

2011 Census Snapshot: Ethnic diversity indices for wards

February 2013

On 30 January 2013, ONS released the first 2011 Census data on the population characteristics of areas smaller than local authorities in England and Wales. This snapshot presents an analysis of ethnic groups for wards in London, updating the analysis for local authorities that was published in December 2012. It also builds upon analysis in DMAG Briefing 2006/39, *Ward ethnic diversity indices 1991 and 2001*.

All data presented here can be viewed through a range of interactive maps and tools on the London Datastore at <http://data.london.gov.uk/census/data>

Key Findings

- Greater London is home to 4.5 million non-White British residents, up from 2.9 million in 2001. London accounted for 41 per cent of the non-White British population of England and Wales in 2011 down from 46 per cent in 2001.
- London wards make up the majority of the most ethnically diverse wards in England and Wales in 2011. Forty-five of the 50 wards with the highest diversity scores are in London. Nine of the top 20 are in Newham and six are in Brent.
- Over half of London's wards (344 out of 625) featured in the 5 per cent most diverse wards in England and Wales.
- The average diversity index score for London wards rose from 1.62 in 1991 to 2.03 in 2001 and 2.69 in 2011.
- The wards with highest diversity index score in all three years were in Newham: 1991 Green Street East in (4.85); in both 2001 and 2011 it was Little Ilford (6.04 in 2001, 7.39 in 2011).
- In 2011, over half of London's most diverse wards were in Newham (15 out of 63), Redbridge (11) and Brent (10), while over three-quarters of the least diverse wards were in Bromley (14), Havering (13), Bexley and Richmond upon Thames (both 12).

Introduction

In this report ethnic group data has been used to create two ethnic diversity indices that provide summary measures of the diversity characteristics of London's wards. The methodology used replicates that developed following the 2001 Census.

Typically diversity indices account for

- 1) The number of different/distinct groups present in the population
- 2) The sizes of these distinct groups relative to each other

The two variants of Simpson's Diversity Index¹ presented in this report differ in the number ethnic groups used. For the 2011 census, an 18 ethnic group classification was introduced and these categories have used to create the index shown from pages 3 to 6.

For comparison of ethnic diversity across 1991, 2001 and 2011 censuses a 10 ethnic group classification has been used as there was no more detail available in 1991. This index is presented from page 6 to 9. The mapping between ethnic group categories in 1991, 2001 and 2011 censuses is shown in annexes 1 and 2.

The possible range of Simpson Diversity Index (SDI) scores depends on the number of categories in the index: the minimum value of the index is 1 (corresponding to all of the population being in one group) whilst the maximum value is the number of categories (corresponding to equal shares of the population in each group). The maximum value of the 2011 18 group SDI is hence 18, and that of the 10 group SDI compared across censuses is 10.

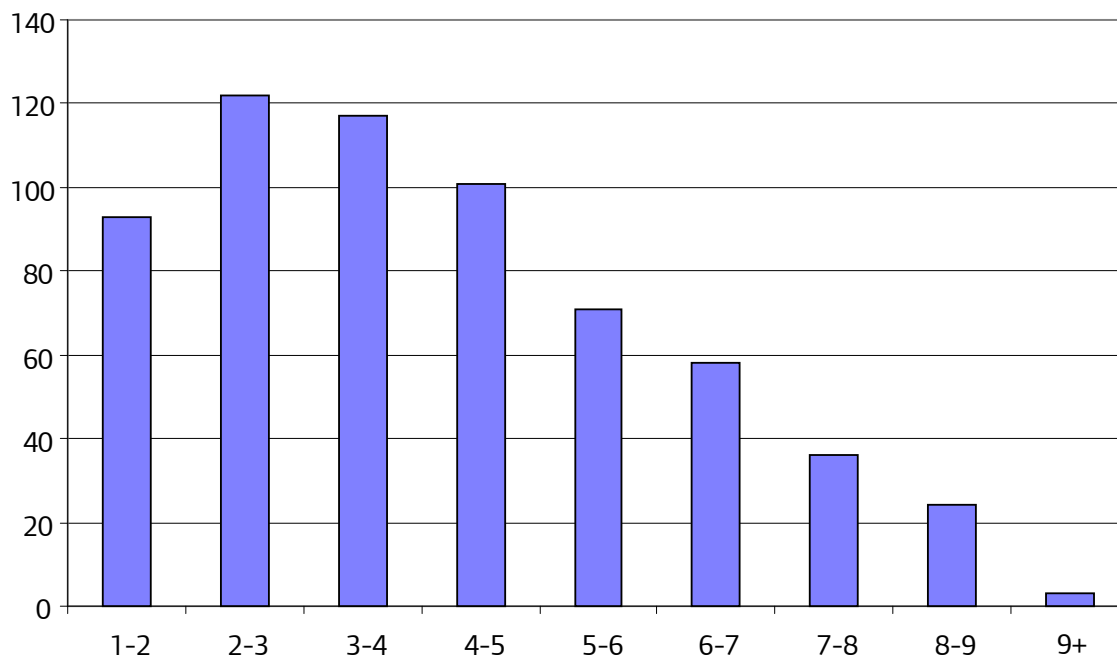
The wards used in these analyses are those current for 2011 census, which for London were unchanged from those used in 2001. Figures for 1991 are estimated from wards current at the 1991 census. City of London has been treated as a single area throughout.

