

Data Management and Analysis Group

GLA 2008 Round Demographic Projections



Demography

# DMAG Briefing 2009-02

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## **GLA 2008 Round Demographic Projections**

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**Mid-year Estimates**

ONS mid-year population estimates are

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# GLA 2008 Round Demographic Projections

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## Executive Summary

The 2008 Round Demographic Projections update those published as the 2007 Round (*DMAG Briefing 2008-07*).

The new projections differ from their predecessor projections in a number of key ways, in particular:

- The projections recognise actual mid-year to mid-year births and deaths up to mid-2007 as used in the Office for National Statistics (ONS) population estimates change analyses for mid-2001 to mid-2007. Registrations in the calendar year 2007 are also used as first estimates for 2007-08.
- The ONS mid-2006 based assumptions for the future course of total fertility rates and gender/age-specific survival rates in England have been followed.
- The 2004 London Housing Capacity Study (LHCS), as updated in 2006 for the period 2017-27, has been the main determinant of the population distribution amongst the London boroughs. However more recent data from the boroughs (in terms of actual development up to the end of March 2008 and housing trajectories) has enhanced the LHCS.
- The Communities and Local Government's (CLG) revised 2004-based household projections have been used to establish borough household and population totals. The CLG proportions of the population resident in communal establishments, the marital status distributions and household representative rates have been used to link the growth in homes with the potential change in population in each borough.

Two projections have been published:

- The first, referred to as **Low**, is entirely driven by the increase in homes as seen annually since mid-2001 from data collected at borough level by the London development Database (LDD), the LHCS and the boroughs.
- The second projection, **High**, was prepared to establish the impact on London of the ONS 2006-based population projection for England. Apart from following the trends in fertility rates and improved survival, the projection assumes that each London borough's average 2002-07 proportions of England's gross international migration inflow and outflow will continue. These proportions are applied to the ONS assumption for international migration in the period 2007-12. This gives a London population that is used as a higher constraint for the borough populations. The distribution of London's population amongst the boroughs is then determined by the distribution of the **Low** projection. The borough **Low** populations by age/gender each year are grossed to match the High London totals.

The main results of the **Low** projection are that:

- The population in 2006 is estimated to be 7.45 million, with growth of 1.34 million to a 2031 total of 8.79 million.
- Over the same period the number of households rises by 750 thousand from 3.15 million in 2006 to 3.90 million in 2031.

- The majority of the increase in households (547 thousand) will be formed by one-person households, with most of these individuals being aged between 35 and 64.
- Average household size is projected to fall from 2.34 persons in 2006 to 2.23 in 2031.
- Married couple households are expected to continue their long-term decline, falling by 237 thousand to just 790 thousand in 2031. Much of the decline is taken up by the projected 252 thousand increase in cohabiting couples, which are expected to reach 579 thousand in 2031.
- Net migration between 2006 and 2031 amounts to a loss from London of 589 thousand, equivalent to 24 thousand a year.

While at 2031 the new projection shows growth of 1.34 million (18%) since 2006 there are some significant changes in age structure:

- 226 thousand more children aged 0-14, or 16 per cent
- 141 thousand more persons aged 15-29, or 9 per cent
- 158 thousand more persons aged 30-44, or 8 per cent
- 425 thousand more persons aged 45-59, or 34 per cent
- 288 thousand more persons aged 60-74, or 39 per cent
- 102 thousand more persons over 75, or 24 per cent
- of whom, 29 thousand are over 90, or 72 per cent.

The age structure changes amongst adults mainly reflect the relative sizes of past birth cohorts and the population structure of London as recorded at the 2001 Census. The age structures of the migration flows into and out of London fine-tune the changes. The key point of these results is the significant ageing expected in London's population, even though the population profile will show the largest population in the cohorts between 25 and 44.

The main results of the **High** projection are that:

- The population in 2006 is estimated to be 7.54 million, with growth of 1.56 million to a 2031 total of 9.11 million.
- The migration-led increase in population implies that over the same period the number of households would be expected to rise by 846 thousand from 3.19 million in 2006 to 4.04 million in 2031.
- The majority of the increase in households (589 thousand) would be formed by one-person households.
- Average household size is projected to fall from 2.34 persons in 2006 to 2.23 in 2031.
- Married couple households are expected to decline, falling by 223 thousand, while cohabiting couples increase by 266 thousand.
- Net migration between 2006 and 2031 amounts to a loss from London of 516 thousand, equivalent to 21 thousand a year.

**It is generally recommended that the Low projection be used for detailed analysis and planning at the borough and ward levels, but if, in the longer-term, London does**

**continue to attract a higher level of international migrants the High projection should be borne in mind for longer term projects that may ill afford to be planned to cope with a population that turns out to be too low.**

However, should the London population turn out to be significantly higher than implied by the Low projection there can be no certainty as to where and how the extra population will be accommodated. The spatial distribution of the High projection is a pragmatic solution but it could be that some boroughs are better placed to expand housing capacity more rapidly than others. It would also be likely that the average household size in boroughs with a large private renting sector may rise to meet additional demand as more households and singles share accommodation. Even so, TfL prefers to use the High results in long-term transport infrastructure planning while shorter-term school roll planning uses the Low, currently between 2009 and 2019.

At 2007 the ONS mid-year estimate for London is 7.56 million, which is between the two GLA populations but overall closer to High. The difference is due to the GLA revision of numbers of children aged 0 to 4 in 2001 and subsequent years. These revisions are described in a later section. However, the differences between the estimates for 2007 seen for London are not reflected in all boroughs. ONS estimates of international migration destinations have tended to over-estimate the populations of central boroughs; therefore the ONS mid-year estimates are rather higher than either the Low or High GLA figures. Conversely ONS estimates are lower than either of the GLA projections in many boroughs in the rest of inner London.

The population definition of 'usual residents' used in GLA projections is the same as used by ONS. This means that it only considers estimates of international migrants who intend to stay in the UK for at least a year. At present there are no estimates of short-term residents at borough level, though ONS has produced a paper outlining the issues and intends to produce flow estimates at borough level in August 2009. Discussion of some of these issues and analysis of recent National Insurance and NHS data that may imply current levels of short-term residents may be found in *DMAG Briefing 2008-10* and *DMAG Updates 16-2008, 21-2008 and 01-2009*.

## Background

The 2006 Round projections were produced as background for the *Review (Further Alterations) of the London Plan*. Summaries of the RLP projections were published in *Draft Further Alterations to the London Plan* (GLA, September 2006) and GLA Economics and Transport for London used the detailed results in work leading up to the *London Plan Examination in Public* that took place in the summer of 2007. The consolidated amendments to the *London Plan* were published in early 2008.

In the 2007 Round, two projections were prepared on the same basis as in the previous round. These were called PLP (Post London Plan) Low and PLP High.

The 2008 Round again produces two projections on a similar basis to the previous two rounds

These projections have used updated inputs in a number of particulars:

- Since the 2007 Round the data on the annual net increase in new homes have been updated to 2008 and boroughs have provided revised estimates of the annual levels of future increases in homes, mainly based on the housing trajectories. These data are broadly consistent with the 2004 London Housing Capacity Study but set annually rather than over time periods.
- These are used in the Low projection which also incorporates the results of the revised CLG 2004-based household projections in terms of three sets of borough variables that are used to convert populations to households: proportions of the population resident in private households, marital status and household representative rates.

This *Briefing* gives details of all the data incorporated in the projections, the assumptions made and the key results.

## Data used in the Projections

### *Base Population*

The model runs from mid-2001 as its starting point. It uses the re-revised ONS mid-2001 population estimates by single years of age (0 to 90+) and gender published in September 2004, but with a key exception. The mid-year estimates for single years of age 0 to 4 by gender have been adjusted in all boroughs. The reason for this adjustment is that an analysis of the relationships between births (mid-year to mid-year) and the subsequent estimates of 0 year olds to 4 year olds in the five succeeding mid-year estimates showed that the patterns of annual transition, ie from births to 0 year olds, 0 year olds to 1 year olds, etc, showed that the transitions relating to the 2001 mid-year estimates were out of step with the transitions occurring in earlier and subsequent years. A correction was introduced that used the annual transitions for the years 1996 to 2000 to re-estimate the 0-4 year olds. Table 1 shows the London impact of these revisions

**Table 1: Revisions to mid-2001 population aged 0-4: Greater London**

		ONS MYE	Revision	Difference	Difference %
<b>Males</b>	<b>0</b>	49757	52112	2355	4.73
	<b>1</b>	49531	51293	1762	3.56
	<b>2</b>	48574	50170	1596	3.29
	<b>3</b>	48240	49238	998	2.07
	<b>4</b>	48106	48789	683	1.42
<b>Females</b>	<b>0</b>	47380	49633	2253	4.76
	<b>1</b>	47210	48897	1687	3.57
	<b>2</b>	46571	48095	1524	3.27
	<b>3</b>	46524	47471	947	2.04
	<b>4</b>	46929	47630	701	1.49
<b>Persons</b>	<b>0-4</b>	478822	493328	14506	3.03

ONS has also published estimates for mid-2002, to mid-2007. These estimates are not used directly in the projections, but the associated change analyses provide the annual birth and death totals that are used in the model.

The private household population is the basis of the projection of households. To establish the household population the CLG assumptions about the communal establishment population have been used. In creating their household projections CLG assume that up to age 74 the numbers of people resident in communal establishments in each borough is constant at levels seen in the 2001 Census by gender, age and marital status. For older ages the assumption is that the proportions of the population resident in communal establishments are constant.

Within the household projection part of the model the private household population in each borough is split into four marital statuses (married, divorced, widowed and single) for each gender by five-year age groups (15-19 to 84-89 and 85+) for years 2001, 2006, 2011, 2016,

2021 and 2026. This is done using the detailed results of the CLG revised 2004-based household projection.

### ***Fertility***

GLA has produced an analysis of age-specific fertility rates in each borough covering data for the calendar years 2000 to 2002 (see *DMAG Briefing 2005/09*). These rates have been used in the model as the basis for future birth projections. Actual annual births up to mid-2007 have been incorporated at borough level, with the registered births in 2007 being used as a surrogate estimate for 2007-08. Future changes in age-specific fertility follow the trends in the total fertility rate as used in the ONS 2006-based projection for England, using the level at 2007-08 as the starting point for changes to age-specific rates.

