

Changes to the ONS Mid-Year Population Estimates Methodology 2007

On April 24th 2007 the Office for National Statistics released the details of new methodologies relating to the calculation and apportionment of international migrants developed for use in the mid-year estimates from 2006. The new methods will also be used to revise the mid-year estimates for 2002 to 2005. A number of papers were released. Links to each paper are provided in the header and highlights of the content follow below. The final section examines the implications for London.

[Introduction](#)

This document summarises the key changes as listed below. In all the papers the UN definition of a long-term migrant is used, that is a person who moves to a country with the intent to remain for more than a year or who leaves a country with the intent to be away for a year or more.

[Geographical Distribution of In-migrants](#)

There are two aspects to this part of the new methods:

- 1) Use of the Labour Force Survey (LFS) to improve the regional distribution of in-migrants based on the International Passenger Survey (IPS) flows to the UK.

The LFS was used as an improved distribution source due to its consistency with the 2001 Census data and the significant difference when compared to the IPS.

	% of UK migrant inflows to London
2001 Census	31
LFS (2000-01)	29
IPS (2000-01)	37

- 2) Improvements to the distribution of in-migrants below the regional level to LA level

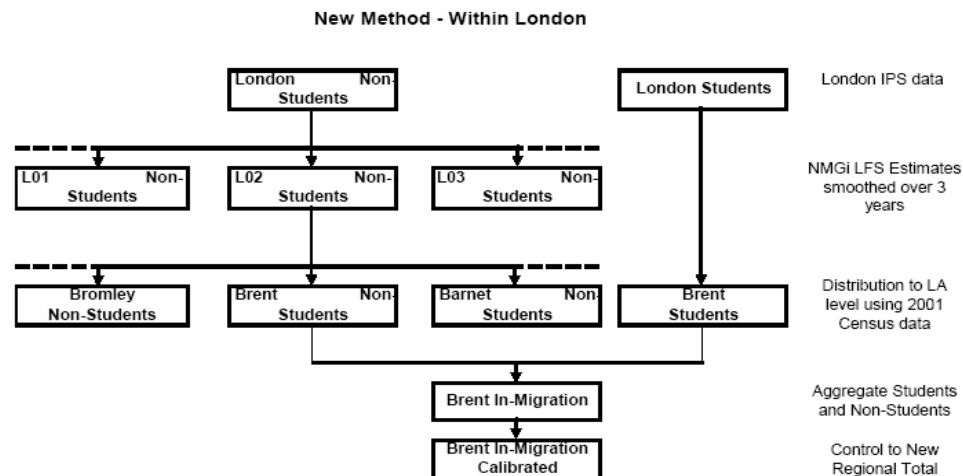
A new geography (NMGi areas) has been developed between regional and LA level to assist in then final distribution of the IPS/LFS regional data to local authorities. This has been done to overcome the central tendency in the IPS data to direct flows to city centre areas and to regional centres. Outside London the NMGi areas were created as contiguous areas with a minimum number of original IPS migrant contacts. Within London the boroughs were clustered on the basis of the country of birth of residents. The clusters also had to have a minimum number of LFS migrant contacts.

Outside London the IPS was used to distribute in-migrants from regions to the NMGi but within London the LFS was used to distribute the data. This is due to the better sample of migrants in the LFS in London compared to the rest of the country.

Once the in-migrant population was distributed to the NMGi areas it then needs to be split down to Local Authority areas.

Outside London the 2001 Census was used to distribute migrants from NMGi to LAs.

Within London the method is slightly different as student migrants were separately treated to non-student migrants. However the 2001 census was again the means by which the two groups were apportioned to boroughs. A summary of the methods used to derive the London Borough in-migration estimates is given below.



Source: Appendix A – Improved Methods for Estimating International Migration: Geographical Distribution of In-migration. Office for National Statistics.