¹ For more details on the calculating the Simpson's Diversity Index see DMAG briefing 2005/12, Ethnic Diversity Indices

Results for 2011

Chart 1 shows the distribution of Simpson’s Diversity Index values for the 625 wards in London. Values range from less than 1.20 for four wards in Bromley and Havering, to over 9 for three wards in Brent and Newham. The median SDI score for London was 3.84 whereas for England and Wales it was 1.13 – a value lower than any ward in London.

Chart 1: Distribution of Simpson’s Diversity Index values for wards in London



Source: 2011 Census, Office for National Statistics

Table 1 on the next page shows the 50 highest ranking wards by SDI score for England and Wales. The table also includes a column showing the index score relative to the possible range (one to 18). London wards comprise 45 of the top 50 including 18 of the top 20 ranked wards. Dollis Hill in Brent has the highest SDI score (10.44) followed by Plaistow North (9.27) and Forest Gate South (9.18) both in Newham. Twelve wards in Newham rank in the top 50 nationally, together with 10 in Brent, and five in both Croydon and Waltham Forest.

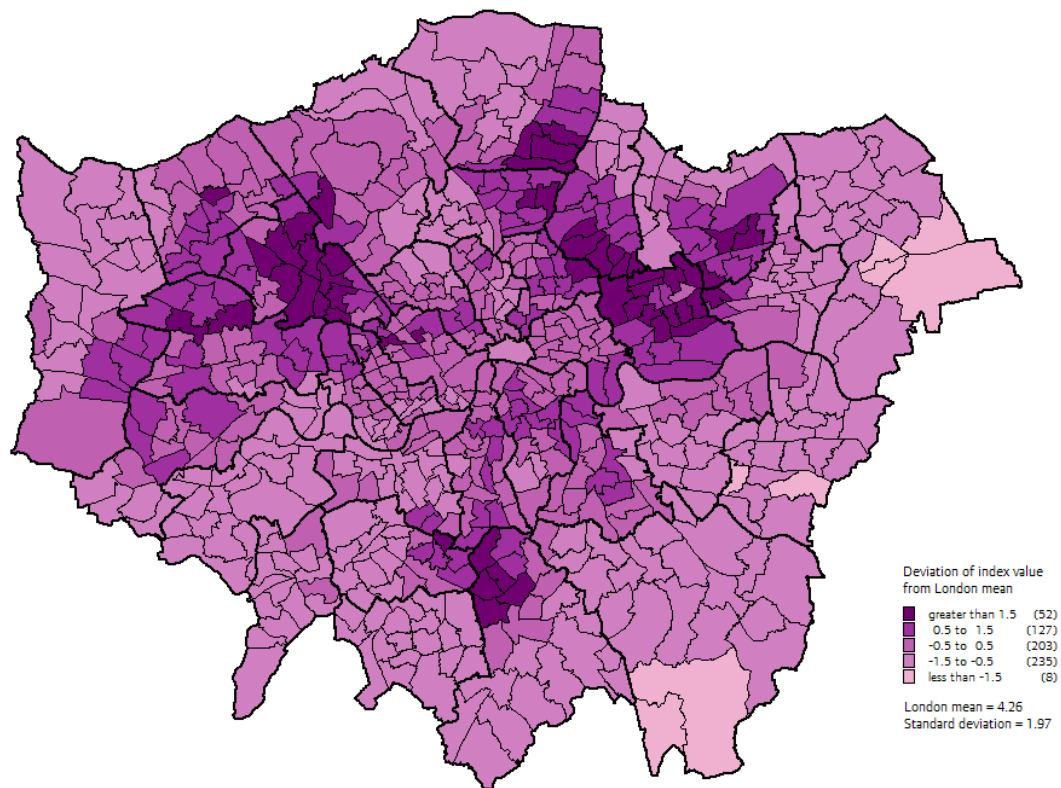
Over half of London’s wards – 344 out of 625 – are in the top 5 per cent nationally by SDI score. All London local authorities except City of London, Bexley, Havering, Richmond upon Thames and Sutton have at least one ward in the top 5 per cent.

