GLAINTELLIGENCE

Update 2017-11

2016-based Ethnic Group Population Projections

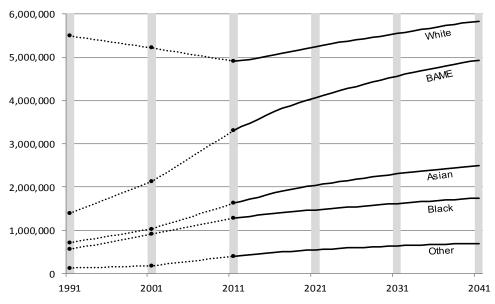
November 2017

The variation in the characteristics, and the resulting needs, of diverse ethnic groups is central to our understanding of London's population. The GLA 2016-based ethnic population projections are on the basis of 17 ethnic groups; a development first introduced in the preceding ethnic projections (2015 Round) in November 2016. Disaggregating and projecting for detailed groups greatly increases the utility of the GLA projections. The main variant, recommended for general use, is the 2016-based housing-led projection.

Key Findings

- The White British population is projected to increase marginally from 3.55 million to 3.76 million between 2016 and 2041 and will remain the single largest ethnic group for the entire projection period.
- The Other White population is projected to be the fastest growing group over the period 2016 to 2041 increasing from 1.31 million to 1.89 million (44 per cent). See figure 2.
- London's diversity will increase over the projection period as less populous ethnic groups grow at a faster rate than larger groups.
- Figure 1 shows the trajectories of four broad ethnic groups between 1991 and 2041. The BAME group is calculated by adding together the Asian, Black and Other population totals.

Figure 1: Ethnic group populations 1991 to 2041 Greater London



Solid lines are from the 2016-based housing-led variant ethnic projections.

Dotted lines are interpolations between the three census years, 1991, 2001 and 2011.

Source: ONS Census, GLA 2016-based housing-led ethnic group projections

Background

Context

The GLA produces a range of population and household projections, updated annually, which are intended for use in strategic planning and policy decision-making within the GLA, its functional bodies and London boroughs. The Ethnic Group population projections disaggregate the GLA's borough-level population projections into ethnic groups and have been produced for over twenty years.

The 2016-based ethnic projection outputs have been produced for 17 ethnic groups: all of the 2011 Census groups, with the exception that the White Gypsy or Irish Traveller group which has been aggregated into the Other White group due to its small size (see Appendix 1). This expansion to 17 groups, from ten, was first introduced in the preceding ethnic projections (the 2015 Round) in November 2016

Ethnic group projections have been a central output of the GLA's demographic modelling team for two decades. These projections allow for detailed planning for future service provision based on specific community needs. They also have value in the health sector in identifying investment priorities and targeting community health programmes.

Model Variants

Two model variants have been produced, one constrained to the GLA 2016-based housing-led and one constrained to the GLA 2016-based central trend projections¹. This *Update* describes the outputs for the housing-led variant, which is recommended as the main of the two ethnic model variants. Comparison with the central trend variant is made where appropriate.

Ethnic Group Model

The methodology used for the GLA ethnic 17-group model is similar to that used for the preceding tengroup model used up to the 2014 Round, but with updating of ethnic births modelling parameters and redefining all 2011 Census ethnic input parameters in terms of the 17 groups. This methodology is described in *Update 15-2017 Ethnic Group Population Projection Methodology*².

The underlying housing-led projections are constrained to the central trend variant at Greater London level.

Data Limitations

This round of ethnic projections have been produced using ethnic migration patterns based on data collected in the 2011 Census. Since then the economy, particularly that of London, has moved forward from recession and as a result ethnic migration patterns may have changed. However, the impact of any such changes is unknown and therefore not accounted for in the modelling process.

This set of projections, and the underlying GLA borough-level population projections on which they are based, make no attempt to account for the effects on future population change of the UK leaving the European Union. The underlying borough-level projections are grounded in observed data from past years which are averaged and rolled forward to project future populations.

¹ https://data.london.gov.uk/dataset/population-projections

² https://data.london.gov.uk/dataset/population-projections-documentation

Results

Projected ethnic population trends

Table 1 summarises the 2016-based housing-led and central trend projected ethnic populations for Greater London.

Between 2016 and 2041 the total London population is projected to increase by 1.98 million (22 per cent) to 10.8 million. The housing-led variant projects that the Other White group will see a significant increase, 577 thousand (44 per cent) to 1.89 million. The White British population is projected to increase by 203 thousand (six per cent) to 3.76 million. The BAME (all ethnic groups except the three White groups) population is projected to increase by 1.19 million (32 per cent) to 4.94 million.

The White British group will remain as the biggest individual ethnic group, by a significant margin, over the 2016 to 2041 period. Over the projection period the second-biggest individual ethnic group will be Other White. The next largest groups will be Black African (increasing by 31 per cent to 828 thousand in 2041), Indian (increasing by 32 per cent to 811 thousand in 2041), and Other Asian (increasing by 42 per cent to 671 thousand in 2041).

The most stable groups (i.e. smallest relative change), apart from White British, are projected to be the White Irish (increasing by only six per cent to 196 thousand in 2041), and Black Caribbean (increasing by only six per cent to 370 thousand in 2041).

The remaining ethnic groups, including the individual Mixed groups (White & Black Caribbean, White & Black African, White & Asian, and Other Mixed) and also the Arab group, are all projected to increase noticeably in relative terms over the period. The Pakistani group is projected to increase by 33 per cent to 351 thousand in 2041.

Figure 2 shows the housing-led projection trajectories of each of the 17 ethnic groups.

Table 2 shows the projected ethnic population changes between 2016 and 2041 in Table 1 ranked by absolute (numerical) change and by relative (percentage) change.

In terms of relative population change, the biggest projected percentage increase is 47 per cent for the Arab group. This is followed by four groups with a projected percentage increase of over 40 per cent, these being four out of the five "Other" groups (Other White, Other Mixed, Other Asian, and Other Ethnic Group). All these large relative increases are in relation to the groups with the lowest initial populations, i.e. the trajectories at the bottom of Figure 2, with the exception of the Other White group. These large percentage increases follow on from the increases for these groups between the 2001 and 2011 Censuses.

