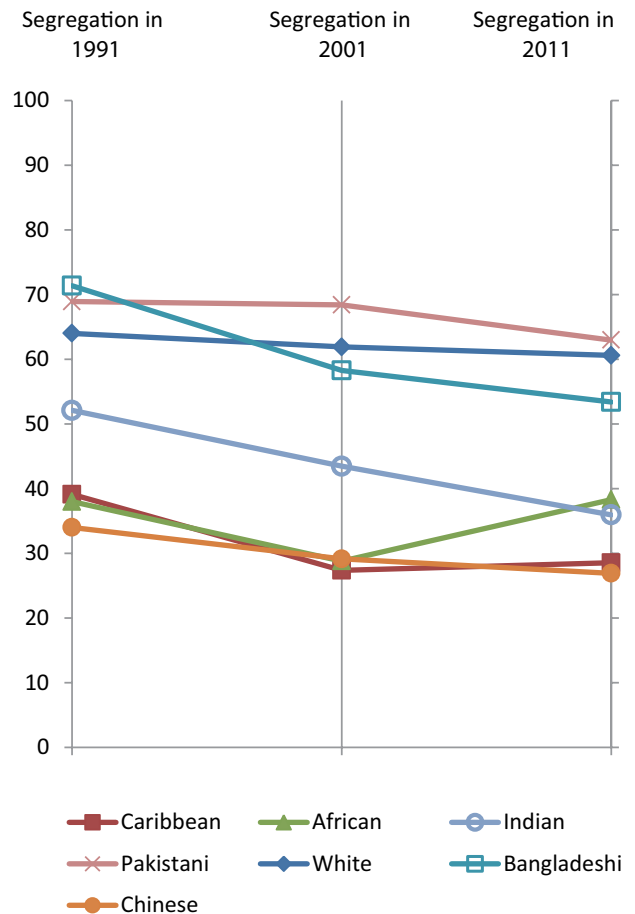


# Ethnic mixing in Bradford

## Summary

- Ethnic minority groups in Bradford (those other than White British) have grown in population, and predominantly live in more evenly mixed wards in 2011 compared to 1991.
- Every ethnic group measured in the census, except Black Africans, is more evenly spread across Bradford wards in 2011 compared to 1991.
- The decreased segregation of most groups, particularly Bangladeshi, Indian, Black Caribbean, Chinese and Pakistani groups is a result of dispersal away from wards where they have been traditionally clustered.
- Ethnic minority groups have increased in both the most and least clustered wards in Bradford between 2001 and 2011. During this time Bangladeshi and Pakistani groups have grown more in less clustered wards.
- Five out of ten of the most diverse wards in West Yorkshire are in Bradford.
- The most diverse wards in Bradford are City, Bowling and Barkerend, Little Horton, Great Horton, Heaton, Keighley Central and Manningham.
- In addition to becoming more mixed residentially the population of Bradford is becoming more mixed within households. One in nine households in Bradford include people of more than one ethnic group, higher than most other districts in West Yorkshire.
- In Bradford the Mixed ethnic group has nearly doubled in size since 2001, to 12,799 in 2011, representing 2% of the total population.

**Figure 1.** Change in ethnic group segregation in Bradford, 1991 - 2011



Notes: Index of Dissimilarity across 30 wards in Bradford. 100 indicates complete segregation, with all members of an ethnic group in a single ward, 0 indicates a completely even spread of an ethnic group across wards.

## Measuring segregation

The most commonly used measure of segregation is the Index of Dissimilarity, which calculates a summary measure of the spread of an ethnic group across space compared with the spread of the rest of the population. It is often referred to as the Segregation Index. The Segregation Index is calculated by comparing the percentage of an ethnic group's total population in wards in Bradford with the percentage of all other ethnic groups that live in the same ward. The absolute difference is added up across the 30 wards, and then halved so that the index is between 0 and 100, with 0 indicating a completely even spread of a particular ethnic group across wards, and 100 meaning complete segregation, with all members of the ethnic group living in one ward. Values of the Segregation Index tend to be higher when they are based on smaller areas, for example in wards compared to local authority districts, because smaller geographical areas generally contain more similar populations than larger geographical areas.

