

Update 2017-09

2018-based Trend Projection Results

November 2019

Key Findings

- The GLA has released three sets of trend-based projections based on different periods of past migration data. These are:
 - A central 10-year migration variant
 - A short 5-year migration variant
 - A long 15-year migration variant
- Based on the central variant the total population of London is projected to rise by 1.62 million between 2018 and 2041 to reach 10.43 million.
- The 2018-based release projects slower growth than the previous 2017-based round
- London is projected to see an average of 131,900 births and 58,700 deaths per year between 2018 and 2041, which will result in average natural population increase of 73,100 per year
- Across the period between 2018 and 2041, domestic in-migration is projected to average 220,700 people per year, whereas domestic out-migration is projected to average 302,900 people per year, with the result that net domestic out migration is projected be 81,200 people per year
- International in-migration is projected to average 204,800 people per year over the projection, while international out-migration is projected to average 125,800 people per year, which will result in net international migration adding to London's population at a rate of 78,900 people per year
- London's population is ageing. These projections show that between 2018 and 2041 that the number of adults aged 65 to 79 is projected to increase by 61% and the number aged 80 and over is projected to increase by 70%
- The number of households in Greater London is projected to increase by just under 1.02 million between 2018 and 2041 (a 28% increase), which would be equivalent to 42,200 new households being created each year (using the DCLG household model).

1. Introduction

London's population has been growing continuously since the early 1990s, following a long period of decline over the previous five decades. The city's peak pre-war population of 8.6 million people was finally surpassed in 2016, and since then the population has continued to increase towards 9 million (Fig.1).

Fig.1 Total population of Greater London, 1901-2018

London's population fell sharply after World War Two, but has been growing strongly since the early 1990s and surpassed its pre-war total in 2016

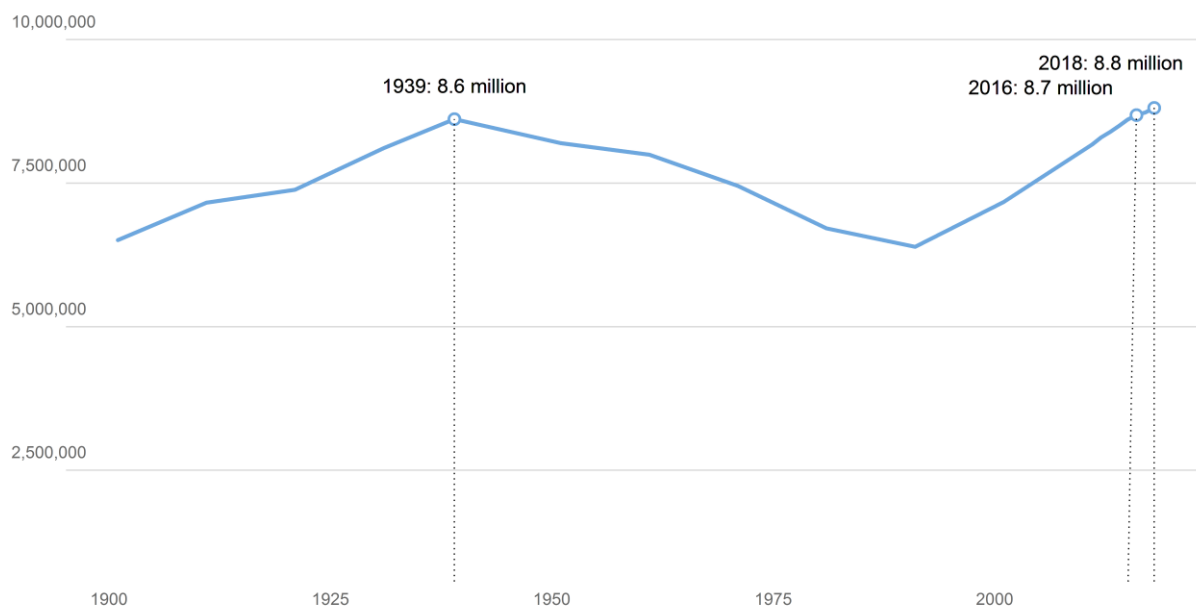


Chart: GLA City Intelligence Source: London Datastore
 Note: Data from 1801 to 2011 are from the UK census, post-2011 data are derived from GLA projections

The GLA produces an annual set of population and household projections which detail how the capital's population might be expected to change in the future. This report accompanies the release of the 2018-based population and household projections, which update and supersede the 2017-based projections released earlier this year.

In addition to these trend-based projections the GLA also produces an annual set of housing-led projection at borough, ward and MSOA level. The most recent set of housing-led projections are the 2016-based round, released in July 2017. A set of housing-led projections consistent with the 2018-based trend projection is scheduled for release in early 2020.

The 2018-based outputs incorporate the latest available demographic data but make no significant changes in methodology over the previous round of outputs. Three migration-based variant projections have been produced, using different periods of past migration data to project future patterns, these are:

- Central variant: uses ten years of past data
- Short-term variant: uses five years of past data
- Long-term variant: uses 15 years of past data

These projections are referred to herein as the central, short-term and long-term variants. In each case, mortality and fertility methodologies are the same but the assumptions regarding migration differ. Projections based on shorter periods of past migration data will generally respond more quickly to recent changes in estimated flows and the results will have greater variation between successive sets of outputs. Users are encouraged to consider the trade-off between responsiveness and stability when determining the most appropriate projection for their application. The GLA typically employs the central variant as its primary projection to inform long-term strategic planning.

Two sets of household projections have been produced for each population output:

- A set using the Department of Communities and Local Government (now Ministry of Housing, Communities and Local Government) 2014-based subnational household projections model
- A set using the ONS 2016-based household projections model.

This report is divided into sections which each look at a different aspect of London's population. Section 2 analyses how London's population as a whole is projected to change between 2018 and the end of the current London Plan period in 2041. Section 3 analyses how the different drivers of London's population are projected to change between 2018 and 2041, including births, deaths, and levels of domestic and international migration. Section 4 analyses how the age structure of London's population is projected to change between 2018 and 2041, and Section 5 analyses how the number of households in London is projected to change between 2018 and 2041.

