homes**
**Source: English Housing Survey, dwelling sample**

## Living rooms[11]

4.4 The average internal living room space for semi-detached and detached homes was 17m² and 21m² respectively. As with the main bedroom, this average varied very little by the age of the dwelling, Figures 4.3 and 4.4. There is no evidence to suggest that the average living room space is significantly smaller in more 'modern' homes built in the last 20 to 30 years in both semi-detached and detached houses.

4.5 Broadly speaking, the range in the internal living room space decreased over time within semi-detached homes. Unlike the main bedroom, the 1970s and 1980s did not witness the marked fall in the range of available living room floor space.

**Figure 4.3: Usable floor area of living rooms in semi-detached homes, by dwelling age, 2012**

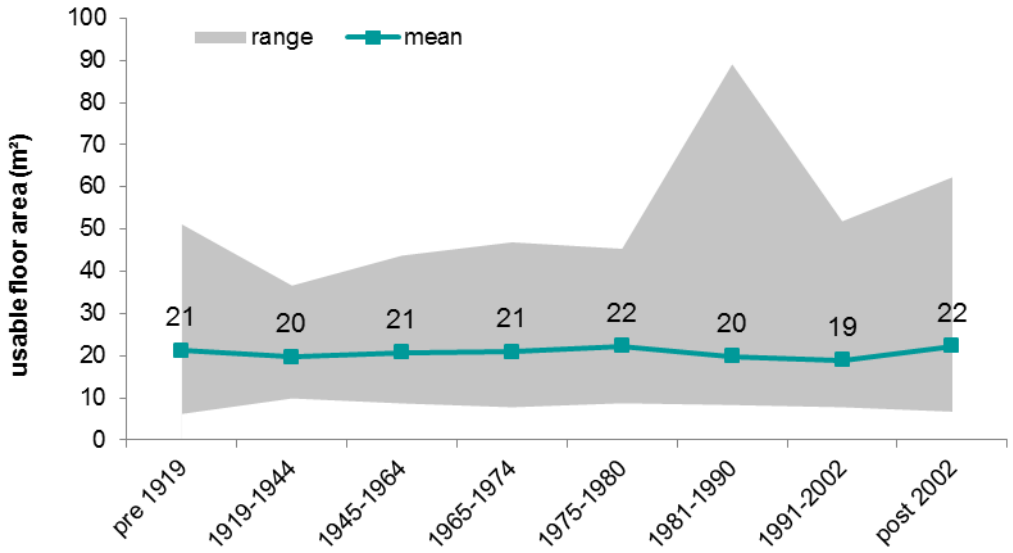



**Base: semi-detached homes**
**Source: English Housing Survey, dwelling sample**

4.6 Overall, the range in living room space increased over time within detached homes. The range of available living room floor space was notably lower in homes built between 1919 and 1945.

[11] Appendix 1 contains background information on how living room sizes are recorded for the EHS and how the data have been modelled for this report.

