Estimates of Additional Housing Need in Wales (2019-based)\textsuperscript{1}

Background

This statistical article presents 2019-based estimates of additional housing need in Wales from 2019/20 to 2038/39. Estimates of housing need are key to future planning requirements at a national and regional level and will be used to inform the National Development Framework (NDF) and housing policy development.

Previous estimates of additional housing need based on the 2014-based household projections were published by the Welsh Government (WG) in 2019:

- January 2019: Estimates of Housing Need in Wales at a national and regional level (2018-based). The article presented estimates of additional housing need over twenty years at a national level as well as for the three economic regions (North Wales, Mid and South West Wales, and South East Wales).
- June 2019: Estimates of Housing Need in Wales by Tenure (2018-based). The estimates were split by two housing tenures: market housing (owner occupier and private rented sector) and affordable housing (intermediate and social rents)\textsuperscript{2}.

In August 2020, Welsh Government published revised 2018-based household projections replacing the 2014-based household projections so the previous 2018-based estimates of housing need are now out of date. 2019-based estimates of additional housing need use the same methodology as the 2018-based estimates but with four regions not three and, where available, with updated data and assumptions. The estimates do not take into account the impact of the coronavirus (COVID-19), as there is currently considerable uncertainty about such impacts and it will be some time before the full impact is known.

Figures in this article relate to the need for additional housing units across Wales and are based on:

- estimates of existing unmet need (full definition can be found in box 1)
- newly arising need (using 2018-based household projections). Household projections are not forecasts, they are based purely on past trends and assume these trends continue into the future. In particular, such projections do not attempt to account for the effect of future policies (for example, policies which might seek to influence population movements) and changing economic circumstances or other factors (such as Brexit or pandemics).

Date of Publication: 13 August 2020
Author: Rhiannon Jones, Housing Statistics, Knowledge and Analytical Services
E-mail: stats.housing@gov.wales Telephone: 0300 061 5614
Twitter: www.twitter.com/statisticswales | www.twitter.com/ystadegaucymru
\textsuperscript{1}Notes on the use of statistical articles can be found at the end of this document.
\textsuperscript{2}This definition differs to the TAN 2 definition of affordable housing – see box 3.
This article includes estimates of housing need by tenure (market and affordable housing as defined in box 3) for the first 5 years of the estimates (section 3 provides the full details for Wales and section 4.2 for the regions). To illustrate the uncertainty associated with estimates of additional housing need, a range of estimates are presented in this article using different sets of household projection assumptions (full details of the higher and lower variants can be found in annex 1) and a summary of limitations is provided below.

As in earlier publications, the estimates in this publication are not official statistics.

**Further information**

This statistical article is supported by a quality report and the data published on StatsWales as well as an excel tool where all data sources and underlying assumptions can be altered to observe the impact on the estimates of additional housing units split by tenure.
**Summary: Key Results**

**Overall estimates of additional housing need (see section 2 for full details)**

Chart 1 shows the average annual estimates of additional housing need for five yearly periods. These estimates are given based on variant household projections (see annex 1 for the detail). For the purpose of these estimates, it is assumed that the backlog of existing unmet need will be cleared by the end of 2023/24.

**Chart 1: Average annual estimates of additional housing need (Wales)**

- During the first 5 years (2019/20-2023/24), it is estimated that between 6,200 and 8,300 additional housing units will be required annually, with a central estimate of 7,400. These figures include an annual average of 1,100 additional housing units to clear those in existing unmet need over the first 5 years.

- The estimates of additional housing need largely decrease over the remaining 15 years (2024/25 to 2038/39) and by the mid to late 2030s (2034/35-2038/39), the central estimate is for an annual average of 4,300 additional housing units. This is based on newly arising need only and reflects a slowdown in the projected household growth from the 2018-based household projections.

- Household projections are largely driven by population projections.

- These updated estimates of additional housing need are generally lower until approximately 2030 compared with the 2018-based estimates. This is largely due to the differences between the 2014-based local authority household projections and the 2018-based local authority household projections.

- Both sets of projections show projected increases in the numbers of households throughout the projection period. However, the projected growth rate is lower in the 2018-based projections than in the 2014-based projections up to around 2030. After this point, the projected growth rate is higher in the 2018-based projections than in the 2014-based projections. This means that these updated estimates are projected to be generally higher than the 2018-based estimates for this period.
Estimates of additional housing need split by tenure (see section 3 for full details).

This article splits the estimates of the additional housing units by tenure (market and affordable housing) for the first 5 years. The split of the overall estimate of additional housing need into market and affordable housing is based on a number of assumptions (e.g. future changes to rental prices and household incomes). Section 5 analyses the sensitivity of the tenure split to a change in these assumptions.

Chart 2 shows the average annual estimate of additional housing need split by tenure between 2019/20 and 2023/24 under the central estimate, higher and lower variants.

Chart 2: Estimates of additional housing units split by tenure (Wales)

- The annual estimates of market housing need range from 3,100 (lower variant) to 4,500 (higher variant) with a central estimate of 3,900 units. The annual estimates of affordable housing need range from 3,000 (lower variant) to 3,900 (higher variant) with a central estimate of 3,500 units.
- Under the central estimate, approximately 52% of the estimated need is for market housing and approximately 48% for affordable housing (intermediate rent or social) over the next five years (2019/20 – 2023/24).
Regional Results (see section 4 for detail)

Estimates of additional housing need have been calculated for four regions (see section 1.2). A selection of key results for the first five years only are given below. Please see section 4 for results over the full 20 year period.

- **North Wales:** for the first 5-year period (2019/20-2023/24), between 1,000 and 1,400 additional housing units are required annually (with a central estimate of 1,200). During this period, and under the central estimate, 47% of the estimated need is for market housing and 53% for affordable housing (intermediate rent or social).

- **Mid Wales:** for the first 5-year period (2019/20-2023/24), between 70 and 200 additional housing units are required annually (with a central estimate of 130). During this period, and under the central estimate, 39% of the estimated need is for market housing and 61% for affordable housing (intermediate rent or social).

- **South West Wales:** for the first 5-year period (2019/20-2023/24), between 1,400 and 1,900 additional housing units are required annually (with a central estimate of 1,600). During this period, and under the central estimate, 56% of the estimated need is for market housing and 44% for affordable housing (intermediate rent or social).