### ***Mortality/Survival***

GLA has also produced an analysis of the gender and age-specific mortality rates and lifetables in each borough group (Central, Rest of Inner and Outer) covering data for the calendar years 2000 to 2002 (see *DMAG Briefing 2005/10*). These rates have been used in the model as the basis for future survival probabilities and, therefore, the projections of numbers of deaths. Borough level survival adjustments (ie borough differences from the relevant borough group norm) are based upon actual deaths in each borough since mid-2001 up to mid-2007. For 2007-08 registered deaths in 2007 have been used as a surrogate. Future changes in age-specific survival rates follow the ONS 2006-based projections for England. The average annual improvement at each age between 2006-07 and 2030-31 has been used.

### ***2001-02 Migration Matrix***

The initial migration matrix of total moves between each borough and to/from each borough with the Government Office East of England (GOER) Region, the Government Office South East (GOSE) Region, the Rest of the UK and Overseas has been created using ONS data based on NHS patient moves and the International Passenger Survey together with Home Office data on asylum seekers and visitor switchers. These data are consistent with the mid-year estimate changes for 2001-02. However in the 'alternate migration' projection the international inflows and the resulting net flows have been adjusted to accommodate GLA preferred borough estimates for 2002, see later for a fuller explanation.

### ***Migration Flow Age Structures***

All age and gender structures of migration flows are based upon data from the 2001 Census. Inflows to each borough group from GOER, GOSE, the Rest of the UK and Overseas are assumed to continue to have the same structures throughout the projection period, ie the proportion of each flow assigned to a single year of age/gender is assumed to be constant from 2001-02 throughout the projection.

Outflow probabilities, based upon 2001 Census data, for moves from each borough group to all borough groups (including moves within the same group) plus to GOER, GOSE and the Rest of

the UK and Overseas are assumed to continue throughout the projection period, ie the same proportion of a single year of age/gender population resident in the origin area is assumed to move to the destination area in each year.

Individual borough weights are applied to the probabilities in order that the projection matches the borough-to-borough matrix in 2001-02 and the required borough net migration levels in each year up to 2007-08. The weights are adjusted in each year to achieve the required matches. The probabilities and the associated borough weights remain unchanged in the migration-led projections after 2008.

### ***2002-03 and 2006-07 Gross Inflows from Outside London and Net Flows***

As with the initial matrix the gross inflows to each borough from GOER, GOSE, the Rest of the UK and Overseas have been created using ONS data based on NHS patient moves and the International Passenger Survey together with Home Office data on asylum seekers and visitor switchers. The flows from other parts of the UK are consistent with the annual mid-year estimate changes from 2002 to 2007. However the international inflows and the net flows have been adjusted to accommodate GLA preferred borough estimates for years up to 2007, as mentioned above.

### ***2007-08 Gross Inflows from Outside London and Net Flows***

Input for 2007-08 for inflows were based on the linear trends in the flows over the five years 2002-03 to 2006-07. 2007-08 is the base year for variant assumptions about future net migration levels. The assumed net flows have also been based upon analyses of data for 2002-2007.

### ***Development data***

The Low projection is produced by linking the results of the two initial projections (see later for descriptions) to the borough estimates of the net annual increases in homes from 2001. The boroughs supply the homes data. From 2008 to 2027 the 2004 London Housing Capacity Study (LHCS) is used. The version of the LHCS being used includes revisions made in Summer 2006 that significantly increase the numbers of new homes expected to be provided in each borough after 2017. The average annual values for 2017-27 have been used to extend the projection to 2031. Boroughs have confirmed the data from the LHCS or supplied updated development scenarios consistent with their most recent housing trajectories.

### ***Household Representative Rates***

The results of the revised CLG 2004-based borough household projections provide the final inputs to the projections. These projections show the distribution of the usual resident population by gender, age group and marital status and divides it into the private household (PH) population and the communal establishment (CE) population. The CLG assumption is that the 2001 CE population is constant over time by gender, age group and marital status up to age 74. For 75-79, 80-84 and 85+ it is assumed that a constant proportion of the population (by

gender, age group and marital status) is resident in CEs. The private household population by age, gender and marital status is linked to numbers of households by the application of household representative rates (ie the proportions of each population subgroup that 'represents' a household) by household type. By convention, only married males can represent married couples and only males can represent cohabiting couples. All other population subgroups may represent a lone parent household, a one-person household or an 'other' household, which is one formed of two or more adults with no family. Therefore, by converting the CLG projection results to a model, a population (by five-year age groups and gender) can be converted at 2001, 2006, 2011, 2016, 2021 and 2026 into households by type. The CLG relationships for 2026 are assumed to remain constant until 2031 to enable the projections to be consistently extended to 2031.

## Initial Projections

Three projections were prepared from which the final results were developed. The first two were based on following the ONS mid-year estimate trends and the third provided an alternative view of borough migration levels.

### ***MYE Trend***

This projection aims to replicate change in births and deaths and gross migration for each borough up to mid-2007 as seen in the ONS mid-year estimate change analyses between 2001 and 2007. The projection uses the revised analyses for years 2001-05 published in 2007 to be consistent with ONS' revised methodology for assessing and distributing international migration flows at regional and local levels.

For 2007-08 birth and death totals in each borough are based on registrations data for 2007. 2007-08 then becomes the effective base-year for the application of the ONS assumptions regarding the future courses of total fertility rates and age-specific survival rates in England.

Migration flows within the UK for 2007-08 are based on the linear trend in each flow over the five years 2002-03 to 2006-07. The inflows from outside London are then held constant in all later years.

International inflows and outflows are calculated in the same way.

After 2007-08 all migration flows starting in a London borough are determined by the interaction of the changing population size and age structure of the borough and the constant age-specific probabilities of leaving that borough for all other destinations, both other boroughs and outside London. These probabilities are based on the 2001 Census with borough weightings determined by the model to achieve the migration flows specified for 2006-07. This process means that the outflow from London tends to rise with a rising population.

The MYE Trend projection is used later in the 2008 Round by being linked with the 'alternate migration' projection to prepare the Low results for each borough.

### ***MYE Trend linked to ONS 2006-based national projections***

This projection differs from the MYE Trend projection only in the way it treats international migration.

International inflows and outflows are initially calculated in the same way as for the MYE Trend, but are adjusted such that each borough would continue to attract the same share of gross international migration flows to and from England as it had been estimated by ONS to have received in 2002-07. These proportions are applied to the average gross migration flows to and from England over the years 2007-12 as assumed in the ONS 2006-based population projection for England. In this regard the flows used are those between England and countries beyond the

UK, ie cross-border moves with Wales, Scotland and Northern Ireland are considered to be internal (UK) migration in the GLA model.

The MYE Trend projection that is linked to the ONS national projection is used later in the 2008 Round. The projected population of London at each year, by age and gender, becomes the London result for the High projection and constrains the borough results.

### ***Alternate Migration***

In order to calculate the Low output two projections are required for each borough. Ideally, one of these should be above the anticipated population capacity of the borough based on the increase in homes, and one should be below. The MYE Trend projection provides the first projection and the results from the 2007 Round PLP Low projection provide an initial guide as to the capacity of the borough.

The migration inputs to the MYE Trend projection are therefore altered to provide the alternative projection for each borough. Where the MYE Trend population appears to be too high when compared to 2007 PLP Low, then the alternative projection needs to be lower and below 2007 PLP Low, and vice versa. A lower (or higher) alternative population is achieved by altering the international migration inputs and the estimated net migration for each borough in each year 2001-08. The adjustments are concentrated on the international inflows.

Care needs to be taken in resetting the migration levels. If the adjustment to the international inflow implies too great a reduction, ie to a flow of less than a thousand in a borough, then amendments are also included in the gross international outflow. Ideally the revisions to the flows should be the minimum necessary to get a second population projection that is on the required side of 2007 PLP Low projection, ie below or above the anticipated borough population capacity. Some trial and error is required as the interaction of migration flows between the boroughs cannot be readily predicted when so many migration flows are altered and the resulting populations are therefore changed.

In all other respects the Alternate Migration projection uses the same fertility and mortality inputs as the MYE Trend projection.

## Low Projection

The Low projection for each borough is a hybrid of the MYE Trend and Alternate Migration projections described above. The Low projections are prepared separately for each individual borough as described below.

### *Method*

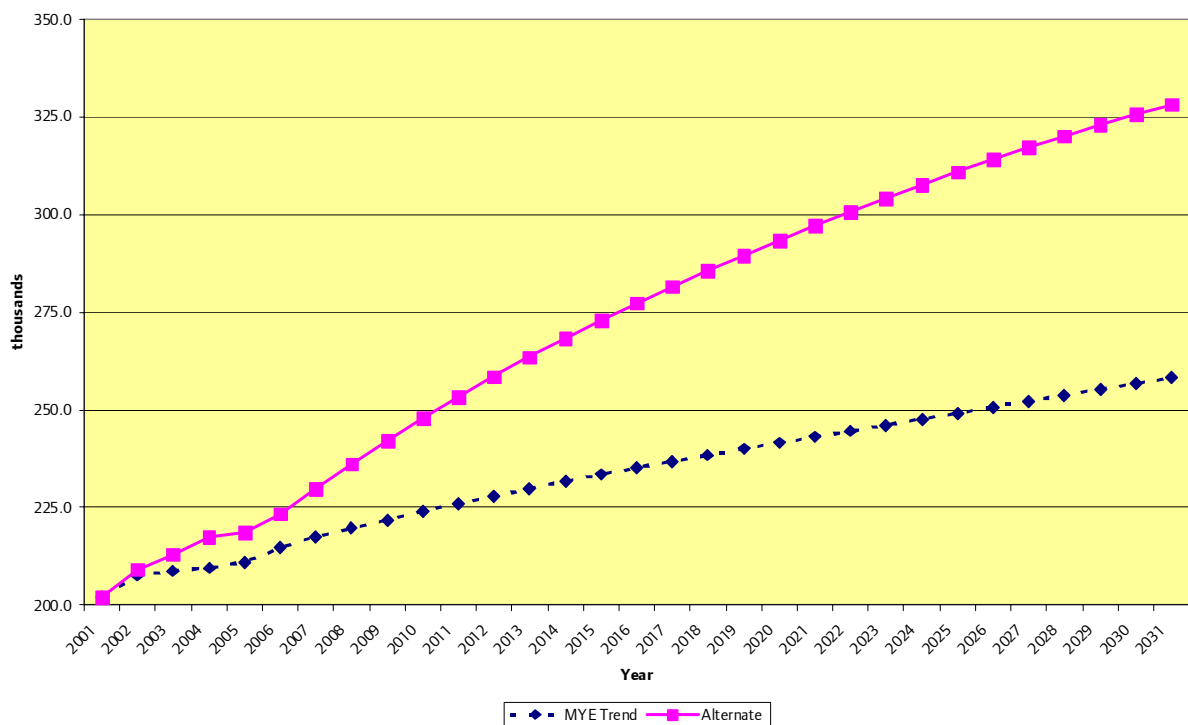
- Stage 1 The revised CLG 2004-based household projections were converted into borough level models such that when a new population by gender and five year age groups for years 2001, 2006, 2011, 2016, 2021 and 2026 is put into the model all of the relationships (number or proportion of the total population not in private households, marital status of the household population, and household representative rates) are applied. This results in a projection of households by type for every fifth year and enables the calculation of the average household size and the proportion of total population not resident in households.
- Stage 2 The **MYE Trend** projection was put into the CLG 'model' and for 2001, 2006, 2011, 2016, 2021 and 2026 the **total households (2001 only)**, **average household size** and **ratio of the total population to the private household population** were extracted from the results. The values of average household size and the ratio were interpolated to establish values for intervening years and the 2026 values were extended unchanged to 2031.
- Stage 3 The expected numbers of additional homes, from the LHCS and the boroughs, for each year were added to the number of households in 2001 to establish **total households in each year**.
- Stage 4 The number of households was multiplied by the average household size to establish the **total household population**. This population was grossed-up, using the ratio, to get the **total population**. This gives the first estimate of total population capacity for each year.
- Stage 5 The annual population totals were then introduced to a module that contains the full single year of age results of the **MYE Trend** and **Alternate Migration** projections. The module produces a 'weighted average' **population by single years of age and gender** by comparing the required total population (from Stage 4) each year with the two fully developed projections.
- Stage 6 Return to Stage 2 (above) and introduce the newly created population by age and gender to the model.
- Stage 7 Go through Stages 3 to 5 (above) and then repeat Stages 2 to 6 until the projection shows that the increase in households in each five-year period matches the increase in homes from the input data. This process requires about five iterations to produce a solution. The projection is now complete in terms of **annual population by age and**