## Figure 4.4: Usable floor area of living rooms in detached homes, by dwelling age, 2012



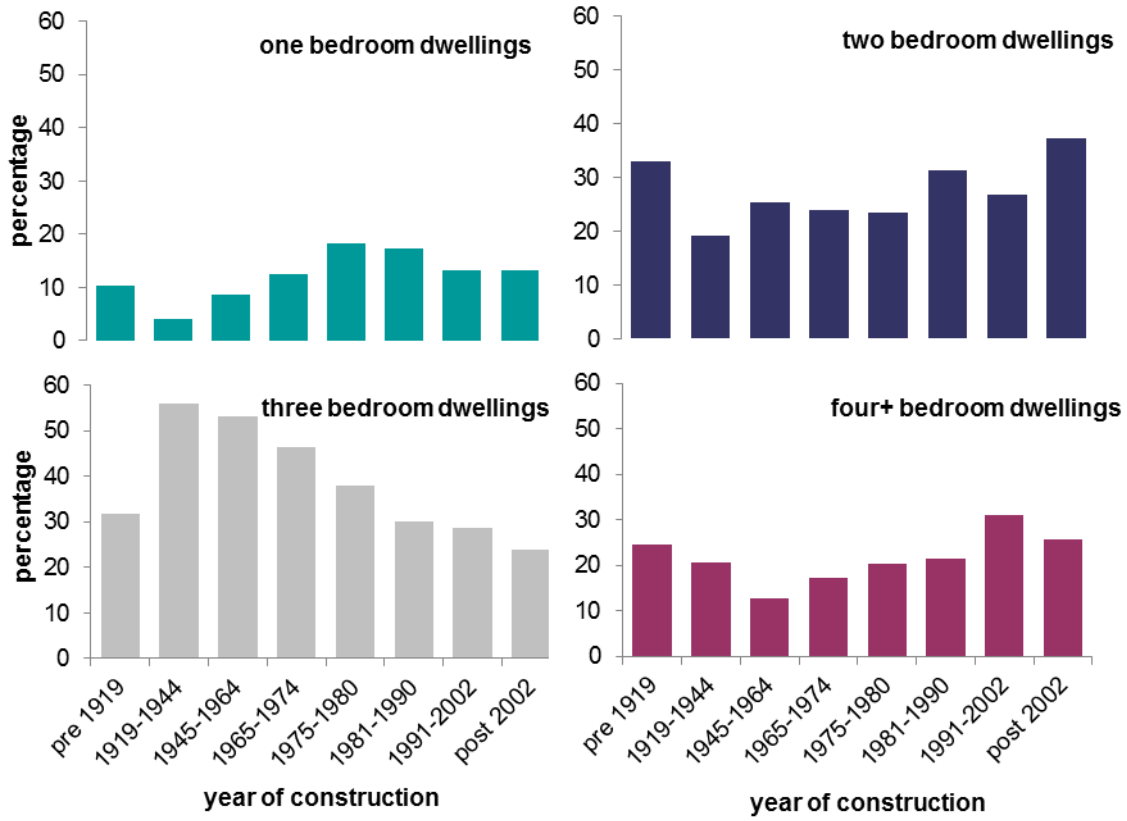

**Base: detached homes**
**Source: English Housing Survey**

# Chapter 5

# Average floor area, by number of bedrooms and age

5.1 The proportion of dwellings with different numbers of bedrooms has changed over time. We need to bear in mind, however, that some homes may have had extensions with additional bedrooms/bedroom space since originally constructed. Three bedroom homes were more commonly built between 1919 and 1980, comprising 56% of all homes built between 1919 and 1944. However, this proportion declined, with these homes accounting for 24% all dwellings built after 2002. The largest proportion of dwellings built post 2002 had two bedrooms (37%). and are reflective of the large proportion of purpose built flats built, Figure 5.1.

**Figure 5.1: Number of bedrooms, by dwelling age, 2012**

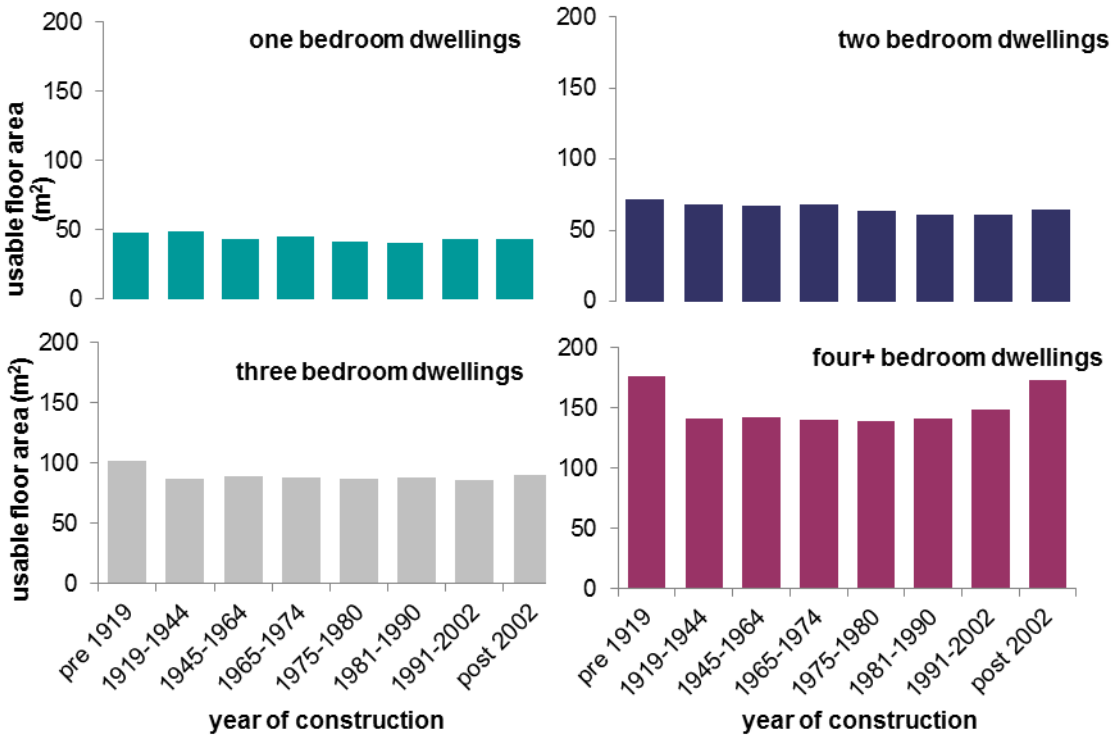



**Base: all dwellings**
**Source: English Housing Survey, dwelling sample**

5.2 The average floor area for one bedroom, two bedroom and three bedroom homes has been fairly consistent over time. Homes with four

or more bedrooms show a slightly different pattern, with the average floor area higher in dwellings built before 1919 and after 2002[12], Figure 5.2.

