

Household forecasts for Birmingham, with an ethnic group dimension

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Preface

This report was commissioned by Birmingham City Council from the Cathie Marsh Centre for Census and Survey Research (CCSR), University of Manchester. It accompanies a report of population forecasts, disaggregated by ethnic group.

The forecast has been completed for eight ethnic group categories – White, Caribbean, African, Indian, Pakistani, Bangladeshi, Chinese and Other – and extends to 2026. The trends for smaller groups and in the more distant future are less predictable.

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The results of the household forecast are also provided on Excel files in full detail together with interrogation software. A separate technical report describes how to use the Excel files provided both to explore the results further and to develop the forecasts with further data and alternative assumptions.

This report: “Household forecasts for Birmingham CCSR Report.doc” (or .pdf)

Technical report: “Household forecasts for Birmingham CCSR Tech.doc” (or .pdf)

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Executive Summary

This forecast of the number of households in Birmingham makes use of the most up to date information about the household formation of each ethnic group and future trends to smaller households assumed by government at the time of writing. This report accompanies a separate report of population forecasts. The population forecasts are broadly consistent with the 2003-based projections produced by the Office for National Statistics (ONS). The main features of the household forecast are as follows:

- The total number of households in Birmingham is expected to rise over the next twenty years to reach 484,450 in 2026, an increase of approximately 74 thousand in the period from 2006. This is an average annual increase of 3,700 per annum.
- The forecast shows a reducing average household size, from 2.41 in 2006 to 2.25 in 2026.
- This forecast takes into account the larger extended households, more common among the Indian, Pakistani and Bangladeshi populations which will be a larger proportion of the total in 2026. The forecast is therefore a lower number than projected by the government's Department of Communities and Local Government (DCLG), which foresees 495,800 households in 2026, an increase of 86 thousand from 2001 or 4,300 per annum. The two forecasts use the same total population projection, but the current forecast takes more account of the increasing ethnic diversity of Birmingham.
- The actual future number of households may differ from the main 'trend-based' forecast reported here, in particular if household structure or migration responds to changing economic, social and policy factors. It is the best forecast possible at present; while growth in number of households is very likely, the growth may quite feasibly be more or less by thirty thousand households.
- The number of one-person households is expected to increase from 138 thousand in 2006 to 172 thousand in 2026.
- The overall growth of the number of households includes a reduction of around 29 thousand households headed by White residents and substantial growth particularly among households headed by the African, Pakistani and Other groups, mainly as a result of their population growth.
- Average household size is falling for each group. However, the average household size of the Pakistani, Bangladeshi, Other and Indian populations (4.2, 4.5, 3.8 and 3.5 respectively in 2001) is greater than the White, Caribbean, African or Chinese populations (all between 1.9 and 2.5).
- Young South Asian adults are more likely to stay with their parents or share with siblings before forming a separate household of their own, including after forming an adult partnership. Elderly South Asian adults are also less likely to live alone.

Further details of the forecast are given in this main report and in spreadsheet files.

Household change

- The total number of households in Birmingham is expected to increase from 410.5 to 484 thousand between 2006 and 2026. This 18.0% rise is faster than the expected 10.2% growth in population, mainly due to a reduction in household size.
- The forecast, based on government expectations of a greater likelihood that people live alone, shows a reducing average household size, from 2.41 in 2006 to 2.25 in 2026.
- The number of one-person households is expected to increase from 138 thousand to 172 thousand, and of lone parent households from 51 thousand to 72 thousand.
- The number of concealed families fluctuates between six and eight thousand. While these may partly represent extra demand for housing, they also represent a continuing greater preference for extended families by young adults and for care of the elderly among the Indian, Pakistani and Bangladeshi communities.

