

Greater London Authority Sub-national modelling

Ben Corr/Wil Tonkiss

27 March, Leeds

Content

- GLA Trend model
 - Overview
 - Outputs
 - National picture
- Housing-led model
- Integrated models

Trend model

- Cohort component model
- Multi-region migration
- Configurable
- Incorporates DCLG household model
- Validated by CPC, Southampton
- Preferred option for London - underpins the London Plan

Trend model gui

Cohort Component Model

GLAINTELLIGENCE DEMOGRAPHY

Model Fertility Mortality Domestic International In International Out Outputs Save

Model Details

[Run Model](#)

File name
CCM Model 2017-03-24 1723

Output folder
Q:/Teams/D&PA/Projections/R Mo

Projection Parameters

First projection year 2015

years to project 35

Constrain to NPP

- No Constraint
- Constrain to 2012 NPP
- Constrain to 2014 NPP

DCLG Household Model

- 2012 DCLG model
- 2014 DCLG model

Metadata

User

Comments

Ready

Trend model gui

Model Fertility Mortality **Domestic** International In

Domestic Migration

Last year to use

2014

Use latest available data

years to average

1 5 12

1 3 5 7 9 11 12

NPP cross-border constraint

none

2012 NPP

2014 NPP

Model Fertility Mortality Domestic International In International Out

Standard Outputs (SNPP)

Births by mother's age

Deaths by sya

International In by sya

International Out by sya

Additional Outputs

Population	Fertility	Mortality
<input checked="" type="checkbox"/> Machine Readable File	<input checked="" type="checkbox"/> Total Births	<input checked="" type="checkbox"/> Total deaths
<input checked="" type="checkbox"/> District totals	<input checked="" type="checkbox"/> TFR	<input checked="" type="checkbox"/> Life expectancy
<input checked="" type="checkbox"/> Regional totals	<input checked="" type="checkbox"/> ASFR	
<input checked="" type="checkbox"/> Regional sya		