Table 1: Ethnic group projections - Greater London

2016-based housing-led						2016-41		
	2011	2016	2027	2021	2047	61	%	% of
Ethnic Group	2011	2016	2021	2031	2041	Change	Change	Change
All Ethnicities	8,217,500	8,799,000	9,298,000	10,113,700	10,776,400	1,977,500	22	100
White British	3,687,700	3,554,600	3,557,000	3,640,600	3,758,000	203,300	6	10
White Irish	176,800	184,900	187,400	190,000	195,600	10,800	6	1
Other White	1,047,600	1,308,800	1,490,500	1,718,500	1,885,500	576,700	44	29
White & Black Caribbean	120,100	134,200	143,800	158,300	170,800	36,600	27	2
White & Black African	65,900	79,300	88,200	98,900	106,900	27,600	35	1
White & Asian	102,200	121,500	135,100	148,000	157,500	36,000	30	2
Other Mixed	119,700	149,500	171,100	197,400	214,400	64,900	43	3
Indian	546,300	613,700	664,300	747,600	810,700	197,000	32	10
Pakistani	225,500	263,100	285,600	322,700	350,500	87,400	33	4
Bangladeshi	223,900	253,500	265,100	294,900	309,900	56,400	22	3
Chinese	124,600	146,700	161,000	179,100	193,200	46,500	32	2
Other Asian	400,700	472,800	528,800	613,800	671,300	198,500	42	10
Black African	577,000	631,600	677,700	760,400	827,800	196,200	31	10
Black Caribbean	346,200	347,600	346,000	355,000	369,800	22,200	6	1
Other Black	171,000	199,600	217,300	246,100	269,400	69,800	35	4
Arab	106,500	131,500	150,000	177,100	193,600	62,100	47	3
Other Ethnic Group	175,800	206,100	229,100	265,100	291,600	85,500	41	4
BAME	3,305,400	3,750,600	4,063,100	4,564,600	4,937,300	1,186,700	32	60
White 1	4,912,100	5,048,300	5,234,900	5,549,200	5,839,100	790,800	16	40

Source: GLA 2016-based housing-led ethnic group projections

2016-based central trend						2016-41	2016-41 %	2016-41 % of
Ethnic Group	2011	2016	2021	2031	2041	Change	Change	Change
All Ethnicities	8,217,500	8,799,000	9,298,000	10,113,700	10,776,400	1,977,500	22	100
White British	3,687,700	3,554,600	3,512,000	3,534,100	3,619,600	64,900	2	3
White Irish	176,800	184,900	187,500	190,400	194,900	10,000	5	1
Other White	1,047,600	1,308,800	1,485,100	1,716,400	1,866,500	557,700	43	28
White & Black Caribbean	120,100	134,200	145,300	163,600	177,600	43,400	32	2
White & Black African	65,900	79,300	88,800	101,400	109,500	30,200	38	2
White & Asian	102,200	121,500	135,200	150,800	159,900	38,400	32	2
Other Mixed	119,700	149,500	171,900	202,200	219,700	70,200	47	4
Indian	546,300	613,700	676,000	774,300	852,900	239,200	39	12
Pakistani	225,500	263,100	294,700	343,100	379,200	116,100	44	6
Bangladeshi	223,900	253,500	276,800	315,300	346,600	93,100	37	5
Chinese	124,600	146,700	158,900	175,100	187,900	41,200	28	2
Other Asian	400,700	472,800	530,600	616,200	675,600	202,900	43	10
Black African	577,000	631,600	679,300	753,900	813,000	181,500	29	9
Black Caribbean	346,200	347,600	350,800	362,400	378,600	31,000	9	2
Other Black	171,000	199,600	222,600	261,500	293,200	93,600	47	5
Arab	106,500	131,500	151,000	179,700	199,000	67,400	51	3
Other Ethnic Group	175,800	206,100	231,600	273,100	302,700	96,600	47	5
BAME	3,305,400	3,750,600	4,113,500	4,672,800	5,095,400	1,344,800	36	68
White 1	4,912,100	5,048,300	5,184,500	5,441,000	5,681,000	632,700	<i>13</i>	<i>32</i>

Source: GLA 2016-based central trend ethnic group projections

Figures may not add due to rounding

¹ The GLA aggregated White group in Appendix 1.