Using this method 22 London borough receive smaller numbers of in-migrants. In particular for the period 2001-05 Kensington and Chelsea receives 18,600 fewer in-migrants and Westminster receives 13,500 fewer. Losses in excess of 3,000 are also found in Hillingdon, Croydon, Greenwich and Richmond upon Thames. London as a whole loses 55,800 immigrants by this new method. Of the boroughs that gain by this approach only Southwark (5,200), Haringey (2,500) and Merton (1,400) gain more than a thousand persons.

[Geographical Distribution of Out-migrants](#)

This distribution also has a stepped approach like that for the distribution of in-migrants:

- 1) Derive estimates of out-migration using the IPS for Wales and the Government Office Regions (GORS) for England
- 2) Split the regional data to a new intermediate geography (NMGo) using a three-year average of IPS data. Outside London these intermediate geographies are a little different to those used for in-migration due to the smaller number of contacts made on the IPS for out-migrants. For London the same NMGi geography has been used.
- 3) Distribute out-migrants from the intermediate geography to LA/borough level using a propensity to migrate model.

The main difference here is the use of a model to distribute out-migrants as the existing methods distribute based on population size. The new model provides a propensity to migrate figure for each LA. The age and sex distribution of this total is then predicted separately.

Factors including in-migrants to the area, population age and sex structure, ethnic group, economic activity status, deprivation indices, proportion of persons with limiting long-term illness, NS-SEC and owner-occupier status were all factors considered in the modelling process.

For each LA the model provides a propensity to emigrate. This is a probability that is then multiplied by the population size of the LA at the start of the mid-year period to provide an estimate of the number of out-migrants. These predictions are then scaled to the totals at the NMGo level.

Estimates of out migration increased by 3,900 for London in the period 2001-05. Significantly lower out migration was estimated for Sutton (6,100), Lewisham (4,400), Islington and Hounslow (each 4,200) and Ealing (3,900). Notably higher out migration was estimated for Hammersmith & Fulham (4,900), Greenwich and Tower Hamlets (each 3,300) and Haringey (3,000).

[Geographic Areas Used in Estimation](#)

This paper details the new level geographies that are used in the in- and out-migration estimation. These are termed New Migrant Geography-in (NMGi) and New Migrant Geography-out (NMGo)

For England and Wales the NMGi and NMGo groupings are different with 58 NMGi groups and 44 NMGo areas but for London they are the same.

NMGi/NMGo - London



Two principles were used to create this intermediate geography between region and LA. These are (i) to correct the positive 'central tendency' bias in IPS data (e.g. people stating Newcastle when they mean the surrounding area) and (ii) to base the apportionment on sufficient numbers of IPS (LFS in London) migration contacts in order to produce robust estimates.

[Migrants and Visitor Switching Intentions](#)

Migrant switchers are people who intended to enter/leave the UK for more than a year, but subsequently stay for less than a year. Visitor switchers are people who intended to enter/leave the UK for less than a year, but subsequently extend their stays for more than a year.

In January 2004 additional questions were added to the IPS to help better identify visitor switchers and migrant switchers.

Currently the IPS inflows are reduced by 5 per cent and outflows by 1 per cent to account for migrant switchers. The new questions have been used to better estimate these values. Analysis on the new questions gave new values of 3.1% reduction to inflows and 4.4% reduction to outflows.

Visitor switchers are harder to identify as they are only identified in a survey when they are subsequently questioned in an IPS survey. There are also coverage problems in this area as many switchers are not captured at all and the possibility that switchers could be counted twice. It was decided that these two effects would cancel each other out so no further adjustments have been made.

The impact on London of these two factors over 2001-05 is a reduction of 6,300 net migrants. At the borough level the impacts are quite small with only Hammersmith & Fulham, Kensington & Chelsea, Wandsworth and Westminster showing reductions of 1,000 or more and no boroughs showing increases greater than 500.

[Numbers](#)

ONS has also released indicative results showing the changes they expect that will occur with the new methodology. These are given for London boroughs in Table 1.