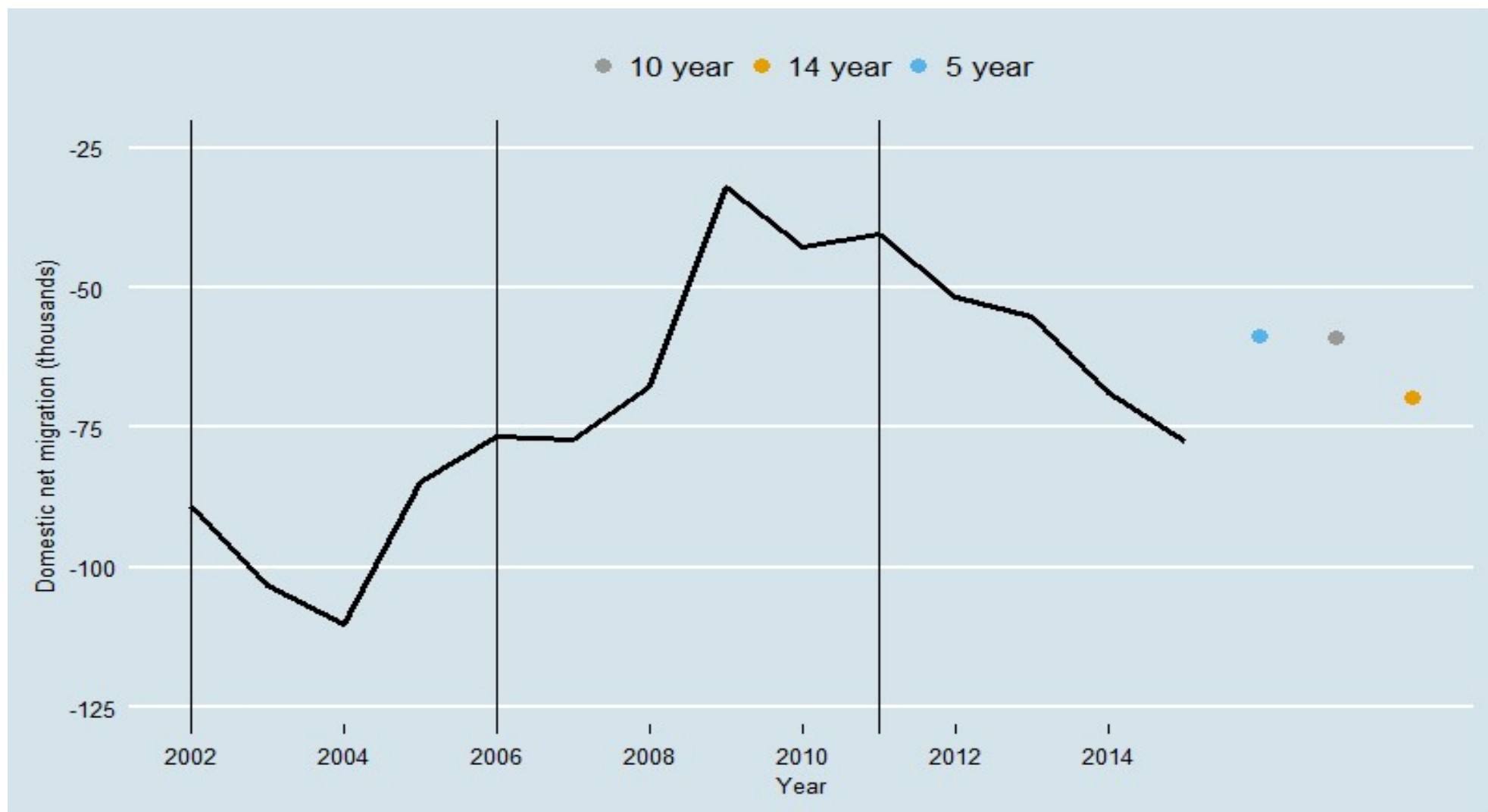
Other

Households

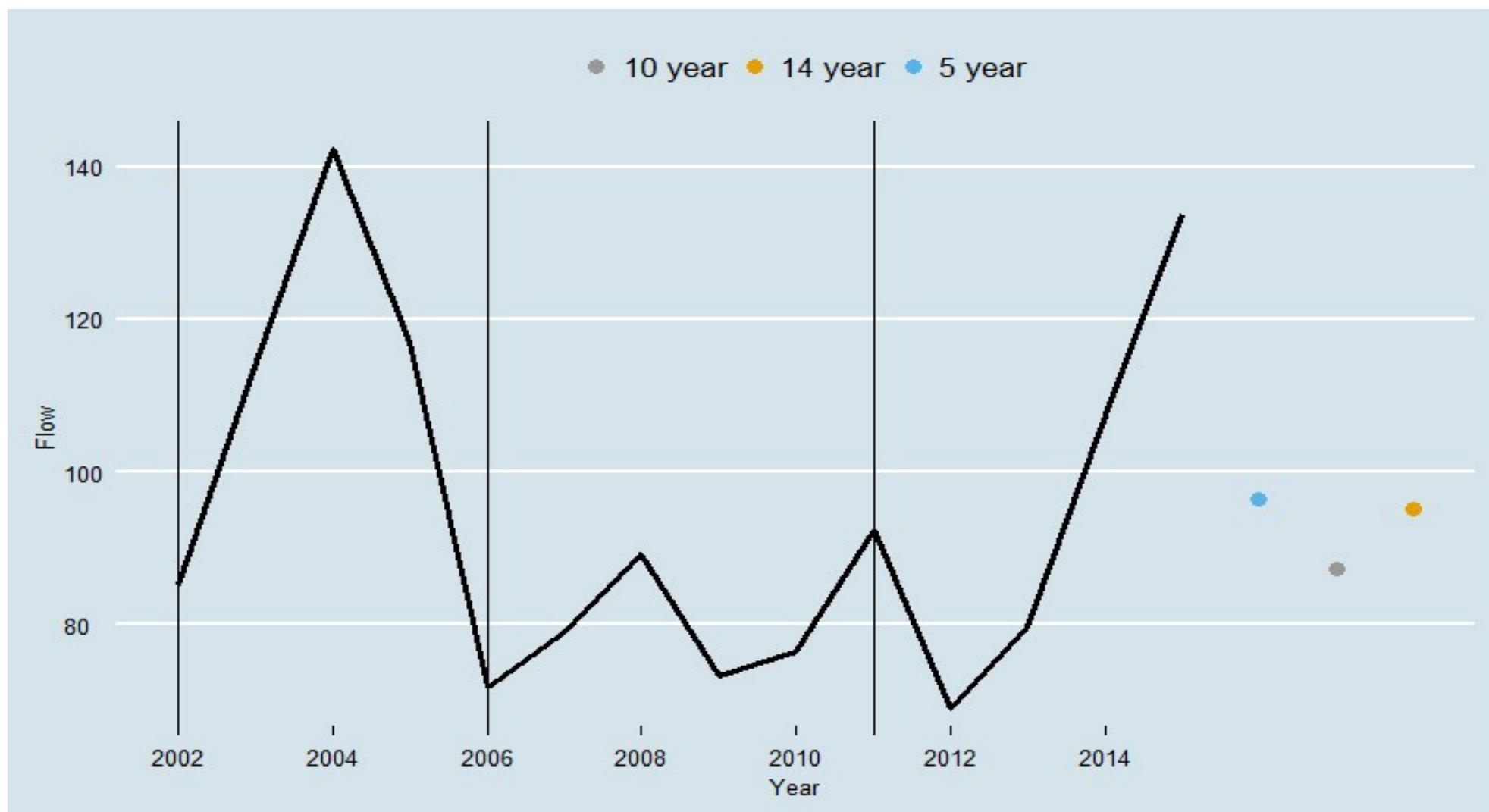
Ethnic group model inputs

School Rolls model inputs