- **South East Wales:** for the first 5-year period (2019/20-2023/24), between 3,700 and 4,800 additional housing units are required annually (with a central estimate of 4,400). During this period, and under the central estimate, 52% of the estimated need is for market housing and 48% for affordable housing (intermediate rent or social).
# Table of Contents

Background .......................................................................................................................... 1

Summary: Key Results ........................................................................................................... 3

Overall estimates of additional housing need (see section 2 for full details) ......................... 3

Estimates of additional housing need split by tenure (see section 3 for full details) ............. 4

Regional Results (see section 4 for detail) ............................................................................. 5

1. Policy context .................................................................................................................... 7

1.1 Limitations ..................................................................................................................... 7

1.2 Regions ......................................................................................................................... 8

1.3 Approach ...................................................................................................................... 8

2. Overall estimates of additional housing need .................................................................... 9

2.1 Definitions .................................................................................................................... 9

2.2 Results ......................................................................................................................... 10

3. Estimates of additional housing need split by tenure ..................................................... 15

3.1 Definitions .................................................................................................................... 15

3.2 Methodology .............................................................................................................. 16

3.3. Data sources ............................................................................................................. 17

3.4 Assumptions ............................................................................................................... 20

3.5 Key results .................................................................................................................. 21

4. Regional estimates ......................................................................................................... 23

4.1 Overall Estimates ....................................................................................................... 23

4.2 Estimates by Tenure ................................................................................................... 24

5. Sensitivity of the tenure split of the central estimates .................................................... 29

5.1 Affordability criteria for market housing ...................................................................... 29

5.2 Annual growth in median household income ................................................................ 30

5.3 Annual change to distribution of household income ................................................... 30

5.4 Annual growth to private rents .................................................................................... 31

5.5 Cumulative impact of changing assumption ................................................................ 31

6. Contextual information ................................................................................................... 33

7. Key differences between 2018-based and 2019-based estimates of additional housing need .................................................................................................................. 36

Annex 1 – Definition of household projection variants ....................................................... 38

Annex 2 – Assumptions for four tenure split ...................................................................... 39

Annex 3 – Worked example ............................................................................................... 40

Annex 4 – Assumptions for two tenure split ...................................................................... 42

Annex 5 – Definitions of Existing Unmet Need .................................................................. 44

Notes on the use of statistical articles .................................................................................. 45
1. Policy context

Estimates of housing need are key to future planning requirements at a national and regional level and will be used to inform housing policy development and to support the continuing development of the National Development Framework (NDF) following consultation on the draft NDF in autumn 2019.

1.1 Limitations

There are a number of limitations to the results presented in this article:

- These estimates are based on 2018-based household projections. Household projections provide estimates of the future numbers of households and are based on population projections and a range of assumptions about household composition and characteristics. The assumptions are based on past trends and assume these trends continue into the future. The further into the future the estimates go, the less certain they become. The estimates do not attempt to reflect the impact of future policies or events such as Brexit.

- The overall estimates are not a housing target. They are a measure of households that are in need of an additional housing unit, over a specific period and based on a range of assumptions.

- The methodology only considers households that are in need of an additional housing unit. It therefore does not take into account those households that are living in unsuitable accommodation and are in need of a different type of housing unit, nor aspirations of households to live in different accommodation.

- Existing unmet need is estimated from the best available data. We recognise that this, together with the above limitation, provides an incomplete picture of existing unmet need in Wales and is likely to be an undercount.

- The household projections used within these figures are an estimate of newly arising need, based on past trends. These trends may, to some extent, be influenced by the availability of homes i.e. if more homes are built, the increased availability of homes may result in more households forming. The opposite is also true – if fewer homes are built then fewer households are able to form.

- While we are presenting estimates at a regional level, there is wide variation within each region. There will also be variation within each local authority.

- To illustrate the uncertainty associated with the projections, higher and lower variants (full definitions can be found in annex 1) of household projections are included to produce a range of estimates for the additional housing need.

- The estimates do not take into account the impact of the coronavirus (Covid-19) as there is currently considerable uncertainty about such impacts and it will be some time before the full impact is known.
1.2 Regions
The 2018-based estimates of additional housing need were based on three regions:

- North Wales;
- Mid and South West Wales;
- South East Wales

For this publication, the Mid and South West Wales region has been split into separate regions for Mid Wales and South West Wales to provide more detailed analysis on the key issues and trends in these areas. The four regions are (shown in map 1):

- North Wales (Conwy, Denbighshire, Flintshire, Gwynedd, Isle of Anglesey and Wrexham)
- Mid Wales (Ceredigion and Powys)
- South West (Carmarthenshire, Neath Port Talbot, Pembrokeshire and Swansea)
- South East (Blaenau Gwent, Bridgend, Caerphilly, Cardiff, Merthyr Tydfil, Monmouthshire, Newport, Rhondda Cynon Taff, Torfaen and Vale of Glamorgan)

1.3 Approach
In order to ensure that the estimates and output from this work are robust, transparent and of the highest standard, a technical group was established at the outset which includes analytical and policy experts from both Welsh Government and Local Government. The role of this group was to advise on methodology and technical issues.

During early 2018, Welsh Government analysts together with the technical group explored and reviewed approaches to calculating housing need taken elsewhere across the UK. The group concluded that an Excel based Housing Need and Demand tool developed by the Scottish Government could be adapted for the Welsh context.
2. Overall estimates of additional housing need

The estimates of additional housing need in this publication are based on the same definitions and methodology as the 2018-based estimates published in 2019.

2.1 Definitions

The terms housing need and demand are widely used and often used interchangeably. For the context of this work, the following box defines these terms.

**Box 1 - Definitions**

**Overall Housing Need:** The existing unmet need for additional housing units and newly arising need for additional housing units

**Existing Unmet Need:** The number of households that do not have access to adequate housing and would require an additional housing unit. Those who may be in need of more appropriate housing that would not require an additional unit are excluded from this analysis

**Newly Arising Need:** The projected number of newly forming households that will require additional housing units for a period in the future

**Housing Demand:** A market driven concept that relates to the type of house that a household will choose to occupy based on preference and ability to pay

**Newly arising need** is calculated as the difference in household projections from one year to the next. For the purpose of this work, it is taken from the 2018-based household projections. When the projections show a decline in the number of households from one year to the next (therefore having a negative figure of newly arising need) this has been capped at zero throughout the analysis.

For the purpose of this work, existing unmet need is estimated from two components (which are further discussed in section 2.2.2):

- Homeless households in temporary accommodation (June 2019 snapshot)
- The number of households that were both overcrowded and concealed (2011 Census)

The full definition of the two components of existing unmet need can be found in annex 5.

Box 2 below shows the flow of components that make up the overall housing need as discussed above.
2.2 Results

This section presents the estimates of overall housing need at both a national and regional level. It first shows the results from the two components of overall need (newly arising and existing unmet) and how they combine together to produce the final estimates.

2.2.1 Newly arising need (household projections)

Newly arising need is the main component of future estimates of additional housing need, and is calculated as the difference in household projections from one year to the next.

The 2014-based household projections were used for the 2018-based estimates of additional housing need published in 2019. The 2019-based estimates of additional housing need within this article have been updated using the 2018-based household projections (published in August 2020).

Household projections are not forecasts; they are based purely on past trends and assume these trends continue into the future. In particular, such projections do not attempt to account for the effect of future polices (for example, policies which might seek to influence population movements) and events such as Brexit and the current coronavirus (COVID-19).

To illustrate the uncertainty associated with the projections, higher and lower variants (full definitions can be found in annex 1) of household projections are produced to provide a range of estimates for the additional housing need.
Under the principal projection, the number of households in Wales is projected to steadily increase over the next 20 years.

Aggregating local authority household projection data shows that under the principal projection, the number of households in all regions is expected to gradually increase over the next 20 years with the largest increase being for South East Wales.
Chart 4 shows newly arising need for housing units across the 20-year period of the 2018-based household projections. The gradual decline in newly arising need reflects the slowdown in growth in the 2018-based household projections, during the 20 year period; this being more marked under the lower variant projections.

2.2.2 Existing Unmet Need

While estimates for additional housing need are driven for the most part by newly arising households, the other component is existing unmet need. For the purpose of this work the following two aspects of the existing unmet need are captured (further information is available in pages 12-15, section 2.2, of the first article published in January 2019):

- Homeless households in temporary accommodation
- Households that are both overcrowded and concealed

The number of homeless households in temporary accommodation is taken from the April to June 2019 quarterly statutory homelessness release published by Welsh Government. There were a total of 2,229 homeless households in temporary accommodation at the end of June 2019.