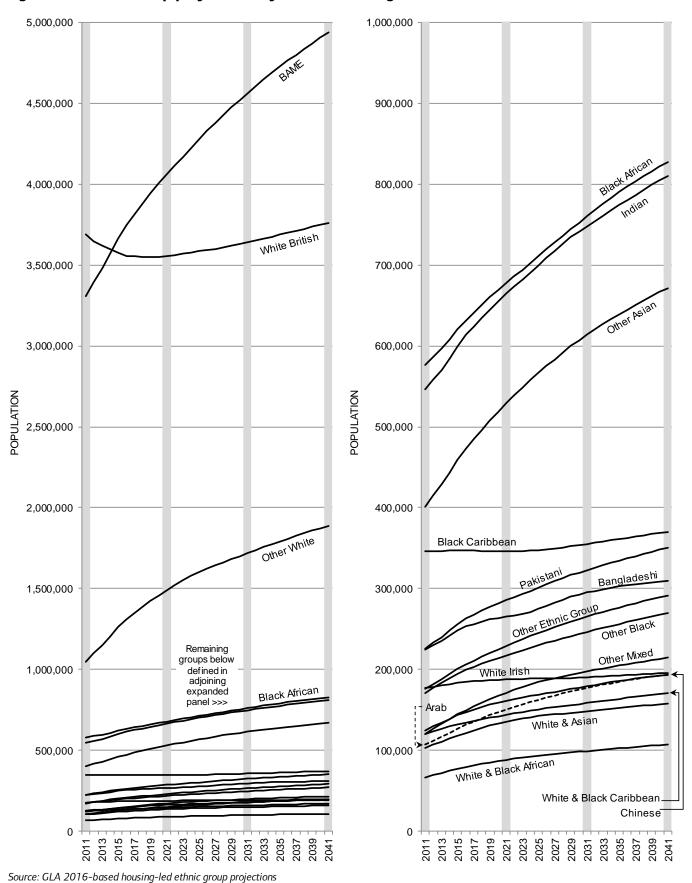


Figure 2: Ethnic Group projection trajectories: housing-led - Greater London

Table 2: Change in ethnic group populations 2016 - 2041 - Greater London

2016-based housing-led	2016-41	Rank of	2016-41	Rank of %	2016-41
Ethnic Group	Change	Change	% Change	Change	% of Change
All Ethnicities	1,977,500		22		100
Other White	576,700	1	44	2	29
White British	203,300	2	6	17	10
Other Asian	198,500	3	42	4	10
Indian	197,000	4	32	9	10
Black African	196,200	5	31	11	10
Pakistani	87,400	6	33	8	4
Other Ethnic Group	85,500	7	41	5	4
Other Black	69,800	8	35	6	4
Other Mixed	64,900	9	43	3	3
Arab	62,100	10	47	1	3
Bangladeshi	56,400	11	22	14	3
Chinese	46,500	12	32	10	2
White & Black Caribbean	36,600	13	27	13	2
White & Asian	36,000	14	30	12	2
White & Black African	27,600	15	35	7	1
Black Caribbean	22,200	16	6	15	1
White Irish	10,800	17	6	16	1
BAME <i>White</i> ¹	1,186,700 <i>790,800</i>		32 <i>16</i>		60 <i>40</i>

Source: GLA 2016-based housing-led ethnic group projections

2016-based central trend	2016-41	Rank of	2016-41	Rank of %	2016-41
Ethnic Group	Change	Change	% Change	Change	% of Change
All Ethnicities	1,977,500		22		100
Other White	557,700	1	43	7	28
Indian	239,200	2	39	8	12
Other Asian	202,900	3	43	6	10
Black African	181,500	4	29	13	9
Pakistani	116,100	5	44	5	6
Other Ethnic Group	96,600	6	47	4	5
Other Black	93,600	7	47	3	5
Bangladeshi	93,100	8	37	10	5
Other Mixed	70,200	9	47	2	4
Arab	67,400	10	51	1	3
White British	64,900	11	2	17	3
White & Black Caribbean	43,400	12	32	11	2
Chinese	41,200	13	28	14	2
White & Asian	38,400	14	32	12	2
Black Caribbean	31,000	15	9	15	2
White & Black African	30,200	16	38	9	2
White Irish	10,000	17	5	16	1
BAME	1,344,800		36		68
White 1	632,700		13		<i>32</i>

Source: GLA 2016-based central trend ethnic group projections

Figures may not add due to rounding

¹ The GLA aggregated White group in Appendix 1.

Differences between housing-led and central trend ethnic group projections

Table 3 summarises the differences between the 2016-based housing-led and central trend projections at Greater London level. For the historical years 2011 to 2016 the overall and ethnic populations are the same for both variants, at Greater London level and at borough level.

The ethnic housing-led model is constrained to the borough central trend model so that for the projection years (2017 to 2041) the two variants have a consistent total population. The two projections diverge at the borough level where growth in the trend model is based solely on past observed trend but growth in the housing-led model takes account of forecast development. The development trajectory is taken from the 2016 Strategic Housing Land Availability Assessment (SHLAA).

Differences in the amount of total population change at borough level impact on ethnic group distributions because different boroughs have different ethnic-specific migration rates. As a result, even though the total population of Greater London is consistent across the two ethnic projection variants the size of the 17 groups varies.

The main differences between the two ethnic projections at the Greater London level are that by 2041 the housing-led variant projects:

- a White British population that is 138,400 (3.8 per cent) higher
- an Other White population that is 19,000 (1.0 per cent) higher
- a Black African population that is 14,700 (1.8 per cent) higher
- a Chinese population that is 5,300 (2.8 per cent) higher
- an Indian population that is 42,200 (4.9 per cent) lower
- a Bangladeshi population that is 36,700 (10.6 per cent) lower
- a Pakistani population that is 28,700 (7.6 per cent) lower
- an Other Black population that is 23,800 (8.1 per cent) lower
- an Other Ethnic Group population that is 11,100 (3.7 per cent) lower
- remaining ethnic group populations that are marginally lower, except for White Irish which is practically the same.

The variant differences at Greater London level over the projection period are shown graphically in Figure 3 for each ethnic group.

Although the variant differences at Greater London level are relatively small, at borough level the differences can be greater due to the differing borough trend trajectories underlying the variants.

Table 3: Differences between housing-led and central trend variants - Greater London