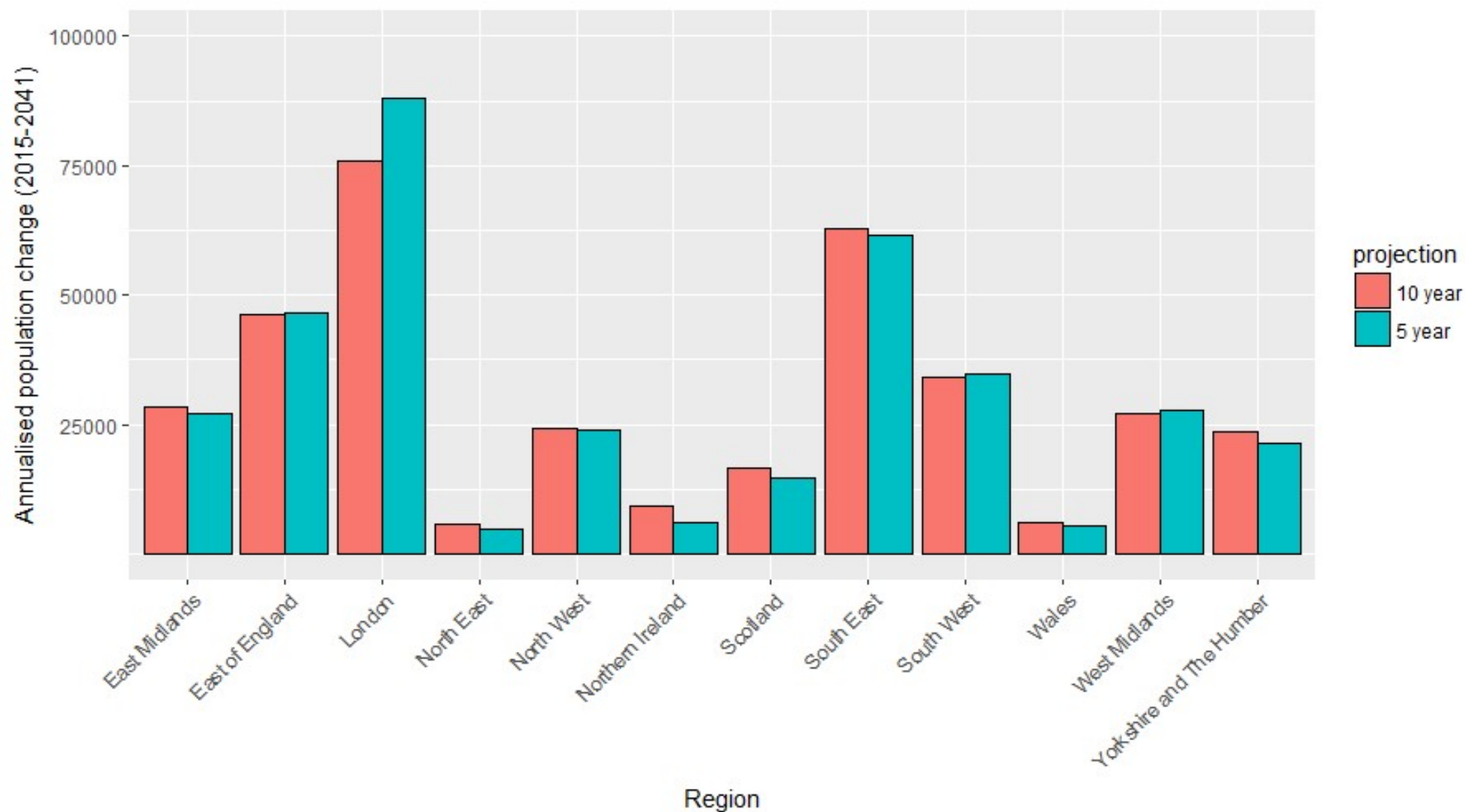
Net domestic: london



Net international: london



Trend model: national results



Model application