Birmingham City						
Household Types	2001	2006	2011	2016	2021	2026
Married couple	158,050	153,350	150,950	150,650	151,650	153,450
Cohabiting couple	27,750	33,850	39,300	42,950	44,900	45,650
Lone parent	42,400	50,950	58,650	64,900	69,500	72,500
Other multi-person	32,800	33,950	35,650	37,200	38,650	40,400
One person	129,500	138,450	147,850	157,200	165,650	172,450
All Households	390,550	410,550	432,450	452,950	470,350	484,450
Private household population	968,150	988,150	1,012,600	1,039,100	1,065,000	1,088,750
Average household size	2.48	2.41	2.34	2.29	2.26	2.25
Concealed couple	3,750	4,200	4,700	4,950	5,250	5,750
Concealed lone parent	2,050	2,050	2,100	2,200	2,350	2,600
<i>All concealed families</i>	5,800	6,250	6,750	7,150	7,650	8,350

Households and ethnic group

The two tables below summarise the results which are given in more detail on the following pages.

- The overall growth of the number of households includes a reduction of around 29 thousand households headed by White residents and particular growth among households headed by the African, Pakistani and Other groups.

The reduction in White-headed households is entirely due to a smaller population. The reduction would be rather more if the trend were not towards smaller households on average. Thus the 'headship effect' in the table below is positive for the White population, indicating more households from the smaller household size, but not sufficient to outweigh the effect of a smaller population.

Similarly, the increase in Indian, Pakistani, Bangladeshi-headed households is due to the increase in those populations. As explained in the section on methods below, the forecast has assumed that these populations maintain their current diversity of household structures. DCLG's expected increase in rates of lone-parenthood, single person households and cohabitation is not assumed for these three populations.

Summary – ethnic group, number of households

	2001	2006	2011	2016	2021	2026
All groups	390,550	410,550	432,450	452,950	470,350	484,450
White	302,550	298,950	295,800	290,100	281,800	270,200
Caribbean	24,500	27,200	28,450	29,250	29,050	27,950
African	2,700	5,450	9,300	13,800	18,750	24,500
Indian	15,900	17,450	18,450	19,350	19,850	19,950
Pakistani	24,950	32,000	39,700	47,800	56,200	65,400
Bangladeshi	4,700	6,100	7,700	9,500	11,350	13,300
Chinese	1,850	2,800	3,750	4,600	5,400	6,200
Other	13,300	20,550	29,200	38,600	48,000	56,950

Household change 2006-2026

	Population Effect	Headship Effect	Total Change
All groups	36,300	37,650	73,950
White	-51,850	23,100	-28,750
Caribbean	-2,800	3,550	750
African	15,600	3,450	19,050
Indian	2,500	0	2,500
Pakistani	33,400	0	33,400
Bangl	7,200	0	7,200
Chinese	3,250	150	3,400
Other	29,000	7,400	36,400

Each figure has been independently rounded to the nearest 50.

White						
Household Types	2001	2006	2011	2016	2021	2026
Married couple	116,300	103,500	92,750	83,500	75,550	68,000
Cohabiting couple	24,350	28,950	32,700	34,700	35,250	34,850
Lone parent	27,850	30,650	32,050	32,050	31,350	30,050
Other multi-person	25,800	25,100	24,800	24,100	23,200	22,200
One person	108,250	110,750	113,500	115,700	116,450	115,100
All Households	302,550	298,950	295,800	290,100	281,800	270,200
Private household population	676,250	642,450	610,100	578,600	547,150	514,250
Average household size	2.24	2.15	2.06	1.99	1.94	1.90
Concealed couple	550	450	450	400	400	350
Concealed lone parent	950	750	600	450	350	300
<i>All concealed families</i>	1,500	1,200	1,000	900	750	650

Caribbean						
Household Types	2001	2006	2011	2016	2021	2026
Married couple	5,200	4,900	4,400	3,950	3,500	3,200
Cohabiting couple	1,550	1,900	2,300	2,550	2,600	2,400
Lone parent	5,300	6,200	6,550	6,700	6,600	6,150
Other multi-person	2,300	2,550	2,800	3,000	3,100	3,200
One person	10,150	11,650	12,450	13,000	13,250	13,050
All Households	24,500	27,200	28,450	29,250	29,050	27,950
Private household population	48,000	48,200	46,650	45,000	43,100	40,900
Average household size	1.96	1.77	1.64	1.54	1.48	1.46
Concealed couple	0	0	0	0	0	0
Concealed lone parent	100	100	50	50	50	50
<i>All concealed families</i>	100	100	100	50	50	50