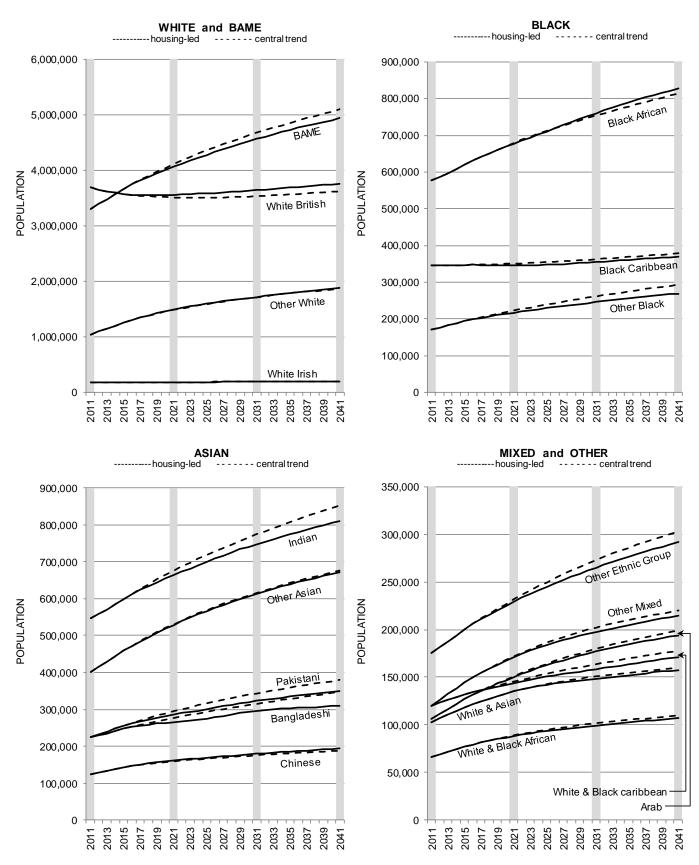
diff housing-led - central trend	2017	2021	2026	2031	2036	2041
All Ethnicities	0	0	0	0	0	0
White British	12,000	45,000	82,100	106,500	124,100	138,400
White Irish	-100	-100	-200	-400	300	700
Other White	200	5,500	6,400	2,100	9,400	19,000
White & Black Caribbean	-300	-1,500	-3,200	-5,300	-6,200	-6,800
White & Black African	-100	-700	-1,500	-2,500	-2,600	-2,600
White & Asian	0	-100	-1,200	-2,800	-2,800	-2,500
Other Mixed	-100	-800	-2,600	-4,900	-5,400	-5,300
Indian	-2,800	-11,800	-20,600	-26,600	-35,200	-42,200
Pakistani	-1,900	-9,100	-15,900	-20,400	-25,200	-28,700
Bangladeshi	-2,500	-11,600	-18,400	-20,400	-28,000	-36,700
Chinese	600	2,200	3,000	3,900	4,700	5,300
Other Asian	-600	-1,800	-2,600	-2,400	-3,700	-4,300
Black African	-700	-1,600	-300	6,600	12,000	14,700
Black Caribbean	-1,300	-4,800	-7,300	-7,400	-7,900	-8,800
Other Black	-1,200	-5,300	-10,600	-15,400	-19,600	-23,800
Arab	-500	-1,000	-1,800	-2,600	-3,900	-5,300
Other Ethnic Group	-600	-2,500	-5,200	-8,000	-9,900	-11,100
BAME	-12,000	-50,400	-88,400	-108,200	-133,700	-158,100
White 1	12,000	50,400	<i>88,400</i>	108,200	133,700	158,100
%diff housing-led - central trend	2017	2021	2026	2031	2036	2041
All Ethnicities	0.0	0.0	0.0	0.0	0.0	0.0
White British	0.3	1.3	2.3	3.0	3.5	
White Irish					3.3	3.8
	-0.1	0.0	-0.1	-0.2	0.1	3.8 0.4
Other White	-0.1 0.0	0.0 0.4				
Other White White & Black Caribbean			-0.1	-0.2	0.1	0.4
	0.0	0.4	-0.1 0.4	-0.2 0.1	0.1 0.5	0.4 1.0
White & Black Caribbean	0.0 -0.2 -0.2 0.0	0.4 -1.0	-0.1 0.4 -2.1	-0.2 0.1 -3.2	0.1 0.5 -3.6	0.4 1.0 -3.8
White & Black Caribbean White & Black African	0.0 -0.2 -0.2	0.4 -1.0 -0.7	-0.1 0.4 -2.1 -1.6	-0.2 0.1 -3.2 -2.4	0.1 0.5 -3.6 -2.5	0.4 1.0 -3.8 -2.4
White & Black Caribbean White & Black African White & Asian	0.0 -0.2 -0.2 0.0	0.4 -1.0 -0.7 -0.1	-0.1 0.4 -2.1 -1.6 -0.8	-0.2 0.1 -3.2 -2.4 -1.8	0.1 0.5 -3.6 -2.5 -1.8	0.4 1.0 -3.8 -2.4 -1.5
White & Black Caribbean White & Black African White & Asian Other Mixed	0.0 -0.2 -0.2 0.0 -0.1 -0.4 -0.7	0.4 -1.0 -0.7 -0.1 -0.5	-0.1 0.4 -2.1 -1.6 -0.8 -1.4	-0.2 0.1 -3.2 -2.4 -1.8 -2.4	0.1 0.5 -3.6 -2.5 -1.8 -2.6	0.4 1.0 -3.8 -2.4 -1.5 -2.4
White & Black Caribbean White & Black African White & Asian Other Mixed Indian Pakistani Bangladeshi	0.0 -0.2 -0.2 0.0 -0.1 -0.4 -0.7	0.4 -1.0 -0.7 -0.1 -0.5 -1.7 -3.1 -4.2	-0.1 0.4 -2.1 -1.6 -0.8 -1.4 -2.8	-0.2 0.1 -3.2 -2.4 -1.8 -2.4 -3.4	0.1 0.5 -3.6 -2.5 -1.8 -2.6 -4.3	0.4 1.0 -3.8 -2.4 -1.5 -2.4 -4.9 -7.6 -10.6
White & Black Caribbean White & Black African White & Asian Other Mixed Indian Pakistani Bangladeshi Chinese	0.0 -0.2 -0.2 0.0 -0.1 -0.4 -0.7	0.4 -1.0 -0.7 -0.1 -0.5 -1.7	-0.1 0.4 -2.1 -1.6 -0.8 -1.4 -2.8 -5.0	-0.2 0.1 -3.2 -2.4 -1.8 -2.4 -3.4 -5.9	0.1 0.5 -3.6 -2.5 -1.8 -2.6 -4.3 -6.9	0.4 1.0 -3.8 -2.4 -1.5 -2.4 -4.9 -7.6
White & Black Caribbean White & Black African White & Asian Other Mixed Indian Pakistani Bangladeshi Chinese Other Asian	0.0 -0.2 -0.2 0.0 -0.1 -0.4 -0.7	0.4 -1.0 -0.7 -0.1 -0.5 -1.7 -3.1 -4.2	-0.1 0.4 -2.1 -1.6 -0.8 -1.4 -2.8 -5.0 -6.2 1.8 -0.5	-0.2 0.1 -3.2 -2.4 -1.8 -2.4 -3.4 -5.9 -6.5 2.2 -0.4	0.1 0.5 -3.6 -2.5 -1.8 -2.6 -4.3 -6.9 -8.4	0.4 1.0 -3.8 -2.4 -1.5 -2.4 -4.9 -7.6 -10.6