**gender as well as households every fifth years by type and by age, gender and marital status of the household representative.**

Stage 8 The final borough populations are then introduced to the resident labour force module to create projections of the **economically active population** for each year by age groups and gender. This module links the ONS national projection of economic activity rates by age/gender (see *Labour Market Trends*, January 2006) to the borough economic activity rates as at the 2001 Census.

***Borough Example: Tower Hamlets***

**Chart 1: MYE Trend and Alternate Migration projections: Tower Hamlets**



Tower Hamlets is an example of a borough where following 2002-07 trends in the ONS mid-year estimates is likely to under-project the future population due to the expected housing developments. As Chart 1 shows the MYE Trend projection shows a 2031 population of 258 thousand, but this is far lower than the population that would result as a consequence of providing an additional 57 thousand new homes between 2007 and 2031. Therefore the Alternate Migration projection attempts to reflect this and shows the population growing to 328 thousand in 2031.

**Table 2: Housing Capacity Calculation: Tower Hamlets**

	<b>Total Population</b>	<b>Communal Estabs. Population</b>	<b>Private Household Population</b>	<b>Households</b>	<b>Average Household Size</b>	<b>Annual Net New Homes</b>	<b>Ratio: Total to PH Pop</b>
<b>2001</b>	202.1	2.1	199.9	<b>78.7</b>	<b>2.542</b>		<b>1.011</b>
<b>2002</b>	205.2	2.1	203.1	80.9	2.511	<b>2204</b>	1.011
<b>2003</b>	206.9	2.1	204.8	82.6	2.480	<b>1701</b>	1.010
<b>2004</b>	207.3	2.1	205.2	83.8	2.450	<b>1190</b>	1.010
<b>2005</b>	214.3	2.2	212.1	87.7	2.419	<b>3911</b>	1.010
<b>2006</b>	218.4	2.2	216.3	90.5	<b>2.389</b>	<b>2867</b>	<b>1.010</b>
<b>2007</b>	224.9	2.2	222.7	94.0	2.368	<b>3488</b>	1.010
<b>2008</b>	227.7	2.2	225.5	96.1	2.348	<b>2037</b>	1.010
<b>2009</b>	235.0	2.2	232.8	100.0	2.327	<b>3960</b>	1.009
<b>2010</b>	242.1	2.2	239.9	104.0	2.307	<b>3960</b>	1.009
<b>2011</b>	249.0	2.2	246.8	107.9	<b>2.286</b>	<b>3960</b>	<b>1.009</b>
<b>2012</b>	256.4	2.3	254.1	111.9	2.271	<b>3960</b>	1.009
<b>2013</b>	260.0	2.3	257.7	114.2	2.256	<b>2339</b>	1.009
<b>2014</b>	263.5	2.3	261.2	116.6	2.241	<b>2339</b>	1.009
<b>2015</b>	266.9	2.2	264.7	118.9	2.226	<b>2339</b>	1.009
<b>2016</b>	270.3	2.2	268.0	121.3	<b>2.210</b>	<b>2339</b>	<b>1.008</b>
<b>2017</b>	274.1	2.3	271.9	123.6	2.200	<b>2339</b>	1.008
<b>2018</b>	277.3	2.3	275.0	125.6	2.189	<b>2023</b>	1.008
<b>2019</b>	280.3	2.3	278.1	127.6	2.179	<b>2023</b>	1.008
<b>2020</b>	283.4	2.3	281.1	129.7	2.168	<b>2023</b>	1.008
<b>2021</b>	286.4	2.3	284.1	131.7	<b>2.157</b>	<b>2023</b>	<b>1.008</b>
<b>2022</b>	289.5	2.3	287.3	133.7	2.149	<b>2023</b>	1.008
<b>2023</b>	292.5	2.3	290.2	135.6	2.140	<b>1918</b>	1.008
<b>2024</b>	295.4	2.3	293.1	137.5	2.131	<b>1918</b>	1.008
<b>2025</b>	298.2	2.3	295.9	139.5	2.122	<b>1918</b>	1.008
<b>2026</b>	301.0	2.3	298.8	141.4	<b>2.113</b>	<b>1918</b>	<b>1.008</b>
<b>2027</b>	305.1	2.3	302.8	143.3	2.113	<b>1918</b>	1.008
<b>2028</b>	309.2	2.4	306.9	145.2	2.113	1918	1.008
<b>2029</b>	313.3	2.4	310.9	147.1	2.113	1918	1.008
<b>2030</b>	317.4	2.4	315.0	149.1	2.113	1918	1.008
<b>2031</b>	321.5	2.5	319.0	151.0	2.113	1918	1.008

Units are thousands in the first four columns.

Table 2 shows the key steps and data extractions for the stable iterated capacity population, which becomes the Low projection. In the Household column the 2001 figure is consistent with the CLG estimate. The highlighted values in the Average Household Size and Ratio columns are drawn directly from the results of the completely iterated projection, but these values are extracted at each iteration and help to re-estimate the capacity population. The highlighted values in the New Homes column are those as agreed by the borough.

Over the period 2006 to 2031 there are expected to be an additional 60 thousand new homes. These convert to show a population growing from 218 thousand to 321 thousand over twenty-five years. This is a similar result to that found in the 2007 Round PLP Low projection.

**Chart 2: Low, High, MYE Trend and Alternate Migration projections: 2001-31: Tower Hamlets**

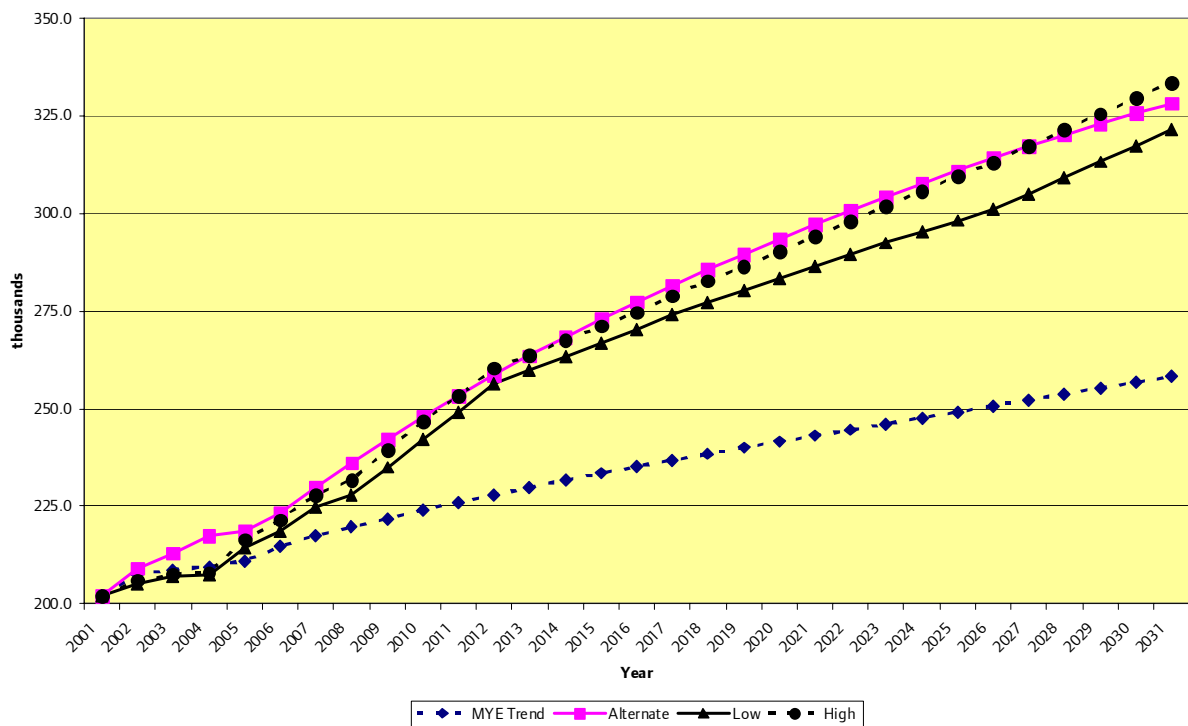


Chart 2 shows the final Low projection for Tower Hamlets compared to the two projections from which it was prepared. The High projection is included for completeness.

The Low projection is relatively close to the alternate migration projection. Given the way in which the alternate migration projection was constructed it is common to most boroughs that the Low projection would be closer to it than to the MYE trend.