This release includes data for all English and Welsh local authorities as well as national-level data for Scotland and Northern Ireland. The report presents the results for London only. Data for areas beyond the Greater London boundary are primarily published for the purpose of transparency and do not necessarily reflect the organisation's view of future growth outside of the city.

The data outputs from these projections are available from the London Datastore. A detailed report on the methodology is also available (see section 7 below for details).

2. How is London's population projected to change?

Fig.2 Total population of Greater London, 1981-2041 (projected)

London's current population of approximately 8.8 million residents is its highest ever level, and it's projected to rise to 10.43 million by 2041

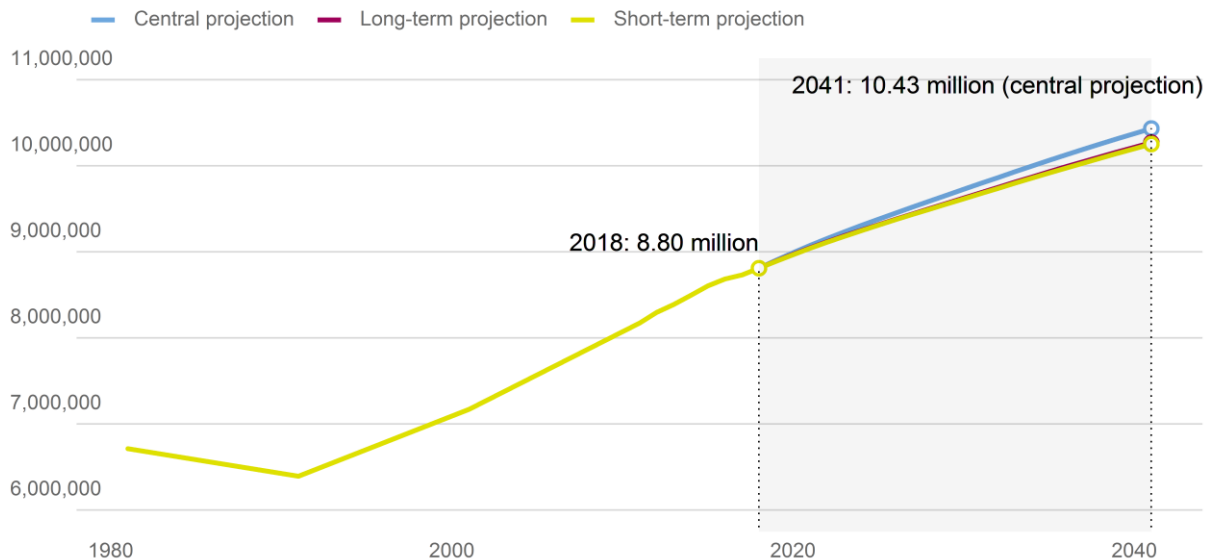


Chart: GLA City Intelligence Source: London Datastore
Note: Data from 1981 to 2011 are from the UK census, post-2011 data are derived from GLA projections

Between 2018 and 2041, London's population is projected to increase from 8.80 million to 10.43 million under the central trend projection. This represents a total increase of 1.62 million, or 18%, over the remaining lifetime of the current London Plan, and would represent an annual increase of around 70,600 new residents per year.

As illustrated by Fig.2, London's projected population growth is higher under the central trend projection than under either the short-term trend projection or long-term trend projection. Under the short-term trend projection, London's population would reach 10.25 million by 2041 (increasing by 62,800 per year), whilst under the long-term trend projection it would reach 10.27 million (increasing by 63,500 per year).

In past rounds of projections, the central trend trajectory has fallen between the short- and long-term migration variants. The fact that in this round the central trend shows the strongest growth is primarily due to the cyclical nature of migration flows resulting in average annual net migration for London being higher when taking an average of the past 10 years in comparison to either the past 15 years or the last five.

Figure 3 shows net domestic out-migration from London over the past 17 years. The difference in the data captured by each of the three migration variants can clearly be seen. The short-term variant includes only the last five years' data – a period of relatively high out-migration. The central trend projection additionally includes the period 2009–2014 in which out-migration was somewhat suppressed. Finally, the long-term trend includes the period 2004–2018 where the out-migration average was higher.

