

POPGROUP

Data Guidelines

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0. Introduction

POPGROUP provides a suite of models for demographic forecasting. Users of POPGROUP are typically responsible for populating the models with data and assumptions for their particular local area. The [User Manuals and Reference Manuals](#) that are available online provide an introduction to model methodology, the functionality of the software and the requirements for configuring the software with data and assumptions.

This document is designed to supplement the existing [data guidelines](#) with a summary of the location of key datasets and assumptions and/or to provide users with convenient links to follow-up their own lines of enquiry.

A user is likely to work with the User Guide (in the UK) or the Reference Manual, referring to this document when seeking data sources. In these guidelines a 'usage' note for each data source provides a guide to how the data might be used in the configuration of POPGROUP models.

The focus of this document is the UK but an additional section has been added to provide users with introductory links to datasets available for other countries, from international organisations and from national statistical organisations.

For an introduction to the different types of geographical areas which exist in the UK, users should refer to the ONS guide: [Beginner's Guide to UK Geography](#)

Section 1 of this document summarises the 'national' assumptions on fertility, mortality and migration that are made available in the UK

Section 2 details the 'district' level datasets and assumptions available for each of England, Wales, Scotland and Northern Ireland.

Section 3 provides guidance on the availability of 'small area' data for each country.

Section 4 provides a brief summary on the availability of data on ethnicity.

Section 5 concludes with guidance and links to European and other international datasets.

1. UK national assumptions

POPGROUP allows users to apply national assumptions on mortality, fertility and migration to calibrate sub-national projections. These assumptions are updated in line with national population projections and made available via the POPGROUP website. Data are available separately for England, Wales, Scotland and Northern Ireland.

Fertility

All countries

<i>Data source:</i>	Projected trend in fertility for UK and constituent countries.
<i>Usage:</i>	<ol style="list-style-type: none">1. Standard fertility schedule by single year of age, for use on POPGROUP 'sched' sheet.2. Age-specific trend in future fertility rates for use as differentials on POPGROUP 'All groups' sheet.
<i>Availability:</i>	POPGROUP provides a processed version soon after the published national projections, every two years. These data can be downloaded direct from the POPGROUP website POPGROUP National Schedules and may then be added directly to the 'schedule' and 'All groups' sheet of 'fert.xls' when completing a POPGROUP set-up.

Mortality

All countries

<i>Data source:</i>	Projected trend in mortality for UK and constituent countries.
<i>Usage:</i>	<ol style="list-style-type: none">1. Standard mortality schedule by single year of age and sex, for use of POPGROUP 'sched' sheet.2. Age-specific trend of future mortality rates, for use as differentials on POPGROUP 'All groups' sheet.
<i>Availability:</i>	POPGROUP provides a processed version soon after the published national projections, every two years. These data can be downloaded direct from the POPGROUP website POPGROUP National Schedules and may then be added directly to the 'schedule' and 'All groups' sheet of 'mort.xls' when completing a POPGROUP set-up.

Migration

All countries

<i>Data source:</i>	2001 Census age-sex schedule.
<i>Usage:</i>	<p>Migration within the UK: standard schedule single year of age. For use on POPGROUP 'sched' sheet.</p> <p>Migration from overseas: standard schedule single year of age. For use on POPGROUP 'sched' sheet.</p>
<i>Availability:</i>	POPGROUP provides a processed version soon after the published national projections, every two years. These data can be downloaded direct from the POPGROUP website POPGROUP National Schedules and may then be added directly to the 'schedule' and 'All groups' sheet of the 'Mig.xls' files when completing a POPGROUP set-up.

2. UK district-level data and assumptions

2.1 England

In England, local authority ‘districts’ consist of a combination of London Boroughs, metropolitan districts, unitary authorities and non-metropolitan districts. In the Health sector, there Primary Care Organisations (PCOs) Primary Care Trusts (148) 4 Care Trusts (4); the majority of which are defined in terms of local authority districts.

For specific queries to the Office for National Statistics (ONS), the following links and contact details should be used.

Vital Statistics Unit
Office for National Statistics
Email: VSOB@ons.gsi.gov.uk

Migration Statistics Unit
Office for National Statistics
Email: migstats@ons.gsi.gov.uk

Population Estimates Unit
Office For National Statistics
Email: pop.info@ons.gov.uk
Tel: 01329 444661
Web: Population Estimates Unit website

2.1.1 Population estimates	District	England
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Data source: ONS mid-year estimate of resident population 1991 – current, by single year of age and sex. Ages 0-84, 85+ to mid-year 2000 and ages 0-89, 90+ for mid-year 2002 – current.

Usage: Used as a base population for projections (popbase.xls), for annual population constraints (cons.xls) and for derivation of historical demographic rates.