African						
Household Types	2001	2006	2011	2016	2021	2026
Married couple	700	1,150	1,700	2,250	2,950	3,650
Cohabiting couple	150	300	600	900	1,200	1,600
Lone parent	450	1,100	2,150	3,400	4,550	5,650
Other multi-person	350	650	1,050	1,500	2,050	2,700
One person	1,050	2,250	3,850	5,700	8,000	10,900
All Households	2,700	5,450	9,300	13,800	18,750	24,500
Private household population	6,300	11,400	18,400	26,450	35,400	45,500
Average household size	2.33	2.09	1.98	1.92	1.89	1.86
Concealed couple	0	0	0	0	0	0
Concealed lone parent	0	0	0	0	0	0
<i>All concealed families</i>	0	0	0	0	0	0

Each figure has been independently rounded to the nearest 50. A zero represents fewer than 25.

Indian						
Household Types	2001	2006	2011	2016	2021	2026
Married couple	10,950	11,950	12,500	13,150	13,400	13,350
Cohabiting couple	300	300	300	300	300	300
Lone parent	1,250	1,350	1,450	1,500	1,500	1,500
Other multi-person	1,100	1,250	1,350	1,450	1,550	1,650
One person	2,350	2,600	2,800	2,950	3,100	3,200
All Households	15,900	17,450	18,450	19,350	19,850	19,950
Private household population	55,800	58,650	60,450	61,650	62,250	62,250
Average household size	3.51	3.36	3.28	3.19	3.14	3.12
Concealed couple	1,000	1,050	1,100	1,050	950	950
Concealed lone parent	150	200	200	200	200	200
<i>All concealed families</i>	<i>1,200</i>	<i>1,200</i>	<i>1,300</i>	<i>1,250</i>	<i>1,200</i>	<i>1,150</i>
Pakistani						
Household Types	2001	2006	2011	2016	2021	2026
Married couple	16,850	21,600	26,800	32,300	38,000	44,150
Cohabiting couple	500	600	750	900	1,050	1,200
Lone parent	3,450	4,700	6,050	7,250	8,400	9,550
Other multi-person	1,450	1,750	2,150	2,650	3,250	4,000
One person	2,700	3,350	4,000	4,700	5,500	6,500
All Households	24,950	32,000	39,700	47,800	56,200	65,400
Private household population	106,000	129,650	155,150	180,700	206,250	232,200
Average household size	4.25	4.05	3.91	3.78	3.67	3.55
Concealed couple	1,800	2,200	2,500	2,750	3,050	3,500
Concealed lone parent	600	750	900	1,050	1,250	1,500
<i>All concealed families</i>	<i>2,350</i>	<i>2,950</i>	<i>3,400</i>	<i>3,800</i>	<i>4,300</i>	<i>5,000</i>
Bangladeshi						
Household Types	2001	2006	2011	2016	2021	2026
Married couple	3,400	4,400	5,500	6,750	8,000	9,300
Cohabiting couple	100	100	150	150	200	200
Lone parent	650	900	1,200	1,500	1,850	2,150
Other multi-person	250	300	350	450	550	700
One person	350	400	550	650	800	950
All Households	4,700	6,100	7,700	9,500	11,350	13,300
Private household population	21,200	26,500	32,050	37,450	42,650	47,800
Average household size	4.51	4.34	4.16	3.94	3.76	3.59
Concealed couple	250	300	350	400	450	500
Concealed lone parent	150	150	200	250	350	400
<i>All concealed families</i>	<i>350</i>	<i>450</i>	<i>550</i>	<i>650</i>	<i>750</i>	<i>900</i>

Each figure has been independently rounded to the nearest 50. A zero represents fewer than 25.