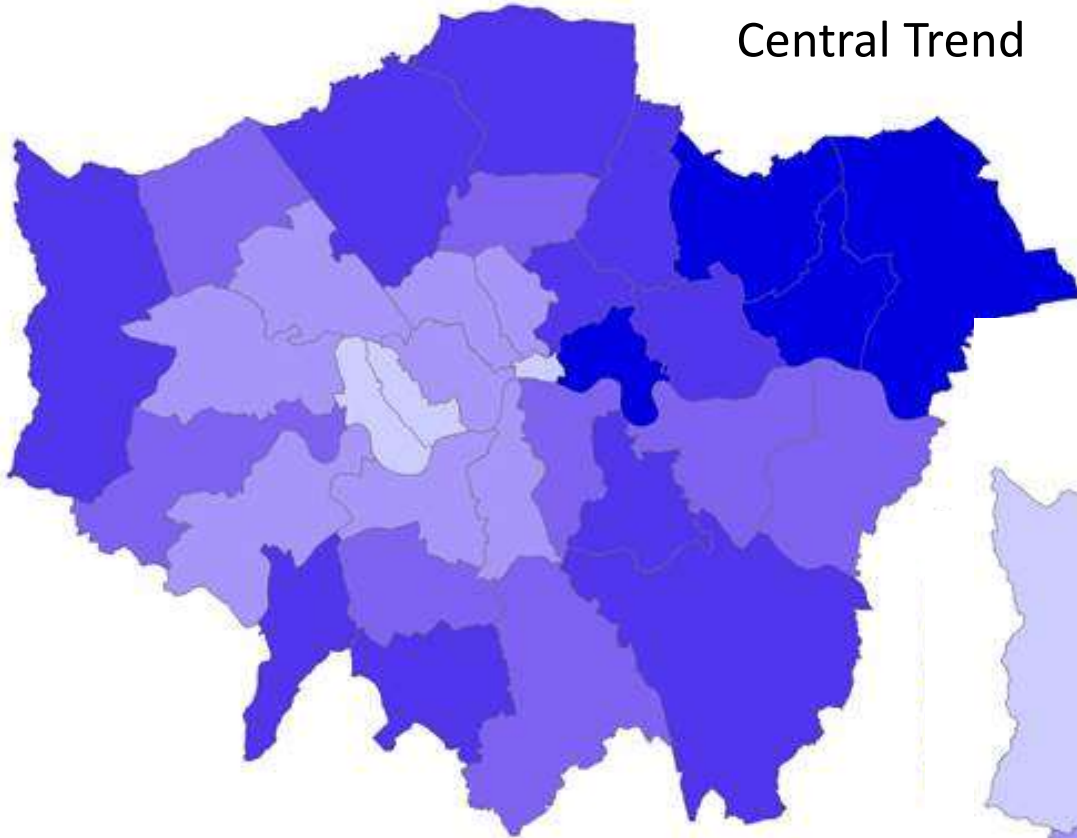
- Underpins the London Plan
 - London borough housing targets
- Indicative impacts for planning process across the Wider South-East Region