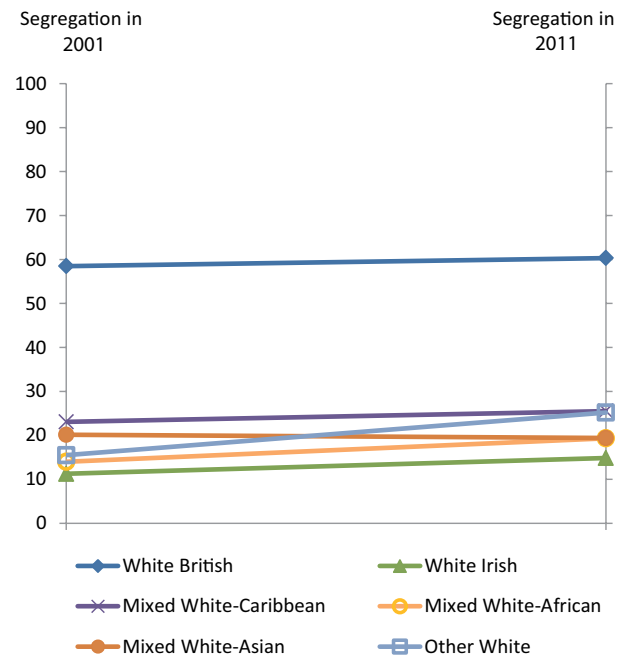
## Residential mixing

Measuring residential ethnic segregation is a challenge because its meaning and measurement have become politically loaded. Figure 1 shows the Segregation Index for Bradford for ethnic groups that can be measured in each of the last three censuses.

The segregation index shows that, in 1991, the Bangladeshi group was the most segregated (71) and the Chinese group (34) was the least segregated. During the 1990's all ethnic groups became less segregated, particularly Bangladeshi, Black Caribbean and Black African groups. There is less of a decrease in segregation during the 2000's. During this time segregation increased for Black African groups, which reflects an increase in overall size of the Black African population that occurred in a small number of wards. Overall, for all ethnic groups, other than Black Africans, there has been a decrease in segregation between 1991 and 2011.

The groups that have only been identified by the census since 2001 are shown in Figure 2. In 1991 the White Irish (11), White Other (15) and Mixed groups (14 to 23) are more evenly spread through Bradford than other ethnic groups. The levels of segregation for most of these groups increased between 2001 and 2011, apart from Mixed White-Asian groups, though, overall, they remain low. The White British have relatively high levels of segregation in 2001 (58) and 2011 (60).

**Figure 2.** Change in ethnic group segregation in Bradford, 2001 - 2011 (White and Mixed ethnic groups)



**Notes:** Index of Dissimilarity across 30 wards in Bradford. 100 indicates complete segregation, with all members of an ethnic group in a single ward, 0 indicates a completely even spread of an ethnic group across wards.

Growth of the ethnic minority population in Bradford between 2001 and 2011 has occurred in wards where ethnic groups have been previously clustered, as well as in wards where they have not. Figure 3 highlights the percentage change in the population (2001-2011) of selected ethnic groups in the wards where they were most clustered (those that contain at least a fifth of the population of each ethnic group), and the percentage change in the population of each ethnic group in all other wards in Bradford. For Pakistani and Bangladeshi groups there has been more population growth in wards that are less clustered, reflecting a pattern of increased diversity in wards where these groups have historically been less clustered. The population growth of Black African groups has occurred mostly in wards where this group was clustered in 2001, however there is also large population growth in wards where this group was not clustered in 2001, see figure 3.

