Bridport Area Neighbourhood Plan: Technical Facilitation

1. Life-stage modelling

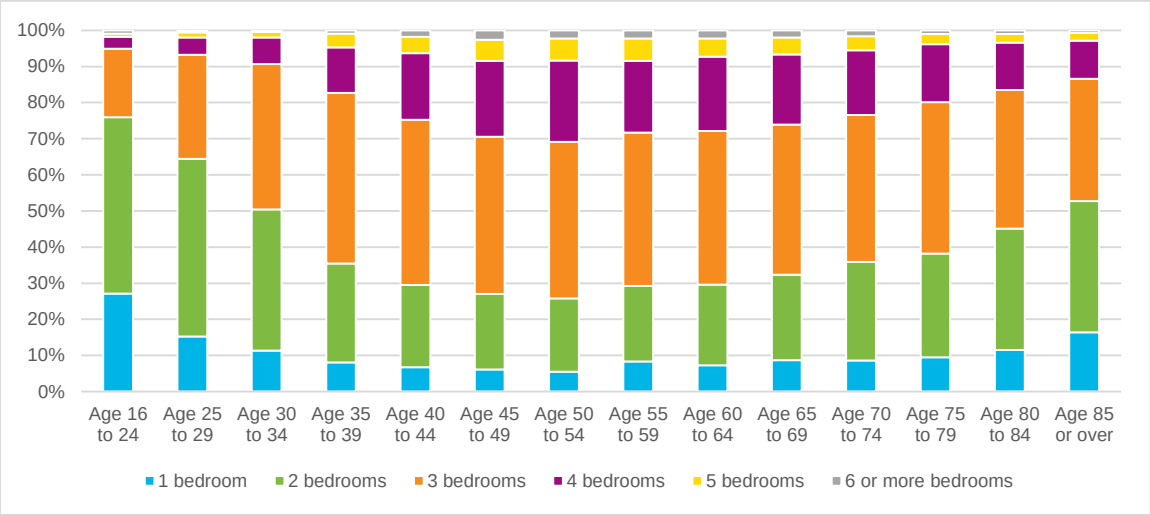
1. As part of the Evidence Base and Policy Development work AECOM identified a gap in the data relating to type and size of dwellings, suggesting that an additional indicator that would support policy development in this area would be AECOM's "Life-Stage modelling" approach. This follows a stepped methodology and is set out below.

2. To estimate the housing mix needed by the end of the Plan period we adopt an approach which assumes that current occupation patterns – that is, the propensity of households of different ages to occupy different types of accommodation – will persist into the future. For example, projected growth in single person households aged over 65 will lead to an increase in the need for the type of housing currently occupied by single person households of that age.

3. Size of housing is strongly correlated with household life stage. However, no data on housing size occupation by age of the Household Reference Person (HRP) is available at the parish level, so District-level data for West Dorset is used as a proxy. That data is presented in Figure 1 below, showing the size of property occupied by different age groups.

4. Figure 1 below describes the distribution of dwellings of different sizes (where size is determined by numbers of bedrooms) among the age groups of the HRP or head of household in West Dorset. The table illustrates that, as the HRP passes from her early thirties to her late thirties, and into middle age, so the size of dwelling occupied increases in size. The point at which they are likely to occupy a dwelling of the greatest size is within the age 50 to 54. Thereafter, households shift to smaller homes to the point where, over the age of 85, the majority of households occupy dwellings of 1 and 2 bedrooms. It is worth noting however that households occupying three-bedroom dwellings are still popular among older people.

Figure 1: Age of household reference person to size in West Dorset, 2011 (detailed)



Source: ONS 2011, AECOM Calculations

5. The next step of the process is to apply these propensities to the profile of HRP in the Neighbourhood area at the end of the Plan period (2036). To do this it is necessary to draw on data relating to the change in the distribution of households across the life stages at the District level, as this data is not available at smaller geographies. This is set out in Table 2 below.

Table 2: Projected distribution of Households by age of HRP in West Dorset

Year	Age of HRP 24 and under	Age of HRP 25 to 34	Age of HRP 35 to 54	Age of HRP 55 to 64	Age of HRP 65 and over
2011	845	3,122	14,384	8,987	17,048
2014	1,000	3,000	13,000	9,000	19,000

2036	1,000	3,000	13,000	9,000	27,800
2039	1,000	3,000	13,000	9,000	29,000

Source(s): MHCLG 2014-based household projections, ONS 2011, AECOM Calculations

6. We use the data set out in Table 1 as a proxy for the NA to arrive at a calculation of the forecast change in the age profile of HRPs between the 2011 Census and 2036 in the NA. This is shown in Table 2 below.