The number of households that are both overcrowded and concealed (full definitions in Annex 5) is taken from an ONS commissioned table based on the 2011 census. Whilst the estimate may be somewhat out-of-date, it was regarded by the technical group as the best estimate currently available. There were a total of 3,503 overcrowded and concealed households in Wales on census day in 2011 as shown in table 1.

Table 1: Existing unmet need

<table>
<thead>
<tr>
<th>Area</th>
<th>Concealed and Overcrowded Households</th>
<th>Homeless Households in Temporary Accommodation (a)</th>
<th>Total (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid</td>
<td>167</td>
<td>84</td>
<td>251</td>
</tr>
<tr>
<td>South West</td>
<td>695</td>
<td>243</td>
<td>938</td>
</tr>
<tr>
<td>North</td>
<td>735</td>
<td>549</td>
<td>1,284</td>
</tr>
<tr>
<td>South East</td>
<td>1,906</td>
<td>1,347</td>
<td>3,253</td>
</tr>
<tr>
<td>Wales</td>
<td>3,503</td>
<td>2,229</td>
<td>5,732</td>
</tr>
</tbody>
</table>

Sources: Homeless households in temporary accommodation, 2011 Census

(a) Disclosure control has been applied to the data. All figures are rounded independently to the nearest 3. As a result, there may be a difference between the sum of the constituent items and the total
(b) Totals may not match due to rounding
The two components combined give a total estimate of current existing unmet need in Wales of 5,732 households.

In order to incorporate the overall figure of 5,732 households in existing unmet need into the estimates of overall need for additional housing units, an assumption is required on the number of years it would take to clear the existing need for additional housing units. The technical group concluded that it was reasonable to assume that existing need should be cleared within 5 years.

To clear over 5 years, is to assume 1/5\textsuperscript{th} of the total existing unmet need is cleared each year for 5 years. At the end of this period the assumption is that there is no backlog of existing unmet need but it is possible that a new backlog would then have built up. These figures would be reviewed and updated at this point.

Therefore, each of the first 5 years of the estimates (2019/20 – 2023/24) include both newly arising need and 1/5\textsuperscript{th} of total existing unmet need.

Homeless households in temporary accommodation and overcrowded and concealed households, both expressed as a rate per 10,000 households vary considerably at local authority level (please see maps 3 and 4 in the January 2019 report as an indication of these variances).

2.2.3 Overall estimates: key results

Combining both the newly arising households and existing unmet need components produces estimates of overall housing need. Estimates by year, region and variant of household projections can be found on StatsWales.

Chart 5: Average annual estimates of additional housing need (Wales)
• During the first 5 years, it is estimated that on average, between 6,200 and 8,300 additional housing units will be required annually, with a central estimate of 7,400. These figures include an annual average of 1,100 additional housing units to clear those in existing unmet need over the first 5 years.

• As it is assumed that the backlog of existing unmet need will be cleared by the end of 2023/24, the estimates of additional housing need from 2024/25 to 2038/39 are based on newly arising need only.

• The estimates of additional housing need largely decrease over the remaining 15 years (2024/25 to 2038/39) and by the mid to late 2030s (2034/35-2038/39), the central estimate is for an annual average of 4,300 additional housing units. The estimate of additional housing need units is 600 under the lower variant and 7,200 units under the higher variant. This is based on newly arising need only and reflects a slowdown in the projected household growth in the 2018-based household projections. Household projections are largely driven by population projections.

• Over time, the chart shows the range of annual estimates widen across the different household projections, reflecting the uncertainty of these estimates.

Chart 6 shows the annual estimates of the additional housing need for the first 5 years at a national level for each of the different household projections.

**Chart 6: Estimates of additional housing units for first 5 years (Wales)**
3. Estimates of additional housing need split by tenure

This section splits the additional housing units by tenure (as detailed in section 3.5) for the first 5 years of the estimates (to split by tenure beyond a 5-year period is considered unreasonable).

3.1 Definitions

This report uses a number of terms that could be interpreted in various ways. Box 3 defines these terms for the purpose of this work.

Box 3: Definition of terms

<table>
<thead>
<tr>
<th>For the purpose of this report, terms are defined as follows:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market housing:</strong> Housing units that are either owner-occupier or rented privately. It includes Help to Buy and Intermediate Low Cost Home Ownership units (e.g. Homebuy and Shared Ownership).</td>
</tr>
<tr>
<td><strong>Affordable housing</strong>: Social housing and intermediate rented housing. It excludes intermediate Low Cost Home Ownership units. This differs slightly from the Technical Advice Note (TAN) 2 Planning and Affordable Housing (2006) definition of affordable housing.</td>
</tr>
<tr>
<td><strong>Social housing</strong>: Social housing refers to units owned by local authorities and registered social landlords. The majority of social housing units are let at social rents under the Welsh Government social rents policy but also include other supported units such as extra care units.</td>
</tr>
<tr>
<td><strong>Intermediate rent</strong>: Where rent is above those of social rent but below market rent.</td>
</tr>
<tr>
<td><strong>Suitable for</strong>: The methodology deems households suitable for a specific tenure if their household income satisfies the affordability criteria of the tenure. The affordability criteria are based on the assumptions outlined below.</td>
</tr>
<tr>
<td><strong>Household income</strong>: Gross un-equivalised household income for all adults living within the household, derived from detailed income questions on the National Survey for Wales 2017/18. This includes housing related benefit and allowances.</td>
</tr>
</tbody>
</table>

---

3 The Technical Advice Note (TAN) 2 Planning and Affordable Housing (2006) definition of affordable housing includes schemes which may provide for stair-casing to full ownership as long as there are secure arrangements in place to ensure the recycling of capital receipts to provide replacement affordable housing.

4 Eurostat’s full definition of equivalised income
3.2 Methodology

The excel tool used for the 2019-based estimates of additional housing need uses the same methodology as the 2018-based estimates published in June 2019. The method is adopted and adapted from that used by the Scottish Government.

While the Scottish Government’s methodology splits estimates into four tenures, this article splits the estimates into two tenures only – market housing and affordable housing as defined in box 3 above and shown in box 4 below.

**Box 4: Diagram of Welsh methodology**

![Diagram of Welsh methodology]

Within this methodology:

- **market housing** covers those households from the newly arising need that are assumed able to rent within the private sector or become owner occupiers

- **affordable housing** covers the remaining households within the newly arising need and the existing unmet need

The allocation of the newly arising need to market housing is based on a set of assumptions. The assumptions require data inputs such as the income distribution, rental and house prices. These data inputs have been updated where more recent data is available. Annex 3 provides a worked example of the assumptions used to determine the estimates by tenure.

To split the estimates into four tenures (owner occupier, private rented sector, intermediary housing and social housing) requires variables that lack robust evidence in order to make a confident assumption for Wales (see annex 2). While this article splits the estimates into two tenures only, an excel tool has also been published alongside this article. The excel tool
allows users to enter their own assumptions and data sources to observe the impact the changes have on both the two tenure and the four tenure splits.

3.3. Data sources

3.3.1 Household income distribution

The distribution of household income is required at both a national and regional level to calculate what proportion of newly arising need would be suitable for each housing tenure. Household income data has been derived from the National Survey for Wales (April 2017 to March 2018) and for the purpose of this work is defined in box 3.