White & Black Caribbean White & Black African White & Asian Other Mixed Indian Pakistani Bangladeshi Chinese Other Asian Black African	0.0 -0.2 -0.2 0.0 -0.1 -0.4 -0.7 -1.0 0.4 -0.1	0.4 -1.0 -0.7 -0.1 -0.5 -1.7 -3.1 -4.2 1.4 -0.3 -0.2	-0.1 0.4 -2.1 -1.6 -0.8 -1.4 -2.8 -5.0 -6.2 1.8	-0.2 0.1 -3.2 -2.4 -1.8 -2.4 -3.4 -5.9 -6.5 2.2	0.1 0.5 -3.6 -2.5 -1.8 -2.6 -4.3 -6.9 -8.4 2.6	0.4 1.0 -3.8 -2.4 -1.5 -2.4 -4.9 -7.6 -10.6 2.8
White & Black Caribbean White & Black African White & Asian Other Mixed Indian Pakistani Bangladeshi Chinese Other Asian Black African Black Caribbean	0.0 -0.2 -0.2 0.0 -0.1 -0.4 -0.7 -1.0 0.4 -0.1 -0.1 -0.4	0.4 -1.0 -0.7 -0.1 -0.5 -1.7 -3.1 -4.2 1.4 -0.3	-0.1 0.4 -2.1 -1.6 -0.8 -1.4 -2.8 -5.0 -6.2 1.8 -0.5	-0.2 0.1 -3.2 -2.4 -1.8 -2.4 -3.4 -5.9 -6.5 2.2 -0.4 0.9 -2.0	0.1 0.5 -3.6 -2.5 -1.8 -2.6 -4.3 -6.9 -8.4 2.6 -0.6	0.4 1.0 -3.8 -2.4 -1.5 -2.4 -4.9 -7.6 -10.6 2.8
White & Black Caribbean White & Black African White & Asian Other Mixed Indian Pakistani Bangladeshi Chinese Other Asian Black African	0.0 -0.2 -0.2 -0.0 -0.1 -0.4 -0.7 -1.0 0.4 -0.1 -0.1 -0.4 -0.6	0.4 -1.0 -0.7 -0.1 -0.5 -1.7 -3.1 -4.2 1.4 -0.3 -0.2	-0.1 0.4 -2.1 -1.6 -0.8 -1.4 -2.8 -5.0 -6.2 1.8 -0.5 0.0	-0.2 0.1 -3.2 -2.4 -1.8 -2.4 -3.4 -5.9 -6.5 2.2 -0.4 0.9	0.1 0.5 -3.6 -2.5 -1.8 -2.6 -4.3 -6.9 -8.4 2.6 -0.6 1.5	0.4 1.0 -3.8 -2.4 -1.5 -2.4 -4.9 -7.6 -10.6 2.8 -0.6 1.8
White & Black Caribbean White & Black African White & Asian Other Mixed Indian Pakistani Bangladeshi Chinese Other Asian Black African Black Caribbean Other Black Arab	0.0 -0.2 -0.2 0.0 -0.1 -0.4 -0.7 -1.0 0.4 -0.1 -0.1 -0.4 -0.3	0.4 -1.0 -0.7 -0.1 -0.5 -1.7 -3.1 -4.2 1.4 -0.3 -0.2 -1.4	-0.1 0.4 -2.1 -1.6 -0.8 -1.4 -2.8 -5.0 -6.2 1.8 -0.5 0.0	-0.2 0.1 -3.2 -2.4 -1.8 -2.4 -3.4 -5.9 -6.5 2.2 -0.4 0.9 -2.0	0.1 0.5 -3.6 -2.5 -1.8 -2.6 -4.3 -6.9 -8.4 2.6 -0.6 1.5	0.4 1.0 -3.8 -2.4 -1.5 -2.4 -4.9 -7.6 -10.6 2.8 -0.6 1.8
White & Black Caribbean White & Black African White & Asian Other Mixed Indian Pakistani Bangladeshi Chinese Other Asian Black African Black Caribbean Other Black Arab Other Ethnic Group	0.0 -0.2 -0.2 0.0 -0.1 -0.4 -0.7 -1.0 0.4 -0.1 -0.1 -0.4 -0.3 -0.3	0.4 -1.0 -0.7 -0.1 -0.5 -1.7 -3.1 -4.2 1.4 -0.3 -0.2 -1.4 -2.4 -0.6 -1.1	-0.1 0.4 -2.1 -1.6 -0.8 -1.4 -2.8 -5.0 -6.2 1.8 -0.5 0.0 -2.1 -4.4 -1.1 -2.1	-0.2 0.1 -3.2 -2.4 -1.8 -2.4 -3.4 -5.9 -6.5 2.2 -0.4 0.9 -2.0 -5.9 -1.5 -2.9	0.1 0.5 -3.6 -2.5 -1.8 -2.6 -4.3 -6.9 -8.4 2.6 -0.6 1.5 -2.1 -7.1 -2.1 -3.4	0.4 1.0 -3.8 -2.4 -1.5 -2.4 -4.9 -7.6 -10.6 2.8 -0.6 1.8 -2.3 -8.1 -2.7 -3.7
White & Black Caribbean White & Black African White & Asian Other Mixed Indian Pakistani Bangladeshi Chinese Other Asian Black African Black Caribbean Other Black Arab	0.0 -0.2 -0.2 0.0 -0.1 -0.4 -0.7 -1.0 0.4 -0.1 -0.1 -0.4 -0.3	0.4 -1.0 -0.7 -0.1 -0.5 -1.7 -3.1 -4.2 1.4 -0.3 -0.2 -1.4 -2.4 -0.6	-0.1 0.4 -2.1 -1.6 -0.8 -1.4 -2.8 -5.0 -6.2 1.8 -0.5 0.0 [-2.1 -4.4 -1.1	-0.2 0.1 -3.2 -2.4 -1.8 -2.4 -3.4 -5.9 -6.5 2.2 -0.4 0.9 -2.0 -5.9 -1.5	0.1 0.5 -3.6 -2.5 -1.8 -2.6 -4.3 -6.9 -8.4 2.6 -0.6 1.5 -2.1 -7.1	0.4 1.0 -3.8 -2.4 -1.5 -2.4 -4.9 -7.6 -10.6 2.8 -0.6 1.8 -2.3 -8.1 -2.7