Table 2: Projected distribution of Households by age of HRP in the NA (Bridport, Allington, Bothenhampton, Bradpole, and Symondsbury)

Year	Age of HRP 24 and under	Age of HRP 25 to 34	Age of HRP 35 to 54	Age of HRP 55 to 64	Age of HRP 65 and over
2011	186	482	2,082	1,439	2,829
2014	220	463	1,882	1,441	3,153
2036	220	463	1,882	1,441	4,613

Source: AECOM Calculations

7. Applying these changes in the distribution of HRPs among the life stages over the course of the Plan period to the distribution of different sizes of dwelling allows an estimate of the changes to the housing mix that are required in order to meet community need.

8. In Table 3 below the % change in the number of HRPs falling into each age category between 2011 and 2036 has been applied to arrive at a distribution of HRPs falling into the key life stage categories in 2036. In the final column, a recommended distribution of dwellings driven by these changes at the end of the Plan period in 2036 is provided.

Table 3: Ideal size distribution in the NA (Bridport, Allington, Bothenhampton, Bradpole, and Symondsbury) at the end of Plan Period, according to household life-stages

Size	Age of HRP 16 to 24	Age of HRP under 35	Age of HRP 35 to 54	Age of HRP 55 to 64	Age of HRP 65 and over	Total Households requiring dwelling sizes
Pop	220	463	1,882	1,441	4,613	-
1 bedroom	60	60	121	112	491	**844**
2 bedrooms	108	200	421	313	1,354	**2,395**
3 bedrooms	42	165	840	612	1,825	**3,484**
4 bedrooms	7	29	364	291	729	**1,420**
5+ bedrooms	4	9	136	113	214	**476**

Source: Census 2011, AECOM Calculations

9. In Table 4 below, we set out the "ideal" distribution of dwellings at the end of the Plan period based on the understanding of community need set out in Table 2.

Table 4: Size distribution in 2011 compared to ideal distribution at the end of the Plan Period in the NA (Bridport, Allington, Bothenhampton, Bradpole, and Symondsbury)

Number of bedrooms	2011		2036	
1 bedroom	13	0.2%	844	9.8%
2 bedrooms	875	12.5%	2,395	27.8%
3 bedrooms	2,436	34.7%	3,484	40.4%
4 bedrooms	2,564	36.5%	1,420	16.5%
5 or more bedrooms	866	12.3%	476	5.5%
Total households	**7,018**	**100.0%**	**8,619**	**100.0%**

Source: Census 2011, AECOM Calculations

10. In Table 5 below, we set out the proportions of size (by bedroom number) into which new homes should fall to satisfy community need in 2036. The delivery of new dwellings according to the proportions set out in Table 5 facilitates an adjustment to the housing stock to address the potential for imbalances in supply and demand. This indicates that 24% (rounded) of new homes built over the Plan period should be 1 bedroom homes, 45% (rounded) should be 2 bedrooms, 31% (rounded) of new dwellings should have 3 bedrooms. No further dwellings of four and five bedrooms should be built on account of the over-supply the modelling has identified.

11. This data is driven by the very modest forecast uplift in the population of those in younger age groups in the period 2011 to 2036, the contraction of the cohort who tend to live in larger dwellings (the 35-54 age group) and the substantial increase in older age groups. We note these findings chime with "West Dorset population projection, 2016 based" shown on page 12 of the Bridport Area Housing Needs Assessment.

12. In other geographies, the market failure associated with the inability of older residents to down-size on account of an under-supply of dwellings of 2-3 bedrooms in size does not appear to be so acute in the Bridport area. Figure 1 suggests people are able to down size as they pass the age of 70, and by the time they reach 85, only around 12% of households occupy dwellings of 4+ bedrooms, and this minority group may do so by choice. For this welcome scenario to endure over the Plan period, however, future supply should focus on smaller to medium sized dwellings.

13. It is worth noting that the recommended provision of 24% of dwellings being one-bedroom should be considered in the context of family households who may need additional space to grow. The final recommendation may therefore be 10% one-bedroom dwellings, 59% two bedroom homes and 31% having three bedrooms.

Table 5: Misalignments of supply and demand for housing

Number of bedrooms	2011	2036	Change to housing mix	Recommended split
1 bedroom	13	844	831	24.4%
2 bedrooms	875	2,395	1,520	44.7%
3 bedrooms	2,436	3,484	1,048	30.8%
4 bedrooms	2,564	1,420	-1,144	0.0%
5 or more bedrooms	866	476	-390	0.0%

Source: AECOM Calculations