Chinese						
Household Types	2001	2006	2011	2016	2021	2026
Married couple	750	1,100	1,500	1,700	1,900	2,150
Cohabiting couple	50	100	150	200	200	200
Lone parent	100	200	300	400	500	550
Other multi-person	300	450	450	550	600	700
One person	650	1,000	1,350	1,750	2,200	2,600
All Households	1,850	2,800	3,750	4,600	5,400	6,200
Private household population	4,700	6,500	8,350	10,050	11,550	12,900
Average household size	2.54	2.32	2.23	2.18	2.14	2.08
Concealed couple	0	50	50	50	50	50
Concealed lone parent						
<i>All concealed families</i>	0	50	50	50	50	50
Other						
Household Types	2001	2006	2011	2016	2021	2026
Married couple	3,900	4,850	5,850	7,050	8,400	9,650
Cohabiting couple	850	1,550	2,400	3,300	4,150	4,950
Lone parent	3,300	5,850	8,900	12,050	14,800	16,900
Other multi-person	1,250	1,900	2,700	3,500	4,350	5,250
One person	4,000	6,450	9,350	12,700	16,350	20,200
All Households	13,300	20,550	29,200	38,600	48,000	56,950
Private household population	49,900	64,700	81,500	99,200	116,650	133,000
Average household size	3.75	3.15	2.79	2.57	2.43	2.34
Concealed couple	150	200	250	300	350	350
Concealed lone parent	100	100	150	150	150	150
<i>All concealed families</i>	250	300	350	400	450	550

Each figure has been independently rounded to the nearest 50. A zero represents fewer than 25.

Household size and headship rates

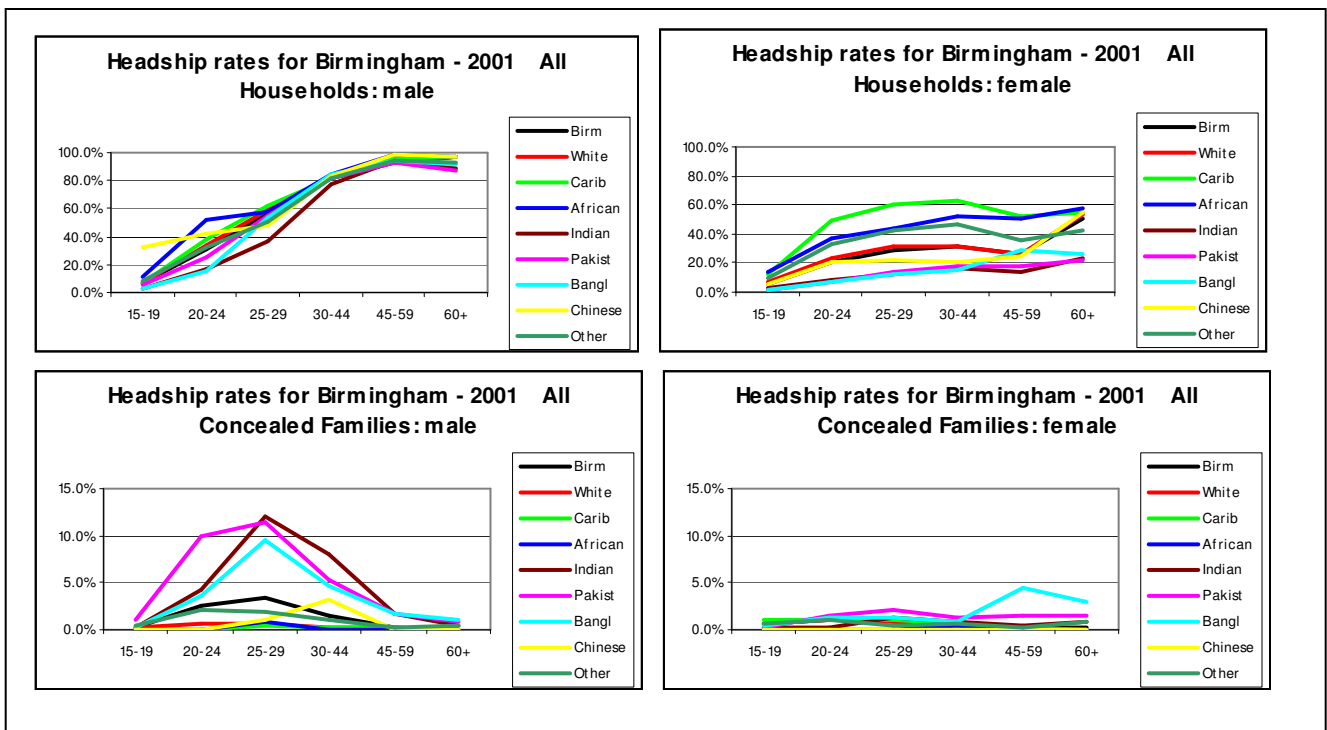
The tables above also show the average household size.