Table 2 shows the estimated median gross household income for 2018/19 by region (to the nearest £100). The estimated household income distribution used the 2017/18 National Survey data with a multiplier based on the growth to the mean household gross income by deciles from 2017/18 to 2018/19 using UKMOD 1.0. This is a UK tax-benefit model developed by the Institute for Social and Economic Research based on the Family Resource Survey.

Table 2: Median gross household income

<table>
<thead>
<tr>
<th>Area</th>
<th>Median Gross Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Wales</td>
<td>£26,100</td>
</tr>
<tr>
<td>Mid Wales</td>
<td>£25,700</td>
</tr>
<tr>
<td>South West Wales</td>
<td>£26,000</td>
</tr>
<tr>
<td>South East Wales</td>
<td>£27,000</td>
</tr>
<tr>
<td>Wales</td>
<td>£26,500</td>
</tr>
</tbody>
</table>

Source: National Survey for Wales, UK-tax benefit model

3.3.2 Private rent prices

Data on private sector rents across Wales is collected by Welsh Government rent officers. The median and 30th percentile private rent data has been calculated from private rentals with 2 or 3 bedrooms. While data is available for different sizes of property (by number of bedrooms) those with 2 or 3 bedrooms were chosen as these are the two most common sizes for private rented properties and account for over 75% of all records in the data set.

---

5The data that has been used for this work additionally includes households that are in receipt of housing benefit as well as student households. These are excluded from the data that is published on StatsWales so the data is not comparable. The data covers the period July 2018 to June 2019.

6The median refers to the midpoint of the frequency distribution. 50% of all private sector rents will be above this value, and 50% below. The 30th percentile refers to a value in the distribution which 30% of all private sector rents are below.
Private rent data has been used at a national and regional level together with household income distribution to estimate how many households are suitable for market housing (see worked example in annex 3).

### Table 3: Regional monthly rent

<table>
<thead>
<tr>
<th>Area</th>
<th>30th Percentile Monthly Private Rent (2 and 3 bed)</th>
<th>Median Monthly Private Rent (2 and 3 bed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Wales</td>
<td>£500</td>
<td>£550</td>
</tr>
<tr>
<td>Mid Wales</td>
<td>£450</td>
<td>£520</td>
</tr>
<tr>
<td>South West Wales</td>
<td>£450</td>
<td>£500</td>
</tr>
<tr>
<td>South East Wales</td>
<td>£475</td>
<td>£525</td>
</tr>
<tr>
<td>Wales</td>
<td>£475</td>
<td>£525</td>
</tr>
</tbody>
</table>

Source: Rent Officers Wales

As with previous publications, while overall estimates of housing need are presented at a national and regional level, there are significant variations within some of the regions (as well as variation within local authorities).

For context, map 1 below shows median rents for private rentals with 2 or 3 bedrooms at a local authority level. Though the median rent in South East Wales is set at £525 per month, as the map shows, the median rent for the local authorities within South East Wales is varied. South East Wales contains both the local authority with the lowest median (Blaenau Gwent) and the highest median (Cardiff). Whilst there is an element of consistency in the rents for local authorities in North Wales, there is some non-uniformity amongst rents for the local authorities within the Mid Wales and South West Wales regions.
3.3.3 House prices

House price data is not required to split estimates of housing need into the two tenures (market and affordable) as households that are suitable to purchase a home are a subset of those that are suitable for market housing. House price data is, however, required to split the estimates into the four tenures (owner occupier, private rent, social rent and intermediate housing). This is further explained in annex 2.
3.4 Assumptions

Four variables are required to split the estimates of additional housing units into two tenures. The underlying assumptions are stated in the table below (annex 4 has full descriptions and rationale for the decisions). The technical subgroup reviewed the assumptions needed, assessed available sources of information and provided recommendations to the Chief Statistician. Where possible, forecasts from the Office for Budget Responsibility (OBR) have been used. The assumptions do not take into account the impact of the coronavirus (COVID-19), as there is currently considerable uncertainty about such impacts.

Table 4: Variables required for estimates of housing need split into 2 tenures

<table>
<thead>
<tr>
<th>Variable</th>
<th>Underlying assumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordability Criteria for market housing (proportion of household income)</td>
<td>Households that would spend up to 30% of household income on median private rent for a 2/3 bed property would be suitable for market housing. As the household income threshold is increased (e.g. households who spend less than 35% of household income on median rent would be suitable for private rent), so will the number of households that would be suitable for private rent.</td>
</tr>
<tr>
<td>Annual growth in median household income</td>
<td>Office for Budget Responsibility (OBR) published their latest forecast of household income in March 2020 (table 1.13). While the forecast is at a UK level, it has been applied at the national and regional level in Wales. The forecast is around 3% growth each year for the five year period.</td>
</tr>
<tr>
<td>Annual change to distribution of household income</td>
<td>Published literature suggests that it is likely there will be an increase in the inequality of household income between high and low income households over the coming years. This means that high income households will increase faster than those of low income households (although the incomes of low income households may not necessarily increase).</td>
</tr>
<tr>
<td>Annual growth in private rent prices</td>
<td>Office for Budget Responsibility (OBR) published their latest forecast of annual growth in private rent prices in March 2020 (table 1.6). OBR state that private rents are assumed to grow in line with the average earnings forecast. While the forecast is at a UK level, it has been applied at the national and regional level in Wales. The forecast is around 3% growth each year for the five year period.</td>
</tr>
</tbody>
</table>
3.5 Key results

The estimates presented in this section are based on a number of default assumptions, which are discussed above in detail in section 3.4. Changing these assumptions would change the estimates. The sensitivities of the assumptions are discussed in section 5.

Chart 7 shows how the split between market and affordable housing changes under the different 2018-based household projections.

**Chart 7: Estimates of additional housing units split by tenure (Wales)**

- The average annual housing need by tenure over 2019/20 to 2023/24 varies under the different variants of household projections. The annual estimated requirement of market housing units ranges from 3,100 (lower variant) to 4,500 (higher variant) each year with an annual central estimate of 3,900 units. Affordable housing units range from 3,000 (lower variant) to 3,900 (higher variant) each year with an annual central estimate of 3,500 units.

- Based on the data sources and assumptions discussed throughout this article, these estimates suggest that on average, under the central estimate, the additional housing units are split 52% for market housing and 48% for affordable housing (intermediate rent or social).

- As shown in table 5 below, under the higher variant, the proportional split of additional housing units is 53% market and 47% affordable. Under the lower variant, the additional housing units are split evenly between market housing and affordable housing.
Table 5: Average annual split of market/affordable housing by variant 2019/20-2023/24

<table>
<thead>
<tr>
<th></th>
<th>Higher Variant</th>
<th>Central Estimate</th>
<th>Lower Variant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Housing</td>
<td>53%</td>
<td>52%</td>
<td>50%</td>
</tr>
<tr>
<td>Affordable Housing</td>
<td>47%</td>
<td>48%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Percentage of overall estimate from existing unmet need</strong></td>
<td>14%</td>
<td>16%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: WG 2019-based estimates of additional housing need

Those households in existing unmet need are automatically assumed to be suitable for affordable housing. Table 5 shows the proportion of existing unmet need is higher under the lower variant (19%) compared to the central estimate (16%) and the higher variant (14%). Whilst the overall estimate of additional housing need is lower under the lower variant, the estimate of existing unmet need is constant under all variants making the need for affordable housing proportionally higher under the lower variant compared with that under the central estimate and the higher variant.
4. Regional estimates

This section explores estimates at a regional level (North Wales, Mid Wales, South West Wales, and South East Wales). Map 1 shows the regional boundaries.