### **Results for London**

Before reviewing the results note should be taken of the significant inputs to the calculations. The LDD/LHCS/Borough housing inputs show the following numbers of additional homes:

2006-11	181 thousand
2011-16	202 thousand
2016-21	141 thousand
2021-26	116 thousand

These additional homes, amounting to an average of 32 thousand per year from 2006 to 2026 and is reflected in the population and household projection.

**Table 3: Low projection: Key results for Greater London**

Units are thousands except average household size.

	2001	2006	2011	2016	2021	2026	2031	2006-31 Change
<b>Married Couples</b>	1,115.7	1,027.8	966.3	919.5	873.2	832.4	790.4	-237.4
<b>Cohabiting Couples</b>	261.7	327.2	398.4	459.2	503.7	541.7	578.8	251.6
<b>Lone Parents</b>	274.6	314.9	347.8	379.2	395.2	404.2	412.5	97.6
<b>Other (2+ Adults)</b>	332.1	339.5	359.4	383.0	400.4	416.1	431.1	91.6
<b>One-person</b>	1,052.0	1,139.8	1,258.0	1,391.0	1,500.4	1,594.9	1,686.8	547.0
<b>Total Households</b>	3,036.1	3,149.2	3,329.8	3,531.9	3,673.0	3,789.2	3,899.6	750.4
<b>Private Household Population</b>	7,243.3	7,355.6	7,703.5	8,061.8	8,277.1	8,442.4	8,688.3	1,332.6
<b>Average Household Size</b>	2.39	2.34	2.31	2.28	2.25	2.23	2.23	-0.11
<b>Total Population</b>	7,336.9	7,448.8	7,797.7	8,156.8	8,373.0	8,540.0	8,788.7	1,339.9
<b>Communal Population</b>	93.6	93.1	94.2	95.0	95.9	97.6	100.4	7.3
<b>Economically Active</b>	3,699.7	3,849.6	4,057.7	4,258.0	4,364.2	4,427.2	4,535.0	685.4

In Table 3 the household distribution at 2031 is italicised as it is based upon extrapolation of 2021-26 change as the CLG revised 2004-based household projections have an end year of 2029. Therefore the 2006-31 change data are also italicised. The table shows the total population rising by 1.34 million between 2006 and 2031 with the number of households increasing by 750 thousand, ie an average of 30 thousand a year. Significant changes are projected for household structure, with a reduction of 237 thousand married couples being offset by a rise of 252 thousand cohabiting couples. Most of the household increase (547 thousand) will be one-person households with 98 thousand more lone parents and 92 thousand more other (ie multi-adult non-family) households.

The projected increase in one-person households between 2006 and 2026 is concentrated in the 'middle ages' (35-64, particularly 45-54) where 398 thousand of the 455 thousand increase occurs. 288 thousand of this growth is male one-person households, of which 228 thousand are aged between 35 and 64. Reductions in one-person households are projected for persons in their twenties and for females in their seventies and eighties. These changes are consistent with reduced likelihood of marriage, more divorce and better male survival at older ages leading to reduced widowhood. Most of the older 'single' male one-person households will be former cohabiters. These men may well have children living with former partners and their housing requirements will be more akin to divorcees of a similar age.

The resident labour force is projected to grow by 685 thousand from 3.85 million in 2006 to 4.53 million in 2031.

The Low projection implies a lower population at mid-2006 than does the ONS mid-2006 estimate. The comparison is 7.45 million with 7.51 million, a difference of 63 thousand.

## High Projection

While the results of the Low projection create a freestanding projection incorporating directly as much data as exist linking new homes, household formation and migration patterns, they are also critical to the High projection.

As indicated earlier the MYE Trend projection linked to the ONS national projection determines the total London population in the High projection. The key variable in the linked MYE Trend projection was that London was assumed to continue to have the same 2002-07 average proportions of the ONS projection of gross international flows coming to and from England between 2007 and 2012.

### *Method*

- Stage 1      The Low population projections were grossed up at single years of age and gender for all years from 2002 to 2031 to match, in sum, the population previously projected for London in the linked MYE Trend projection.
- Stage 2      The borough level High population projections were then put into the CLG 'model' to create at 2001, 2006, 2011, 2016, 2021 and 2026 full household projections. In this case no iterations were necessary, only a strict conversion of a predetermined population to households.
- Stage 3      The borough populations are then introduced to the resident labour force module to create projections of the economically active population for each year by age groups and gender.

### *Results for London*

Table 4 shows London's population growing between 2006 and 2031 by 1.55 million to 9.11 million. This growth is strongly influenced by recent migration trends and a national long term annual forecast of 189 thousand net international migrants to England. London's projected growth is equivalent to over 62 thousand persons a year. This is consistent with an increase of 846 thousand households over the 25 years, ie nearly 34 thousand a year. The structure of household change is similar to the Low projection, but with more households in all categories and similar age structure changes. The resident labour force is projected to grow from 3.91 million in 2006 to 4.71 million in 2031.

The linked MYE trend projection was based upon migration trends since 2001. It therefore has a different 2006 population to the Low projection that is based on new homes since 2001. Hence at 2006 the High population is higher than Low by 95 thousand and the implied number of households is also higher by 41 thousand.

It is recommended that High be used for large-scale longer term project planning where the consequences of not using a sufficiently high projection, such as Low, could be significant. TfL

use GLA High projections for long-term transport modelling but the boroughs tend to use the Low projection for school roll forecasts.

**Table 4: High: Key results for Greater London**

Units are thousands except average household size.

	<b>2001</b>	<b>2006</b>	<b>2011</b>	<b>2016</b>	<b>2021</b>	<b>2026</b>	<b>2031</b>	<b>2006-31 Change</b>
<b>Married Couples</b>	1115.7	1039.6	974.6	925.0	887.7	858.9	816.8	-222.8
<b>Cohabiting Couples</b>	261.7	333.2	406.3	467.0	517.8	563.5	599.5	266.3
<b>Lone Parents</b>	274.6	319.9	353.4	385.0	407.9	424.4	433.9	114.0
<b>Other (2+ Adults)</b>	332.1	344.5	365.4	388.3	409.5	430.3	444.0	99.5
<b>One-person</b>	1052.0	1153.2	1271.3	1403.0	1530.1	1650.2	1742.0	588.8
<b>Total Households</b>	3036.1	3190.4	3370.9	3568.3	3753.0	3927.3	4036.2	845.8
<b>Private Household Population</b>	7243.3	7450.0	7815.6	8170.8	8481.2	8760.9	9003.9	1553.9
<b>Average Household Size</b>	2.39	2.34	2.31	2.28	2.25	2.23	2.23	-0.11
<b>Total Population</b>	7336.9	7543.3	7910.0	8266.2	8578.1	8860.6	9106.3	1563.0
<b>Communal Population</b>	93.6	93.4	94.4	95.4	96.9	99.7	102.4	9.1
<b>Economically Active</b>	3699.7	3912.8	4130.8	4324.0	4481.2	4604.1	4705.4	792.6

## Ward Projections

Both the Low and High borough projection have been converted to ward projections. The principal ward projection is Low as it this that uses new homes data consistent with that used for the each of the boroughs.

Other annual ward data used in Low are:

- Births by gender up to mid-2007
- Deaths by gender up to mid-2007
- Electorates up to December 2007 – the 2008 Electorate

The ward level projections use the methodology as outlined in *DMAG Briefing 2007-12: GLA 2006 Round Ward Population Projections*.

The essentials of the method are that all ward projections are constrained to the borough results in terms of population by gender and age and also births and deaths. The inputs are also constrained to be consistent with borough level inputs. This is particularly relevant when checking the annual vital data and additional homes.

Ward fertility and survival differentials are determined from the most recent three years of events information. Therefore for births the differential is set based on events in 2004-07 and applied in years 2007-31.

The communal establishment population is assumed to remain constant at 2001 levels. The estimated future private household population is based on the total number of future households and an estimate of the ward average household size, based on the value at 2001 and the changes projected at borough level.

The 2001 Census provides ward migration profiles of immigrants and emigrants. Immigrants are assumed to have a constant age/gender structure of the total flow. The emigrant profile is of age and gender specific probabilities of leaving the ward.

## Appendix Tables and Charts

The following six summary tables show the Low and High population, household and resident labour force projections for boroughs and borough groups. However, the households are only shown to 2026, as the CLG projections upon which they are based do not go beyond 2029 and the London Housing Capacity Study only goes to 2027.

In the household projection tables (A2 and A5) there are two rows for London results. Data labelled 'GREATER LONDON' are the sums of the individual borough projections. Data labelled 'Greater London (Independent)' were produced by putting the relevant London population data through the household projection module.

The 'Greater London (Independent)' household results, which are also shown for London in Tables 3 and 4, are assumed to be more robust as in the CLG household projections the Greater London results are the constraints for the borough results. The CLG projection is based on the ONS revised 2004-based subnational population projections, which means that the relative weightings of the boroughs in the GLA projections are different and hence create a different result for London when summed. However, the results of the sums of the boroughs and the independent calculations are quite similar.

The labour force projections have just one set of figures for London as the module operates only at borough level with the London projection being the sum of the borough results.