**Figure 5.2: Mean usable floor area, by number of bedrooms and dwelling age, 2012**



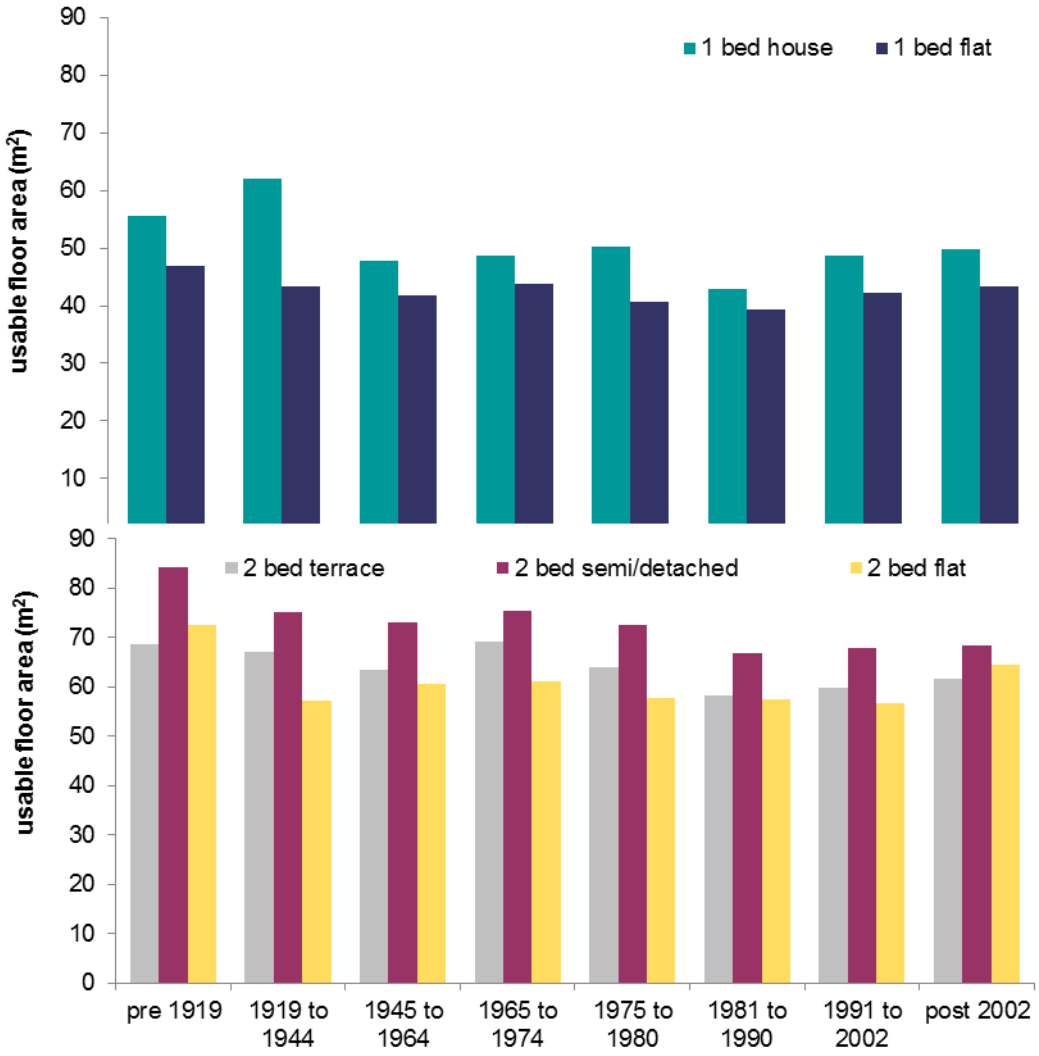

**Base: all dwellings**
**Source: English Housing Survey, dwelling sample**

5.3 Average floor area for different aged homes remained fairly constant over time among one bedroom flats and most of these apparent differences were not statistically significant. The average was, however, higher for the newest homes built after 2002 compared with those built during the 1980s. The picture among one bedroom houses was similar, with most differences in average floor area not statistically significant. The sample size of homes built after 1990 is smaller, and findings for these age dwellings should be treated with caution.

5.4 The average floor area of two bedroom semi-detached and detached homes appears to be lower in 1980 and 1990, these differences were not significantly different to homes of other ages, with the exception of those built before 1919 which were, on average, bigger, Figure 5.3.

[12] The average floor area for homes with four or more bedrooms built post 2002 is not significantly different from homes with four or more bedrooms built from 1991 to 2002.

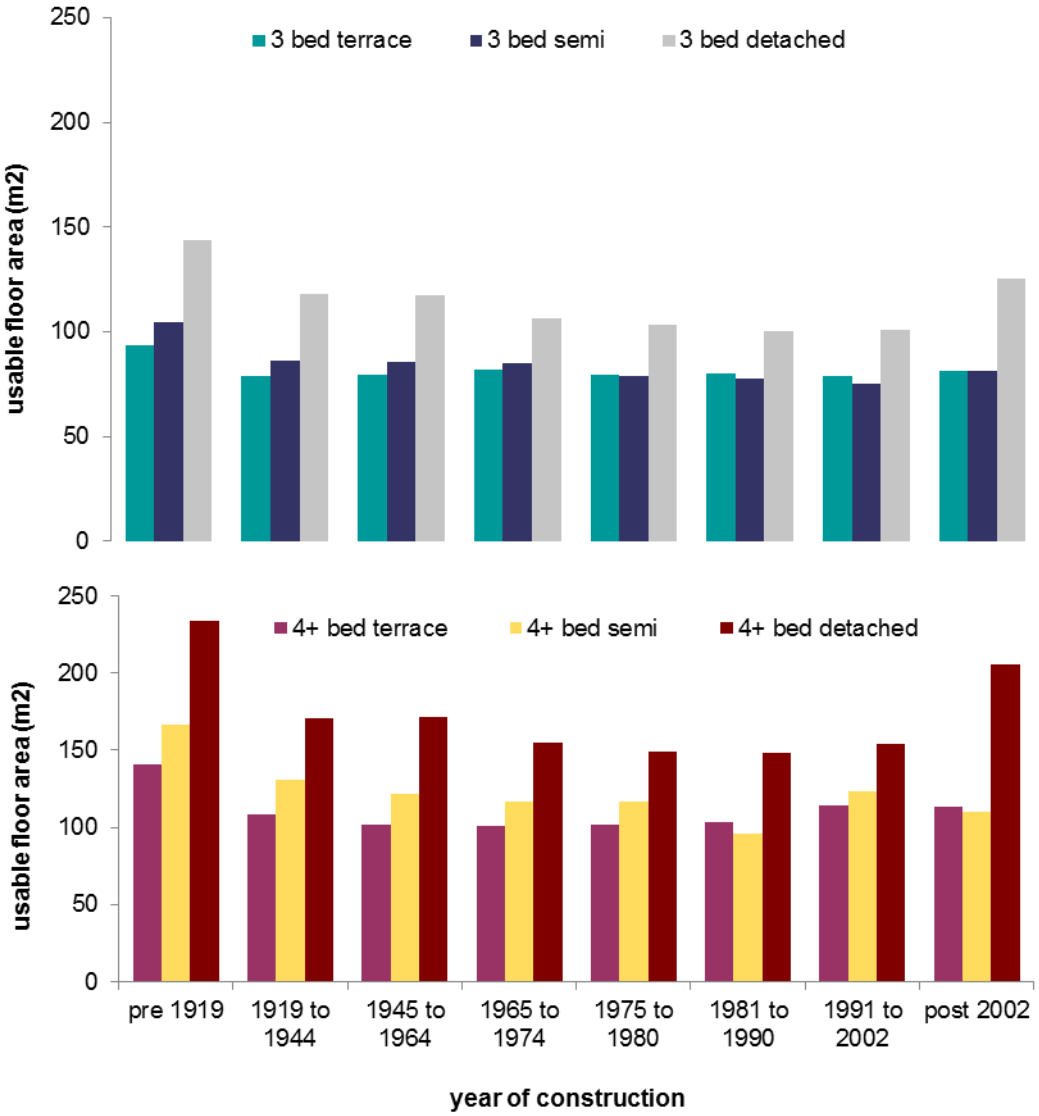
## Figure 5.3: Mean usable floor area of one and two bedroom homes, by dwelling age, 2012