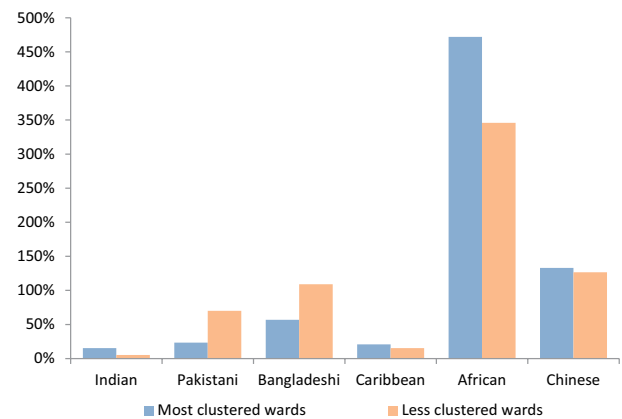
## Measuring diversity

Ecologists have a very useful notion of diversity, the 'Reciprocal Diversity Index'. This is applied to 2011 census data for wards in Bradford to calculate how closely each ward is to having an equal number of the 18 ethnic groups measured in the census. The index is produced by calculating, for all ethnic groups, the size of that group in the ward as a proportion of the total ward population, this is then squared, summed for all eighteen ethnic groups and then divided into 1. The index is greatest when there are equal numbers of ethnic groups in the ward, when it is equal to 18, and lowest when there is only one ethnic group in a ward, when it is equal to 1. The index is standardised by stretching it to always be within the range of 0 to 100. The average standardised index across Bradford wards is 5.3, compared to 3.6 for wards in England and Wales and 3.5 for wards in West Yorkshire.

## Ethnically diverse wards Bradford

Diversity can be measured by calculating how close a ward is to having an equal number of the population in each ethnic group (see box). Five out of the ten most diverse wards in West Yorkshire are in Bradford, three are in Leeds and two in Kirklees. The most diverse wards in Bradford are City (19.9), Bowling and Barkerend (16.1), Little Horton (14.2), Great Horton (13.8), Heaton (11.3), Keighley Central (11.1), Manningham (9.3), Clayton and Fairweather Green

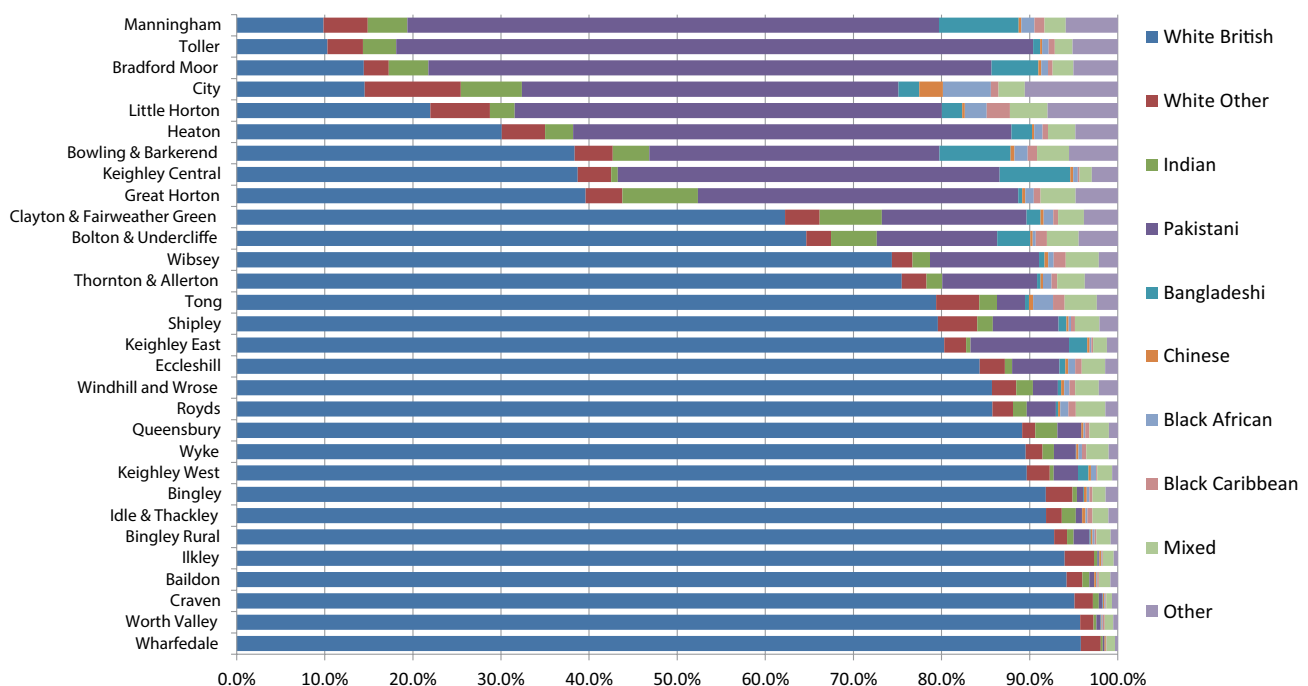
**Figure 3.** Growth in population by ethnic group in Bradford wards where each group is most clustered, and other less clustered wards, 2001-2011