Table 1: Top 50 wards in England and Wales based on 18 ethnic group SDI

rank	Ward	local authority	18 group diversity score	percentage of range
1	Dollis Hill	Brent	10.44	61.4
2	Plaistow North	Newham	9.27	54.5
3	Forest Gate South	Newham	9.18	54.0
4	Welsh Harp	Brent	8.97	52.8
5	Barnhill	Brent	8.92	52.5
6	West Ham	Newham	8.90	52.4
7	Plaistow South	Newham	8.89	52.3
8	Boleyn	Newham	8.89	52.3
9	West Thornton	Croydon	8.89	52.3
10	Dudden Hill	Brent	8.88	52.2
11	Harlesden	Brent	8.85	52.1
12	Forest Gate North	Newham	8.74	51.4
13	East Ham South	Newham	8.74	51.4
14	Little Ilford	Newham	8.73	51.4
15	Soho	Birmingham	8.72	51.3
16	Leyton	Waltham Forest	8.67	51.0
17	Cathall	Waltham Forest	8.59	50.6
18	Stonebridge	Brent	8.58	50.5
19	Nechells	Birmingham	8.55	50.3
20	Stratford and New Town	Newham	8.51	50.1
21	Bensham Manor	Croydon	8.49	50.0
22	Lea Bridge	Waltham Forest	8.49	49.9
23	Church Street	Westminster	8.48	49.9
24	Abbey	Barking and Dagenham	8.36	49.2
25	Willesden Green	Brent	8.26	48.6
26	Fryent	Brent	8.21	48.3
27	Broad Green	Croydon	8.21	48.3
28	Colindale	Barnet	8.17	48.1
29	Norbury	Croydon	8.14	47.9
30	Aston	Birmingham	8.13	47.8
31	Moss Side	Manchester	7.87	46.3
32	Cann Hall	Waltham Forest	7.85	46.2
33	Manor Park	Newham	7.81	46.0
34	Soho and Victoria	Sandwell	7.78	45.8
35	Wall End	Newham	7.74	45.5
36	Loxford	Redbridge	7.73	45.5
37	Upper Edmonton	Enfield	7.68	45.2
38	Lower Edmonton	Enfield	7.60	44.7
39	Selhurst	Croydon	7.60	44.7
40	Kensal Green	Brent	7.59	44.6
41	Greenford Broadway	Ealing	7.59	44.6
42	Graveney	Merton	7.57	44.5
43	East Ham Central	Newham	7.50	44.1
44	Edmonton Green	Enfield	7.50	44.1
45	Grove Green	Waltham Forest	7.50	44.1
46	Westbourne	Westminster	7.49	44.1
47	Tottenham Hale	Haringey	7.48	44.0
48	Newbury	Redbridge	7.47	43.9
49	Preston	Brent	7.39	43.5
50	Seven Kings	Redbridge	7.34	43.2

Source: 2011 Census, Office for National Statistics

Map 1: Simpson's Diversity Index, 18 Ethnic Groups, 2011



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Source: 2011 Census, Office for National Statistics

Map 1 shows Simpson's diversity index scores for wards in London relative to the London mean and dispersion. The mean is a simple average of ward scores, and dispersion is measured by the standard deviation of ward scores. Scores are grouped as follows:

Very high. Index value is greater than the mean plus 1.5 standard deviations
52 London wards, 8 per cent of total

High. Index value is between the mean plus half and 1.5 standard deviations
127 London wards, 20 per cent of total

Average. Index value is the mean plus or minus half the standard deviation
203 London wards, 32 per cent of total

Low. Index value is between the mean and minus half and minus 1.5 standard deviations
235 London wards, 38 per cent of total

Very Low. Index value is less than the mean minus 1.5 standard deviations
8 London wards, 1 per cent of total

The calculation of mean and standard deviation is based on unweighted index values for London wards for the 18 ethnic group classification.