**Base: one and two bedroom homes**
**Source: English Housing Survey, dwelling sample**

5.5 For the common types of three and four bedroom homes, we could expect a greater variation in average floor space among different aged homes, particularly given the greater ability to extend/make alterations to them. The average floor area among three bedroom terraced homes was most consistent over time (from 79m² to 93m²) whilst average floor area varied from 148m² to 233m² among four bedroom detached houses. There appears to be a marked fall in average floor area among semi-detached homes with four or more bedrooms in the 1980s, these homes were underrepresented since 1975, and so the findings need to be treated with caution. Similarly, four bedroom terraced homes built from 1975 to 2002 were also underrepresented, and findings for these homes should also be treated with caution, Figure 5.4.

## Figure 5.4: Mean usable floor area of three and four-plus bedroom homes, by dwelling age, 2012




**Base: three and four plus bedroom homes**
**Source: English Housing Survey, dwelling sample**

# Chapter 6

# Average floor area, by number of habitable rooms and age

6.1 It could be argued that modern homes feel smaller because they contain a larger number of rooms within a similar floor area, for example, through the addition of *en suite* bathrooms and utility rooms. This analysis in this section does not support this however[13].

6.2 The most common number of habitable rooms in homes was five, found in 6.3 million dwellings (28%), and followed by 4.7 million dwellings (21%) with four habitable rooms. Smaller dwellings with one or two habitable rooms (9%) were less common as were larger dwellings with eight or more habitable rooms (6%). Not surprisingly, homes with only one or two habitable rooms were predominantly flats (96%). Homes which had four or five habitable rooms were mostly semi-detached and mid terraced dwellings. Larger homes with six or seven habitable rooms mainly comprised detached or semi-detached dwellings.

6.3 Table 6.1 provides the breakdown of habitable rooms within banded floor area by dwelling age. Additional rooms may have been added since the original construction, particularly to older homes.

6.4 In relatively small homes with floor areas of 50-69m², there were differences in the distributions of homes with up to four and five habitable rooms but these differences showed no clear pattern according to the age of the dwelling. In the 1965-80 age-band, roughly one fifth of these sized homes had five habitable rooms, but this proportion fell from 1981. Homes built from 1919 to 1944 had the highest proportion of five or more habitable rooms, which may be the result of alterations since the date of construction.

6.5 From 1945 onwards, in medium sized homes of 70-89m², a greater proportion of homes with six habitable rooms were built in the 1980s.

[13] The total number of habitable rooms in a home is the total number of rooms which offer 'living accommodation'. This includes kitchens where there is additional space to provide a dining area large enough to accommodate a table and chairs (typically an area 2m by 2m additional to kitchen space) but does not include bathrooms A habitable room may also be a fully converted room in the loft space even if it can only be reached by a fixed ladder or an unsafe staircase.

However, a similar proportion of these homes were found in the 1919-44 era, again possibly reflecting, adaptations to the older homes

6.6 From 1981, a greater proportion of homes with six or more habitable rooms were found in the largest sized homes of 110m² or more. However, we should bear in mind that, for detached homes, the range of total floor area generally increased from this period (see Figure 3.6).