4.1 Overall Estimates

The overall estimates at a regional level are calculated in the same way as the national level estimates for the 20 year period (2019/20 to 2038/39). There are considerable differences within the regions as shown in table 6 below.

**Table 6: Annual average estimate of additional housing need by region, variant and 5-yearly periods**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Wales</td>
<td>Lower variant</td>
<td>968</td>
<td>368</td>
<td>60</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Central estimate</td>
<td>1,231</td>
<td>810</td>
<td>643</td>
<td>557</td>
</tr>
<tr>
<td></td>
<td>Higher variant</td>
<td>1,443</td>
<td>1,148</td>
<td>1,115</td>
<td>1,177</td>
</tr>
<tr>
<td>Mid Wales</td>
<td>Lower variant</td>
<td>67</td>
<td>14</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Central estimate</td>
<td>133</td>
<td>128</td>
<td>75</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Higher variant</td>
<td>194</td>
<td>227</td>
<td>213</td>
<td>217</td>
</tr>
<tr>
<td>South West Wales</td>
<td>Lower variant</td>
<td>1,376</td>
<td>860</td>
<td>497</td>
<td>201</td>
</tr>
<tr>
<td></td>
<td>Central estimate</td>
<td>1,642</td>
<td>1,311</td>
<td>1,120</td>
<td>1,041</td>
</tr>
<tr>
<td></td>
<td>Higher variant</td>
<td>1,858</td>
<td>1,655</td>
<td>1,603</td>
<td>1,678</td>
</tr>
<tr>
<td>South East Wales</td>
<td>Lower variant</td>
<td>3,749</td>
<td>2,234</td>
<td>1,546</td>
<td>835</td>
</tr>
<tr>
<td></td>
<td>Central estimate</td>
<td>4,358</td>
<td>3,291</td>
<td>2,956</td>
<td>2,681</td>
</tr>
<tr>
<td></td>
<td>Higher variant</td>
<td>4,839</td>
<td>4,084</td>
<td>4,044</td>
<td>4,085</td>
</tr>
</tbody>
</table>

Source: WG 2019-based estimate of additional housing need

Note: '-' denotes no newly arising need due to the projected household units falling year-on-year
• North Wales: For the first 5-year period, between 970 and 1,400 additional housing units are required annually (with a central estimate of 1,200). From 2032/33 onwards, under the lower variant, there is currently estimated to be no newly arising need for housing. This reflects a projected decrease year-on-year in the number of households from the 2018-based household projections.

• Mid Wales: For the first 5-year period, between 70 and 190 additional housing units are required annually (with a central estimate of 130). The 2018-based household projections show a decline year-on-year in the number of projected households which results in no newly arising need for housing under the lower variant from 2027/28 – 2038/39.

• South West Wales: For the first 5-year period, between 1,400 and 1,900 additional housing units are required annually (with a central estimate of 1,600). The estimates decrease gradually over the remaining 15 years (2025/26 to 2038/39) and by the mid to late 2030s (2034/35-2038/39), the central estimate is an annual average of 1,000 additional housing units. This reflects a general slowdown in the projected household growth from the 2018-based household projections.

• South East Wales: For the first 5-year period, between 3,700 and 4,800 additional housing units are required annually (with a central estimate of 4,400). The estimates decrease gradually over the remaining 15 years (2024/25 to 2038/39) and by the mid to late 2030s (2034/35-2038/39) the central estimate is an annual average of 2,700 additional housing units. This reflects a marked slowdown in the projected household growth from the 2018-based household projections.

4.2 Estimates by Tenure

Estimates by tenure is considered over the first 5 years only (to consider beyond 2023/24 is considered unreasonable when setting the following variables). To produce estimates by tenure at a regional level the distribution of household income is required for each region, as well as regional private rental values as shown in Table 7.

All other variables remain the same as at the Wales level, namely:

- affordability criteria for market housing
- rental growth
- household income growth
- changes to the distribution of household income.

There are slight differences in the proportional tenure split of housing need by region. There are a number of reasons for this. First, there are differences in private rents and household income data. This will affect the proportion of newly arising need across the regions that will be suitable for market housing.
Second, the proportion of overall estimates of additional housing units by region that comes from existing unmet need (automatically deemed suitable for affordable housing) differs. Table 7 shows that Mid Wales has the highest proportion of overall estimates from existing unmet need at 38%. South West Wales has the lowest proportion at 11%.

### Table 7: Regional data

<table>
<thead>
<tr>
<th>Area</th>
<th>Annual Median Rent</th>
<th>Median Household Income</th>
<th>Proportion of Overall Estimates from Existing Unmet Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Wales</td>
<td>£6,600</td>
<td>£26,100</td>
<td>21%</td>
</tr>
<tr>
<td>Mid Wales</td>
<td>£6,240</td>
<td>£25,700</td>
<td>38%</td>
</tr>
<tr>
<td>South West Wales</td>
<td>£6,000</td>
<td>£26,000</td>
<td>11%</td>
</tr>
<tr>
<td>South East Wales</td>
<td>£6,600</td>
<td>£27,000</td>
<td>15%</td>
</tr>
<tr>
<td>Wales</td>
<td>£6,300</td>
<td>£26,500</td>
<td>16%</td>
</tr>
</tbody>
</table>

Source: Rent Office Wales, StatsWales, National Survey for Wales

Charts 8 to 13 show the variation in the tenure split (market and affordable housing) of the estimate of additional housing need by region under the different variants of the household projections.

#### 4.2.1 North Wales

**Chart 8: Estimates of additional housing units split by tenure (North Wales)**

![Chart 8](image)

*Variant of 2018-based Household Projections (a)*

*Source: WG 2019-based estimates of additional housing need*

- Higher variant is based on high fertility, life expectancy and migration assumptions
- Central estimate is based on principal household projections (based on recent trends)
- Lower variant is based on low fertility, life expectancy and migration assumptions
In North Wales, the estimated average annual need for additional market housing units range from 420 (lower variant) to 700 (higher variant) between 2019/20 and 2023/24. The annual need for affordable housing units range between 550 (lower variant) and 740 (higher variant).

Under the central estimates and default assumptions, an average of 580 (47%) market housing units and 660 (53%) affordable housing units would be required annually between 2019/20 and 2023/24. For all the variants the need is for more affordable housing than market housing.

4.2.2 Mid Wales

Chart 9: Estimates of additional housing units split by tenure (Mid Wales)

![Chart showing estimates of additional housing units for Mid Wales]

<table>
<thead>
<tr>
<th>Variant</th>
<th>Average Additional Housing Units (2019/20 - 2023/24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Variant</td>
<td>10 (lower variant) to 90 (higher variant)</td>
</tr>
<tr>
<td>Central Estimate</td>
<td>60 (lower variant) to 100 (higher variant)</td>
</tr>
<tr>
<td>Lower Variant</td>
<td>80 (higher variant)</td>
</tr>
</tbody>
</table>

Under the central estimates and default assumptions, an average of 50 (39%) market housing units and 80 (61%) affordable housing units would be required annually between 2019/20 and 2023/24. For all the variants the need is for more affordable housing than market housing.