Overall ONS is predicting that the cumulative impact of the methodology changes will lead to the London population being 60,300 lower in 2005 than previously estimated, therefore the revised 2005 MYE would be approximately 7,457 thousand.

Over the four year period both Inner and Outer London will have cumulative losses to their population – 42,300 in Inner London and 18,000 in Outer London.

Nineteen London boroughs were assigned indicative losses, 13 indicative rises and one has no change over the period – Bexley. The largest declines in are in Kensington & Chelsea (20,800), Westminster (15,500) and Hammersmith & Fulham (8,400). Sutton has the largest increase of 5,800 over the period followed by Southwark and Lewisham with a 5,300 increase.

Table 1. Indicative Net Effect and Cumulative Effect of Methodology Changes for International Migration, 2002 to 2005

	Mid-2002		Mid-2003		Mid-2004		Mid-2005		Mid-2002 to Mid-2005 Cumulative effect of change
	Original mid-year estimate	Effect of change	Original mid-year estimate	Effect of change	Original mid-year estimate	Effect of change	Original mid-year estimate	Effect of change	
LONDON	7,371,200	-10,100	7,387,900	-13,000	7,428,600	-14,800	7,517,700	-22,200	-60,300
Inner London	2,891,900	-6,900	2,904,600	-7,500	2,931,100	-9,600	2,985,700	-18,300	-42,300
Camden	207,000	-1,200	210,700	-400	217,100	-300	226,100	-1,800	-3,800
City of London	7,700	-200	8,000	-300	8,600	-400	9,200	-400	-1,300
Hackney	208,900	-300	208,400	-300	207,000	100	207,700	-100	-700
Hammersmith and Fulham	172,700	-2,400	174,200	-2,300	176,800	-2,100	179,900	-1,600	-8,400
Haringey	224,300	-800	224,700	-1,000	224,300	300	224,500	800	-800
Islington	180,200	500	180,100	1,100	179,900	1,000	182,600	-100	2,400
Kensington and Chelsea	168,400	-3,400	174,400	-3,600	184,100	-5,800	196,200	-8,000	-20,800
Lambeth	271,100	200	268,500	100	268,100	900	269,100	400	1,400
Lewisham	251,900	1,100	248,300	1,200	247,000	1,400	247,500	1,600	5,300
Newham	251,800	1,800	250,600	200	247,700	0	246,200	-200	1,800
Southwark	255,400	700	253,800	1,100	254,700	1,900	257,700	1,600	5,300
Tower Hamlets	204,600	1,500	206,600	-400	209,300	-1,100	213,200	-3,500	-3,500
Wandsworth	273,500	-1,100	274,100	-300	276,500	-1,200	281,400	-1,200	-3,800
Westminster	214,400	-3,000	222,000	-2,500	230,000	-4,300	244,400	-5,700	-15,500
Outer London	4,479,400	-3,300	4,483,300	-5,500	4,497,500	-5,200	4,532,100	-3,900	-18,000
Barking and Dagenham	165,900	300	165,900	-100	164,600	0	164,500	-100	200
Barnet	322,300	-1,700	324,400	-1,300	326,700	-100	329,700	700	-2,400
Bexley	218,600	0	219,100	0	219,500	-100	220,300	100	0
Brent	269,700	-700	267,800	100	267,700	300	270,100	-800	-1,100
Bromley	297,100	-400	298,300	-1,100	299,100	-1,200	301,900	-900	-3,600
Croydon	335,900	-500	336,700	-1,400	340,200	-3,000	342,700	-1,300	-6,100
Ealing	307,800	-200	305,000	300	303,200	1,900	301,800	2,200	4,200
Enfield	280,000	600	280,300	300	280,000	100	280,500	900	1,900
Greenwich	221,100	-1,900	223,700	-2,100	225,700	-1,700	228,100	-900	-6,600
Harrow	211,300	200	210,700	900	211,200	800	214,000	-500	1,300
Havering	224,500	300	224,600	-100	225,000	-500	226,200	-500	-700
Hillingdon	246,800	-500	247,600	-900	248,700	-1,300	252,400	-2,100	-4,800
Hounslow	215,400	300	212,900	700	212,300	1,600	212,500	1,700	4,300
Kingston upon Thames	150,100	-200	150,400	300	151,800	300	153,000	900	1,300
Merton	191,700	100	191,400	200	192,300	700	194,700	300	1,200
Redbridge	242,400	1,600	245,100	-500	247,300	-1,100	251,500	-2,400	-2,300
Richmond upon Thames	176,500	-1,600	179,200	-2,000	182,700	-1,700	186,300	-600	-5,900
Sutton	180,200	1,500	178,500	1,900	177,600	1,200	177,700	1,200	5,800
Waltham Forest	221,900	-300	221,600	-1,000	221,800	-1,300	224,100	-2,000	-4,700