## Table 6.1 The percentage of habitable rooms within banded floor area by dwelling age, 2012

*all dwellings*

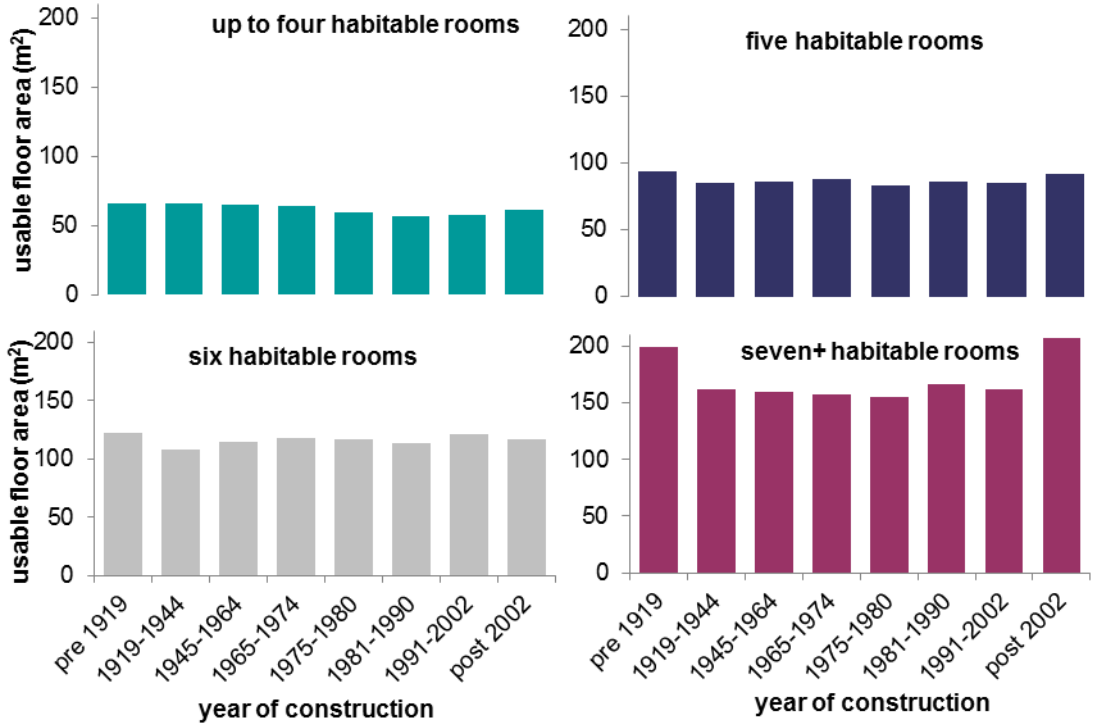
| | pre 1919 | 1919-44 | 1945-64 | 1965-80 | 1981-90 | post 1990 |
|---|---|---|---|---|---|---|
| | | | | | | *percentages* |
| **less than 50m²** | | | | | | |
| up to 4 | 99.2 | 97.9 | 99.8 | 99.8 | 100.0 | 100.0 |
| 5 | 0.6 | 0.5 | 0.2 | 0.2 | 0.0 | 0.0 |
| 6 | 0.3 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 or more | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **50 to 69m²** | | | | | | |
| up to 4 | 85.6 | 68.3 | 82.0 | 78.1 | 83.5 | 88.4 |
| 5 | 13.5 | 28.7 | 16.7 | 21.1 | 16.5 | 11.1 |
| 6 | 0.9 | 2.7 | 0.7 | 0.8 | 0.0 | 0.2 |
| 7 or more | 0.0 | 0.3 | 0.5 | 0.0 | 0.0 | 0.3 |
| **70 to 89 m²** | | | | | | |
| up to 4 | 53.5 | 28.3 | 37.7 | 43.6 | 38.6 | 47.9 |
| 5 | 37.6 | 58.3 | 57.4 | 49.5 | 48.7 | 43.5 |
| 6 | 8.0 | 12.7 | 4.5 | 6.8 | 12.7 | 6.7 |
| 7 or more | 0.8 | 0.7 | 0.4 | 0.1 | 0.0 | 1.9 |
| **90 to 109 m²** | | | | | | |
| up to 4 | 29.4 | 10.0 | 15.2 | 16.7 | 18.3 | 15.8 |
| 5 | 39.1 | 49.4 | 53.1 | 44.2 | 44.8 | 39.4 |
| 6 | 23.5 | 35.8 | 26.7 | 31.0 | 26.9 | 28.6 |
| 7 or more | 8.0 | 4.7 | 5.0 | 8.1 | 10.0 | 16.2 |
| **110 m² or more** | | | | | | |
| up to 4 | 3.6 | 1.8 | 6.6 | 6.8 | 5.1 | 3.3 |
| 5 | 13.8 | 14.9 | 19.4 | 15.2 | 8.0 | 9.0 |
| 6 | 27.0 | 29.6 | 26.7 | 34.6 | 27.6 | 23.5 |
| 7 or more | 55.6 | 53.7 | 47.3 | 43.4 | 59.2 | 64.2 |

**Source: English Housing Survey, dwelling sample**

6.7 Average internal floor area for homes with up to four, five or six habitable rooms remained very similar over time. Homes with at least seven habitable rooms also had a very similar average floor area with

the exceptions of the oldest homes built before 1919 and the newest homes built after 2002, Figure 6.1.

**Figure 6.1: Mean usable floor area, by number of habitable rooms and dwelling age, 2012**




**Base: all dwellings**
**Source: English House Survey, dwelling sample**

# Chapter 7
# Plot area by age

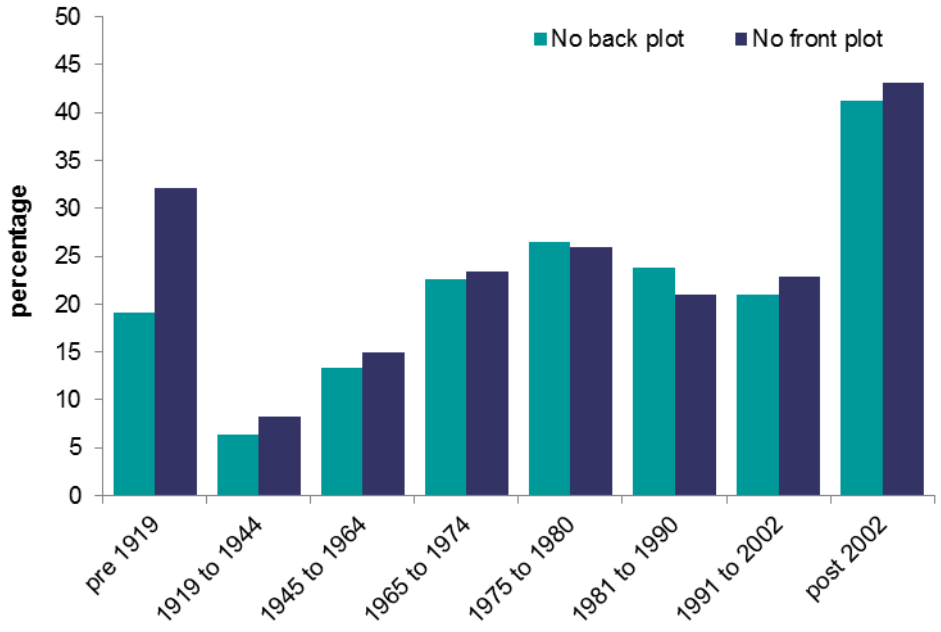
7.1 Perceptions on the overall space available to households may be influenced by the amount of external space they have. The amount of external space can impact on householder perceptions of being overlooked and the degree to which noise travels between dwellings.