Source: GLA 2016-based housing-led and central trend ethnic group projections

Figures may not add due to rounding

The GLA aggregated White group in Appendix 1.

Figure 3: Differences between housing-led and central trend variant ethnic group projection trajectories - Greater London



Source: GLA 2016-based housing-led and central trend ethnic group projections

Ethnic Group distribution

Table 4 shows Greater London ethnic compositions for the housing-led variant. The proportion of the White population is projected to decrease from 59.8 per cent in 2011 to 54.2 per cent in 2041. The proportion of the BAME population is projected to increase from 40.2 per cent in 2011 to 45.8 per cent in 2041.

Over the period the proportion of the White British group is projected to decrease from 44.9 per cent in 2011 to 34.9 per cent in 2041. Conversely, the proportion of the Other White group is projected to increase from 12.7 per cent in 2011 to 17.5 per cent in 2041.

The proportions of most other individual ethnic groups are projected to increase by only one or two percentage points or less, although the majority of increases will occur between 2011 and 2026. The Indian, Black African, and Other Asian groups are projected to maintain their major shares, reaching 7.5 per cent, 7.7 per cent, and 6.2 per cent respectively in 2041.

The exceptions are the White Irish group whose proportion is projected to decrease from 2.2 per cent in 2011 to 1.8 per cent in 2041, and the Black Caribbean group whose proportion is projected to decrease from 4.2 per cent in 2011 to 3.4 per cent in 2041.

Table 4: Distribution between ethnic groups: housing-led - Greater London, 2011 to 2041

2016-based housing-led	2011	2016	2021	2026	2031	2036	2041
White British	44.9	40.4	38.3	36.9	36.0	35.4	34.9
White Irish	2.2	2.1	2.0	1.9	1.9	1.8	1.8
Other White	12.7	14.9	16.0	16.7	17.0	17.3	17.5
White & Black Caribbean	1.5	1.5	1.5	1.6	1.6	1.6	1.6
White & Black African	0.8	0.9	0.9	1.0	1.0	1.0	1.0
White & Asian	1.2	1.4	1.5	1.5	1.5	1.5	1.5
Other Mixed	1.5	1.7	1.8	1.9	2.0	2.0	2.0
Indian	6.6	7.0	7.1	7.3	7.4	7.5	7.5
Pakistani	2.7	3.0	3.1	3.1	3.2	3.2	3.3
Bangladeshi	2.7	2.9	2.9	2.9	2.9	2.9	2.9
Chinese	1.5	1.7	1.7	1.8	1.8	1.8	1.8
Other Asian	4.9	5.4	5.7	5.9	6.1	6.2	6.2
Black African	7.0	7.2	7.3	7.4	7.5	7.6	7.7
Black Caribbean	4.2	4.0	3.7	3.6	3.5	3.5	3.4
Other Black	2.1	2.3	2.3	2.4	2.4	2.5	2.5
Arab	1.3	1.5	1.6	1.7	1.8	1.8	1.8
Other Ethnic Group	2.1	2.3	2.5	2.6	2.6	2.7	2.7
BAME	40.2	42.6	43.7	44.5	45.1	45.5	45.8
White 1	<i>59.8</i>	<i>57.4</i>	<i>56.3</i>	<i>55.5</i>	<i>54.9</i>	<i>54.5</i>	54.2

Source: GLA 2016-based housing-led ethnic group projections

¹ The GLA aggregated White group in Appendix 1.

Simpson's Diversity Index

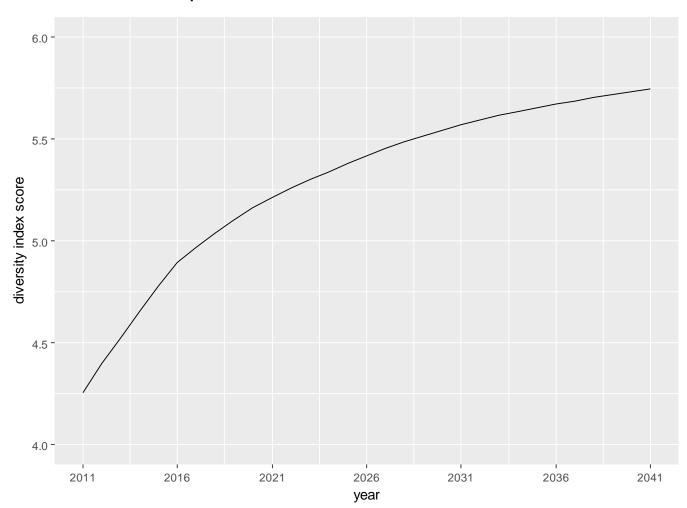
A diversity index is a measure of how well distinct groups are represented within a population. This analysis uses the Simpson's Diversity Index (SDI) to map ethnic diversity at borough level for the 17 ethnic group categories in the GLA projections.

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.

For any given calculation of diversity indices, the maximum value would denote a totally diverse population i.e. an equally sized population within all ethnic group categories. In this analysis, such a population would have a diversity score of 17 (corresponding to the 17 ethnic groups). The minimum value cannot be lower than one. A diversity index score of one would denote a population which comprises entirely of one ethnic group.

Figure 4: Simpson's Diversity Index Greater London, 2011-2041



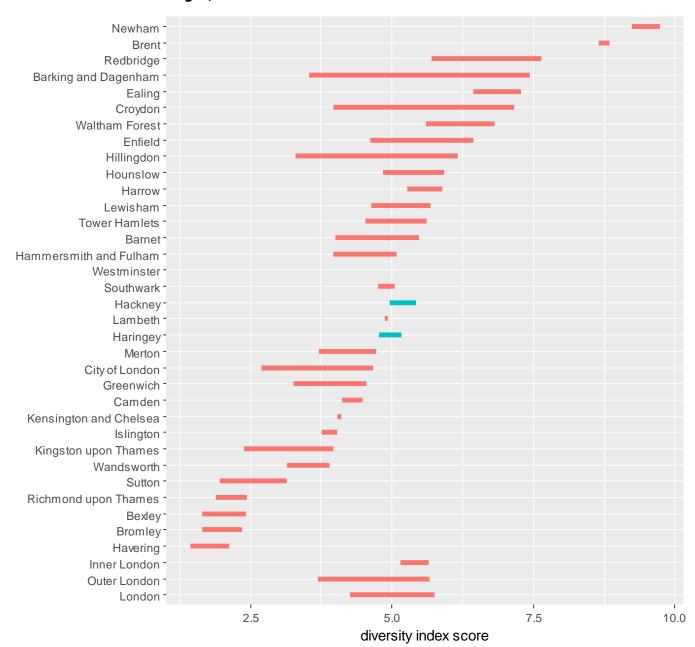
Source: GLA 2016-based housing-led ethnic group population projections

Figure 4 shows the SDI score for London for the period 2011 to 2041 (using the housing-led variant). In 2011 London's SDI was 4.25. It is projected to increase sharply over the initial years of the projection reaching 5.74 in 2041.