Fig.3 Domestic migration backseries, 2001 to 2018

Differing periods included in the calculation of migration rates

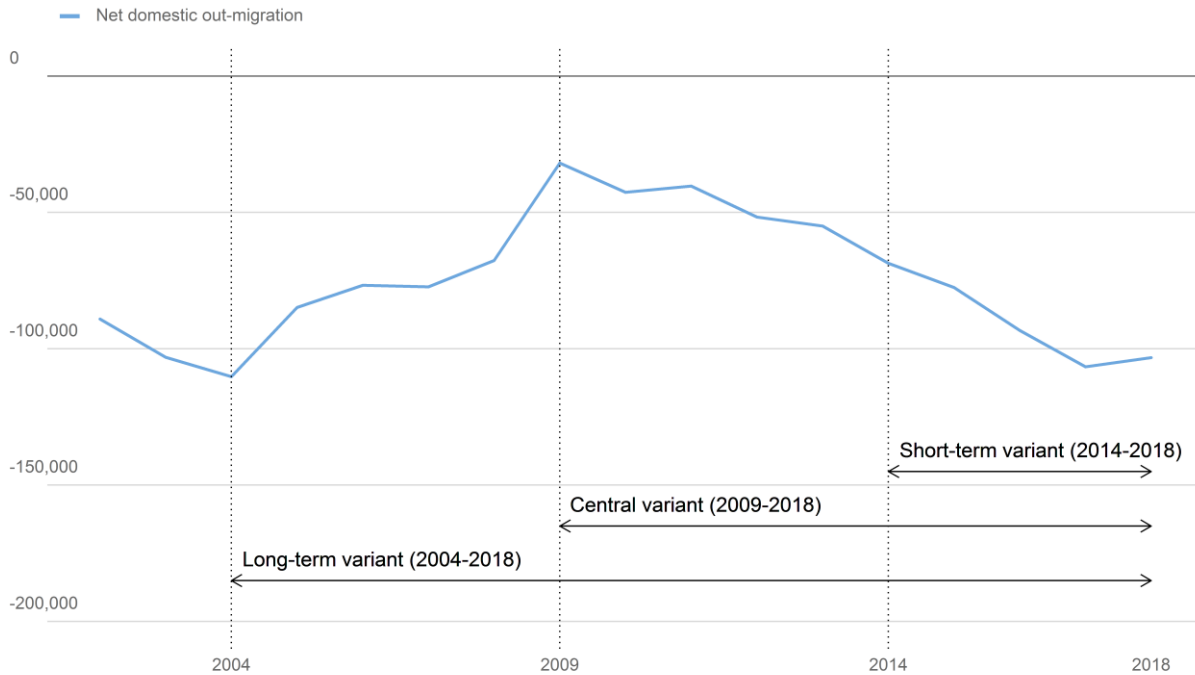


Chart: GLA City Intelligence Source: London Datastore
 Note: Data are estimates

The 2018-based population projections project slower growth than the previous 2017-based projections which were released in March 2019. Fig.4 illustrates that under the 2017-based projection London's population was due to reach 10.66 million by 2041 (central trend) but that this figure has been revised down to 10.43 million under 2018-based set, a difference of 226,500 people.

Fig.4 Changes since the 2017-based population projection

London's population is projected to be 226,499 people lower by 2041 in comparison to the 2017-based projection

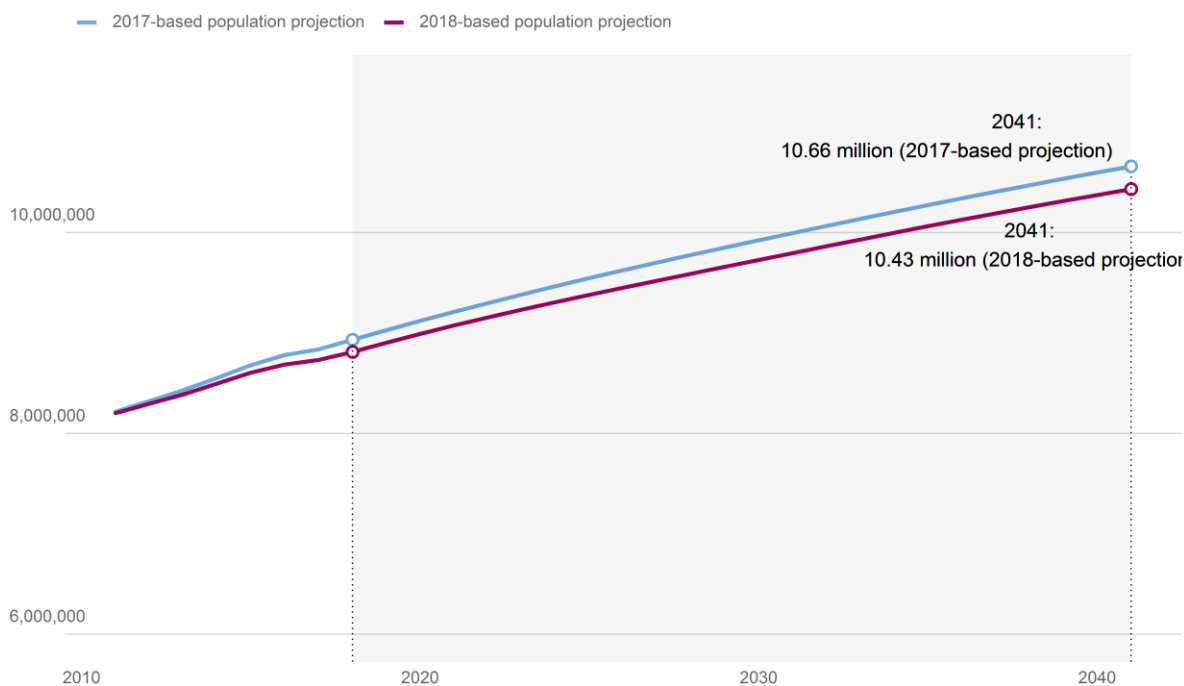


Chart: GLA City Intelligence Source: London Datastore

3. What is causing London's projected population change?

London's population is affected by two main drivers: *natural change* (the balance of births minus deaths among the existing population) and *net migration* (the balance between in-migration and out-migration). Net migration can be further disaggregated into net *domestic migration* (people moving between London and other parts of the UK) and net *international migration* (people moving between London and other countries). These components of change enable us to examine drivers of population change in detail in order to build up a more comprehensive picture of London's future population increase.

Natural change

Fig.5 Births and deaths in Greater London, 2001 to 2041 (projected)

Between now and 2041, there will be an average of 131,852 births and 58,718 deaths per year