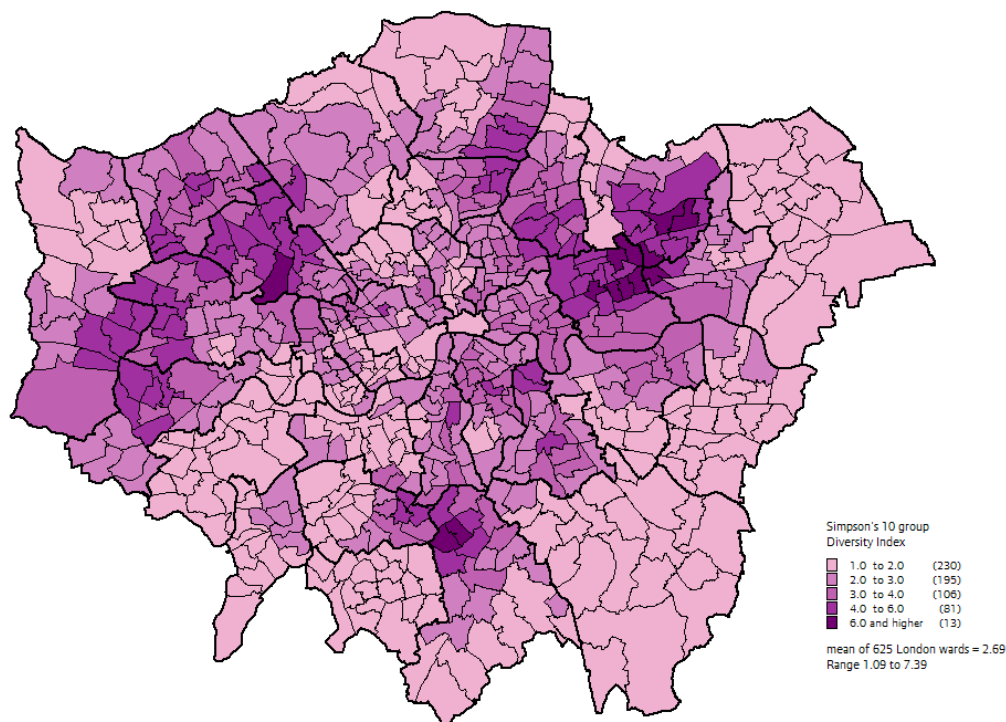
The map illustrates that the areas of highest diversity in the capital are in Newham, Waltham Forest and Enfield in the north east, Brent in the west and the north of Croydon to the south. The least diverse areas are found on the eastern fringes of London.

Results for 1991, 2001 and 2011

The 2011 Census is the third to ask a question on respondents' ethnic identity, although the ethnic categories used have expanded from 10 in 1991 to 16 in 2001 and 18 in 2011. It is hence not possible to make exact comparisons of ethnic diversity between censuses, but the groups used in 2001 and 2011 have been aggregated to give an estimate of the 10 groups used in 1991. The 10 ethnic groups include a single group for all White people so that increases in London's White non-British population will not be captured. In particular, large scale immigration from EU accession countries in the early part of 2000s will not be apparent in these results.

Details of the correspondences between groups are given in annexes 1 and 2.