7.2 An estimate of the total plot area at a dwelling is difficult to calculate from EHS data. Dimensions of any rear and front plot of the dwelling (with a private plot) are recorded but any area(s) at the side of dwellings, sometimes found in larger homes and those with a corner plot, are not recorded.

7.3 This section first outlines the distribution of front and back plots by dwelling age, and then looks at the size of these plots. It does not indicate the degree to which these plots are planted lawn or hard landscaped.

7.4 In 2012, about three quarters of homes (76%) had private plots at the rear and front, whilst 15% of homes had a shared plot. Among homes with a private plot, around 19% had no back plot and a similar proportion (22%) had no front plot. The proportion of homes without rear and front private plots was very similar for homes built from 1965 to 2002. Interestingly, the oldest homes built before 1919 and the newest homes built after 2002 had the highest proportion of homes with either no back or no front plot, Figure 7.1. For the newest homes built after 2002, these findings are not surprising given the relatively lower proportion of larger three and four bedroom homes built in this period (see Figure 5.1).

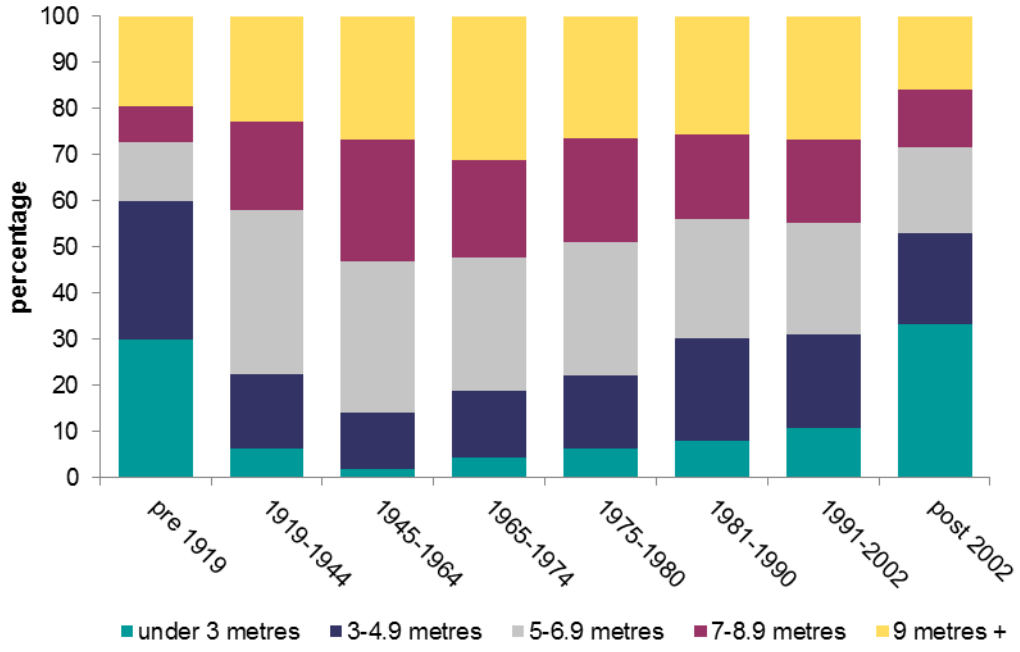
## Figure 7.1: Absence of a back or front plot, by dwelling age, 2012




**Base: all dwellings**
**Source: English Housing Survey, dwelling sample**

7.5 Among homes that have either a front or back private plot, there is some variation in the size of these plots depending on the dwelling age. Dwellings built before 1919 and after 2002 had the largest proportions of the smallest front plots (under three metres). Larger front plots (nine metres+) were also less prevalent among newer homes, Figure 7.2.