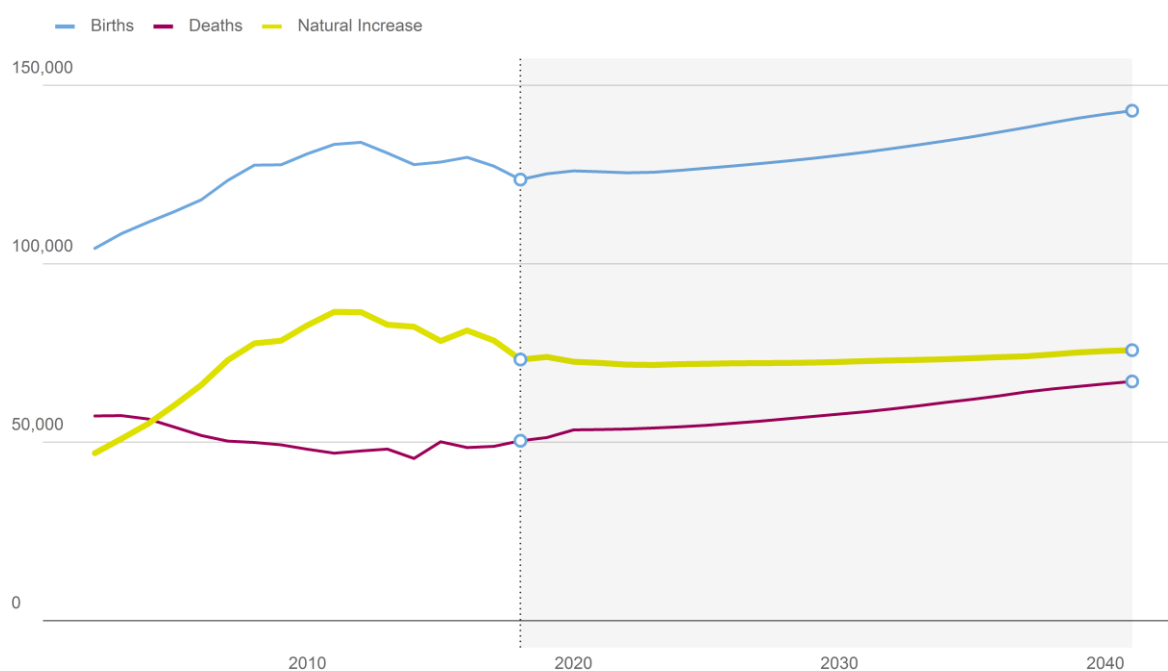


Chart: GLA City Intelligence Source: London Datastore

Note: Data up to 2018 are estimates, post-2018 data are projections (switchover marked by dotted line)

The number of births in London rose by almost 30% between 2002 and 2012 which, combined with a falling number of deaths annually, resulted in a period of high natural increase. However, the number of births has been falling since then, and the level of natural increase is now projected to remain relatively flat between 2018 and 2041 (Fig.5).

Over the projection period, a steadily rising number of births (resulting from a rising number of women of childbearing age within London's population, rather than higher overall fertility rates) is projected to be largely offset by a steadily rising number of deaths (caused primarily by rising numbers of elderly people within the population).

Overall, the central trend projects there will be an average of 131,900 new births and 58,700 deaths per year between 2018 and 2041, which will result in average natural increase of 73,100 per year.

London has a relatively high number of births in relation to the rest of the UK because of its significantly more youthful population profile, meaning it is home to more women who are of childbearing age.

Domestic migration

Fig.6 Domestic migration in and out of Greater London, 2001 to 2041 (projected)

Net domestic migration is projected to fall by 13% between 2018 and 2041

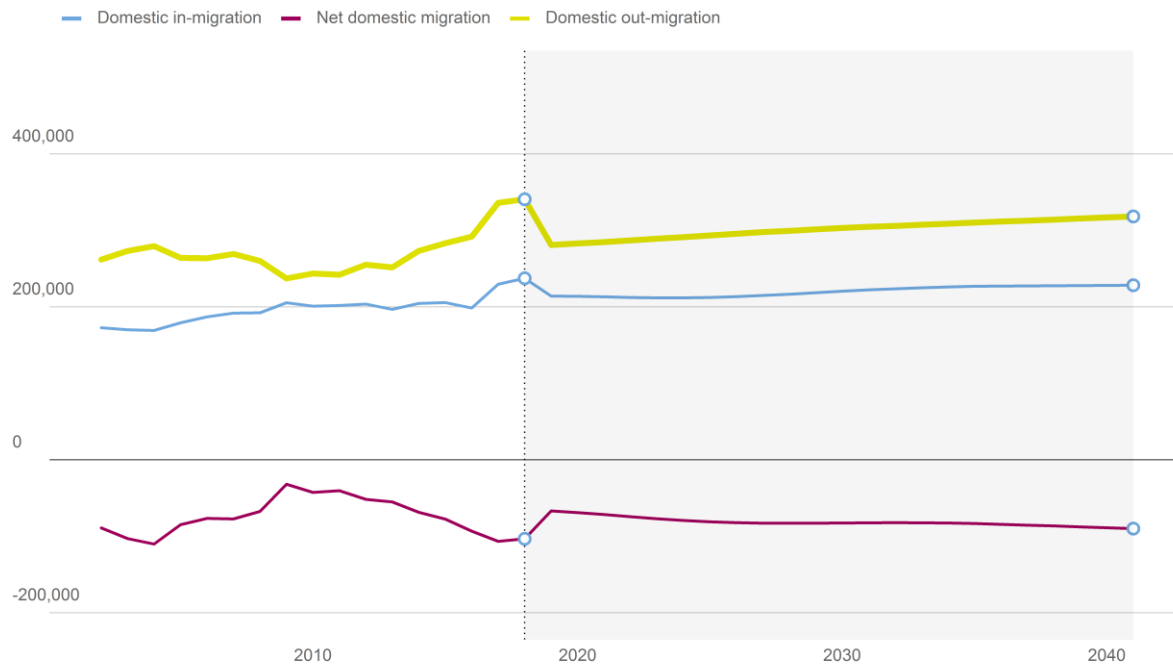


Chart: GLA City Intelligence Source: London Datastore
 Note: Data up to 2018 are estimates, post-2018 data are projections (switchover marked by dotted line)

London has consistently been a net exporter of residents to the rest of the UK, and this trend is projected to continue throughout the period covered by these projections.

Across the period between 2018 to 2041, domestic in-migration is projected to average 220,700 people per year, while domestic out-migration is projected to average 302,900 people per year. The resulting net domestic migration is projected to subtract from London's population at an average rate of 82,200 people per year over the projection period.

In addition, domestic out-migration is projected to increase more quickly than domestic in-migration throughout the period, with the result that the amount of net domestic out-migration is projected to increase by 13% by 2041.

International migration

Fig.7 International migration in and out of Greater London, 2001 to 2041 (projected)