Map 2: Simpson's Diversity Index, 10 Ethnic Groups, 2011

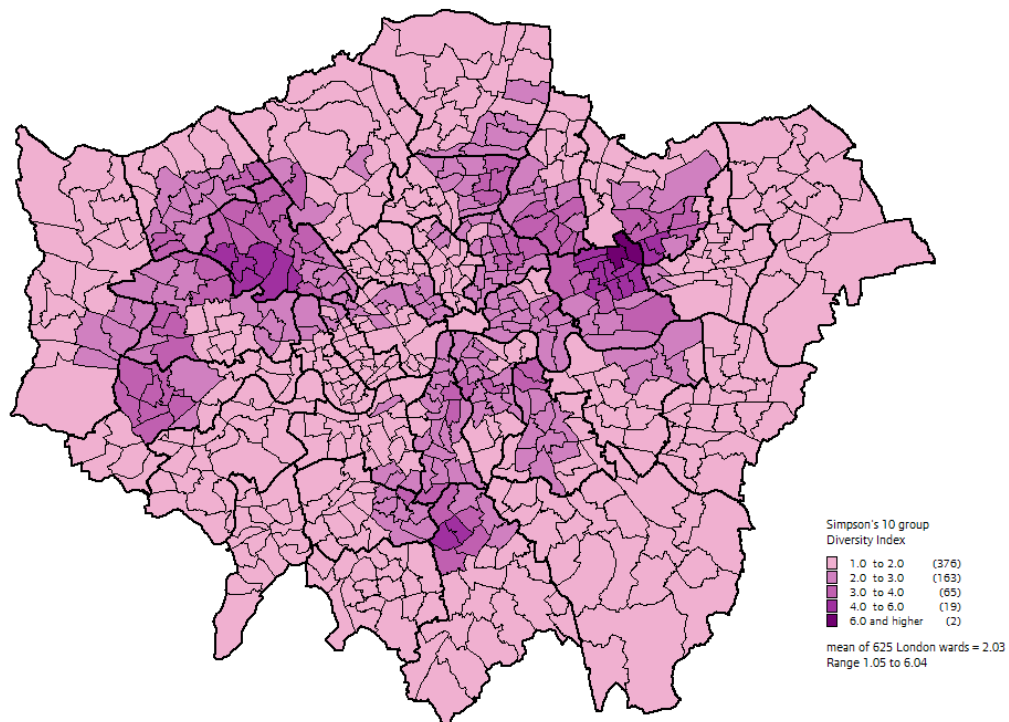


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Source: 2011 Census, Office for National Statistics

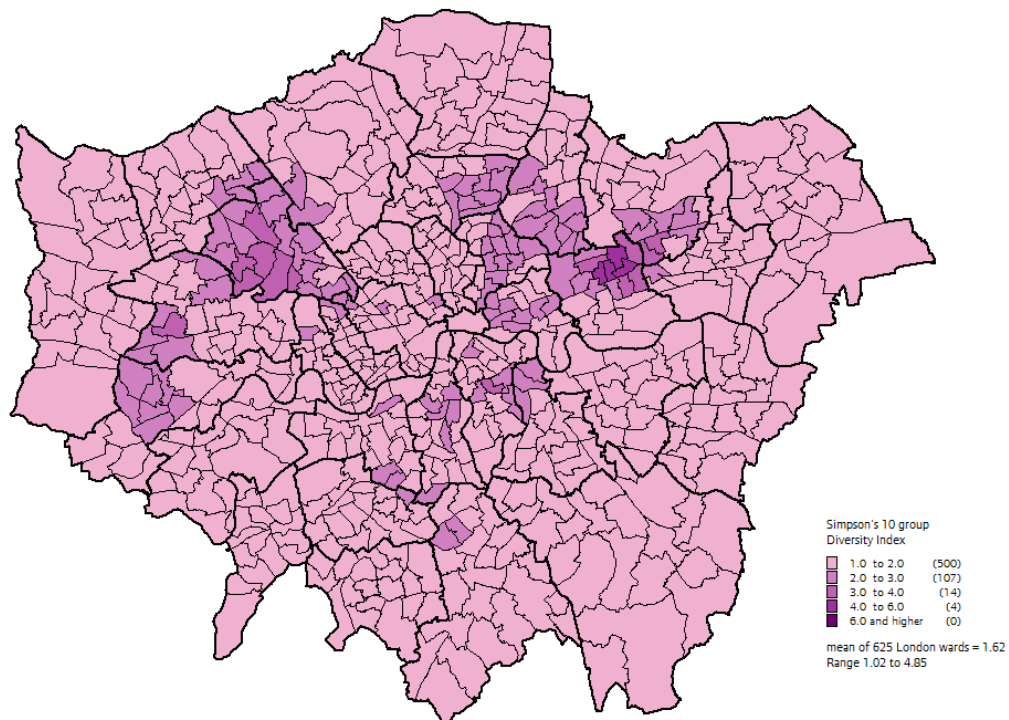
Map 2 shows Simpson's Diversity Index for London wards in 2011 based on 10 Ethnic Groups. Maps 3 and 4 on the next page present the 10 group SDI for 2001 and 1991 on the same scale.