Note: The scale for chart 9 is a quarter of the scale used for charts 8, 10 and 11. Compared to the other three regions, the smaller population in Mid Wales will be more sensitive to a change in the underlying assumptions.

In Mid Wales, the estimated average annual need for additional market housing units range from 10 (lower variant) to 90 (higher variant) between 2019/20 and 2023/24. The annual need for affordable housing units range between 60 (lower variant) and 100 (higher variant).

Under the central estimates and default assumptions, an average of 50 (39%) market housing units and 80 (61%) affordable housing units would be required annually between 2019/20 and 2023/24. For all the variants the need is for more affordable housing than market housing.
4.2.3 South West Wales

Chart 10: Estimates of additional housing units split by tenure (South West Wales)

Chart 10 shows for South West Wales, the estimated average annual need for additional market housing units ranges from 750 (lower variant) to 1,050 (higher variant) between 2019/20 and 2023/24. The estimated average annual need over the same time period for affordable housing units ranges from 630 (lower variant) to 810 (higher variant).

Under the central estimates and default assumptions, an average annual need of 910 (56%) market housing units and 730 (44%) affordable housing units would be required between 2019/20 and 2023/24. For all the variants the need is for more market housing than affordable housing.
4.2.4 South East Wales

Chart 11: Estimates of additional housing units split by tenure (South East Wales)

Chart 11 shows for South East Wales, the estimated average annual need for additional market housing units ranges from 1,890 (lower variant) to 2,560 (higher variant) between 2019/20 and 2023/24. The average annual need for affordable housing units ranges from 1,860 (lower variant) to 2,280 (higher variant).

Under the central estimates and default assumptions, an average annual need of 2,260 (52%) market housing units and 2,100 (48%) affordable housing units would be required between 2019/20 and 2023/24. For all the variants the need is for more market housing than affordable housing.
5. Sensitivity of the tenure split of the central estimates

This section analyses the sensitivity of the tenure split to a change in the assumptions used to split the overall estimate of additional housing need into market and affordable housing. This section, using only the central estimate, explores each assumption in turn (holding all other assumptions constant) and in charts 12 to 16 demonstrates the impact of changing the underlying assumption on the proportional split of tenure. This can be further explored in the excel tool.

This sensitivity analysis does not take into account the impact of the coronavirus (COVID-19), as there is currently considerable uncertainty about such impacts and it will be some time before the full impact is known.

5.1 Affordability criteria for market housing

Chart 12: Sensitivity of market housing affordability criteria

There are differing views across literature that suggest the affordability criteria for market housing lies somewhere between 25% and 30% of household income spent on median private rent.

Changing the default assumption of 30% to 25% reduces the proportion of additional market housing from 52% to 45%.

While no evidence suggests an affordability criteria of 35%, the graph demonstrates the impact of increasing the affordability criteria would be to increase the proportion of additional market housing to 58%.

This assumption is the most sensitive out of the four assumptions in splitting the overall estimates by tenure.
5.2 Annual growth in median household income

Chart 13: Sensitivity of household income growth

There are a number of different sources that present forecasts of household income. The default growth is approximately 3% each year (based on OBR forecasts).

Reducing the default annual growth to household income by 1 percentage point (to approximately 2% pa) decreases the required proportion of market housing units from 52% to 51%.

Increasing the default annual growth to household income by 1 percentage point (to approximately 4% pa) increases the required proportion of market housing units to 53%.

5.3 Annual change to distribution of household income

Chart 14: Sensitivity of household income distribution

Research suggests that the gap between the income of the most and least affluent households will widen in the future. The default inequality (gap) assumption is that the income at the 10th percentile will be 1 percentage basis point lower than the median and 1 percentage basis point higher at the 90th percentile. The 1 percentage basis point reduces uniformly from these two percentiles to no change at the median. 

Annex 5 provides further information.

Increasing the default assumption from 1 percentage basis point to 6 (significant inequality), decreases the required proportion of additional market housing units from 52% to 51%.

If there is no change in the distribution of household income between the highest and lowest incomes over 2019/20 to 2023/24, the required proportion of additional market housing units increases to 53%.
5.4 Annual growth to private rents

Chart 15: Sensitivity of private rental growth

OBRs forecast of private rents has been used in this work as the default assumption (approximately 3% annual growth).

Increasing the annual private rental growth by 1 percentage point a year (to approximately 4% annual growth) decreases the proportion of market housing from 52% to 51%.

Decreasing the annual private rental growth by 1 percentage point a year (to approximately 2% annual growth) increases the required proportion of market housing to 53%.

The impact is very similar to that of the impact on changing the growth to household income and the change to household income distribution.

5.5 Cumulative impact of changing assumption

Chart 16: Cumulative impact of changing all assumptions

Charts 12 to 15 show the impact on the tenure split of changing one of the assumptions whilst holding the other assumptions constant. In reality, there could be any combination of changes to the assumptions.

Chart 16 shows the lower combination of those assumptions that would lead to a decrease in the amount of market housing needed compared with the higher combination of those assumptions that would lead to an increase in the amount of market housing needed.

Under the lower combination, 42% of additional housing units are required to be market housing compared with 62% under the higher combination.
This section highlights the limitations of these estimates. While the central estimates (based on principal household projections and default assumptions) presented in this report are based on assumptions that have been agreed with a number of internal and external stakeholders, they will not replicate exactly the real world environment. They provide an indication of a suitable tenure split of additional housing units based on a set of assumptions. Please note the assumptions make no attempt to reflect the impact of the current coronavirus or of Brexit.

The published excel tool allows users to further alter the underlying assumptions behind the estimates to see the impact this has on the estimates.
6. Contextual information

While these estimates are not a housing target, this section discusses historical trends of house building by tenure in Wales over the past 20 years and affordable housing provision since 2008/09. This is to provide context to the housing need estimates by tenure presented in this article.

6.1 New build dwellings

Information on new dwelling completions by tenure in Wales are based on the reports of local authority building inspectors and the National House Building Council (NHBC). It does not include information from other private approved inspectors. It is sometimes difficult for building control officers and NHBC to identify the intended final tenure of the property (the basis for the tenure information). This may lead to an under-count of social sector (Local Authority and Registered Social Landlord) new house building and an over-count for the private sector. Therefore, the tenure data should be treated with caution.

From 1999 to 2009, an annual average of 8,400 new dwellings were built, of which 7% were social sector dwellings. From 2009 to 2019, the annual average of new dwellings built fell to around 6,100 but the average proportion of social sector dwellings increased to 16%.

Chart 17: New build dwellings completed by tenure

New build dwellings completed by tenure

Source: New house building data, Welsh Government
6.2 Affordable housing provision

Within the Welsh Government’s affordable housing provision statistics, ‘affordable housing’ is defined as housing where there are secure mechanisms in place to ensure that it is accessible to those who cannot afford market housing, both on first occupation and for subsequent occupiers as defined in Technical Advice Note (TAN) 2, Planning and Affordable Housing (2006). The figures cover all additional affordable housing units, whether through new build, purchase, acquisition, leasing or conversion of existing dwellings.