Figure 5 shows the change in SDI score for each London borough over the projection period 2011-2041. The red bars indicate boroughs which become more diverse. For these boroughs, the left of the bar denotes the SDI score in 2011 and the right denotes the SDI score in 2041. Thus, a longer bar indicates a greater change in diversity.

Hackney and Haringey are projected to become less diverse over the projection period (denoted by the blue bars). In this case the right-hand side of the bar is the 2011 value and the left-hand side is the 2041 value.

Figure 5: Simpson's Diversity Index London Boroughs, 2011-2041



Source: GLA 2016-based housing-led ethnic group population projections **Note**: red bars indicate positive change over 2011-2041, blue bars indicate negative change

Newham is by far the most diverse London borough according to the Simpson's Diversity Index. In 2011 Newham had an SDI score of 9.24, significantly greater than Brent, the second most diverse borough, which has a score of 8.66. Newham's diversity is projected to increase and will reach 9.73 in 2041.

The greatest change in diversity will be in Barking & Dagenham which is projected to increase from a score of 3.55 in 2011 to 7.44 in 2041 taking it from the ninth least diverse borough to the fourth most diverse. In 2011 the population of Barking & Dagenham was 49 per cent White British, resulting in a low diversity score. Over the 25-year projection period the size of the White British group is projected to fall by 20 per cent. This, coupled with significant rises in other groups (e.g. 192% Other White, 198% Indian, 202% Other Asian), means that by 2041 the White British group will account for just 23 per cent of the total. This shift away from a single dominant group to a more balanced distribution explains the increase in diversity score.

In Hackney diversity is projected to decrease over the period from 5.42 to 4.97. The largest groups in Hackney in 2011 were White British (36%) and Other White (16%). Over the projection period both of these groups are projected to grow so that by 2041 the White British (38%) and White Other (20%) account for a greater proportion of the total. The increase in already dominant groups leads to a reduction in diversity score.

Diversity in Outer London will increase substantially more than diversity in Inner London. By the end of the period diversity in these areas will have an almost identical diversity score (6.56 Inner, 6.57 Outer), although the mix of ethnicities will be very different. Table 5 shows the proportion of the population in each ethnic group in 2041. While Inner and Outer London are equally diverse, their makeup is different. Among the differences, the most notable are perhaps that Inner London has a higher Other White population while Outer London has a larger Indian population.

Table 5: Proportion of total population by Ethnic group, 2041

Ethnic group	Inner London	Outer London	Greater London
White British	34%	36%	35%
White Irish	2%	2%	2%
Other White	21%	15%	17%
White & Black Caribbean	2%	2%	2%
White & Black African	1%	1%	1%
White & Asian	2%	1%	1%
Other Mixed	2%	2%	2%
Indian	4%	10%	8%
Pakistani	2%	4%	3%
Bangladeshi	4%	2%	3%
Chinese	2%	1%	2%
Other Asian	4%	8%	6%
Black African	8%	8%	8%
Black Caribbean	4%	3%	3%
Other Black	3%	2%	2%
Arab	2%	2%	2%
Other	3%	2%	3%

Source: GLA 2016-based housing-led ethnic group projections

Appendix 1: GLA projection 17 ethnic groups and how they relate to the 2011 Census ethnic groups

GLA ethnic model

seventeen-group

GLA agreement Ethnic Crown Breeze

	-	seventeen-group	ten-group		
ONS 2011 Census Ethnic Group (18)	ONS 2001 Census Ethnic Category (16)	GLA Ethnic Group	GLA Aggregated Ethnic Group (AEG) ²	Broad Ethnic Group	GLA White or BAME ¹
White: English/Welsh/Scottish/Northern Irish/British	White: British	White British			
White: Irish	White: Irish	White Irish	White	White	White
White: Gypsy or Irish Traveller ⁴ White: Other White	White: Other White	Other White	vviille	vviite	vviiite
Black/African/Caribbean/Black British: Caribbean	Black or Black British: Caribbean	Black Caribbean	Black Caribbean		
Black/African/Caribbean/Black British: African	Black or Black British: African	Black African	Black African		
Black/African/Caribbean/Black British: Other Black	Black or Black British: Other Black	Other Black		Black	
Mixed/multiple ethnic group: White and Black Caribbean	Mixed: White & Black Caribbean	White & Black Caribbean	Black Other		
Mixed/multiple ethnic group: White and Black African	Mixed: White & Black African	White & Black African			
Asian/Asian British: Indian	Asian or Asian British: Indian	Indian	Indian		
Asian/Asian British: Pakistani	Asian or Asian British: Pakistani	Pakistani	Pakistani		BAME
Asian/Asian British: Bangladeshi	Asian or Asian British: Bangladeshi	Bangladeshi	Bangladeshi	Asian	
Asian/Asian British: Chinese	Chinese or Other: Chinese	Chinese	Chinese	Asian	
Mixed/multiple ethnic group: White and Asian	Mixed: White & Asian	White & Asian	Other Asian ³		
Asian/Asian British: Other Asian	Asian or Asian British: Other Asian	Other Asian 3	Other Asian		
Mixed/multiple ethnic group: Other Mixed	Mixed: Other Mixed	Other Mixed			
Other ethnic group: Arab 4		Arab	Other	Other	
Other ethnic group: Any other ethnic group	Chinese or Other: Other	Other Ethnic Group			

BAME (Black, Asian and Minority Ethnic) denotes a grouping of all ethnic groups except the white groups.

Two additional ethnic groups were introduced in the 2011 Census for England & Wales, "White: Gypsy or Irish Traveller", and "Other ethnic group: Arab". To date there is no detailed Census data or ONS studies thereof available that establish linkage between the 2011 groups and higher-level ethnic group aggregations used in relation to data from previous Censuses. To allow comparison with previous GLA ethnic projections and permit use of the GLA 10-group ethnic model until superseded by the 17-group model in 2016 (2015 Round) the two new groups were allocated to the White and Other GLA Aggregated Ethnic Groups respectively, as shown in the table above.