Housing-led model

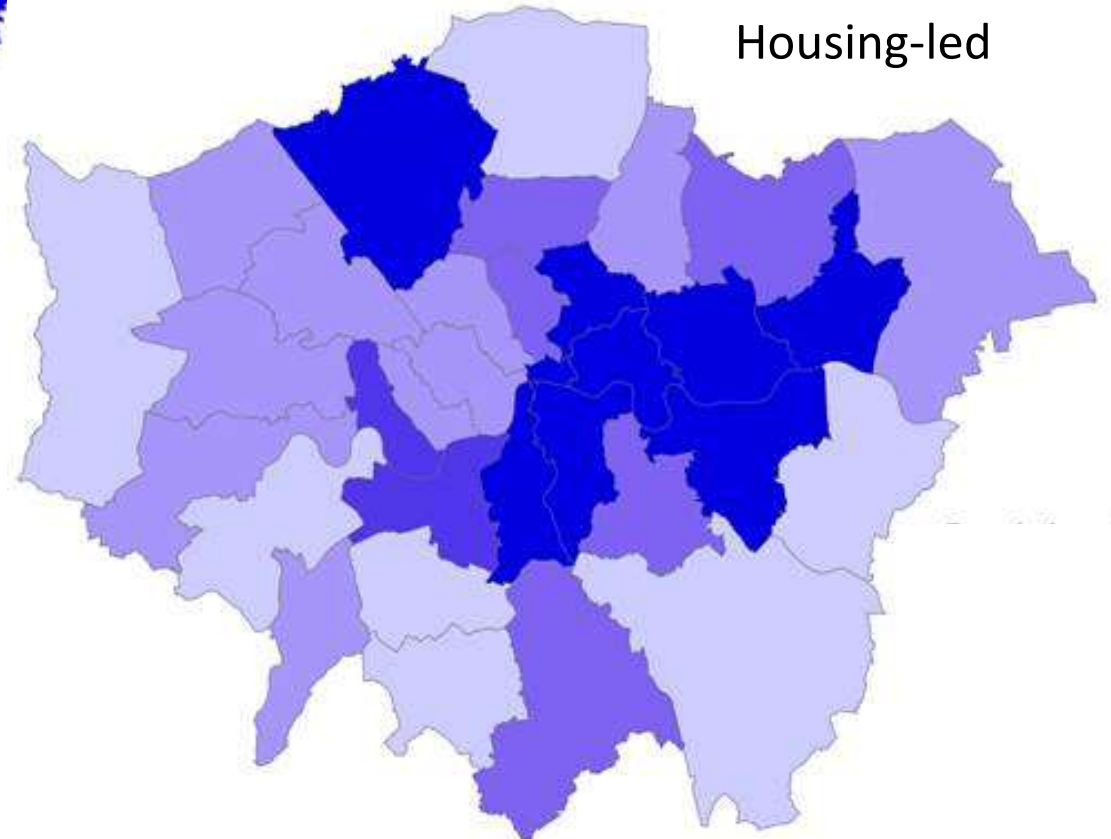
- Provides an alternative to purely trend-based modelling
- Incorporates local intelligence about past and future house building
- Amends domestic migration flows to reconcile population with housing supply
- Constrains to the trend population at the level of the Housing Market Area

Variant model results

Central Trend



Housing-led



Population change 2015-2041



Integrated models

- Small area model (ward & msoa)
- Ethnic group model (17 groups)
- Employment-led model (gva growth +/- 3%)
- School Rolls projection model

Documentation & contact

London Datastore:

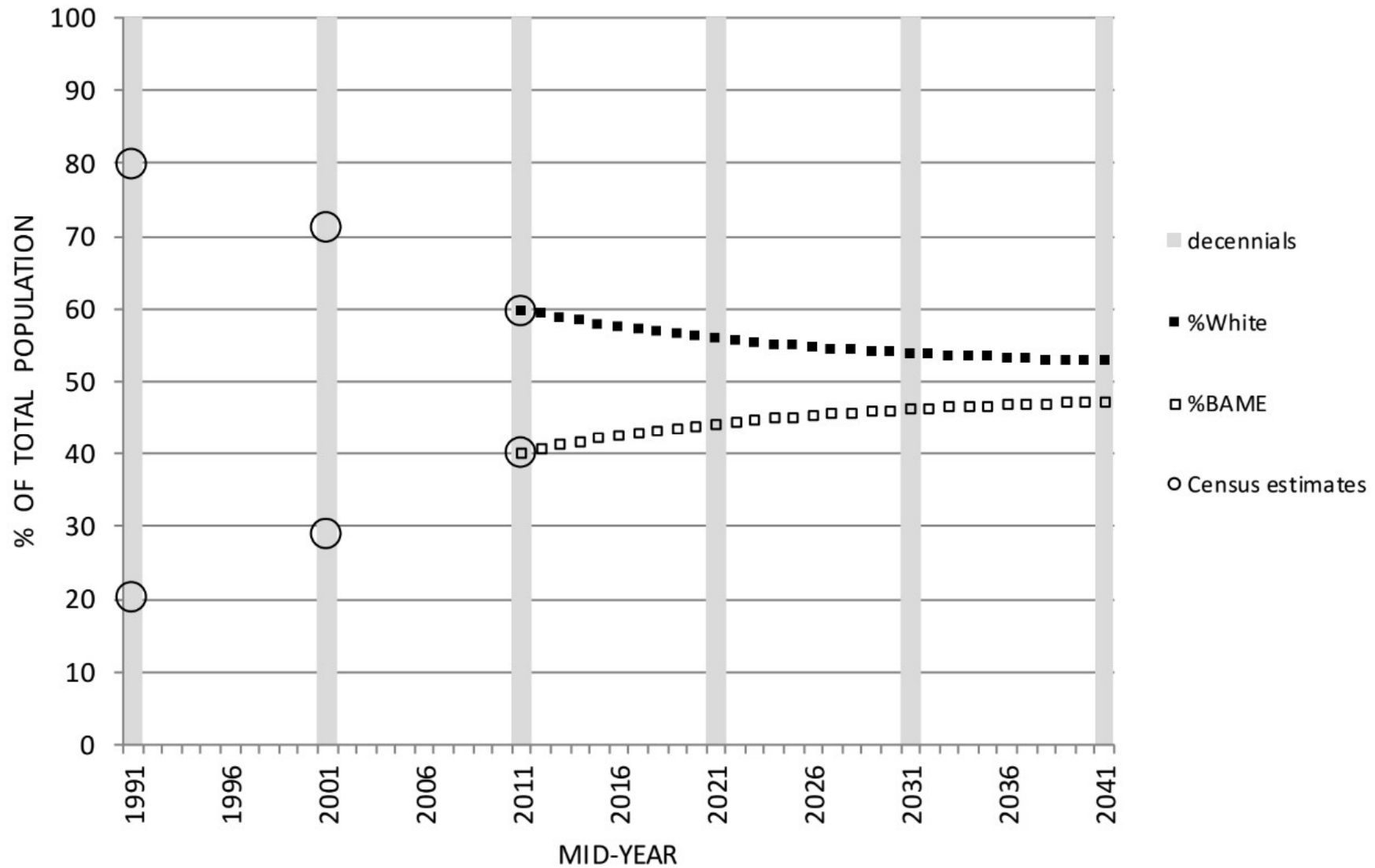
- Model methodology documents
- Model output files (London only)
- <https://data.london.gov.uk/demography/>