- Average household size is falling for each group. However, the average household size of the Pakistani, Bangladeshi, Other and Indian populations (4.2, 4.5, 3.8 and 3.5 respectively in 2001) is greater than the White, Caribbean, African or Chinese populations (all between 1.9 and 2.5).

The larger households are partly due to more children, but are also due to more sharing between adults. This is important for the housing market as it affects not only the number of households but the size and type of housing that households look for.

In making the forecasts, we have measured the ‘headship rate’ separately for each ethnic group. The headship rate is a standard measure in demography and household forecasting. It is the proportion of a population which is recorded as the head of a household, and is measured for each age and sex and ethnic group. The headship rate is also called the ‘household representative rate’ because the head of a household is in this case determined by convention – in couple households the male is taken as the representative. The ‘head’ as used here does not imply responsibility, but is a representative for statistical purposes, as also used by DCLG.

The charts show the headship rates for each ethnic group for Birmingham. The first chart shows, as one expects, that the proportion of men who ‘head’ a household grows with age. It is lower for Indian, Pakistani/Bangladeshi populations at ages up to 30.



On the other hand there are more concealed families among the Indian, Pakistani and Bangladeshi populations, as is evident by the third chart above. Concealed families are couples or lone parents who live within a household headed by another family.

- Young South Asian adults are more likely to stay with their parents or share with siblings before forming a separate household of their own, including after forming an adult partnership.

The headship rates for women show different patterns as they are limited to non-couple households: lone parents and other multi-person households, and people living alone.

- The female headship rate – the proportion of women heading a household – is relatively high for the Black population, and slightly lower for the South Asian populations.

The number of concealed families is also slightly higher again for South Asian women, reflecting the extended and more complex households in those populations compared to the White and Black populations.

Other research suggests that while Pakistani and Bangladeshi fertility is dropping significantly with time and in the second generation, extended households continue at a similar rate in the second generation. The persistence of extended families in the Indian population, which has been established in Birmingham for a relatively long period and has enjoyed relative prosperity, suggests that one should not assume a reduction over time in the prevalence of extended households.

One caution should be borne in mind when interpreting the ‘average household size’ for each ethnic group. As calculated in this report it is the ratio of population to household heads. A household may contain people of different ethnic groups. A proportion of members of an ethnic group may live in households headed by members of a different group. The actual average household size of households headed by members of an ethnic group may differ from those published. The caution applies most severely to the residual ‘Other’ group which includes the Mixed ethnic origin groups.

Method and main assumptions

The forecast uses standard techniques also used by government in their forecasts without an ethnic group dimension. The number of people in communal establishments – care homes and long-stay hospitals, prisons, halls of residence, and so on – is deducted from a forecast of the total population. This provides the population in households for Birmingham, disaggregated by age and sex.

‘Headship rates’ are calculated to show the proportion of an age-sex group which heads each type of household, and assumptions are made about whether and how these rates will change in the future.

The forecast number of households is then simply derived as the headship rate expected in a future year multiplied by the population in households of that year. The software HOUSEGROUP, in standard use among many local authorities, has been used to prepare and compute the population forecast.

The sources of data and assumptions used in this projection for Birmingham are as follows:

Population forecast. For each of eight ethnic groups, as estimated by the University of Manchester and reported in a parallel report to Birmingham City Council in 2007. The population in total (summed across the eight ethnic groups) is the same as that projected by the Office for National Statistics in their 2003-based population projections.