**Notes:** The 'most clustered wards' for each ethnic group include around a fifth of an ethnic group's population in 2001, with the highest percentage of the group, and the 'less clustered wards' include the remaining four-fifths. The most clustered wards for each group are as follows: *Indian:* City, Great Horton; *Pakistani:* Toller, Manningham; *Bangladeshi:* Manningham; *Caribbean:* Little Horton, Manningham; *African:* City; *Chinese:* City.

(8.1), Bradford Moor (7.6) and Bolton and Undercliff (7.4). The least diverse wards in Bradford are Wharfedale (0.5), Worth Valley (0.5), Craven (0.6), Baildon (0.7), Ilkley (0.8), Bingley Rural (0.9), Idle and Thackley (1.1),

**Figure 4.** Ethnic diversity in Bradford wards 2011



Bingley (1.1), Keighley West (1.4) and Wyke (1.4). The average for Bradford, West Yorkshire and England and Wales is 5.3, 3.5 and 3.6. In the most diverse parts of inner London the index is as high as 50. In the City ward in Bradford the Pakistani group is the largest group (43%), followed by the White British (15%) and Other White (10%) groups. In the Bowling and Barkerend ward the White British group is the largest (38%), followed by Pakistani (33%) and Bangladeshi (8%), for ethnicity in all wards at 2011. See figure 4.

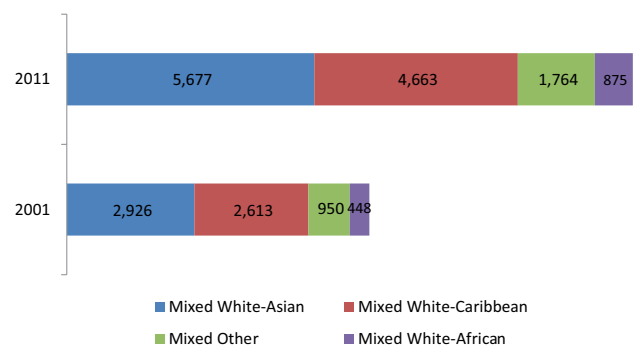
## Mixing within households and families

As well as becoming more mixed residentially, the population in Bradford, like the rest of England and Wales, is also becoming more diverse within households and families.

For households with two or more people, the proportion containing members from more than one ethnic group grew during the 2000's. In 2011 households containing more than one ethnic group account for 11.6% of all households in Bradford, compared to 9.3% in 2001, and just below the England and Wales average of 12.4% in 2011. The proportion of multiple ethnic households is similar in Leeds (11.3%), with the next highest proportion in West Yorkshire being Kirklees (9.5%), and the lowest being Wakefield (4.8%).

In England and Wales 1.2 million people (2.2% of the population) have a mixed ethnic identity. This has increased by more than three quarters from 672,000 in 2001. In Bradford the total Mixed ethnic group has increased from 6,937 in 2001 to 12,979 in 2011 (see figure 5). Each of the Mixed ethnic groups have grown by a similar rate, nearly doubling during the 2000's, and by 2011 the Mixed ethnic group accounted for 2% of the population of Bradford. The largest Mixed ethnic group in Bradford is the White Asian group, with a population of 5,677 in 2011.

**Figure 5.** Growth of Mixed ethnic group population in Bradford, 2001 - 2011



**Notes:** Local authority figures on population change by ethnic group are available from the *CoDE/JRF Area Profiler: The age structure of ethnicity, religion and national identity, for local areas in England and Wales*.

This briefing is one in a series, *Local dynamics of diversity: evidence from the 2011 Census*.

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