



# Household forecasts for Stoke-on-Trent UA, with an ethnic group dimension

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## Citation for published version (APA):

Simpson, L., & Norman, P. (2005). *Household forecasts for Stoke-on-Trent UA, with an ethnic group dimension*. (CCSR Working Paper).

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## Cathie Marsh Centre for Census and Survey Research

# Household forecasts for Stoke-on-Trent UA, with an ethnic group dimension

CCSR Working Paper 2005-03

Ludi Simpson, Vasilis Gavalas, Abdelouahid Tajar

Contact: [ludi@manchester.ac.uk](mailto:ludi@manchester.ac.uk)

This report was commissioned by CSR Partnership Ltd from the Cathie Marsh Centre for Census and Survey Research (CCSR), University of Manchester, as part of its work for Renew North Staffordshire, the Housing Market Renewal Pathfinder for North Staffordshire. It follows a previous report of population forecasts, disaggregated by ethnic group.

The forecast has been completed for five ethnic group categories – White, Black, Indian, Pakistani/Bangladeshi (combined in one group) and Other, and extends to 2028. Because the trends for smaller groups and in the more distant future are less predictable, this report focuses on the change up to 2021, for Stoke as a whole and the two largest groups, White and Pakistani/Bangladeshi.

[www.ccsr.ac.uk](http://www.ccsr.ac.uk)

## Preface

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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 Stoke CCSR Report.doc”  
Technical report: “Household forecasts for Stoke CCSR Tech.doc”

The Census output which has been used extensively and is reported in some sections, is Crown copyright and is reproduced with the permission of the Controller of HMSO. In the use of the Controlled Access Microdata Sample (CAMS), the support of the Office for National Statistics, the Census Microdata Unit at CCSR and the ESRC/JISC Census of Population Programme is gratefully acknowledged. The authors alone are responsible for the interpretation of the data.

## *Executive Summary*

This forecast of the number of households in Stoke-on-Trent follows a previous population forecast disaggregated by ethnic group. It also 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.

The main features of the forecast are as follows:

- The total number of households expected in Stoke on Trent is expected to remain stable over the next fifteen years, at a little over one hundred thousand, despite a slight decline of population.
- The forecast, based on government expectations of a greater likelihood that people live alone, shows a reducing average household size, from 2.3 in 2001 to 2.1 in 2021.
- The number of one-person households is expected to increase from 32 thousand to 38 thousand.
- The number of concealed families – which may represent extra demand for housing, remains low at six hundred.
- The overall stability of the number of households includes a reduction of around 2,000 households headed by White residents and a growth among households headed by the Pakistani, Bangladeshi and Other groups.
- Average household size is falling for each group. However, the average household size of the Pakistani/Bangladeshi and Indian populations (4.2 and 3.0 respectively in 2001) is greater than either the White or the Black populations (2.3 and 1.8 respectively).
- 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.

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

## Household change

- The total number of households expected in Stoke on Trent is expected to remain stable over the next fifteen years, at a little over one hundred thousand, despite a slight decline of population.
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- The number of concealed families – which may represent extra demand for housing, remains low at six hundred.

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## Stoke on Trent UA - Household Forecasts Summary Report

### Total All households

#### Stoke on Trent UA

<b>Household Types</b>	<b>2001</b>	<b>2006</b>	<b>2011</b>	<b>2016</b>	<b>2021</b>
Married couple	46,000	43,750	42,050	40,700	39,400
Cohabiting couple	9,250	10,450	11,450	11,900	11,950
Lone parent	8,600	8,300	8,000	7,650	7,350
Other multi-person	6,850	7,150	7,450	7,400	7,200
One person	32,500	33,700	35,050	36,600	38,100
<b>All Households</b>	<b>103,150</b>	<b>103,400</b>	<b>104,000</b>	<b>104,250</b>	<b>104,000</b>
Private household population	236,850	231,450	227,200	223,200	219,550
Average household size	2.30	2.24	2.18	2.14	2.11
Concealed family	600	600	600	600	600

## Households and ethnic group

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

- The overall stability of the number of households includes a reduction of around 2,000 households headed by White residents and a growth among households headed by the Pakistani, Bangladeshi and Other groups.

