

Section 7: The ORS Housing Mix Model

- ^{7.1} This section summarises the ORS Housing Mix Model. A fuller technical report of the methodology employed is appended.
- ^{7.2} The Model is based exclusively on secondary data from a wide range of sources. It has been designed to help understand the key issues and provide insight into how different assumptions will impact on the required mix of housing over future planning periods.
- ^{7.3} It builds on existing household projections to effectively profile how the housing stock will need to change in order to accommodate the projected future population. Assumptions on changes in affordability and the projected relationship between future housing costs and household income are readily updateable and are easily fed into the model to enable effective sensitivity testing to be undertaken.
- ^{7.4} The Model considers both housing need and overall housing requirements on a longer-term basis, providing robust and credible evidence about the required mix of housing over the planning period and understanding how key housing market drivers, such as affordability, will impact on the appropriate housing mix.

- 7.6 The Model considers the projected household population alongside the existing dwelling stock in order to establish the necessary balance between market housing and affordable housing in relation to the additional dwellings to be provided. For affordable housing the balance between intermediate affordable housing and social rented housing is estimated.
- 7.7 The first stage of the model starts by separating households into two groups, owners and non owners on the basis of baseline information about existing households from the 2001 Census.
- 7.8 Household projections do not typically provide information about changing tenure patterns so the model estimates the number of households likely to become owners and non-owners on the basis of an affordability assessment. The affordability assessment considers both the likely affordability of newly forming households and the changing affordability patterns of existing households.
- 7.9 The model also takes account of the dissolution of households that are existing owner occupiers that is projected to occur over the household projection period. This is based on Government Actuaries Department survival rates and 2001 Census data on the tenure mix for older households. This enables the loss of owner occupiers to be offset against any new owners identified through the affordability analysis.
- 7.10 The outcome is to establish the number of households who are owners and non-owners at each stage of the household projection.
- 7.11 In developing the Housing Mix Model, ORS recognised the need for local level data about household incomes and secured a licence to use the CACI Paycheck data within the model. This dataset provides information at postcode level, detailing the mean and median income for the area and also the number of households in each £5,000 income band. ORS has compared this distribution to that obtained using ORS collected household survey data and has found that the results from the CACI model tend to under-estimate the proportion of households in the lower income bands. ORS has developed and applied a tool that improves the accuracy of the distribution of local household incomes.
- 7.12 ORS has developed an Income Model to identify the income distribution of owners and non-owners to directly inform the Housing Mix Model affordability profiling.
- 7.13 By taking information from the Land Registry transaction database, it is possible to profile the distribution of purchase prices for transactions over time across a given area. Combining the Land Registry data with information from the 2001 Census on the balance between owner occupiers and private renters, specific to the location and property type of each sale, the model establishes the likelihood of the transaction being a property that will be occupied by the purchaser or let privately.
- 7.14 The Housing Mix Model considers housing cost distribution profiles for both owned and privately rented housing in order to establish the distribution of incomes required to access all market housing. This profile is considered alongside the income distribution profile for non-owners. The household income threshold for market housing is set at the lowest level where there is sufficient market housing available. If there is less market housing available than households can afford, 'affordable' housing will be required to address the shortfall and therefore the threshold price for market housing must be set above this level.
- 7.15 Once the income threshold for market housing has been established, the Housing Mix Model estimates the number of households who are non-owners that can afford market housing. Combining

this with the projected number of owner occupiers estimates the total number of households requiring market housing within the area.

- 7.16 The requirement for affordable housing is estimated by subtracting the total number of households requiring market housing from the overall household projections.
- 7.17 The Housing Mix Model considers the need for social rented housing on the basis of social trends. The social trends for each household type, for example, single person or single parent households, are then applied to the household projection data to establish the level of social rented requirement for future years for each type of household. The model establishes a total requirement for social rented housing.
- 7.18 The requirement for intermediate affordable housing is estimated by offsetting the total number of households requiring social rented housing from the projected number of households requiring affordable housing overall.
- 7.19 To establish the current housing stock profile, the Model considers the baseline housing stock from the 2001 Census broken down by tenure. It supplements this information with data on housing completions broken down by tenure reported in local authority annual monitoring reports. The Housing Mix Model also considers data on losses from the affordable housing stock based on right-to-buy sales, and projects the likely future losses from stock on the basis of trends in sales since the recent change in legislation.
- 7.20 The Housing Mix Model considers the future requirement for market housing alongside the current stock of market housing and establishes the net additional dwellings that are required as market housing.
- 7.21 The future requirement for intermediate affordable housing is considered alongside the stock of existing intermediate affordable housing and the stock of sub-market housing, which is affordable to households on incomes below the income threshold for market housing, to establish the net additional dwellings that are required to be provided as intermediate affordable housing.
- 7.22 The future requirement for social rented housing is considered alongside the stock of existing social rented housing to establish the net additional dwellings that are required to be provided as social rented housing.
- 7.23 The Housing Mix Model considers the size and tenure of housing that was occupied by different household types recorded by the 2001 Census. The Model recognises that many households under-occupy their homes, choosing to live in larger properties than they need on the basis of the bedroom standard set out in the Housing Act. However, housing allocation policies mean that new social tenants are less likely to under-occupy their homes.
- 7.24 A trend-based occupancy profile is applied to the projected household mix of households in each housing tenure to establish an overall size mix of future housing requirements. This is then set alongside information about the existing housing stock to establish the net additional dwellings that are required by size and tenure.