Availability: These data are made available as part of the ‘POPGROUP dataset’ from ONS, details at POPGROUP dataset

This includes each of the following datasets:

1. 1991-2000, population estimate by age and sex. Single year of age to 84, 85+.
2. 2001-current, population estimate by age and sex. Single year of age to 89, 90+.
3. Components of population change 1991-2001 (births, deaths and other changes).
4. Components of population change 2001-present (births, deaths and other changes). Births provided for males and females separately. Deaths provided by sex and age (at end of year): 0-1, 2-5, 6-10, five-year age-groups to 81-85, 86+. Note that POPGROUP works with age at beginning of year for which these age groups are then the more familiar newborn-and-age-0, 1-4, 5-9, five-year age-groups to 80-84, 85+.

ONS provides additional supporting Information for Local Authorities, for Mid-Year Population Estimates: MYE Additional Data

User’s specific requests should be addressed to the contact details above.

2.1.2 Population projections

District

England

<i>Data source:</i>	Population projections by age and sex.
<i>Usage:</i>	Used as a constraint for projections or used as a benchmark against which to compare alternative scenarios.
<i>Availability:</i>	Summary data is available from the ONS website: SNPP latest More detailed data are made available upon request to Edge Analytics . Data available is as follows: <ol style="list-style-type: none">1. Mid-year populations for the base year and each year within a 25-year horizon, by age and sex.2. Births by sex, and deaths by age and sex, for each year.3. Each migrant flow in-, out-, and net- by age and sex (Internal within England, International rest of UK, International Rest of World, International Asylum seekers and Visitor Switchers, International total, All migration total), for selected years.

2.1.3 Fertility

District

England

<i>Data source:</i>	Birth by area of usual residence of mother, England and Wales, 2010 (Table 1a).
<i>Usage:</i>	Fertility differentials comparing national and district Fertility Rates (fert.xls). A fertility differential measures the ratio (district/national) of either the Total Fertility Rate or age-specific fertility rates.
<i>Availability:</i>	Data are available on the ONS website: ONS Births by Area of Usual Residence Table 1a provides TFRs for each area. Table 2a provides age-specific fertility rates for each area. Further information on fertility and birth statistics by local authority can be obtained from ONS vital statistics unit: VSOB@ons.gsi.gov.uk

2.1.4 Births

District

England

<i>Data source:</i>	Mid-year to mid-year births used in ONS mid-year population estimates, 1991/2 – current. Total births 1991/2 – 2000/1 and births by sex 2001/2 – current.
<i>Usage:</i>	Birth totals or births by sex for recent years, entered to fert.xls.
<i>Availability:</i>	These data are made available as part of the ‘POPGROUP dataset’ from ONS, details at POPGROUP dataset See ‘Population’ section above.

2.1.5 Mortality

District

England

<i>Data source:</i>	Mortality Statistics: Deaths registered in England and Wales by area of usual residence
<i>Usage:</i>	Mortality differentials comparing national and district mortality rates – Standardised Mortality Ratio.
<i>Availability:</i>	ONS website: ONS Deaths by Area of Usual Residence Table 1a provides SMRs for each area. Further information on fertility and birth statistics by local authority can be obtained from ONS Vital Statistics unit: VSOB@ons.gsi.gov.uk

2.1.6 Deaths		District	England
<i>Data source:</i>	Mid-year to mid-year deaths used in ONS mid-year population estimates, 1991/2 – current. Total deaths 1991/2 – 2000/1 and deaths by age (0, 1-4,...80-84, 85+) and sex 2001/2 – current.		
<i>Usage:</i>	Deaths total or deaths by age and sex, entered to mort.xls.		
<i>Availability:</i>	These data are made available as part of the ‘POPGROUP dataset’ from ONS, details at POPGROUP dataset		
	See ‘Population’ section above.		

2.1.7 Migration - internal		District	England
<i>Data source:</i>	Internal migration data from the patient register data system, combined with NHSCR data.		
<i>Usage:</i>	Historical migration flows used in ‘Mig_INUK.xls’ and ‘Mig_OUTUK.xls’ input files.		
<i>Availability:</i>	The following datasets are made available (free of charge) to users in England and Wales: <ul style="list-style-type: none"> ▪ GOR/local/unitary authority by sex, quinary and broad age group ▪ GOR/local/unitary authority by sex and single year of age, data aggregated 3 year periods ▪ Current county by sex and single year of age, data aggregated 3 year period ▪ Current county by sex, quinary and broad age group ▪ GOR by sex and single year of age, data for single year <p>The Migration Statistics Unit is in the process of updating its guidelines and documentation for the use and dissemination of migration statistics to POPGROUP users in England and Wales (migstats@ons.gsi.gov.uk).</p> <p>Internal migration data is available direct from the ONS website, providing origin, destination and age detail by local authority:</p> <p>ONS - Internal Migration</p>		