Net international migration is projected to fall by 32% between 2018 and 2041

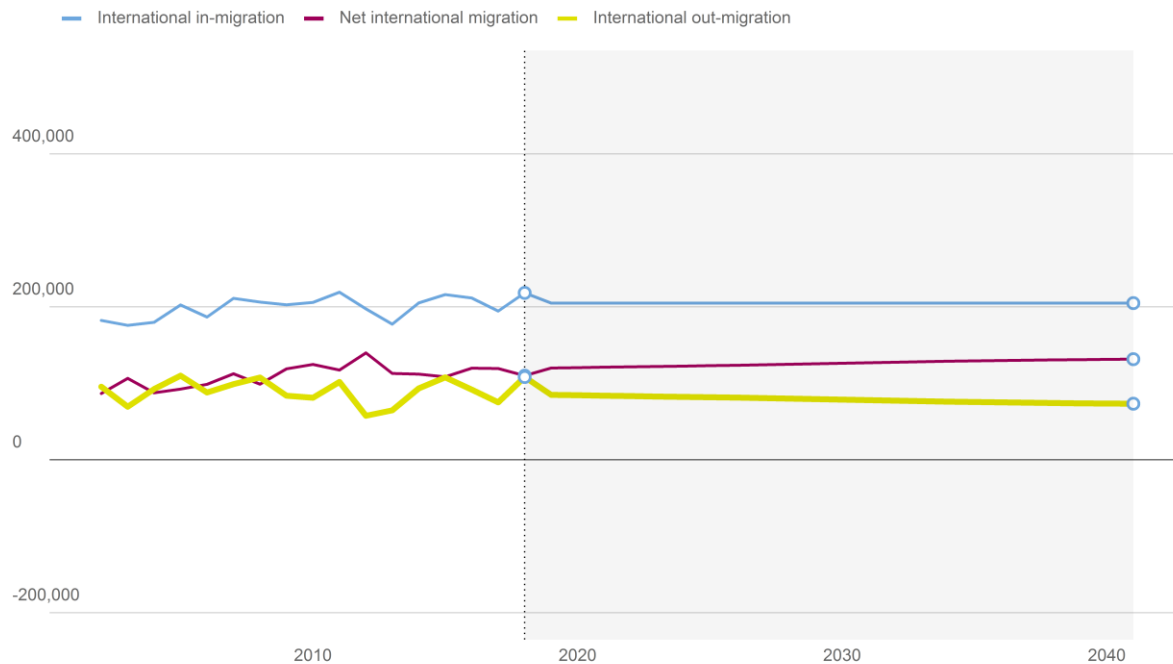


Chart: GLA City Intelligence Source: London Datastore
 Note: Data up to 2018 are estimates, post-2018 data are projections (switchover marked by dotted line)

In contrast to domestic migration, international migration has consistently had a positive impact on the size of London's population because London takes in more immigrants from abroad than are lost from its population through out-migration.

Across the period between 2018 and 2041, international in-migration is projected to average 204,800 people per year, whereas international out-migration is projected to average 125,800 people per year, which will result in net international migration adding to London's population at a rate of 78,900 people per year.

International out-migration is projected to slowly increase during this period while international in-migration is projected to remain constant, with the ramification that the annual rate of net international migration is projected to decline by 30%, from 108,200 people in 2018 to 73,200 in 2041. However, the net flow of international migration is still expected to remain positive.

Total net migration

Fig.8 Total net migration in and out of Greater London, 2001 to 2041 (projected)

Net domestic migration is projected to virtually balance-out net international migration

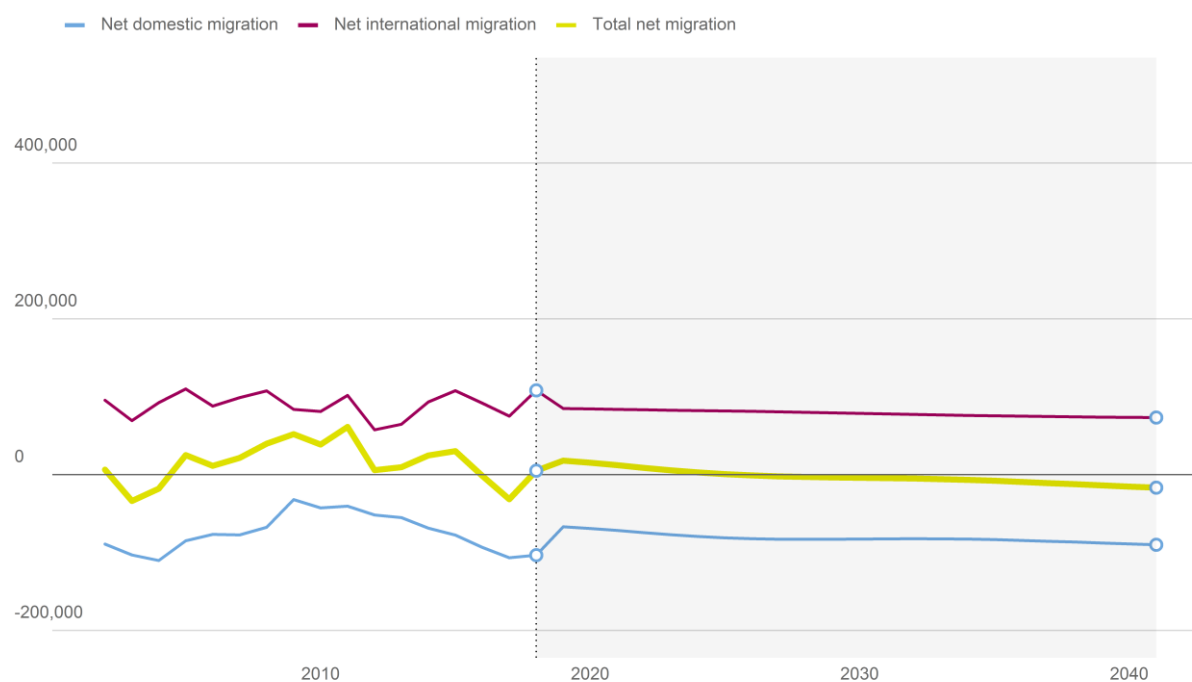


Chart: GLA City Intelligence Source: London Datastore

Note: Data up to 2018 are estimates, post-2018 data are projections (switchover marked by dotted line)

Putting the different components of migration together (total migration), the overall trend for net migration can be seen in Fig.8. London's positive net inflow of international migration is projected to be almost balanced-out by the negative net outflow of domestic migration throughout the period between 2018 and 2041, as is the case in the historical flow data, also seen in Fig.8.

However, the two flows are never projected to perfectly cancel each other out. Total net migration is projected to result in a small positive inflow of people between 2018 and 2026, which will then turn into a small outflow in every year between 2026 and 2041 because both net international migration and net domestic migration are projected to undergo a slow decline throughout this period.

Although domestic and international migration are projected to balance during the projection period, it's important to recognize that migration also contributes to London's population growth through its impact on natural change. This is significant because there is an established pattern in London of flows of inward migration being concentrated among people who are of family-formation age, whereas outward migration tends to be concentrated among people who are slightly older, with moves triggered by the birth of children (Fig.9).