The charts demonstrate four different aspects of the projections for London:

- Total Population: Comparison between Low and High
- Age Structure: Low
- Components of Change: Low
- Households by Type: Low

**Table A1: Total Population: Boroughs and Groupings: Low projection: thousands**

	2001	2006	2011	2016	2021	2026	2031	Change 2006-31	Change 2006-31 %
<b>Camden</b>	202.8	201.1	208.2	215.1	222.9	230.8	236.4	35.2	17.5
<b>Kensington and Chelsea</b>	161.1	164.6	173.8	177.5	179.2	180.9	184.0	19.4	11.8
<b>Westminster, City of</b>	202.9	207.9	215.4	220.4	224.2	226.3	232.3	24.4	11.7
<b>City of London</b>	7.3	8.7	9.5	10.5	11.1	11.7	12.4	3.6	41.4
<b>Central boroughs</b>	<b>574.2</b>	<b>582.4</b>	<b>606.9</b>	<b>623.5</b>	<b>637.4</b>	<b>649.6</b>	<b>665.0</b>	<b>82.7</b>	<b>14.2</b>
<b>Hackney</b>	207.8	215.3	228.7	236.2	244.4	252.1	262.6	47.3	22.0
<b>Hammersmith and Fulham</b>	169.5	173.7	180.9	187.5	194.3	198.0	203.8	30.1	17.3
<b>Haringey</b>	223.0	227.7	240.4	253.7	261.6	271.1	281.5	53.8	23.6
<b>Islington</b>	179.9	186.6	202.7	209.3	215.8	221.3	228.8	42.2	22.6
<b>Lambeth</b>	274.6	282.7	292.6	300.5	309.0	316.9	329.6	47.0	16.6
<b>Lewisham</b>	254.8	260.6	269.9	289.6	302.5	310.7	316.7	56.0	21.5
<b>Newham</b>	251.2	256.5	290.3	332.4	346.9	359.4	375.9	119.5	46.6
<b>Southwark</b>	258.1	264.2	282.9	304.8	321.3	341.3	360.8	96.7	36.6
<b>Tower Hamlets</b>	202.1	218.4	249.0	270.3	286.4	301.0	321.5	103.0	47.2
<b>Wandsworth</b>	272.2	279.3	289.9	298.4	305.9	311.1	319.0	39.7	14.2
<b>Rest of Inner boroughs</b>	<b>2,293.1</b>	<b>2,365.0</b>	<b>2,527.4</b>	<b>2,682.7</b>	<b>2,788.0</b>	<b>2,883.0</b>	<b>3,000.2</b>	<b>635.3</b>	<b>26.9</b>
<b>Inner London</b>	<b>2,867.3</b>	<b>2,947.4</b>	<b>3,134.4</b>	<b>3,306.3</b>	<b>3,425.4</b>	<b>3,532.6</b>	<b>3,665.3</b>	<b>717.9</b>	<b>24.4</b>
<b>Barking and Dagenham</b>	165.3	167.5	178.0	203.7	217.4	232.8	253.9	86.4	51.6
<b>Barnet</b>	319.8	320.7	332.0	366.9	380.0	384.6	394.3	73.6	22.9
<b>Bexley</b>	219.1	215.9	216.0	217.9	220.4	223.1	227.3	11.4	5.3
<b>Brent</b>	271.3	271.4	284.4	296.4	303.0	306.9	314.7	43.3	16.0
<b>Bromley</b>	295.6	296.7	301.1	302.3	305.0	308.5	314.1	17.4	5.9
<b>Croydon</b>	335.5	331.4	341.6	370.8	383.8	384.0	389.0	57.7	17.4
<b>Ealing</b>	308.4	307.2	320.2	326.9	331.2	335.6	343.9	36.7	11.9
<b>Enfield</b>	278.2	285.1	289.9	291.2	292.1	293.5	297.5	12.4	4.3
<b>Greenwich</b>	217.3	228.2	249.7	272.4	280.3	285.7	295.1	66.9	29.3
<b>Harrow</b>	210.7	213.9	225.2	229.9	229.4	229.0	231.7	17.8	8.3
<b>Havering</b>	224.8	226.1	231.2	237.6	243.9	247.5	253.6	27.5	12.2
<b>Hillingdon</b>	246.1	246.0	253.4	262.1	270.0	271.7	275.9	30.0	12.2
<b>Hounslow</b>	217.1	220.2	235.3	242.3	246.5	250.2	255.8	35.5	16.1
<b>Kingston upon Thames</b>	149.1	150.6	154.6	158.9	160.9	161.8	164.4	13.8	9.1
<b>Merton</b>	191.0	192.8	198.0	198.0	197.3	196.7	199.1	6.2	3.2
<b>Redbridge</b>	242.2	245.8	255.9	265.3	267.5	269.5	274.0	28.2	11.5
<b>Richmond upon Thames</b>	174.1	180.1	185.7	188.6	191.5	194.1	197.8	17.6	9.8
<b>Sutton</b>	181.4	181.0	183.7	187.5	191.4	193.1	195.8	14.8	8.2
<b>Waltham Forest</b>	222.8	220.8	227.4	231.9	236.0	239.1	245.8	24.9	11.3
<b>Outer London</b>	<b>4,469.6</b>	<b>4,501.4</b>	<b>4,663.3</b>	<b>4,850.5</b>	<b>4,947.6</b>	<b>5,007.4</b>	<b>5,123.4</b>	<b>622.0</b>	<b>13.8</b>
<b>GREATER LONDON</b>	<b>7,336.9</b>	<b>7,448.8</b>	<b>7,797.7</b>	<b>8,156.8</b>	<b>8,373.0</b>	<b>8,540.0</b>	<b>8,788.7</b>	<b>1,339.9</b>	<b>18.0</b>

**Table A2: Total households: Boroughs and Groupings: Low projection: thousands**

	2001	2006	2011	2016	2021	2026	Change 2006-26	Change 2006-26 %
Camden	91.7	94.2	97.3	100.8	105.0	109.1	14.9	15.8
Kensington and Chelsea	79.3	81.0	85.0	87.1	88.3	89.8	8.9	10.9
Westminster, City of	100.0	104.7	108.4	111.7	115.0	118.2	13.5	12.9
City of London	4.3	5.0	5.4	6.0	6.4	6.8	1.8	36.6
<b>Central boroughs</b>	<b>275.4</b>	<b>284.8</b>	<b>296.2</b>	<b>305.6</b>	<b>314.7</b>	<b>323.9</b>	<b>39.1</b>	<b>13.7</b>
Hackney	86.1	90.7	97.5	102.0	106.9	111.6	20.9	23.0
Hammersmith and Fulham	75.6	77.9	81.8	86.1	91.6	95.3	17.4	22.4
Haringey	92.2	94.5	100.2	106.4	110.2	114.7	20.1	21.3
Islington	82.3	87.4	98.6	103.5	107.6	111.4	24.0	27.5
Lambeth	118.7	123.5	129.1	134.4	140.2	146.1	22.6	18.3
Lewisham	107.6	111.6	116.0	127.1	134.5	138.9	27.3	24.4
Newham	91.6	97.2	114.1	136.8	145.4	152.4	55.3	56.9
Southwark	109.2	114.7	123.3	134.4	143.5	154.1	39.4	34.3
Tower Hamlets	78.7	90.5	107.9	121.3	131.7	141.4	50.8	56.2
Wandsworth	119.4	124.8	130.1	135.7	141.3	146.2	21.4	17.1
<b>Rest of Inner boroughs</b>	<b>961.4</b>	<b>1,012.8</b>	<b>1,098.6</b>	<b>1,187.6</b>	<b>1,253.0</b>	<b>1,312.1</b>	<b>299.3</b>	<b>29.5</b>
<b>Inner London</b>	<b>1,236.8</b>	<b>1,297.6</b>	<b>1,394.8</b>	<b>1,493.2</b>	<b>1,567.7</b>	<b>1,636.0</b>	<b>338.4</b>	<b>26.1</b>
Barking and Dagenham	67.2	69.8	74.4	86.6	93.4	101.4	31.6	45.3
Barnet	127.0	130.1	136.8	152.5	160.7	164.6	34.5	26.5
Bexley	89.7	90.5	91.8	93.8	95.7	97.6	7.1	7.8
Brent	100.3	104.0	111.0	118.4	123.6	127.2	23.2	22.3
Bromley	126.1	128.7	132.1	134.3	136.8	139.4	10.7	8.3
Croydon	139.1	142.0	149.2	165.9	174.9	177.2	35.2	24.8
Ealing	118.1	120.4	126.4	131.0	134.6	138.0	17.6	14.6
Enfield	110.6	114.8	117.9	119.8	121.5	123.1	8.3	7.2
Greenwich	93.0	101.4	111.6	123.7	128.6	132.4	31.0	30.6
Harrow	79.5	82.0	87.0	90.3	91.4	92.5	10.4	12.7
Havering	91.9	93.7	97.1	101.5	105.6	108.3	14.5	15.5
Hillingdon	96.8	99.4	103.3	107.9	112.2	114.0	14.6	14.6
Hounslow	84.1	87.0	93.4	96.9	99.3	101.6	14.6	16.7
Kingston upon Thames	61.5	63.5	65.3	67.6	69.2	70.3	6.8	10.7
Merton	79.0	81.8	84.7	86.0	87.1	88.2	6.4	7.8
Redbridge	92.5	95.5	99.9	104.6	106.7	108.5	13.0	13.6
Richmond upon Thames	76.3	78.5	80.2	81.3	82.8	84.4	5.9	7.6
Sutton	76.5	78.2	80.3	83.1	85.9	87.6	9.5	12.1
Waltham Forest	89.9	92.0	95.5	98.9	102.4	105.4	13.4	14.6
<b>Outer London</b>	<b>1,799.2</b>	<b>1,853.5</b>	<b>1,937.9</b>	<b>2,044.2</b>	<b>2,112.3</b>	<b>2,161.8</b>	<b>308.3</b>	<b>16.6</b>
<b>GREATER LONDON</b>	<b>3,036.0</b>	<b>3,151.1</b>	<b>3,332.8</b>	<b>3,537.4</b>	<b>3,679.9</b>	<b>3,797.8</b>	<b>646.7</b>	<b>20.5</b>
<b>Greater London (Independent)</b>	<b>3,036.1</b>	<b>3,149.2</b>	<b>3,329.8</b>	<b>3,531.9</b>	<b>3,673.0</b>	<b>3,789.2</b>	<b>640.0</b>	<b>20.3</b>