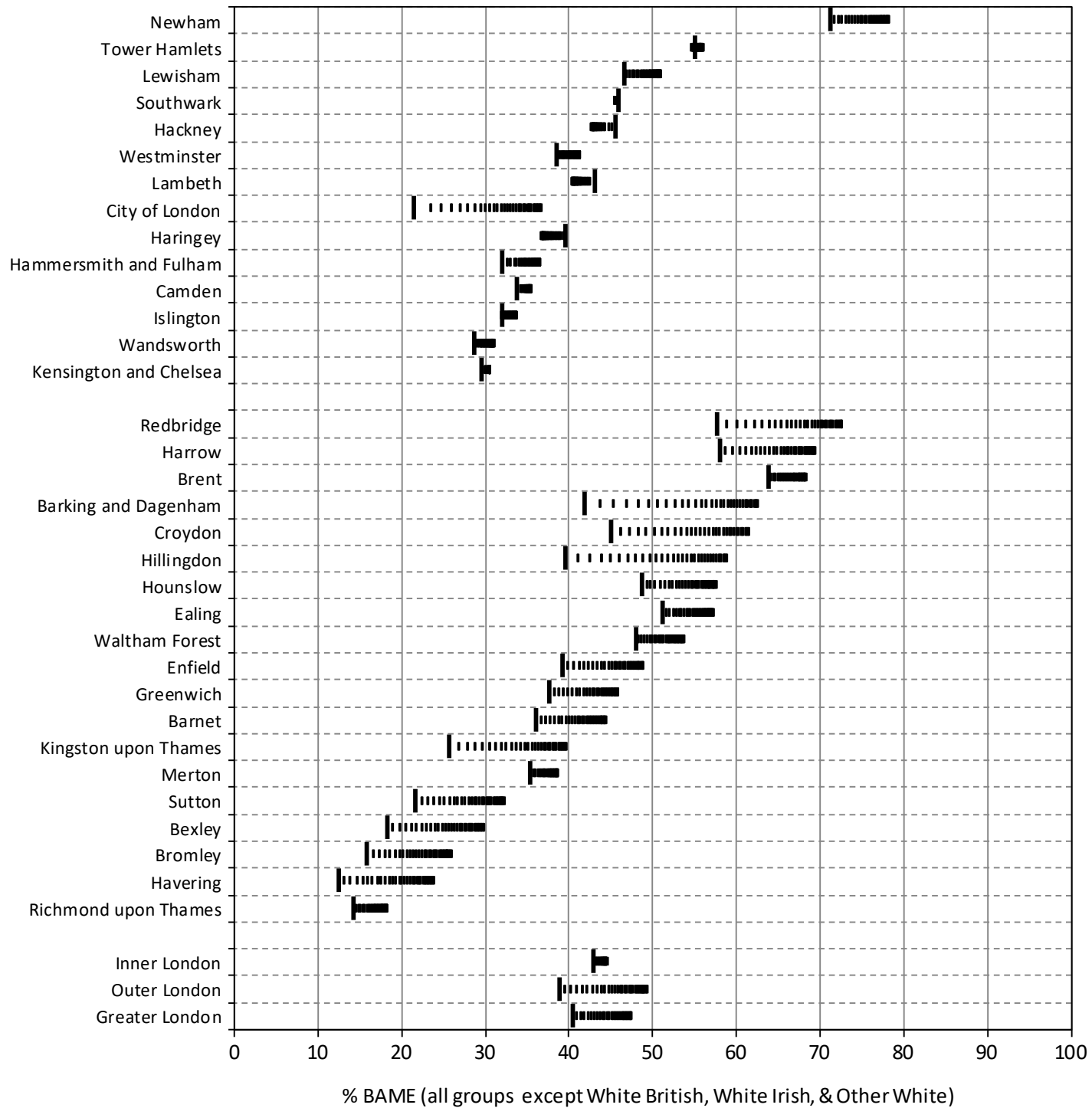
Contact

demography@london.gov.uk

Example outputs

Ethnic group model






% BAME (all groups except White British, White Irish, & Other White)

Ethnic group model

Ethnic Group	2011	2016	2041	2016-41	2016-41
				Change	%
All Ethnicities	8,217,500	8,727,300	10,449,000	1,721,700	20
White British	3,687,700	3,538,000	3,496,100	-41,900	-1
White Irish	176,800	183,200	190,000	6,800	4
Other White	1,047,600	1,291,000	1,817,900	526,900	41
White & Black Caribbean	120,100	133,300	172,300	39,000	29
White & Black African	65,900	78,400	106,300	27,800	35
White & Asian	102,200	120,300	155,400	35,100	29
Other Mixed	119,700	147,700	212,800	65,100	44
Indian	546,300	609,900	836,600	226,800	37
Pakistani	225,500	261,300	372,600	111,300	43
Bangladeshi	223,900	249,500	328,400	78,900	32
Chinese	124,600	144,700	181,300	36,700	25
Other Asian	400,700	469,000	660,800	191,800	41
Black African	577,000	623,800	780,800	157,000	25
Black Caribbean	346,200	345,500	365,800	20,400	6
Other Black	171,000	197,700	285,400	87,600	44
Arab	106,500	129,900	193,000	63,200	49
Other Ethnic Group	175,800	204,100	293,400	89,400	44

Ward projection profiles



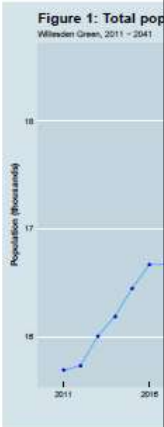
This report provides an overview of the ward of Willesden Green.