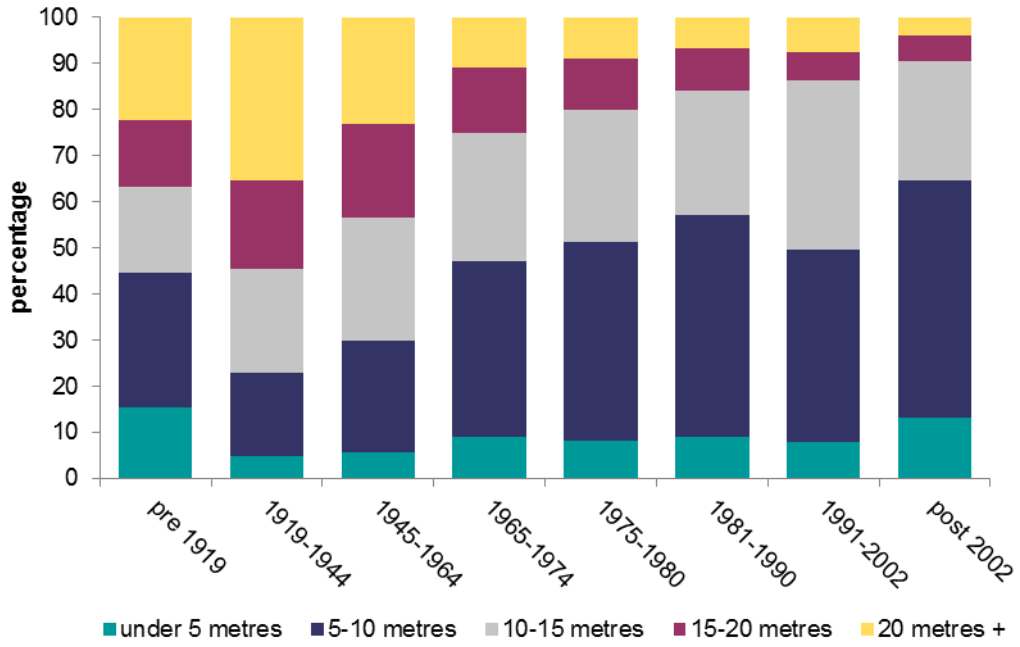
## Figure 7.2: Front plot size, by dwelling age, 2012




**Base: all dwellings with front plots**
**Source: English Housing Survey, dwelling sample**

7.6 There was more variation between the age of the dwelling and the size of the back plots. The proportion of dwellings with back plots over 15 metres has reduced over time. For example, just 10% of homes built after 2002 had a back plot of over 15 metres compared with 16% of those built in the 1980s and 54% of those built 1919-1944, Figure 7.3. Whilst plot sizes have reduced in newer homes, it is important to bear in mind the types of homes built in each time period, particularly, the higher proportion of purpose built flats built since the turn of this century (see Figure 2.3).

## Figure 7.3: Back plot size, by dwelling age, 2012




**Base: all dwellings with back plots**
**Source: English Housing survey, dwelling sample**

**Photos: c2000 semi-detached home with no front plot and modest sized rear plot (left). This part of the estate was designed to 'mirror' traditional Victorian terraces that opened directly onto the street, and a large detached home on a small plot (right).**

# Chapter 8

# European and international comparisons

8.1 For background, some international comparisons are provided, using data from 2008 and 2009 Table 2.1. The housing space available to each person in the UK is very similar to that in France or Germany but half that of a citizen of the USA. The UK housing stock is notably older than comparative countries and comprises mainly owner occupied homes.

## Table 8.1: Comparative housing statistics for the UK and selected developed countries

| | United Kingdom 2008 | Germany 2009 | France 2009 | USA 2009 |
|---|---|---|---|---|
| | | | | *millions* |
| **population** | 62 | 82 | 64 | 283 |
| **dwellings (occupied)** | 26 | 37.5 | 26 | 112 |
| | | | | *mean* |
| **persons per dwelling** | 2.3 | 2.4 | 2.3 | 2.5 |
| | | | | *$m^2$* |
| **mean floor area** | | | | |
| per dwelling | 85 | 83 | 85 | 152 |
| per person | 37 | 35 | 37 | 61 |
| | | | | *percentages* |
| **dwelling age** | | | | |
| pre 1940 | 37 | 24 | 30 | 16 |
| post 1940 | 63 | 76 | 70 | 84 |
| **dwelling type** | | | | |
| house | 81 | 39 | 59 | 77 |
| flat | 19 | 61 | 41 | 23 |
| **tenure** | | | | |
| owned | 68 | 41 | 58 | 68 |
| rented | 32 | 59 | 42 | 32 |
| **main fuel for heating** | | | | |
| gas (piped) | 82 | 35 | 34 | 5 |
| oil (+ kerosene, bottled gas) | 7 | 35 | 24 | 13 |
| solid (coal, wood) | 1 | 4 | 4 | 2 |
| electricity | 9 | 16 | 28 | 35 |
| district | 1 | 1 | 1 | - |

**Source: Housing in the UK: National comparisons in typology, condition and cost of poor housing**

# Conclusions

9.1 This report has demonstrated the difficulties in assessing the relative size of English homes over time, principally due to the large number of alterations that have been undertaken since dwellings were originally constructed, and due to the changing nature in the types of homes built at different points in time. From the EHS data analysed for this report, which uses a constant measure of usable floor space, there is no conclusive evidence to suggest that our newest homes are getting smaller.

9.2 For the whole of the English housing stock, and for most dwelling types, average internal floor area has remained fairly constant over time, particularly when we exclude the oldest homes built before 1919 many of which will have been extended since they were constructed. There is, however, evidence to suggest that for some types of dwellings, average floor space fell at various times during the 1970s, 1980s or 1990s, when compared with older homes and the newest homes built after 2002. Average floor area remained constant among purpose built flats built from 1919 to 1974 but then fell from 1975 to 2002. The newest purpose built flats built after 2002 had an average floor space greater than those built from 1975 to 2002.

9.3 From the 1990s, however, the pre-1945 diversity in dwelling sizes returned for many types of homes. However, some 43% of homes built since 2002 were purpose built flats and the predominant bedroom size of new homes was two bedrooms. Unsurprisingly, these types of homes tend to be smaller than the typical family sized semi-detached homes built in from 1945 to the mid-1970s.

9.4 The analysis of bedroom sizes, living room space and number of bedrooms provides no strong evidence to suggest that internal space in homes decreased over time. However, there is some evidence to suggest that for medium and larger sized family homes, there were generally more habitable rooms within homes of similar total floor area from around 1980. The inclusion of rooms such as *en suite* bathrooms and utility rooms, some of which may have been added after a home was originally constructed, may be making our modern homes feel smaller.