The decline in number of White-headed households is entirely due to a smaller population. The decline in number of households would be rather more if the trend were not towards smaller households on average.

Similarly, the increase in Pakistani and Bangladeshi-headed households is due to the increase in those populations. The impact of a higher rate of single-person households does not have an impact on this population as it has a lower proportion of these households (discussed later).

### Summary – ethnic group

	2001	2006	2011	2016	2021
<b>All Households</b>	103,150	103,400	104,000	104,250	104,000
White	99,600	99,200	99,050	98,500	97,450
Black	600	600	550	550	500
Indian	350	400	450	450	450
Pakistani+Bangladeshi	1,650	2,050	2,450	2,850	3,300
Other	950	1,200	1,550	1,900	2,300

### Household change

	2001-2021		
	Population Effect	Headship Effect	Change
<b>All groups</b>	-800	1,750	900
White	-4,000	1,850	-2,150
Black	-100	50	-50
Indian	150	0	100
Pakistani+Bangladeshi	1,900	-250	1,650
Other	1,250	100	1,350

Each figure has been independently rounded to the nearest 50

**Results (1)**

<b>White</b>					
<b>Household Types</b>	<b>2001</b>	<b>2006</b>	<b>2011</b>	<b>2016</b>	<b>2021</b>
Married couple	44,250	41,700	39,750	38,050	36,450
Cohabiting couple	9,050	10,250	11,150	11,550	11,500
Lone parent	8,100	7,750	7,350	6,900	6,500
Other multi-person	6,500	6,800	7,000	6,850	6,600
One person	31,700	32,700	33,850	35,150	36,400
<b>All Households</b>	<b>99,600</b>	<b>99,200</b>	<b>99,050</b>	<b>98,500</b>	<b>97,450</b>
Private household population	224,600	217,500	211,400	205,250	199,250
Average household size	2.26	2.19	2.13	2.08	2.04
Concealed family	450	450	450	450	400
<b>Black</b>					
<b>Household Types</b>	<b>2001</b>	<b>2006</b>	<b>2011</b>	<b>2016</b>	<b>2021</b>
Married couple	150	150	150	100	100
Cohabiting couple	50	50	50	50	50
Lone parent	100	100	100	50	50
Other multi-person	50	50	50	50	50
One person	250	250	250	250	250
<b>All Households</b>	<b>600</b>	<b>600</b>	<b>550</b>	<b>550</b>	<b>500</b>
Private household population	1,050	950	900	850	800
Average household size	1.75	1.58	1.64	1.55	1.60
Concealed family	0	0	0	0	0
<b>Indian</b>					
<b>Household Types</b>	<b>2001</b>	<b>2006</b>	<b>2011</b>	<b>2016</b>	<b>2021</b>
Married couple	200	200	200	250	250
Cohabiting couple	0	0	0	0	0
Lone parent	0	0	50	50	50
Other multi-person	50	50	50	50	50
One person	100	100	150	150	150
<b>All Households</b>	<b>350</b>	<b>400</b>	<b>450</b>	<b>450</b>	<b>450</b>
Private household population	1,050	1,050	1,100	1,100	1,150
Average household size	3.00	2.63	2.44	2.44	2.56
Concealed family	0	0	0	0	0

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

**Results (2)**


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<b><i>Pakistani+Bangladeshi</i></b>					
<b><i>Household Types</i></b>	<b>2001</b>	<b>2006</b>	<b>2011</b>	<b>2016</b>	<b>2021</b>
Married couple	1,050	1,250	1,450	1,700	1,900
Cohabiting couple	50	50	100	100	150
Lone parent	200	300	350	450	500
Other multi-person	100	150	150	200	250
One person	250	300	350	450	550
<b>All Households</b>	1,650	2,050	2,450	2,850	3,300
Private household population	6,900	7,950	9,050	10,200	11,350
Average household size	4.18	3.88	3.69	3.58	3.44
Concealed family	100	100	150	150	150