Fig.9 shows average annual net migration by single year of age for the ten-year period between 2009 and 2018: it demonstrates that net inward migration is heavily concentrated among younger age groups (those aged 16 to 30), with a peak at the age of 23, whereas net outward migration is heavily concentrated amongst Londoners who are in their 30s and 40s (net migration is negative among all ages above 30, with the peak outflow occurring at the age of 35).

This helps to explain why natural increase plays such a large role in London's population growth, because it means that a bigger share of the city's population belongs to the age groups in which women tend to have children. It is also plausible to suggest that having children may act as a trigger for people migrating to areas

outside of London, as the relatively high level of net out-migration among children shown in Fig.9 is presumably caused by their parents choosing to leave the city.

Another cohort of note is 19-year-olds, this peak in outmigration shows 19-year-olds who were previously resident in London moving out of the city to attend university. This will be offset to some extent by moves the other way, to come and study in London, by the outflow is greater leading to a negative net flow.

Fig.9 Average annual net migration in and out of Greater London by age, 2008 to 2018

London is a net importer of people who are in their teens and twenties, and a net exporter of people aged 30 and over

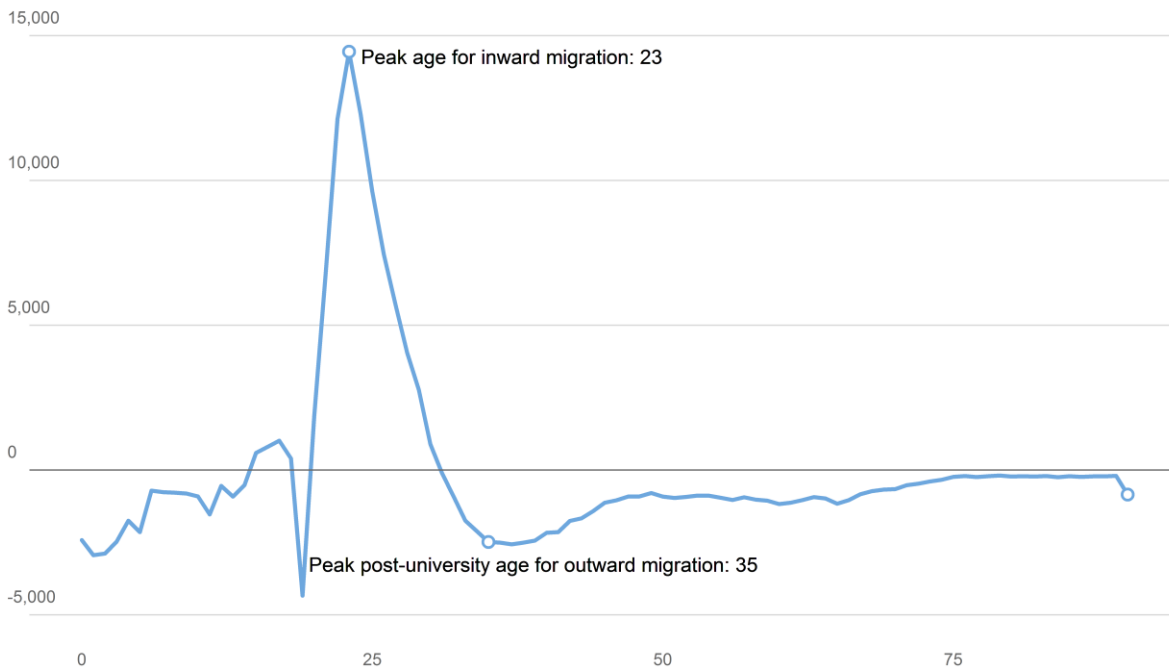


Chart: GLA City Intelligence Source: London Datastore

The level of total net migration into London is sensitive to the projection variant which is being used, although the differences between the central projection and the short-term and long-term projections are not especially large, as shown in Fig.10.

Fig.10 Total net migration in and out of Greater London, 2001 to 2041 (variant projections)

The level of net migration into London is sensitive to the projection variant which is used

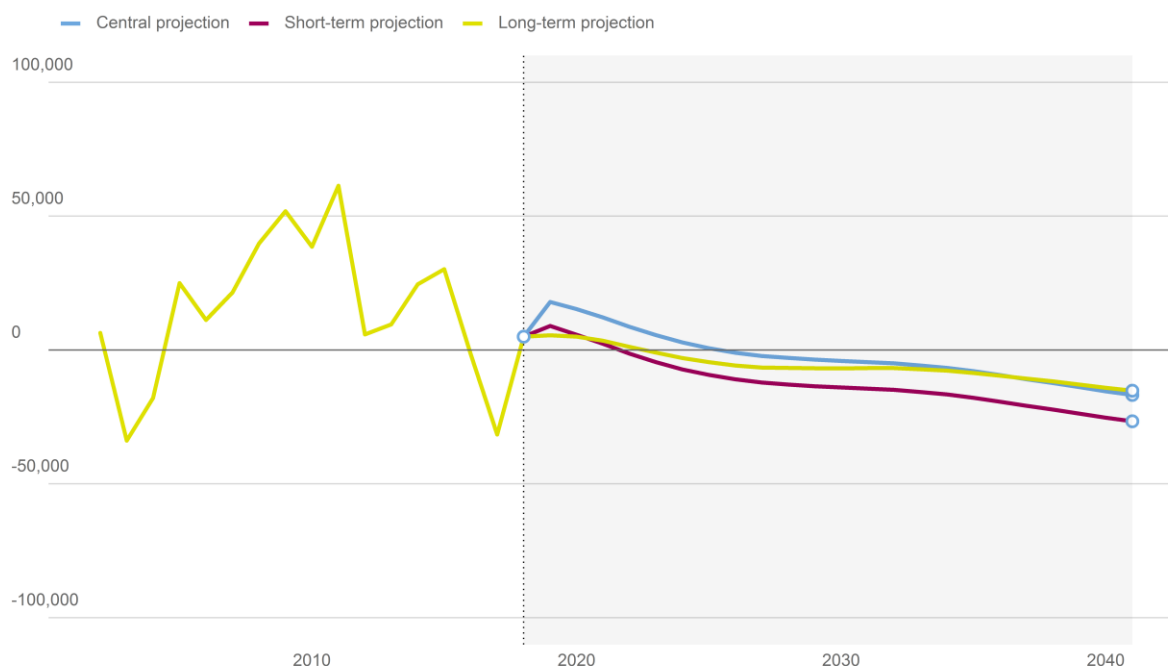


Chart: GLA City Intelligence Source: London Datastore
 Note: Data up to 2018 are estimates, post-2018 data are projections (switchover marked by dotted line)

The same pattern in which net migration is projected to make a small positive contribution to London's population growth until the mid-2020s and then a small negative contribution thereafter, is observed under all three variants, although there is a small difference in its magnitude.