Source: Improved Methods for Estimating International Migration: Indicative Figures. Office for National Statistics.

Publication timetable

The 2006 MYE and the revisions to the 2002 to 2005 MYE will be released on 22nd August. Revised 2004-based subnational population projections will be released on 27th September, in time to be used by the Department for Communities and Local Government in the Revenue Support Grant allocations for 2008-09-10-11. These are then available to be used in revised CLG household estimates. Not dates for the release of these data have been given.

Comment

A key component of the new methods is the sub-regional intermediate geography selected and is likely to be the aspect upon which London boroughs will be seeking additional work and testing. The users of the data will need to know how sensitive the results are to this part of the methodology.

The selection of the geography within London is worthy of further explanation as it clusters some unlikely boroughs (ie Camden with Havering). It is not clear how many other methods were considered by ONS. A method based on age-structure was tested and did not produce such good results as the method based on country of birth. While the NMGi geography appears to work quite satisfactorily for inflows its continued use for outflows is more questionable.

The overall results, in most boroughs, are consistent with the direction of change adopted by the GLA in its latest projections (see *DMAG Briefing 2006/32*) based on additional homes since 2001. Overall a loss of 60,300 is a little less than implied by the GLA work. However, the level of change in several boroughs is disappointing. Although central London boroughs were all reduced the revisions still imply large increases in populations since 2001 that are totally inconsistent with the additional housing made available.

The revisions to outflows give rise to significant questions. The biggest reduction in outflows has been identified as occurring in Sutton. The level of this reduction is more than half of the original estimate of international outflow.

ONS has organised a meeting in London ([see link](#)) on May 15th to present their findings relating to revisions to international migration. ONS intends at that meeting to present comparisons of its results with other data relating to population change, including NHS 'Flag 4' international migrant flows that have been used by several boroughs and which show a larger redistribution from central London to the surrounding boroughs.

GLA Demography will be further examining these results following the meeting on May 15th and as further details are known. When the revised ONS estimates are made public in August together with the mid-2006 estimates it will become necessary to decide whether to accept the mid-2006 estimates as new population benchmarks – even if there are inconsistencies with other data over the period 2001-06 or whether to revert to using the mid-2001 estimates as the only benchmarks in the GLA projections and, therefore, to continue to see some significant differences with the official ONS estimates and projections on which local funding will be based for the next three financial years.

For more information please contact John Hollis, Data Management and Analysis Group, Greater London Authority, City Hall, The Queen's Walk, London SE1 2AA. Tel: 020 7983 4604 E-mail: John.Hollis@london.gov.uk or Caroline Hall Tel: 0207 983 4347 E-mail: caroline.hall@london.gov.uk

Copyright © Greater London Authority, 2007. Data are reproduced in this *Update* with the permission of the Controller of Her Majesty's Stationery Office and are © Crown Copyright. An acknowledgement of the source is given at the end of each figure.