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<b><i>Other</i></b>					
<b><i>Household Types</i></b>	<b>2001</b>	<b>2006</b>	<b>2011</b>	<b>2016</b>	<b>2021</b>
Married couple	350	450	500	600	700
Cohabiting couple	100	100	150	200	200
Lone parent	150	150	200	250	300
Other multi-person	100	150	200	250	300
One person	250	350	450	600	750
<b>All Households</b>	950	1,200	1,550	1,900	2,300
Private household population	3,300	3,950	4,800	5,850	7,000
Average household size	3.47	3.29	3.10	3.08	3.04
Concealed family	0	0	0	0	0

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



## Household size and headship rates

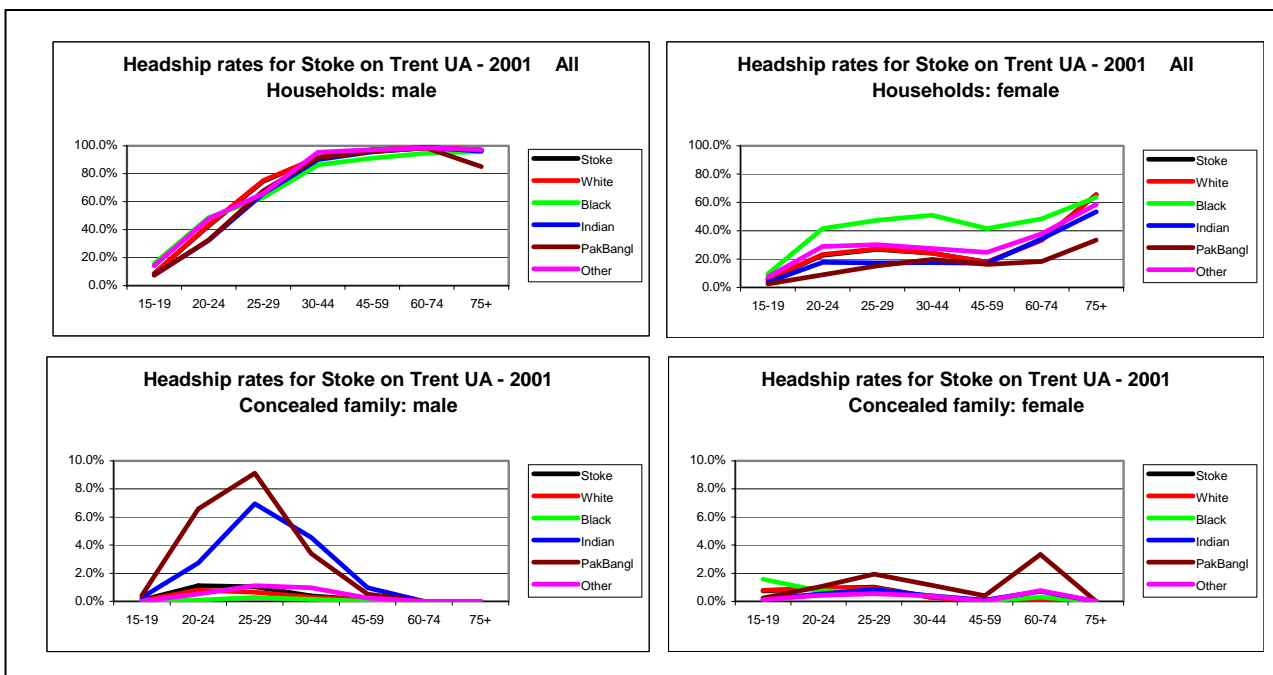
The tables above also show the average household size.