Affordable housing includes social rented housing that is provided by local authorities and registered social landlords as well as intermediate housing where prices or rents are above those of social rent but below market housing prices or rents. Figures include additional affordable housing units provided under schemes which may provide for stair-casing to full ownership as long as there are secure arrangements in place to ensure the recycling of capital receipts to provide replacement affordable housing.\(^7\)

New build affordable housing units and some conversions can be regarded as additional housing units. However, the purchase or acquisition by social landlords of existing private sector properties and converting them into affordable housing means an increase in the provision of additional affordable housing units, but a reduction in the number of private sector units. Therefore, direct comparisons should not be made between affordable housing provision trend data and estimates of housing need for affordable housing (as defined in this report).

Chart 18: Affordable housing units delivered

\(^7\) These are not included within the ‘affordable’ housing definition used in this housing need report.
On average, around 2,400 additional affordable housing units were delivered in each of the last 5 years. These include new builds, purchase, acquisition, leasing or conversion of existing dwellings. The figures do not take into account any reductions in existing stock due to demolitions or sales.
7. Key differences between 2018-based and 2019-based estimates of additional housing need

The 2019-based estimates in this article are based on the same methodology as those published last year (2018-based estimates) but with current data and assumptions where available. In broad terms, the changes related to:

(a) Newly arising need (change in household projections from one year to the next).
(b) Existing unmet need (change to component based on homeless households in temporary accommodation only).
(c) Changes to the data and assumptions used in the two way tenure split.

7.1 Newly arising need

The key data change is the use of updated household projections; from the 2014-based projections to the 2018-based projections.

- The Welsh Government’s 2018-based household projections use the 2018-based national population projections, published by the Office for National Statistics (ONS), as a basis.
- Using the latest set of household projections (2018-based) the updated estimates of additional housing need are generally lower until approximately 2030 compared with the 2018-based estimates. This is largely due to the differences between the 2014-based local authority household projections and the 2018-based local authority household projections.
- Both sets of projections show projected increases in the numbers of households throughout the projection period. However, the projected growth rate is lower in the 2018-based projections than in the 2014-based projections up to around 2030. After this point, the projected growth rate is higher in the 2018-based projections than in the 2014-based projections. This means that these updated estimates are projected to be generally higher than the 2018-based estimates for this period.

7.2 Existing unmet need

The existing unmet need has increased slightly from 5,645 (2018-based estimates) to 5,732 (2019-based estimates). The increase is due to an update in the homeless households in temporary accommodation. For both estimates, it is assumed the existing unmet need is cleared over a 5 year period. All existing unmet need is assumed to be an affordable housing need.
7.3 Data and assumptions

As well as changes to the household projections and homeless households, other source data have been updated where available, including the private rents data and the income distribution data.

In March 2020, the OBR updated the 5-year forecasts for several assumptions, including for income and private rental prices (see annex 4 for details).

Chart 19a shows 2019-based estimates of additional housing need over 5-yearly periods for the 20 years from 2019 to 2039 and chart 19b shows the 2018-based estimates from 2018 to 2038. Comparing charts 19a and 19b, the 2019-based estimates are initially lower than the 2018-based estimates for the first 10 years but then gradually increasing above the 2018-based estimates for the last 10 years.

Chart 19a: 2019-based Average Annual Estimates of Additional Housing Need (Wales)

[Diagram showing 2019-based estimates]

Source: WG 2019-based estimates of additional housing need

Chart 19b: 2018-based Average Annual Estimates of Additional Housing Need (Wales)

[Diagram showing 2018-based estimates]

Sources: WG 2014-based household projections, Homeless Households in Temporary accommodation, 2011 census
Annex 1 – Definition of household projection variants

Please note the household projection variants provide an indication of uncertainty, but to not represent upper or lower limits of future demographic behaviour. The definition of Household Projection Variants are as follows:

- The **principal projection** is based on recent past trends in births, deaths, and migration (estimates based on the principal household projections are called the **central estimates**)

- The **higher population variant** is based on assumptions of high fertility, life expectancy and migration assumptions

- The **lower population variant** is based on assumptions of low fertility, life expectancy and migration assumptions

In the previous publications, variants zero migration and 10-year migration were also considered. These variants are not currently available for the 2018-based household projections.
Annex 2 – Assumptions for four tenure split

*Table 4* lists the variables that are required to split the estimates into two tenures. The below table lists the *additional* assumptions that would be required to split estimates into four tenures.

**Table 10: Additional variables to produce four tenure split**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
</table>
| House Prices                                   | House prices are required to split those that are suitable for market housing into owner occupier and private rent. House price data is available through the [Land Registry’s price paid data set](#).  

The Office for Budget Responsibility (OBR) produces [house price forecasts (Table 1.21) for the UK](#). There has been additional loadings to the UK forecast for Wales as outlined in paragraph 3.2 (page 9). |
| First Time Buyer Affordability Ratio           | This variable is required to split market housing into owner occupiers and private rented. The affordability ratio is how many times their income first time buyers can expect to pay for a house.  

UK Finance (previously Council for Mortgage Lenders) publish [quarterly figures at a Wales level](#). |
| Percentile of the house price distribution that First Time Buyers (FTB) typically enter the market | This variable is used together with the above to determine how much household income is required for FTB to purchase a house.  

Comparing the average price paid by FTB in Wales as published by ONS with the distribution of land registry’s price paid data set, FTB in Wales typically enter the market at the 40th percentile. |
| Proportion of FTB who go on to purchase a house | The variable takes into account that not all households who could afford to purchase a house (based on the above assumptions) will actually go on to do so, either by choice or circumstance.  

*No robust evidence has been found in order to make a confident assumption about this variable in Wales.* This drove the decision to not present a split by four variables. |
| Affordability Criteria of Social Rent          | To split those deemed suitable for affordable rent into social and intermediate rent requires an assumption on what households are suitable for social rent.  

The default assumption in the [excel tool](#) is that households that would spend more than 35% of household income on 30th percentile rent would be suitable for social housing. As the household income threshold is lowered (e.g. households that spend more than 30% of household income on 30th percentile rent are suitable for social housing), more households will be suitable for social housing. |
Annex 3 – Worked example

Below is a detailed example of how the tenure split is calculated.

1. Overall estimates of additional housing units

Estimates of additional housing units have been produced at a Wales and a regional level, as well as for the different variants of household projections. The overall housing need estimates are based on a combination of newly arising need as well as a measure of existing unmet need.

For this example, we’ll say we have 5,900 newly arising households and 1,100 households in existing unmet need (making a total of 7,000). The 1,100 households in existing unmet need are automatically assumed to be suitable for affordable housing rather than market housing. The 5,900 newly arising households need to be split into those households suitable for market and affordable housing.

2. Affordability criteria for market housing

Based on our default assumptions, households that would spend up to 30% of income on median private rent for a 2 or 3 bed property would be suitable for market housing.

For this example, median annual private rent in Wales is £6,300. Therefore, for households to be suitable for market housing, they need a minimum income of:

\[
\text{Median Private Rent} \times \frac{0.30}{0.30} = £21,000
\]

So households with an income of £21,000 and above can afford market housing.

3. Proportion of newly arising need

We can use the distribution of household income in Wales to interpret how many households have an income of £21,000 and above.

Let’s say that £21,000 lies at the 38th percentile of household income. This means that 38% of all households in Wales have an income below £21,000, leaving 62% of households with an income of £21,000 and above.