Population in communal establishments. The proportion in 2001 has been estimated for each age-sex-ethnic group for Birmingham as a whole from the Census (Table C0705 for those aged over 14 and the census SAR for England and Wales for those aged 0-14; this latter is only used to compute an average household size after the forecast of household numbers has been completed). The proportions not in households are then scaled to agree in 2001 with those used by DCLG for their projections without an ethnic group projection. The forecasts assume that these proportions not in households at each age for each group remain the same during the period of the forecast. The number not in households each year varies with the size of each ethnic group population.

Headship rates in 2001. These have been calculated for each age-sex-ethnic group and each household type, for Birmingham from the Census (Table C0705). These values have been adjusted to be consistent with the DCLG figure for Birmingham concerning the total number households of each type at each age in 2001. This varies from the census data, usually by small amounts but occasionally by about ten per cent, presumably due to the modelling used in the DCLG estimates of headship rates. The definition of household representative and household type are the same as used by the DCLG for their household projections (and the DETR in earlier years).

Future headship rates. There are significant differences in composition of households between each ethnic group population. The projections assume that at each age and sex differences in headship rates will continue to exist in the future. The trends in household composition that were assumed by the last government projections, the 2003-based projections issued by DCLG in 2006, foresaw in particular an increase in the proportion living alone and in cohabiting, and a reduction in the proportion married. These are applied to each of the White, Caribbean, African Chinese and Other groups. The headship rates for the Indian, Pakistani and Bangladeshi groups are assumed to remain at their 2001 levels.

Sensitivity to alternative assumptions. There are two ways in which the DCLG assumptions about future household formation can be applied to each ethnic group, and the choice makes a significant difference to the results. In the forecast reported here, the trend is applied to the White, Caribbean, African Chinese and Other groups 'by multiplication'. That is, the ratio of future headship rate to 2001 headship rate expected by DCLG for Birmingham as a whole is applied to each group. An alternative is to apply the trend 'by addition', where the change in headship rate (as a number of percentage points) from 2001 up to the future rate expected by DCLG for Birmingham is added to the headship rate for each group. The multiplication approach emphasises the differences between ethnic groups, so that for example, the increase in one-person households makes a large difference for the Caribbean group which has relatively many one-person households, but the decrease in married couple headship rates affects the Caribbean group less than others because it has relatively few married couples. For this reason the alternative 'by addition' approach applied to the groups other than Indian, Pakistani and Bangladeshi, gives a lower projected increase of households between 2001 and 2026 (82,500) than that shown in the main forecast in this report (93,900).

However it is the Indian, Pakistani and Bangladeshi populations which are least likely to follow the trend assumed by ONS, irrespective of how that trend is applied. Their high marriage rates, low cohabitation rates and low rates of single-person households may change in the future. For example there might be convergence of headship rates involving a process of assimilation to a common household structure, perhaps closer to that of the indigenous White population where there are commonly nuclear household structures and a period of independent living both before families are formed and after children have 'left the nest'. However, national analysis of the 1981, 1991 and 2001 censuses does not suggest that convergence of household structures has taken place in a significant manner during that period. Diversity of household structure is expected to continue in Birmingham after the integration of new migrant communities, and this is supported by evidence in other parts of the UK and for England as a whole¹.

¹ Nationally, the Longitudinal Study showed steady high South Asian headship rates from 1981 to 1991 (Bradford Council (1997) Household forecasts for Bradford District 1996: documentation. Bradford: City of Bradford Metropolitan District Council, Directorate of Corporate Service Strategic Management Unit, Research Section). South Asian headship rates were constant from 1991 to 2001 and between inner urban and suburban areas, despite falling numbers of children (Simpson, L., & Gavalas, V. (2005). Population dynamics within Rochdale and Oldham: population, household and social change. Manchester: Centre for Census and Survey Research, University of Manchester). Qualitative research suggests that second generation South Asian young adults expect to move from parental home to their own family home without

Birmingham and Britain in 2026 may have quite different societal norms and expectations from today. In addition, the third generation of South Asian adults, those raised by parents themselves brought up in Britain, may have different life courses from the original immigrants and the second generation. However, the differences, if there will be many, are not identifiable at present. The forecasts have therefore assumed that the headship rates for the Indian, Pakistani and Bangladeshi populations will remain at their 2001 estimated levels throughout the forecast, with neither a decrease in marriage rates nor an increase in single-person households.