**Table A3: Total resident labour force: Boroughs and Groupings: Low projection: thousands**

	2001	2006	2011	2016	2021	2026	2031	Change 2006-31	Change 2006-31 %
<b>Camden</b>	104.1	106.5	110.7	114.7	119.5	123.9	127.1	20.7	19.4
<b>Kensington and Chelsea</b>	84.7	88.2	94.3	97.0	98.5	99.2	100.6	12.4	14.1
<b>Westminster, City of</b>	109.7	115.9	121.3	125.2	128.2	129.0	131.5	15.6	13.5
<b>City of London</b>	4.7	5.6	6.1	6.7	7.1	7.5	7.9	2.3	40.6
<b>Central boroughs</b>	<b>303.2</b>	<b>316.1</b>	<b>332.3</b>	<b>343.6</b>	<b>353.3</b>	<b>359.6</b>	<b>367.1</b>	<b>51.0</b>	<b>16.1</b>
<b>Hackney</b>	94.3	101.9	110.4	114.6	119.3	123.1	128.5	26.6	26.1
<b>Hammersmith and Fulham</b>	93.7	97.7	102.1	106.6	111.8	113.8	115.4	17.7	18.2
<b>Haringey</b>	110.6	117.4	125.1	132.4	136.1	140.8	146.4	29.0	24.7
<b>Islington</b>	91.6	99.7	110.7	115.4	119.1	121.3	123.5	23.8	23.8
<b>Lambeth</b>	151.0	158.0	164.2	169.2	174.4	178.3	184.6	26.6	16.9
<b>Lewisham</b>	130.7	139.5	145.4	156.8	163.4	167.1	169.9	30.4	21.8
<b>Newham</b>	104.5	114.0	133.5	156.8	163.7	169.7	178.6	64.6	56.6
<b>Southwark</b>	128.4	136.6	147.9	161.3	170.4	181.2	192.1	55.5	40.6
<b>Tower Hamlets</b>	88.9	102.6	121.2	132.8	141.2	147.9	157.2	54.6	53.2
<b>Wandsworth</b>	159.3	165.4	172.0	177.8	182.6	184.9	187.7	22.2	13.4
<b>Rest of Inner boroughs</b>	<b>1153.1</b>	<b>1232.8</b>	<b>1332.5</b>	<b>1423.5</b>	<b>1482.1</b>	<b>1528.0</b>	<b>1583.8</b>	<b>351.0</b>	<b>28.5</b>
<b>Inner London</b>	<b>1456.3</b>	<b>1548.9</b>	<b>1664.8</b>	<b>1767.1</b>	<b>1835.4</b>	<b>1887.6</b>	<b>1950.9</b>	<b>402.0</b>	<b>26.0</b>
<b>Barking and Dagenham</b>	73.0	76.6	82.4	96.9	103.4	111.2	122.3	45.7	59.7
<b>Barnet</b>	159.0	162.4	171.4	189.5	196.5	197.0	201.0	38.6	23.7
<b>Bexley</b>	108.9	110.4	111.7	112.8	113.9	115.1	117.3	6.9	6.2
<b>Brent</b>	135.5	135.7	141.3	147.4	150.5	151.2	153.3	17.6	12.9
<b>Bromley</b>	148.1	152.6	156.3	157.3	158.1	158.6	160.5	7.9	5.2
<b>Croydon</b>	170.8	170.6	176.1	194.3	200.2	197.2	198.0	27.4	16.1
<b>Ealing</b>	159.3	159.2	165.5	168.3	169.4	169.9	172.2	13.0	8.2
<b>Enfield</b>	133.5	140.3	141.9	141.9	141.5	141.1	142.0	1.7	1.2
<b>Greenwich</b>	103.6	112.0	123.6	135.5	137.9	138.9	142.4	30.4	27.1
<b>Harrow</b>	105.8	111.1	119.4	121.1	119.8	119.1	120.0	8.9	8.0
<b>Havering</b>	109.4	114.7	120.4	124.9	128.1	129.3	132.4	17.6	15.4
<b>Hillingdon</b>	124.9	127.1	131.8	136.9	141.0	140.9	142.3	15.3	12.0
<b>Hounslow</b>	112.8	115.5	123.3	125.9	127.0	128.1	130.4	14.9	12.9
<b>Kingston upon Thames</b>	79.8	82.4	84.2	86.2	86.8	86.6	87.8	5.5	6.6
<b>Merton</b>	102.8	103.9	105.8	104.9	103.7	102.6	103.0	-0.9	-0.9
<b>Redbridge</b>	116.0	120.8	126.2	130.6	130.4	130.5	132.5	11.6	9.6
<b>Richmond upon Thames</b>	94.8	98.8	100.9	101.6	102.6	103.5	105.3	6.5	6.6
<b>Sutton</b>	95.4	97.4	99.2	101.3	103.0	103.2	103.9	6.5	6.7
<b>Waltham Forest</b>	109.9	109.1	111.8	113.7	115.2	115.7	117.6	8.4	7.7
<b>Outer London</b>	<b>2243.4</b>	<b>2300.7</b>	<b>2392.9</b>	<b>2491.0</b>	<b>2528.7</b>	<b>2539.6</b>	<b>2584.0</b>	<b>283.3</b>	<b>12.3</b>
<b>GREATER LONDON</b>	<b>3699.7</b>	<b>3849.6</b>	<b>4057.7</b>	<b>4258.0</b>	<b>4364.2</b>	<b>4427.2</b>	<b>4535.0</b>	<b>685.3</b>	<b>17.8</b>

**Table A4: Total population: Boroughs and Groupings: High projection: thousands**

	2001	2006	2011	2016	2021	2026	2031	Change 2006-31	Change 2006-31 %
<b>Camden</b>	202.8	203.9	211.5	218.4	228.7	239.8	245.1	41.3	20.2
<b>Kensington and Chelsea</b>	161.1	166.8	176.4	180.1	183.9	188.1	190.9	24.1	14.5
<b>Westminster, City of</b>	202.9	210.9	218.9	223.8	230.2	235.3	241.0	30.2	14.3
<b>City of London</b>	7.3	8.9	9.7	10.7	11.4	12.1	12.8	4.0	44.5
<b>Central boroughs</b>	<b>574.2</b>	<b>590.4</b>	<b>616.6</b>	<b>632.8</b>	<b>654.2</b>	<b>675.3</b>	<b>689.9</b>	<b>99.5</b>	<b>16.9</b>
<b>Hackney</b>	207.8	218.1	232.4	239.8	250.9	262.1	272.4	54.3	24.9
<b>Hammersmith and Fulham</b>	169.5	176.2	184.0	190.4	199.7	206.0	211.7	35.5	20.1
<b>Haringey</b>	223.0	230.8	244.4	257.6	268.6	281.8	292.1	61.3	26.6
<b>Islington</b>	179.9	189.3	205.9	212.5	221.5	230.0	237.2	47.9	25.3
<b>Lambeth</b>	274.6	286.6	297.4	305.2	317.3	329.4	341.7	55.1	19.2
<b>Lewisham</b>	254.8	264.1	274.2	293.9	310.4	322.7	328.4	64.3	24.4
<b>Newham</b>	251.2	259.8	295.0	337.6	356.1	373.5	389.9	130.1	50.1
<b>Southwark</b>	258.1	267.7	287.4	309.6	330.0	355.0	374.8	107.1	40.0
<b>Tower Hamlets</b>	202.1	221.5	253.3	274.7	294.3	313.2	333.6	112.1	50.6
<b>Wandsworth</b>	272.2	283.4	295.0	303.4	314.4	323.7	331.2	47.9	16.9
<b>Rest of Inner boroughs</b>	<b>2,293.1</b>	<b>2,397.6</b>	<b>2,569.1</b>	<b>2,724.7</b>	<b>2,863.3</b>	<b>2,997.5</b>	<b>3,113.1</b>	<b>715.5</b>	<b>29.8</b>
<b>Inner London</b>	<b>2,867.3</b>	<b>2,987.9</b>	<b>3,185.6</b>	<b>3,357.6</b>	<b>3,517.5</b>	<b>3,672.8</b>	<b>3,803.0</b>	<b>815.0</b>	<b>27.3</b>
<b>Barking and Dagenham</b>	165.3	169.4	180.4	206.3	222.5	241.3	262.7	93.3	55.0
<b>Barnet</b>	319.8	324.6	336.3	371.3	388.8	398.6	408.4	83.8	25.8
<b>Bexley</b>	219.1	218.4	218.7	220.4	225.3	231.1	235.2	16.8	7.7
<b>Brent</b>	271.3	274.7	288.2	299.8	309.9	318.0	325.8	51.1	18.6
<b>Bromley</b>	295.6	300.1	304.8	305.7	311.7	319.4	325.0	24.9	8.3
<b>Croydon</b>	335.5	335.2	345.9	375.3	392.7	398.0	402.9	67.7	20.2
<b>Ealing</b>	308.4	311.0	324.5	330.8	338.7	347.6	355.9	44.9	14.4
<b>Enfield</b>	278.2	288.5	293.5	294.4	298.5	303.8	307.6	19.1	6.6
<b>Greenwich</b>	217.3	231.0	253.1	275.9	286.9	296.1	305.6	74.5	32.3
<b>Harrow</b>	210.7	216.5	228.4	232.9	234.7	237.1	239.6	23.1	10.7
<b>Havering</b>	224.8	228.7	234.1	240.4	249.3	256.4	262.6	33.9	14.8
<b>Hillingdon</b>	246.1	248.9	256.7	265.3	276.3	281.6	285.8	36.9	14.8
<b>Hounslow</b>	217.1	223.0	238.5	245.4	252.3	259.4	265.0	42.0	18.8
<b>Kingston upon Thames</b>	149.1	152.5	156.8	160.9	164.7	167.6	170.1	17.7	11.6
<b>Merton</b>	191.0	195.2	200.6	200.4	201.8	203.8	206.0	10.8	5.5
<b>Redbridge</b>	242.2	248.7	259.2	268.4	273.5	279.1	283.4	34.7	13.9
<b>Richmond upon Thames</b>	174.1	182.3	188.2	191.0	196.0	201.2	204.9	22.6	12.4
<b>Sutton</b>	181.4	183.1	186.1	189.6	195.6	199.9	202.4	19.3	10.5
<b>Waltham Forest</b>	222.8	223.5	230.4	234.7	241.4	247.8	254.5	30.9	13.8
<b>Outer London</b>	<b>4,469.6</b>	<b>4,555.4</b>	<b>4,724.4</b>	<b>4,908.7</b>	<b>5,060.6</b>	<b>5,187.8</b>	<b>5,303.4</b>	<b>747.9</b>	<b>16.4</b>
<b>GREATER LONDON</b>	<b>7,336.9</b>	<b>7,543.3</b>	<b>7,910.0</b>	<b>8,266.2</b>	<b>8,578.1</b>	<b>8,860.6</b>	<b>9,106.3</b>	<b>1,563.0</b>	<b>20.7</b>