Note the different terminology used by ONS in the last two censuses for the main White group: "White: British" in the 2001 Census and "White: English/Welsh/Scottish/Northern Irish/British" in the 2011 Census. It has been assumed that this is the same ethnic group reflecting people who consider themselves of White background relating to the United Kingdom of Great Britain and Northern Ireland (this excludes White people from the Republic of Ireland, who are defined as a separate group, White Irish, in both Censuses). Technically this 2011 Census group would be summarised as "White UK", but is referred to as "White British" for consistency and continuity.

² Approximate to the ten Ethnic Groups used in the 1991 Census, using best fit comparison described in DMAG Briefing 2003/9, 2001 Census Key Statistics: Ethnicity, religion and country of birth.

³ Although the same name for the Other Asian group is used in both GLA models the definitions are different.

⁴ These two 2011 Census ethnic groups (Gypsy or Irish Traveller and Arab) were not defined separately in the 2001 Census.

Appendix 2: Change in Base Ethnic Populations between 2001 and 2011

Table 5 summarises mid-year populations by Census ethnic group in Greater London in the last two Census years.

Table 6: Summary of change in ethnic populations between 2001 and 2011 - Greater London

			2001-11	2001-11
Census Ethnic Group	2001	2011	Change	% Change
All Ethnicities	7,336,900	8,217,500	880,600	12.0
White British	4,374,300	3,687,700	-686,600	-15.7
White Irish	225,400	176,800	-48,600	-21.6
White Gypsy or Irish Traveller		8,200		
Other White ¹	617,000	1,039,300	422,400	68.5
White & Black Caribbean	72,200	120,100	47,800	66.2
White & Black African	35,100	65,900	30,900	88.1
White & Asian	61,400	102,200	40,800	66.4
Other Mixed	62,500	119,700	57,200	91.5
Indian	446,300	546,300	100,000	22.4
Pakistani	146,500	225,500	79,000	53.9
Bangladeshi	157,600	223,900	66,300	42.0
Chinese	82,200	124,600	42,400	51.5
Other Asian	136,900	400,700	263,800	192.7
Black African	390,200	577,000	186,800	47.9
Black Caribbean	350,900	346,200	-4,700	-1.3
Other Black	61,800	171,000	109,200	176.6
Arab		106,500		
Other Ethnic Group ¹	116,500	175,800	59,300	50.9
BAME	2,120,200	3,305,400	1,185,200	55.9
White ²	5,216,700	4,912,100	-304,600	<i>-5.8</i>

Source: ONS Census, ONS MYE, GLA demographic projections

Figures may not add due to rounding

Figures for 2001 are 2001 Census data scaled to the ONS 2001 Mid-Year Estimates incorporating GLA-adjusted Mid-Year 0 to 4-year-olds (implemented in order to better reflect the pattern of births in each borough) using Census ethnic proportions. Equivalent populations aggregated to ten GLA Aggregated Ethnic Groups were used as base ethnic populations for previous rounds of GLA ethnic projections.

Figures for 2011 are derived from 2011 Census ethnic sex and single-year-of-age scaled to the ONS 2011 Mid-Year Estimates incorporating GLA-adjusted Mid-Year 0 to 3-year-olds (implemented in order to better reflect the pattern of births in each borough) using Census ethnic proportions.

¹ These groups may not be exactly comparable between Censuses due to the addition of the White Gypsy or Irish Traveller and Arab groups in the 2011 Census

² The GLA aggregated White group in Appendix 1.

Over the decade the population of Greater London increased from 7.3 million to 8.2 million, an increase of 0.9 million (12 per cent). However, the White British population declined from 4.4 million to 3.7 million, a notable decline of 0.7 million (16 per cent). The White Irish population declined by 49 thousand (a relative decline of 22 per cent), and the Black Caribbean population declined slightly by five thousand (one per cent). All other ethnic group populations increased, resulting in a net increase in the BAME population of 1.2 million (56 per cent) to 3.3 million.

In 2001 the biggest ethnic group after White British was Other White (617 thousand) and this group grew by 422 thousand to over 1 million people by 2011, an increase of 69 per cent. However, the comparison for this group is indicative only as it may not be exactly comparable between Censuses due to the addition of the White Gypsy or Irish Traveller group in the 2011 Census. The comparison for the Other Ethnic Group is also indicative only due to the addition of the Arab group in the 2011 Census.

The decrease in the White British population was largely offset by the increase in the Other White population, so that the overall White population decreased by only 5.8 per cent (305 thousand).

In 2001 the Indian population was the biggest of the individual BAME groups. By 2011 the Black African group was the biggest individual BAME group, with a population of 577 thousand compared to 546 thousand for the Indian group.

The greatest relative increases were for the Other Asian group, which grew by 193 per cent (264 thousand), and the Other Black group, which grew by 177 per cent (109 thousand). The individual Mixed groups (White & Black Caribbean, White & Black African, White & Asian, and Other Mixed) also grew in relative terms, ranging from 66 per cent to 92 per cent increases.

In 2011 the Greater London White Gypsy or Irish Traveller population was 8 thousand. This was considered too small to model demographically at borough level. Therefore the 2011 base ethnic populations used in the GLA seventeen-group ethnic model are the 2011 populations in Table 1, with the White Gypsy or Irish Traveller group being aggregated into the Other White group.

Availability of Data

The GLA 2016-based housing-led and central trend ethnic group population projections are available on the GLA London Datastore, which is the depository for all current and recent GLA projections and related reports:

http://data.london.gov.uk/demography/

ONS Census Commissioned tables:

New website (search required):

https://www.ons.gov.uk/aboutus/whatwedo/statistics/requestingstatistics/alladhocs Archived:

http://www.ons.gov.uk/ons/about-ons/business-transparency/freedom-of-information/what-can-i-request/published-ad-hoc-data/census/index.html

Routine ONS Census outputs are available on NOMIS:

https://www.nomisweb.co.uk/

ONS 2011 Mid-Year Estimates are available on the ONS website:

http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/mid-2011-and-mid-2012/stb---mid-2011---mid-2012-uk-population-estimates.html