9.5 Finally, there is a correlation between the size of a dwelling's private plot, and its age with rear plot areas, in particular decreasing in size over time. This is likely due to the wish to maximise the use of plots for living space. Given the predominance of flats in the newest homes, it is

not surprising that a higher proportion of households who live in homes built after 2002 only had access to shared plots.

9.6 Following the introduction of the Nationally Determined Space Standard, it may useful to examine the extent to which the English housing stock currently meets new technical requirements, where this can be determined with EHS data. Further analysis could also be undertaken on the occupancy levels within each size of home. This would help determine whether we are using the housing stock most effectively and help identify the greatest areas of housing demand.

# Technical notes

1. Results are presented for '2012' and are based on fieldwork carried out between April 2011 and March 2013 (a mid-point of April 2012). The sample comprises 12,763 occupied or vacant dwellings where a physical inspection was carried out. Throughout the report, this is referred to as the 'dwelling sample'.

2. 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.

3. **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.

4. 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: https://www.gov.uk/government/collections/english-housing-survey

# Annex A
# Room measurements and modelling

## Bedrooms

1. EHS surveyors record room dimensions for one bedroom. Where more than one bedroom is present, the bedroom selected by the surveyor should be representative of them all in terms of size and condition. Where possible it should also have a different aspect (front and back, and left and right) to the main living area. The survey bedroom will not, therefore, always be the main bedroom at the property, making any comparative analysis of bedroom size between different types of dwellings problematic. In view of this, results from the analysis should be treated with a degree of caution.

2. For those homes where a separate bedroom did not exist, bedroom dimensions have been taken from the living room where its function is recorded as a living room, dining room or bedsit. For those cases with no separate bedroom and where living room function is coded as not applicable, bedroom size has been coded as not applicable. In addition, 21 cases were coded as unknown as, although a separate bedroom existed, it was not inspected and hence the dimensions were not recorded. Extreme values were observed but not amended as it was not possible to determine if these values were legitimate without extensive analysis.

## Living rooms

3. For the purpose of the EHS, living rooms are any room which has been designed for living, playing or studying purposes, including living-dining rooms. However, rooms for certain ‘playing’ purposes, for example, games rooms or gymnasia are not surveyed as the main living room. Where a dwelling has more than one living room, the surveyor selects the main one for a full inspection, taking into account its location within the dwelling. There is likely to be a greater proportion of living/dining rooms in newer houses and that some homes will have two living rooms knocked into one.

4. The analysis excluded those living rooms coded as bedsits as these were included in the analysis of bedroom size.

## Extract from EHS surveyors' manual on room measurement

5. As a general rule, measure the room to obtain the **smallest** width and depth measurements.

6. **Width** is measured to nearest 10 cm across left to right of the **narrowest** part of the room.

7. **Depth** is measured to nearest 10 cm from front to back of the **narrowest** part of the room.

8. Room shapes should be dealt with as follows:

    - **Bay windows, chimney breasts, stairs protruding into rooms.** Nooks and crannies are not included in room dimensions because they generally limit the space available for furniture or activities.

    - **Fitted cupboards.** Measurements should be made from wall to wall, not from wall to cupboard. This applies to cylinder cupboards provided there is some storage space within.

    - **Pillars.** Ignore small pillars in the middle of rooms or pillars which protrude from the walls into rooms. If the pillars actually separate two distinct rooms, only measure the room in question.

    - **Room with non-parallel walls.** Measure the largest possible rectangle.

    - **L-shaped rooms.** Reduce the room to a rectangle, taking the larger of two possible rectangles. For U-shaped rooms, adopt a similar approach.

    - The same approach to L-shaped rooms should be taken when deciding whether bedrooms are twin or single. If the rectangle could take a two single beds or a double bed, record 'T'; if not, record 'S', even if the whole L-shaped room can actually take two single beds. However, when answering all the other interior questions about L-shaped rooms, look at the whole room, not just the rectangle you have measured.

# Annex B

# Nationally described space standard

1. The technical requirements of the nationally described space standard (NDSS) can be found in *Technical housing standards – nationally described space standard*[14]. The NDSS's definition of GIA is defined as "the total floor space measured between the internal faces of perimeter walls that enclose the dwelling. This includes partitions, structural elements, cupboards, ducts, flights of stairs and voids above stairs."

2. However, the NDSS qualifies this measure with reference to the *usability* of space, and does not determine occupancy level purely by floor area or by number of bedrooms; for example, bedrooms must be of a minimum width, and areas must have a minimum headroom (which varies by intended function) to contribute to GIA. This differs from commercially-oriented measures of internal space, such as Gross Internal Floor Area (GIFA) and International Property Measurement Standard (IPMS), which do not include such qualifications. Moreover, the NDSS does not include garage space.

3. Prior to 2014, the EHS used a measure derived from Gross Internal Floor Area. However, since this report was produced, the EHS moved to a new measure in anticipation of the publication of NDSS. The details of this revised methodology, the differences between these two measures, and the implications for analysis, are discussed in the *Floor Space in English Homes - technical report.* From 2014, the EHS reports produced by MHCLG[15] have used the revised measure of floor space, and the new measure was retrospectively added to EHS datasets from 2011. Both measures are included in the datasets available for download from the UK Data Service[16].

[14] MHCLG, *Technical housing standards – nationally described space standard,* 2015 https://www.gov.uk/government/publications/technical-housing-standards-nationally-described-space-standard
[15] https://www.gov.uk/government/collections/english-housing-survey
[16] https://www.ukdataservice.ac.uk

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