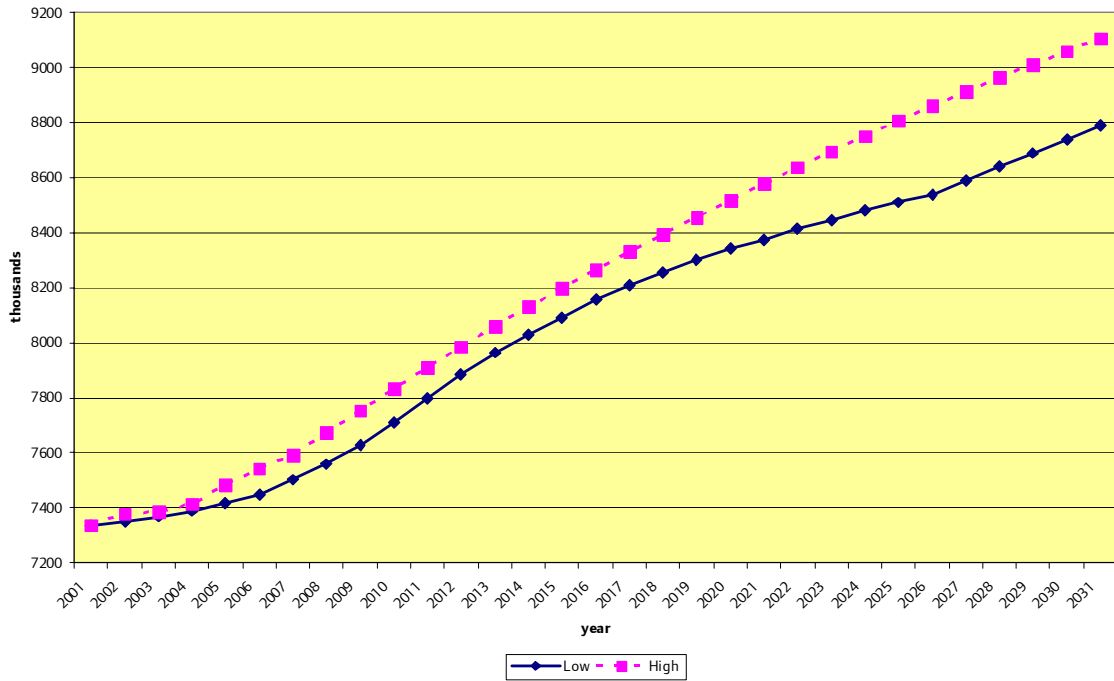
**Table A5: Total households: Boroughs and Groupings: High projection: thousands**

	2001	2006	2011	2016	2021	2026	Change 2006-26	Change 2006-26 %
<b>Camden</b>	91.7	95.5	98.6	102.0	107.4	113.2	17.7	18.5
<b>Kensington and Chelsea</b>	79.3	82.0	86.0	87.9	90.1	93.1	11.1	13.5
<b>Westminster, City of</b>	100.0	106.1	109.9	113.0	117.8	122.8	16.7	15.7
<b>City of London</b>	4.3	5.1	5.5	6.1	6.6	7.1	2.0	39.9
<b>Central boroughs</b>	<b>275.4</b>	<b>288.7</b>	<b>300.1</b>	<b>308.9</b>	<b>321.9</b>	<b>336.2</b>	<b>47.4</b>	<b>16.4</b>
<b>Hackney</b>	86.1	92.0	98.9	103.2	109.4	115.8	23.8	25.9
<b>Hammersmith and Fulham</b>	75.6	79.0	82.8	87.1	93.7	99.0	20.0	25.4
<b>Haringey</b>	92.2	95.8	101.6	107.7	112.8	119.0	23.2	24.2
<b>Islington</b>	82.3	88.7	100.0	104.7	110.2	115.7	27.0	30.5
<b>Lambeth</b>	118.7	125.3	130.9	135.9	143.5	151.7	26.4	21.0
<b>Lewisham</b>	107.6	113.2	117.6	128.6	137.6	144.2	31.0	27.4
<b>Newham</b>	91.6	98.5	115.7	138.5	148.9	158.3	59.8	60.7
<b>Southwark</b>	109.2	116.3	125.0	136.1	147.1	160.2	43.9	37.7
<b>Tower Hamlets</b>	78.7	91.9	109.6	122.9	135.0	147.0	55.1	60.0
<b>Wandsworth</b>	119.4	126.6	132.0	137.5	144.9	152.0	25.4	20.0
<b>Rest of Inner boroughs</b>	<b>961.4</b>	<b>1,027.2</b>	<b>1,114.1</b>	<b>1,202.0</b>	<b>1,283.2</b>	<b>1,362.7</b>	<b>335.5</b>	<b>32.7</b>
<b>Inner London</b>	<b>1,236.8</b>	<b>1,316.0</b>	<b>1,414.2</b>	<b>1,510.9</b>	<b>1,605.0</b>	<b>1,698.9</b>	<b>382.9</b>	<b>29.1</b>
<b>Barking and Dagenham</b>	67.2	70.7	75.3	87.6	95.5	105.1	34.4	48.6
<b>Barnet</b>	127.0	131.7	138.4	153.9	164.0	170.5	38.7	29.4
<b>Bexley</b>	89.7	91.6	92.9	94.7	97.7	101.0	9.4	10.3
<b>Brent</b>	100.3	105.3	112.2	119.3	125.9	131.7	26.3	25.0
<b>Bromley</b>	126.1	130.2	133.6	135.5	139.6	144.3	14.1	10.8
<b>Croydon</b>	139.1	143.8	150.9	167.6	178.7	183.6	39.8	27.7
<b>Ealing</b>	118.1	121.9	127.7	132.0	137.1	142.6	20.7	17.0
<b>Enfield</b>	110.6	116.2	119.1	120.8	123.8	127.3	11.0	9.5
<b>Greenwich</b>	93.0	102.7	113.0	125.0	131.3	137.1	34.4	33.5
<b>Harrow</b>	79.5	83.0	88.0	91.1	93.2	95.5	12.5	15.1
<b>Havering</b>	91.9	94.8	98.2	102.5	107.8	112.2	17.3	18.3
<b>Hillingdon</b>	96.8	100.7	104.5	108.9	114.6	118.1	17.4	17.3
<b>Hounslow</b>	84.1	88.2	94.5	97.8	101.4	105.2	17.0	19.3
<b>Kingston upon Thames</b>	61.5	64.3	66.1	68.3	70.6	72.8	8.4	13.1
<b>Merton</b>	79.0	82.8	85.6	86.8	88.8	91.2	8.4	10.1
<b>Redbridge</b>	92.5	96.6	101.0	105.5	108.8	112.2	15.6	16.1
<b>Richmond upon Thames</b>	76.3	79.5	81.1	82.0	84.5	87.4	7.9	10.0
<b>Sutton</b>	76.5	79.2	81.2	83.9	87.6	90.6	11.5	14.5
<b>Waltham Forest</b>	89.9	93.2	96.6	99.8	104.5	109.1	16.0	17.1
<b>Outer London</b>	<b>1,799.2</b>	<b>1,876.4</b>	<b>1,959.8</b>	<b>2,063.0</b>	<b>2,155.2</b>	<b>2,237.4</b>	<b>361.0</b>	<b>19.2</b>
<b>GREATER LONDON</b>	<b>3,036.0</b>	<b>3,192.4</b>	<b>3,374.0</b>	<b>3,573.9</b>	<b>3,760.2</b>	<b>3,936.3</b>	<b>743.9</b>	<b>23.3</b>
<b>Greater London (Independent)</b>	<b>3,036.1</b>	<b>3,190.4</b>	<b>3,370.9</b>	<b>3,568.3</b>	<b>3,753.0</b>	<b>3,927.3</b>	<b>736.9</b>	<b>23.1</b>

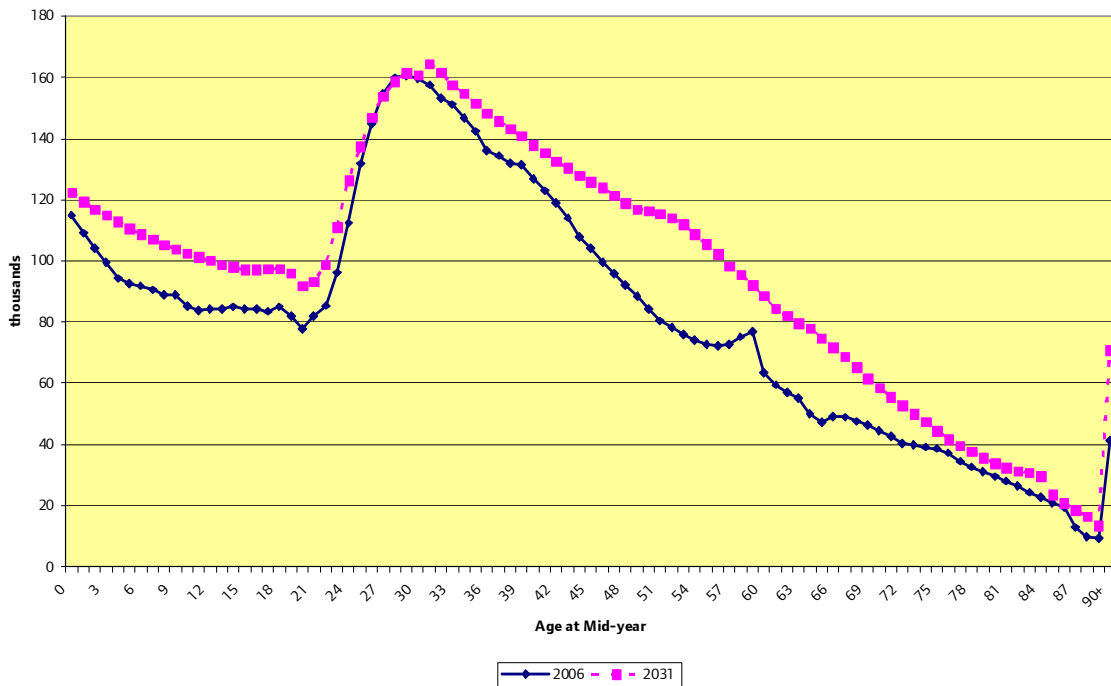
**Table A6: Total resident labour force: Boroughs and Groupings: High projection: thousands**