Map 3: Simpson's Diversity Index, 10 Ethnic Groups, 2001



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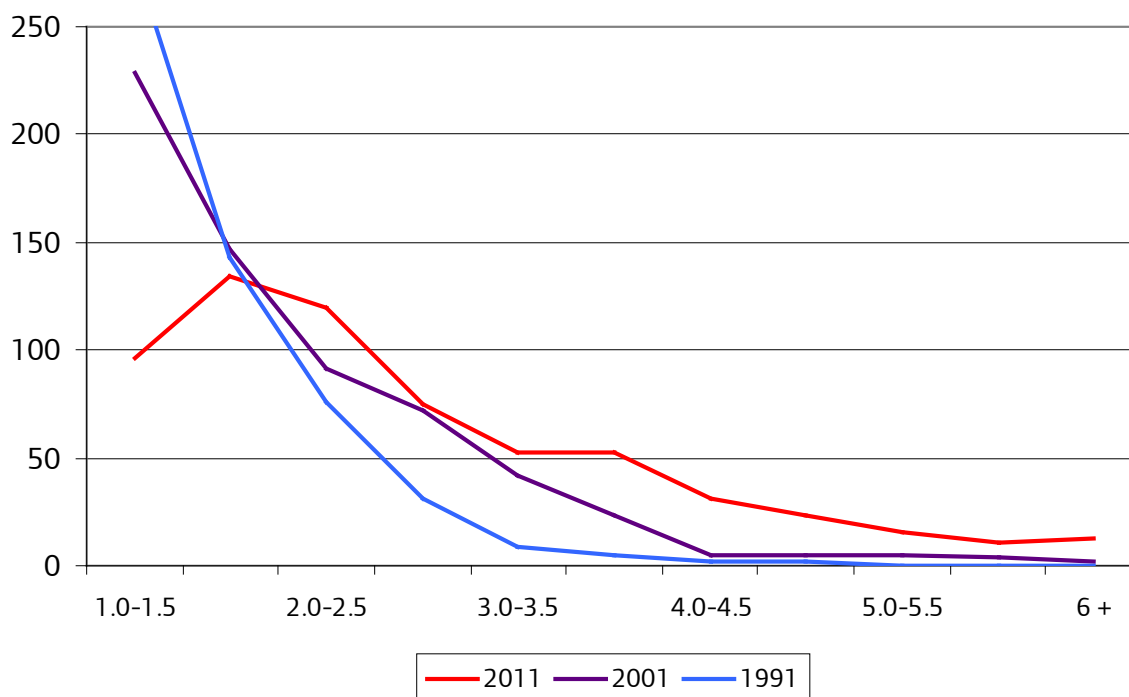
Map 4: Simpson's Diversity Index, 10 Ethnic Groups, 1991



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Maps 3, 4 and 5 show that diversity has increased significantly over the period 1991 to 2011: the average SDI score for London wards rose from 1.62 in 1991 to 2.69 in 2011. Diversity increased both for the most diverse areas and for less diverse ones. Just four wards had SDI scores over 4.0 in 1991, this rose to 21 in 2001 and 94 in 2011. Conversely, the proportions of London wards with an SDI score below 1.50 was over a half in 1991 (357), around a third in 2001 (229) and less than a sixth in 2011 (94). The distribution of SDI scores for London wards is shown in Chart 2 below.

Chart 2: Distribution of Simpson’s Diversity Index 10 group values for wards in London 1991, 2001 and 2011



In 1991, 15 wards in the most diverse decile -that is the top 63 of London’s 625 wards- by SDI scores were in Brent, 11 were in Newham and 6 were in Hackney. By 2011 Newham had 15 of the top decile, Brent 10 and Hackney only one. Redbridge had three wards in the top decile in 1991, seven in 2001 and 11 in 2011.

Over half of London’s least diverse wards -those in the bottom decile by SDI- were in Bromley, Havering and Bexley in 1991, 2001 and 2011. Bromley had 14 in 2011, the same as in 1991; Havering 13 (14 in 1991); and Bexley 12 (13 in 1991). Barking and Dagenham had eight wards in the bottom decile in 1991, four in 2001, and none in 2011. Conversely Richmond on Thames had four wards in the bottom decile in 1991, 9 in 2001, and 12 in 2011.

Table 2 on the next page gives the SDI scores for the top and bottom 10 wards in London in 1991 2001 and 2011. The table shows that while diversity has increased across London over the 20 years, the most diverse wards have continued to be predominantly in Newham and Brent, and the least diverse wards in Havering, Bexley and Bromley.

Table 2 : Top and Bottom ten wards in London by SDI score, 199, 2001 and 2011

1991

Rank	ward	borough	SDI	rank	ward	borough	SDI
1	Green Street East	Newham	4.85	616	Mawneys	Havering	1.05
2	Green Street West	Newham	4.82	617	Havering Park	Havering	1.05
3	East Ham North	Newham	4.15	618	Goresbrook	Barking & Dagenham	1.05
4	Manor Park	Newham	4.08	619	Pettits	Havering	1.05
5	Tokyington	Brent	3.75	620	Heaton	Havering	1.05
6	Alperton	Brent	3.69	621	Gooshays	Havering	1.04
7	Wembley Central	Brent	3.62	622	Cranham	Havering	1.03
8	Loxford	Redbridge	3.60	623	Biggin Hill	Bromley	1.03
9	Stonebridge	Brent	3.55	624	Upminster	Havering	1.03
10	East Ham Central	Newham	3.36	625	Darwin	Bromley	1.02