Ward Summary	
GSS Code	
Area	
2015 population	
2015 density	
Annualised change (2011-2015)	

¹Note: All data in this report is sourced from the GLA 2015 base ward projections.
<https://data.london.gov.uk/>

Population Change

Figure 1: Total population
Willesden Green, 2011 - 2041



The population of Willesden Green is projected to increase from 15,686 in 2011 to 17,801 in 2041, a 13.5 percent increase over the 30-year period.

Year	Population
2011	15,686
2016	16,670
2021	16,752
2026	16,909
2031	17,173
2036	17,471
2041	17,801

Table 1 outlines the total population of Willesden Green, starting at 15,686 through five-year intervals.

Age Structure

Figure 2 below shows the population of Willesden Green by age group over the projection period from 2011 to 2031.

Figure 2: Population by age group
Willesden Green, 2011 - 2031

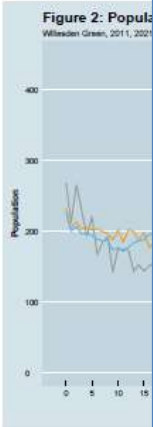


Table 2 disaggregates the population into age groups for different planning purposes. The age groups correspond to school population as traditionally used.

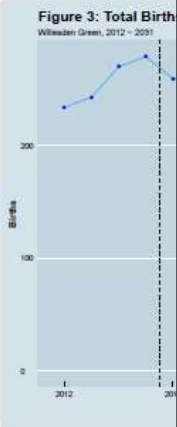
Table 2: Age Structure	
Age Group	
0 to 3	
4 to 10	
11 to 15	
16 to 17	
18 to 64	
65 and over	

The greatest growth in population is projected for the 65 and over age group, where the population is projected to increase from approximately 2,000 in 2011 to 3,000 in 2031.

Components of Change

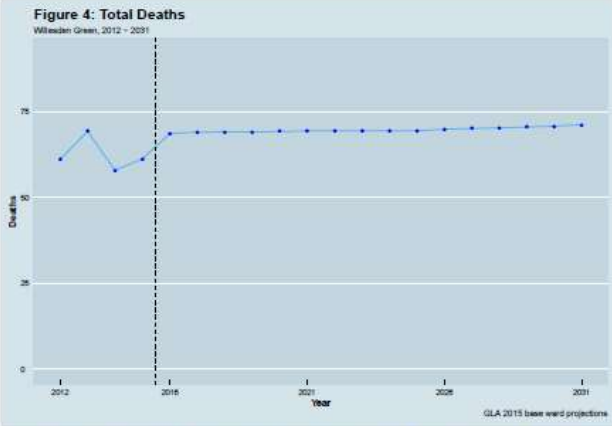
The components of change in population are births and deaths. Births and deaths data include the Office for National Statistics (ONS) data for the period 2012-2015 inclusive, and data for 2016 and after are projected.

Figure 3: Total Births
Willesden Green, 2012 - 2031



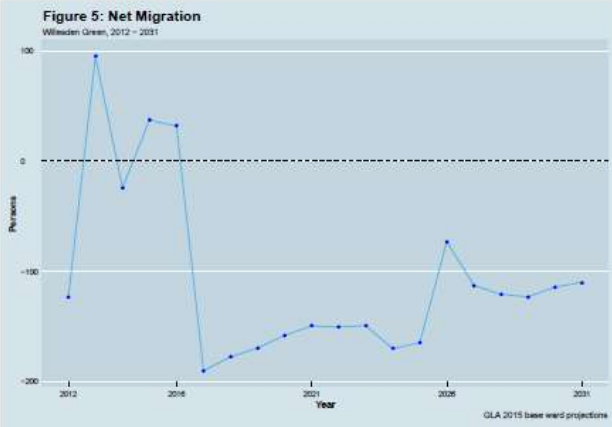
Note: Data for the period 2012-2015 inclusive are observed births, data for 2016 and after are projected.

Figure 4: Total Deaths
Willesden Green, 2012 - 2031



Note: Data for the period 2012-2015 inclusive are observed deaths, data for 2016 and after are projected.

Figure 5: Net Migration
Willesden Green, 2012 - 2031



Note: All migration data is projected, there are no observed values.