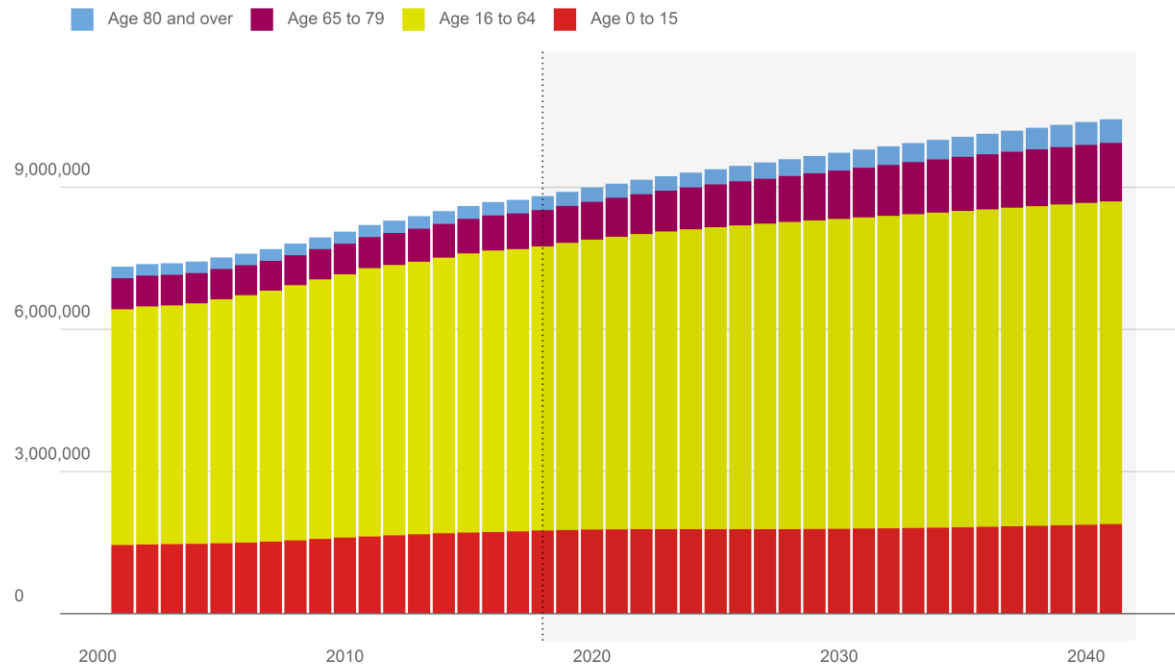
This is most pronounced when comparing the central trend projection with the long-term trend projection. Under the former, net migration continues making a positive contribution to London's population growth until 2025, and its negative impact thereafter is smaller, reaching a net outflow of 16,800 people per year in 2041. By contrast, under the long-term trend projection, total net migration is projected to begin having a negative impact on London's population growth three years earlier in 2022, and it will also have a larger negative impact on London's population by the end of this period in 2041 (with the net outflow reaching 35,300 people per year).

Under the short-term trend projection, the negative impact of net migration on London's population in 2041 would be very similar to the central trend projection, with a projected net outflow of 22,800 people per year. However, it's important to remember that these differences do not hugely alter the overall picture, which is that domestic and international migration are expected to be virtually in balance throughout this period.

4. How is the age structure of London's population projected to change?

Fig.11 Projected population change by age group, 2001 to 2041

The number of Londoners aged 80 and over is projected to increase by 70% between now and 2041



London's population is not only growing; it is also ageing, with a significant proportion of its overall growth being concentrated among the older age groups.

Fig.11 emphasizes that the proportion of London's population which is accounted for by both children (aged 0 to 15) and people of working-age (age 16 to 64) is projected to remain relatively stable, whereas the share of people above the age of 65 is projected to rapidly increase.

Between 2018 and 2041 the number of children is projected to increase by 8%, and the number of working-age adults is projected to increase by 14%, but the number of adults aged 65 to 79 is projected to increase by 61% and the number aged 80 and over is projected to increase by 70%.

These trends mean that the overall share of London's population which is aged 65 and over is projected to grow from just over one-in-ten (12%) in 2018 to almost one-in-five (17%) by 2041.

5. How is the number of households in London projected to change?

Fig.12 Total households in Greater London, 2010 to 2041 (projected)

The total number of households in Greater London is projected to increase by 1,017,116 between 2018 and 2041 (DCLG household model)