2001

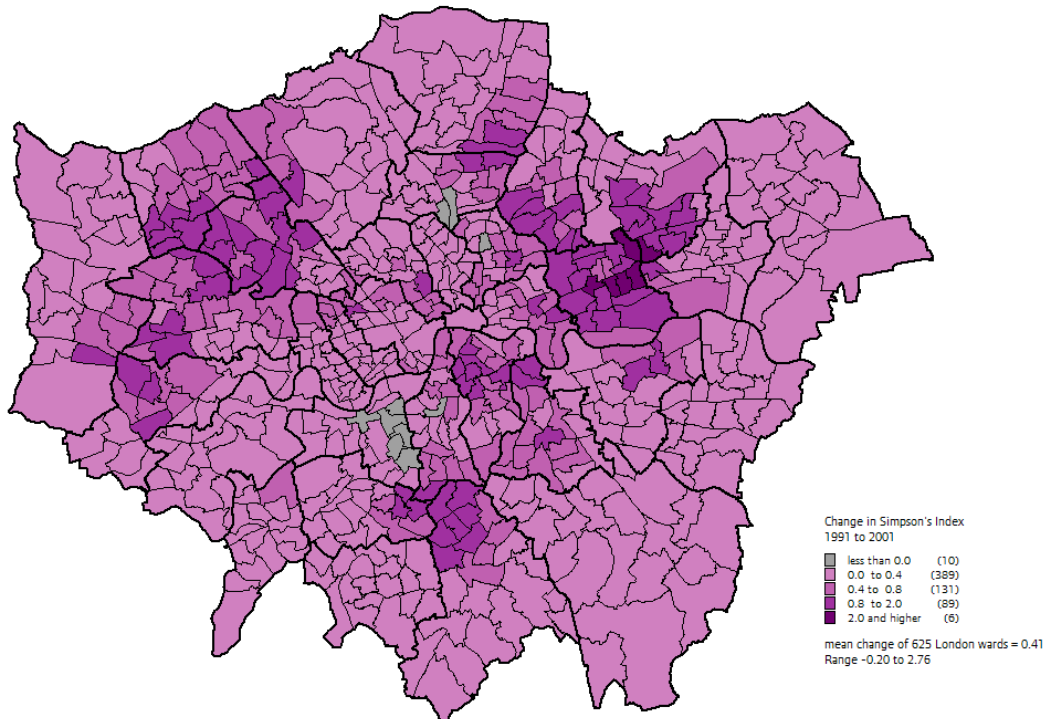
rank	ward	borough	SDI	rank	ward	borough	SDI
1	Little Ilford	Newham	6.04	616	Hylands	Havering	1.08
2	Manor Park	Newham	6.01	617	Hacton	Havering	1.08
3	Wall End	Newham	5.88	618	Heaton	Havering	1.08
4	Loxford	Redbridge	5.71	619	Gooshays	Havering	1.08
5	Green Street East	Newham	5.61	620	St Andrew's	Havering	1.07
6	Green Street West	Newham	5.56	621	Biggin Hill	Bromley	1.07
7	East Ham Central	Newham	5.44	622	Darwin	Bromley	1.07
8	East Ham North	Newham	5.34	623	Havering Park	Havering	1.07
9	Plaistow North	Newham	5.16	624	Cranham	Havering	1.05
10	Forest Gate South	Newham	5.15	625	Upminster	Havering	1.05

2011

rank	ward	borough	SDI	rank	ward	borough	SDI
1	Little Ilford	Newham	7.39	616	Pettits	Havering	1.20
2	Boleyn	Newham	7.11	617	St Mary's	Bexley	1.19
3	West Thornton	Croydon	6.96	618	Hayes and Coney Hall	Bromley	1.19
4	Loxford	Redbridge	6.80	619	Blackfen and Lamorbey	Bexley	1.16
5	Plaistow North	Newham	6.74	620	Hacton	Havering	1.16
6	Manor Park	Newham	6.72	621	St Andrew's	Havering	1.16
7	Wall End	Newham	6.68	622	Cranham	Havering	1.12
8	East Ham Central	Newham	6.45	623	Upminster	Havering	1.10
9	Bensham Manor	Croydon	6.42	624	Darwin	Bromley	1.10
10	Stonebridge	Brent	6.18	625	Biggin Hill	Bromley	1.09