So, we make the assumption that 62% of all households coming from newly arising need (not existing unmet need as they are automatically suitable for social rent) are suitable for market housing.

\[
\text{Proportion that are suitable for market} \times \text{All newly arising need} = 0.62 \times 5,900 = 3,658
\]

Therefore, 3,658 of the additional housing units should be for market housing.
4. Affordable housing

In point 3, we calculated that 3,658 households are suitable for market housing. The remainder are suitable for affordable housing (as all the existing unmet need are assumed to be affordable).

\[
\text{Total additional housing units – Market Housing} = 7,000 – 3,658 = 3,342
\]

5. Additional housing units split by tenure

Steps 1-4 have calculated how many households are suitable for either market or affordable housing. The overall split in this example is therefore 52% market housing (3,658 out of a total 7,000) and 48% affordable housing (3,342 out of a total 7,000).
Annex 4 – Assumptions for two tenure split

*Table 4* briefly describes the variables and assumptions required to split the estimates into two tenures. This annex explains in more detail the underlying assumptions.

**Affordability Criteria of the Private Rented Sector**

There appears to be general agreement in published literature that the affordability criteria of market housing lies between 25% and 30% but there is no consensus on one figure. This assumption was discussed in detail with the members of the technical subgroup whose role it was to provide recommendations on the assumptions. This was also discussed with the wider stakeholder group, made up of Welsh Government officials and more representatives from local authorities.

After reviewing the literature, it was generally agreed that an affordability criteria of 30% was more reasonable than 25%.

An affordability criteria of 30% (based on median private rent of properties with 2 or 3 bedrooms) translates to households requiring a minimum household income of £21,000 in order to be suitable for market housing (based on 2018/19 figures).

**Annual growth in median household income**

The Office for Budget Responsibility (OBR)’s forecast of household income measures disposable household income (after direct and indirect taxes have been paid and any direct benefits received). While this is a slightly different definition to the data source for household income used for these estimates (before taxes have been deduced) this was deemed the most robust and suitable forecast for this work. The impact on the estimates of slightly increasing or decreasing the forecast of median household income is minimal.

*Table 11: Annual growth in median household income*

<table>
<thead>
<tr>
<th>Year</th>
<th>2019/20</th>
<th>2020/21</th>
<th>2021/22</th>
<th>2022/23</th>
<th>2023/24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Growth</td>
<td>2.24%</td>
<td>3.43%</td>
<td>3.42%</td>
<td>3.47%</td>
<td>3.45%</td>
</tr>
</tbody>
</table>

Source: *Table 1.13 Household Disposable Income*.
Annual change to the distribution of household income

The Resolution Foundation published its 2019 Living Standards Outlook in early 2019. They "project a small rise in inequality in the short term" but go on to say that their forecast is uncertain. While the main focus of the report is after housing costs (AHC), in annex 3 of their report they explain that when measured before housing costs, they still project an increase in inequality (although flatter than when measured AHC).

The Institute for Fiscal Studies' 2018 Living Standards Report also suggests an increase in inequality in the coming years, but highlight that these forecasts come with "a substantial degree of uncertainty".

Given the above sources, and ONS latest publication on household income inequality which shows a slight increase in inequality in the financial year ending 2018, the subgroup determined that the default assumption should be a slight increase in household income inequality across the estimated period.

For the purpose of this work, how the distribution of household income changes is measured relative to how the 10th and 90th percentile points move relative to median household income. The subgroup determined that a reasonable assumption of a slight increase equates to households at the 90th percentile having an additional 1% growth compared to households at the 50th percentile (median). Those at the 10th percentile have 1% less growth compared to households at the 50th percentile (median). This is pro-rated across each point of the distribution.

Annual growth in private rent prices

OBR published their latest Economic and Fiscal Outlook in March 2020. They state that private rents are assumed to grow in line with their average earnings forecast. While the forecast is at a UK level, it has been applied at the national and regional level in Wales. The forecast is unchanged from that in March 2019.

Table 12: Annual growth in private rent

<table>
<thead>
<tr>
<th>Year</th>
<th>2019/20</th>
<th>2020/21</th>
<th>2021/22</th>
<th>2022/23</th>
<th>2023/24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Growth</td>
<td>2.95%</td>
<td>3.06%</td>
<td>3.12%</td>
<td>3.17%</td>
<td>3.29%</td>
</tr>
</tbody>
</table>

Source: Table 1.6 Average Earning Growth
Annex 5 – Definitions of Existing Unmet Need

Concealed family

The 2011 Census defined a concealed family as a couple or single parent family, living in a multifamily household, where the Family Reference Person (FRP) is not the Household Reference Person (HRP). Each family living in a household includes a FRP identified on the basis of economic activity and age characteristics (lone parents are automatically the FRP). In a one-family household the FRP is also the HRP. In households where there is more than one family, the HRP is selected from the FRPs based on economic activity, age and then order on the census form.

Concealed families will include:

- young adults living with a partner and/or child/children in the same household as their parents
- older couples living with an adult child and their family
- unrelated families sharing a household

A single person cannot be a concealed family; therefore one elderly parent living with their adult child and family or an adult child returning to the parental home is not a concealed family.

Overcrowded households (bedroom standard)

The Occupancy rating provides a measure of whether a household's accommodation is overcrowded or under occupied (based on the number of bedrooms). The ages of the household members and their relationships to each other are used to derive the number of bedrooms they require, based on a standard formula. The number of bedrooms required is subtracted from the number of bedrooms in the household's accommodation to obtain the occupancy rating. An occupancy rating of -1 implies that a household has one fewer bedroom than required, whereas +1 implies that they have one more bedroom than the standard requirement.

An occupancy rating of -1 or lower indicates an overcrowded household.
Notes on the use of statistical articles

Statistical articles generally relate to one-off analyses for which there are no updates planned, at least in the short-term, and serve to make such analyses available to a wider audience than might otherwise be the case. They are mainly used to publish analyses that are exploratory in some way, for example:

- introducing a new experimental series of data;
- a partial analysis of an issue which provides a useful starting point for further research but that nevertheless is a useful analysis in its own right;
- drawing attention to research undertaken by other organisations, either commissioned by the Welsh Government or otherwise, where it is useful to highlight the conclusions, or to build further upon the research;
- an analysis where the results may not be of as high quality as those in our routine statistical releases and bulletins, but where meaningful conclusions can still be drawn from the results.

Where quality is an issue, this may arise in one or more of the following ways:

- being unable to accurately specify the timeframe used (as can be the case when using an administrative source);
- the quality of the data source or data used; or
- other specified reasons.

However, the level of quality will be such that it does not significantly impact upon the conclusions. For example, the exact timeframe may not be central to the conclusions that can be drawn, or it is the order of magnitude of the results, rather than the exact results, that are of interest to the audience.

The analysis presented does not constitute a National Statistic, but may be based on National Statistics outputs and will nevertheless have been subject to careful consideration and detailed checking before publication. An assessment of the strengths and weaknesses in the analysis will be included in the article, for example comparisons with other sources, along with guidance on how the analysis might be used, and a description of the methodology applied.

Articles are subject to the release practices as defined by the release practices protocol, and so, for example, are published on a pre-announced date in the same way as other statistical outputs.
Missing value symbols used in the article follow the standards used in other statistical outputs, as outlined below.

.. The data item is not available
.
. The data item is not applicable
-
- The data item is not exactly zero, but estimated as zero or less than half the final digit shown
*
* The data item is disclosive or not sufficiently robust for publication

All content is available under the Open Government Licence v3.0, except where otherwise stated.