	2001	2006	2011	2016	2021	2026	2031	Change 2006-31	Change 2006-31 %
<b>Camden</b>	104.1	108.3	112.8	116.7	122.9	129.1	132.1	23.8	22.0
<b>Kensington and Chelsea</b>	84.7	89.6	96.0	98.6	101.3	103.4	104.5	14.9	16.6
<b>Westminster, City of</b>	109.7	117.8	123.7	127.5	132.0	134.5	136.6	18.7	15.9
<b>City of London</b>	4.7	5.7	6.2	6.8	7.3	7.8	8.2	2.5	43.6
<b>Central boroughs</b>	<b>303.2</b>	<b>321.5</b>	<b>338.7</b>	<b>349.6</b>	<b>363.6</b>	<b>374.8</b>	<b>381.4</b>	<b>59.9</b>	<b>18.6</b>
<b>Hackney</b>	94.3	103.7	112.7	116.7	122.8	128.3	133.6	29.9	28.9
<b>Hammersmith and Fulham</b>	93.7	99.4	104.2	108.6	115.2	118.7	120.0	20.5	20.7
<b>Haringey</b>	110.6	119.4	127.7	134.8	140.2	146.8	152.2	32.7	27.4
<b>Islington</b>	91.6	101.5	112.9	117.4	122.7	126.5	128.3	26.8	26.5
<b>Lambeth</b>	151.0	160.8	167.5	172.2	179.5	185.9	191.8	31.0	19.3
<b>Lewisham</b>	130.7	141.9	148.3	159.4	168.1	174.1	176.6	34.7	24.5
<b>Newham</b>	104.5	116.1	136.3	159.6	168.6	176.8	185.6	69.5	59.9
<b>Southwark</b>	128.4	138.9	150.9	164.2	175.5	189.1	199.8	60.9	43.8
<b>Tower Hamlets</b>	88.9	104.5	123.8	135.4	145.6	154.3	163.4	58.9	56.3
<b>Wandsworth</b>	159.3	168.4	175.8	181.2	188.3	192.9	195.2	26.7	15.9
<b>Rest of Inner boroughs</b>	<b>1153.1</b>	<b>1254.6</b>	<b>1359.9</b>	<b>1449.6</b>	<b>1526.4</b>	<b>1593.2</b>	<b>1646.4</b>	<b>391.8</b>	<b>31.2</b>
<b>Inner London</b>	<b>1456.3</b>	<b>1576.1</b>	<b>1698.6</b>	<b>1799.1</b>	<b>1890.0</b>	<b>1968.0</b>	<b>2027.8</b>	<b>451.7</b>	<b>28.7</b>
<b>Barking and Dagenham</b>	73.0	77.8	83.8	98.2	106.0	115.5	126.7	48.9	62.9
<b>Barnet</b>	159.0	165.0	174.2	192.1	201.3	204.4	208.2	43.3	26.2
<b>Bexley</b>	108.9	112.1	113.5	114.3	116.7	119.4	121.5	9.4	8.4
<b>Brent</b>	135.5	137.9	143.6	149.3	154.2	156.9	158.8	20.9	15.2
<b>Bromley</b>	148.1	154.9	158.7	159.3	161.8	164.6	166.2	11.3	7.3
<b>Croydon</b>	170.8	173.2	178.8	196.9	205.2	204.6	205.2	32.0	18.5
<b>Ealing</b>	159.3	161.8	168.3	170.6	173.6	176.4	178.5	16.8	10.4
<b>Enfield</b>	133.5	142.5	144.2	143.7	144.8	146.3	147.0	4.5	3.2
<b>Greenwich</b>	103.6	113.8	125.7	137.4	141.4	144.2	147.5	33.8	29.7
<b>Harrow</b>	105.8	112.8	121.5	122.8	122.7	123.6	124.4	11.5	10.2
<b>Havering</b>	109.4	116.5	122.4	126.6	131.3	134.3	137.1	20.7	17.7
<b>Hillingdon</b>	124.9	129.0	133.9	138.8	144.5	146.2	147.5	18.5	14.3
<b>Hounslow</b>	112.8	117.4	125.4	127.7	130.3	133.1	135.2	17.8	15.2
<b>Kingston upon Thames</b>	79.8	83.7	85.6	87.4	89.0	90.0	91.0	7.4	8.8
<b>Merton</b>	102.8	105.6	107.5	106.2	106.2	106.4	106.7	1.1	1.1
<b>Redbridge</b>	116.0	122.7	128.3	132.4	133.6	135.5	137.2	14.5	11.8
<b>Richmond upon Thames</b>	94.8	100.3	102.6	103.1	105.2	107.6	109.2	8.9	8.9
<b>Sutton</b>	95.4	98.9	100.8	102.6	105.5	107.1	107.6	8.7	8.8
<b>Waltham Forest</b>	109.9	110.9	113.6	115.2	118.0	120.0	121.8	10.9	9.9
<b>Outer London</b>	<b>2243.4</b>	<b>2336.7</b>	<b>2432.2</b>	<b>2524.8</b>	<b>2591.1</b>	<b>2636.1</b>	<b>2677.6</b>	<b>340.9</b>	<b>14.6</b>
<b>GREATER LONDON</b>	<b>3699.7</b>	<b>3912.8</b>	<b>4130.8</b>	<b>4324.0</b>	<b>4481.2</b>	<b>4604.1</b>	<b>4705.4</b>	<b>792.6</b>	<b>20.3</b>

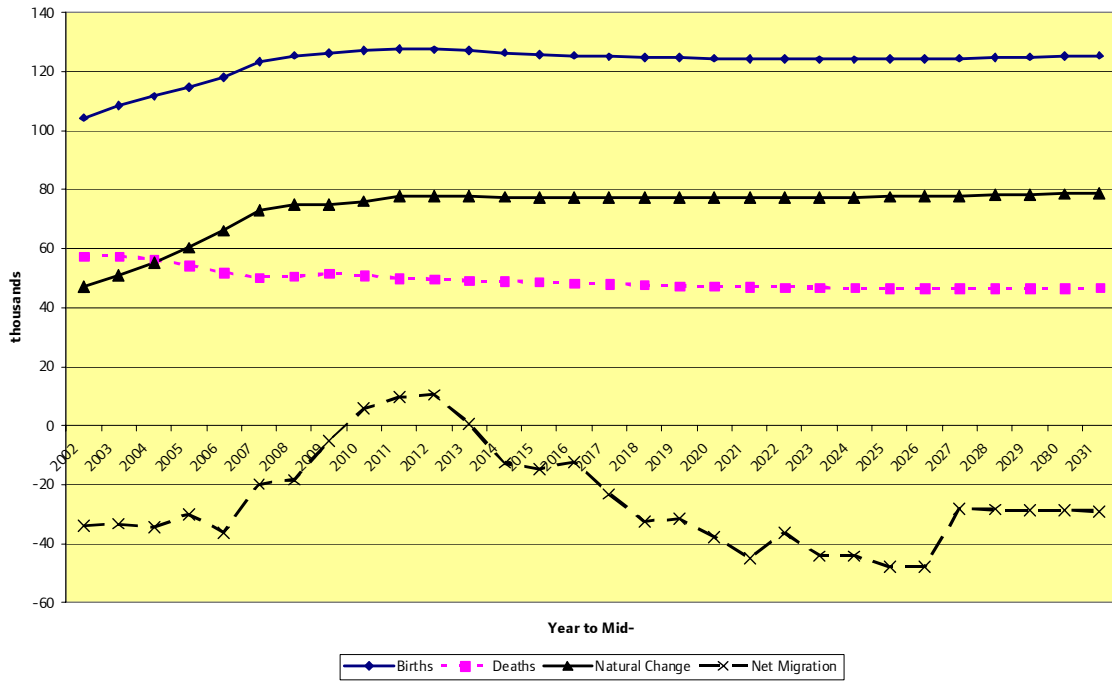
**Chart 1: Total population: London, High and Low projections: 2001-31**



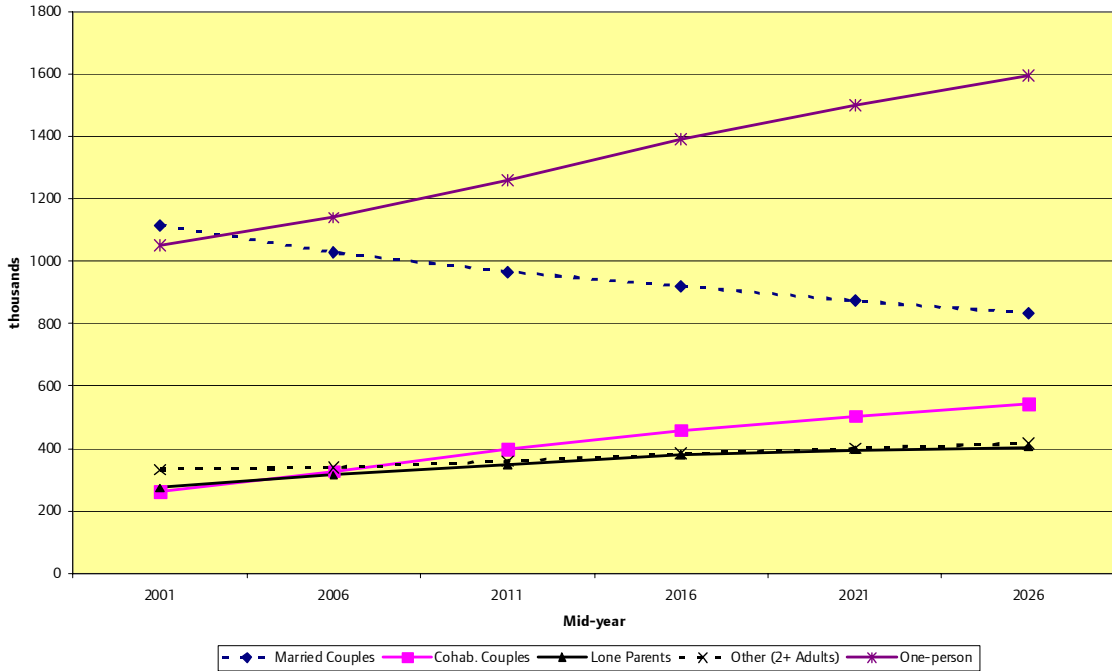
**Chart 2: Age structure: London: Low projection: 2006 and 2031**



**Chart 3: Components of change: London: Low projection: 2001-31**



**Chart 4: Households by type: London: Low projection: 2001-26**



## Access to Data

For most users full results are available for Greater London, each London borough and borough groups as follows:

- Population by single years of age and gender from 2001 to 2031, plus annual births, deaths and net migration
- Households by type and age, gender and marital status of representative for 2001, 2006, 2011, 2016, 2021 and 2026 plus private household population, communal establishment population and average household size
- Resident Labour Force by grouped ages and gender from 2001 to 2031

Ward population projections consistent with Low and High are also available.

These data are available as Excel files via the GLA Demography Extranet for London boroughs and certain other organisations. General users should request data via email [Demography@london.gov.uk](mailto:Demography@london.gov.uk) or telephone 020 7983 4347.

Previous Rounds of GLA projections are also available on request.

## Regular Briefings from the GLA Data Management and Analysis Group - DMAG

### Recent DMAG Briefings:

2008-01	Census Information Note 2008-1	Eileen Howes
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2008-10	<a href="#">London Borough Migration 2001-06</a>	John Hollis
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2008-12	Demography Team Workplan 2008/09	John Hollis
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2008-14	Census Team Workplan 2008/09	Eileen Howes
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