Some sense of the impact of different assumptions allows a range of possible scenarios, which are summarised in the following table.

DCLG published	495,800
DCLG change applied additively to all groups, 2001 group differences maintained	491,500
Constant Indian, Pakistani and Bangladeshi, multiplicative DCLG change for other groups (main forecast)	484,450
DCLG change applied multiplicatively to all groups, 2001 group differences maintained	475,700
2001 average headship rates applied to all groups, no change after 2001	438,100
2001 group headship rates, no change after 2001	433,250

The final two scenarios assume no change in headship rates for any of the groups, and are very unlikely. They are useful in showing that the impact of immediate convergence between the groups is not very great, making a difference of only 4,850 households. They are also useful in showing that even under these extreme assumptions the number of households in Birmingham would grow from the estimated 410,550 in 2006.

In summary, the assumptions about future headship rates are uncertain. This uncertainty is probably as great as the uncertainty in the population forecast itself. The range of uncertainty in the population forecasts was discussed in a separate report, and included a feasible population 70 thousand people below the ONS 2003-based projection which has been used here in all the scenarios. Considering the uncertainty in both future population and household structure, the author's judgement is that the number of households forecast for 2026 may be different from the main forecast presented in this report by up to thirty thousand households. This would be an extreme but feasible error in either the population or the household assumptions. The growing ethnic diversity of Birmingham's households is more certain than the total number of households, as it is mainly determined by the most predictable components of population growth.

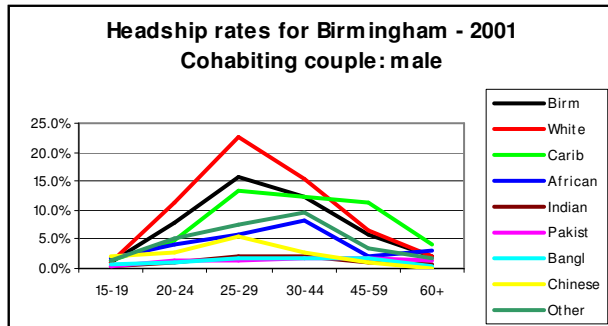
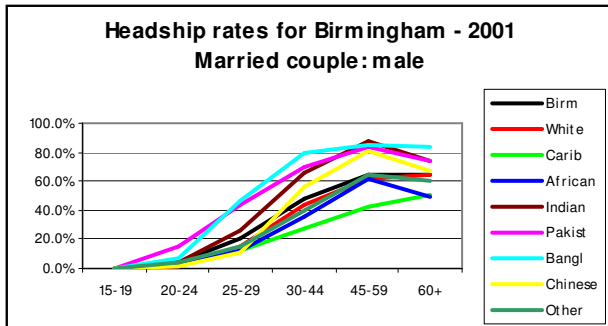
a period of independently living alone. The persistence of extended households in the Indian population suggests that relative prosperity and length of residence in Britain have not led to convergence with White household structure.

The forecasts of population and households are based on the best evidence and analysis available, but are subject to the inherent uncertainty of the future, and non-demographic factors including the economy and national and local policy.

Headship rates for household types

The charts below show headship rates computed for each ethnic group in Birmingham in 2001.

- Married couple households are more prevalent among the South Asian populations, and least prevalent among the Black Caribbean and African populations. The White population has the highest proportion cohabiting.
- Black Caribbean and African women, and the Other group women, are most likely to be lone parents, including over 30% of those aged 30-44.
- Other multi-person households are most frequent among young adults, and older women.
- One-person households are most frequent among young adults and the elderly, but are less common among both young and elderly South Asian groups.



By convention in household forecasting, the man is taken as the representative of man-woman couple households