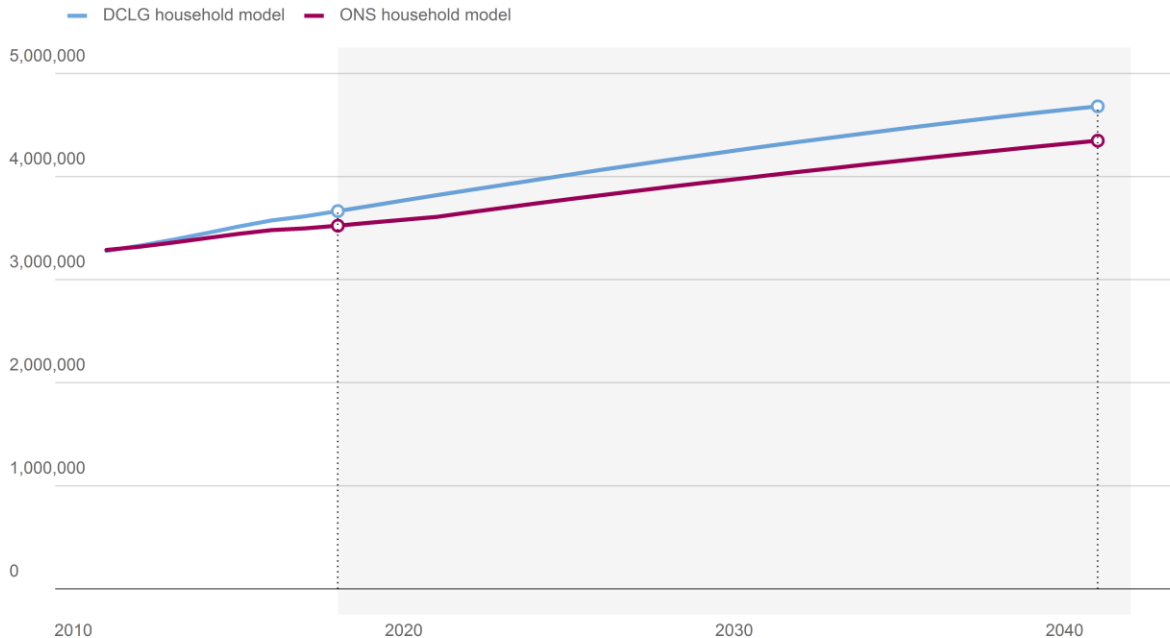


Chart: GLA City Intelligence Source: London Datastore

Note: Data up to 2018 are estimates, post-2018 data are projections (switchover marked by dotted line)

The number of households in London is projected to increase under the central trend projection derived from both the DCLG 2014-based subnational household projections model and the ONS 2016-based household projections model. However, it is projected to increase more quickly according to the projection derived from the former compared to the latter.

The central trend projection derived from the DCLG household projection model projects that the number of households in Greater London will increase by just under 1.02 million between 2018 and 2041 (a 28% increase), which would be equivalent to 42,200 new households being created each year. However, the central trend projection derived from the ONS household projection model projects that only 825,000 new households will be created in Greater London during this time period (a 23% increase), which would be equivalent to 35,900 per year.

The GLA recommends that projections derived from the DCLG household projection model should be used as the main source of household projections for strategic planning purposes, as these are favoured by MHCLG in calculations of housing need. See section 7 for links to projections methodology documentation.

6. Households by age of HRP

Fig.13 Projected number of households by age of HRP, 2011 to 2041 (ONS household model, central trend)

Household growth is projected to be concentrated amongst older households

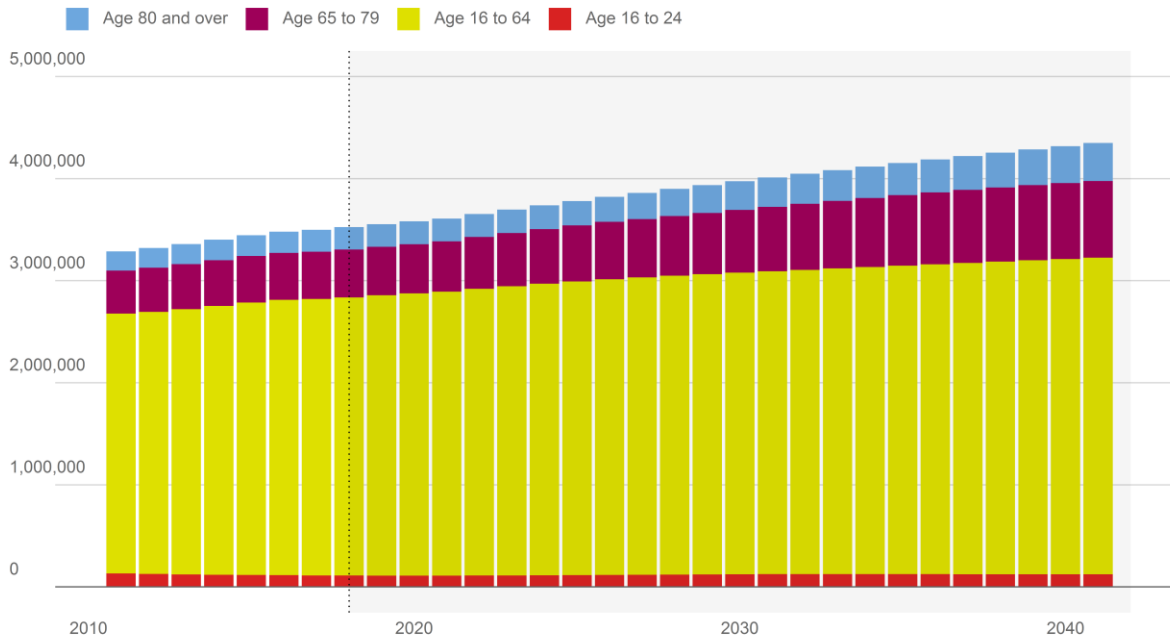


Chart: GLA City Intelligence Source: London Datastore
Note: Data up to 2018 are estimates, post-2018 data are projections (switchover marked by dotted line)

The central trend projection from the ONS household model also suggests that more households are likely to be formed at older ages (Fig.13). Using the age of the Household Reference Person (HRP) as a proxy for the age of the people who live in different households, it appears that households with older HRPs are going to increase in number more quickly than households with working-age ones.

The central trend projection from the ONS household projection model projects that the number of households where the HRP is aged 16 to 64 will grow by 14% between 2018 and 2041, from 2.8 million households to 3.2 million households. However, the number of households where the HRP is aged 65 to 79 is projected to grow by 60%, from 469,000 households to 752,000 households, and the number of households where the HRP is aged 80 and over is projected to grow by 70%, from 219,000 households to 373,000 households.

7. Conclusion

The full data outputs from this set of population projections can be access via the London Datastore, these include:

- Excel workbooks containing population data for London boroughs for each of the three trend projections
- Excel workbooks containing household projection data based on both the DCLG 2014 and ONS 2016 household models
- Data downloads containing detailed components of change for all modelled areas (local authorities in England and Wales, national data for Northern Ireland and Scotland)

<https://data.london.gov.uk/dataset/projections/>

A comprehensive set of methodology documents are also available:

<https://data.london.gov.uk/dataset/projections-documentation>