- Average household size is falling for each group. However, the average household size of the Pakistani/Bangladeshi and Indian populations (4.2 and 3.0 respectively in 2001) is greater than either the White or the Black populations (2.3 and 1.8 respectively).

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 they require.

In making the forecasts, we have measured the ‘headship rate’ for each ethnic group separately. 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.

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



On the other hand there are more concealed families among the Indian and Pakistani/Bangladeshi populations, as is evident by the bottom-left 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/Bangladeshi fertility is dropping significantly with time and in the second generation, extended households continue at a similar rate in the second generation.

One caution should be made for interpreting the ‘average household size’ for an ethnic group. It is the ratio of population to household heads. A household may contain people of different ethnic groups. The population of an ethnic group may not live in households headed by that ethnic group, and so the average household size for those households headed by an ethnic group maybe different from that quoted here.

## *Method and main assumptions*

The forecast uses a 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 a forecast of the private household population for Stoke on Trent, disaggregated by age and sex.

‘Headship rates’ are calculated to show the proportion of an age-sex group which heads up each type of household, and assumptions made about whether and how they 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 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 Stoke on Trent are as follows:

**Population forecast.** For each of five ethnic groups, as estimated by the University of Manchester and reported earlier in 2005.

**Population in communal establishments.** The proportion in 2001 has been estimated for each age-sex group for Stoke on Trent as a whole from the Census (Table S001), and adjusted to agree with the total for each ethnic group (Table S125). The census does not report the age-composition of those in communal establishments, for each group. We have assumed that these proportions who are not in households remain the same during the period of the forecast.

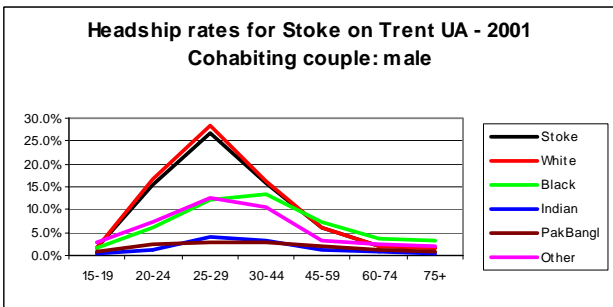
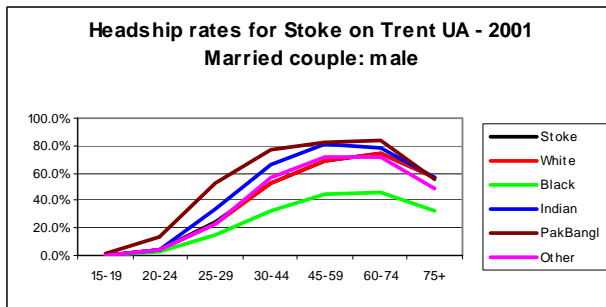
**Headship rates for each ethnic group in 2001.** We have calculated these for England and Wales from Census anonymised microdata (CAMS). These England and Wales values have been adjusted to be consistent with the census data for Stoke concerning the total number households of each type (Table C062). The definition of household representative and household type are the same as used by the Office of the Deputy Prime Minister for their household projections (and the DETR in earlier years). These rates have not been published elsewhere and are shown on the following pages.

**Future headship rates.** There are significant differences regarding the composition of households in each ethnic group population. We have assumed that at each age and sex these differences will remain in the future. However, for every group we have assumed the trends in household composition that were assumed by the last government projections, the ‘1996-based projections’ released in 1998. These foresaw a slight increase in the proportion living alone and a slight reduction in the proportion married.

## Headship rates for household types

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

- Married couple households are more prevalent among the Pakistani/Bangladeshi and Indian populations, and least prevalent among the Black population. The White population has the highest proportion cohabiting.
- Black women are most likely to be lone parents, including over 25% of those aged 25-44.
- Other multi-person households are most frequent among young adults.
- One-person households are most frequent among young adults and the elderly.



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