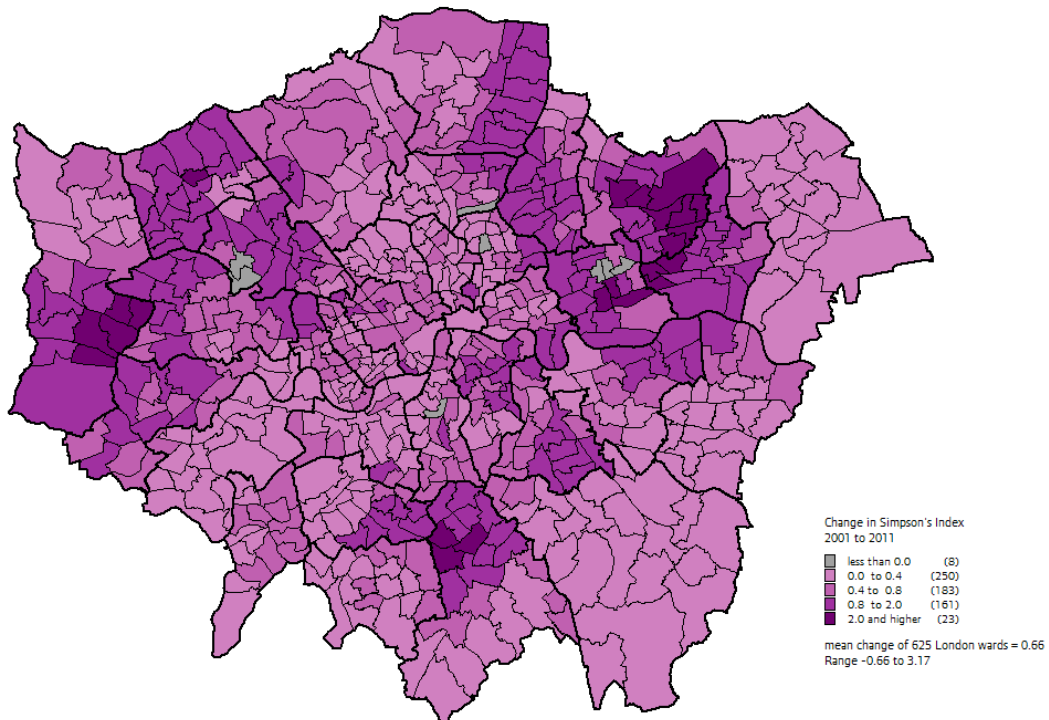
Maps 4 and 5 on the following page present the increases in SDI from 1991 to 2001 and from 2001 to 2011. These show that diversity increased in all but 10 wards between 1991 and 2001, and all but eight wards 2001 to 2011. The biggest increases in SDI tended to be areas with the highest SDI scores: Newham, Redbridge and Croydon for 1991 to 2001, and Newham, Redbridge and Barking and Dagenham for 2001 to 2011. There were however some sharp increases in diversity scores for some wards in Hillingdon and Harrow.

Map 5: Change in Simpson's Diversity Index, 10 Ethnic Groups, 1991 to 2001



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Map 6: Change in Simpson's Diversity Index, 10 Ethnic Groups, 2001 to 2011



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Annex 1 : Ethnic group categories in 1991, 2001 and 2011 Censuses

1991 – 10 categories:

White
Indian
Pakistani
Bangladeshi
Asian Other
Caribbean
African
Black Other
Chinese
Other

2001 – 16 categories:

White
 White British
 White Irish
 White Other
Mixed
 White and Black Caribbean
 White and Black African
 White and Asian
 Other Mixed
Asian or Asian British
 Indian
 Pakistani
 Bangladeshi
 Other Asian
Black or Black British
 Caribbean
 African
 Other Black
Chinese or other ethnic group
 Chinese
 Other Ethnic Group

2011 – 18 categories:

White
 English/Welsh/Scottish/ Northern Irish/British
 Irish
 Gypsy or Irish Traveller
 Other White
Mixed
 White and Black Caribbean
 White and Black African
 White and Asian
 Other Mixed
Asian or Asian British
 Indian
 Pakistani
 Bangladeshi
 Chinese
 Other Asian
Black/African/Caribbean/Black British
 Caribbean
 African
 Other Black
Other Ethnic Group
 Arab
 Any Other Ethnic Group

**Annex 2 : Correspondence between ethnic group categories
in 1991 2001 and 2011 Censuses**

1991 10 groups	2001 16 groups	2011 18 groups
White	White British White Irish Other White	English/Welsh/Scottish/ Northern Irish/British Irish Gypsy or Irish Traveller Other White
Indian	Indian	Indian
Pakistani	Pakistani	Pakistani
Bangladeshi	Bangladeshi	Bangladeshi
Asian Other	Other Asian White and Asian	Other Asian White and Asian
Caribbean	Black Caribbean	Caribbean
African	Black African	African
Black Other	Other Black White and Black Caribbean White and Black African	Other Black/ African/Caribbean White and Black Caribbean White and Black African
Chinese	Chinese	Chinese
Other	Other Ethnic Group Other Mixed	Other Ethnic Group Other Mixed Arab
-	-	-