2.1.8 Migration - international		District	England
<i>Data source:</i>	Immigration and emigration estimates.		
<i>Usage:</i>	Historical and projected migration flows used in ‘Mig_INOV.xls’ and ‘Mig_OUTOV.xls’ input files.		
<i>Availability:</i>	Immigration and emigration estimates which underpin the mid-year population estimates are available (Table 10): MYE Migration Components		
	The estimates of international used in the latest sub-national projections are available from table 5 in the following ONS link: SNPP Components of Change		
	ONS also provides a range of data on international migration through its ‘local area migration indicators’ initiative: Migration Indicators		

2.1.9 Headship Rates		District	England
<i>Data source:</i>	Household headship rates by age and sex.		
<i>Usage:</i>	Headship rates are used to estimate the number of households associated with a		

population that is disaggregated by age and sex.

Availability: The **2008-based household projections for areas within England** were published on 26th November 2010. The data for local authority areas has been processed by CLG and Experian into a format similar to that used previously, so that it can be read into Derived Forecast model. The data for all local authority districts within one region are available on request from allan.cox@communities.gsi.gov.uk

CLG Data Module replicate the Headship Rates.

2.1.10 Communal Establishments	District	England
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<i>Data source:</i>	'Population not in households' is a count of those people living in 'communal establishments'.	
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<i>Usage:</i>	This population is excluded from the population estimate or forecast before the application of Headship Rates.	
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<i>Availability:</i>	'Population not in households' by age and sex can be derived directly from Census table CAS001. The data is available for direct download from the NOMIS website via its 'wizard' tool: NOMIS	
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2.1.11 Economic Activity	District	England
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<i>Data source:</i>	Economic activity (rates) by age and sex.	
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<i>Usage:</i>	Used in the Derived Forecast model to derive labour force estimates from a population estimate or forecast, disaggregated by age and sex.	
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<i>Availability:</i>	Economic activity rates can be derived directly from Census table CAS028 or can be derived for later years from the Labour Force Survey (2002-4) and the Annual Population Survey (2005-current).	
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The LFS and APS data is available for direct download from the NOMIS website via its 'wizard' tool: [NOMIS](#)

A file of economic activity data from the 2001 Census for districts in the UK are provided in the file EcAct01DistsEW.xls which are bundled with the POPGROUP software.

2.2 Wales

In Wales, 'districts' are the Unitary Authorities. In addition 22 Local Health Boards (LHB) comprise one or more of the Unitary Authorities.

For specific queries to the Welsh Assembly Government (WAG) Statistics, the following links and contact details should be used.

E-mail: [WAG demographic enquiries](#) Tel: 029 2082 5058

General link: [WAG Statistics – subject specific enquiries](#)

2.2.1 Population

Unitary Authorities

Wales

Data source: WAG mid-year estimates of resident population, by single year of age and sex for each unitary authority.

Usage: Used as a base population for projections (popbase.xls), for annual population constraints (cons.xls) and for derivation of historical demographic rates.

Availability: Part of POPGROUP dataset from ONS, details at:

[POPGROUP dataset](#)

Also available from StatsWales- Population by unitary authority 2001-2008:

[StatsWales Populations](#)

ONS provides additional supporting Information for local areas, for Mid-Year Population Estimates: [MYE Additional Data](#)

2.1.2 Population projections

Unitary Authorities

Wales

Data source: Population projections by age and sex.

Usage: Used as a constraint for projections or used as a benchmark against which to compare alternative scenarios.

Availability: Data are made available directly through [StatsWales](#). Data available is as follows:

1. Mid-year populations for the base year and each year within a 25-year horizon, by age and sex.

2. Births by sex, and deaths by age and sex, for each year.

3. Each migrant flow in-, out-, and net- by age and sex (Internal within Wales, International rest of UK, International Rest of World, International Asylum seekers and Visitor Switchers, International total, All migration total), for selected years.

2.2.3 Fertility

Unitary Authorities

Wales

Data source: Birth by area of usual residence of mother, England and Wales, 2010 (Table 1a).

Usage: Fertility differentials comparing national and district Fertility Rates (fert.xls).

A fertility differential measures the ratio (district/national) of either the Total Fertility Rate or age-specific fertility rates.

Availability: Data are available on the ONS website:

[ONS Births by Area of Usual Residence](#) Table 1a provides TFRs for each area. Table 2a provides age-specific fertility rates for each area.

Further information on fertility and birth statistics by local authority can be obtained from ONS vital statistics unit: VSOB@ons.gsi.gov.uk

2.2.4 Births	Unitary Authorities	Wales
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Data source: Mid-year to mid-year births by sex.

Usage: Birth totals or births by sex for recent years, entered to fert.xls.

Availability: These data are made available as part of the 'POPGROUP dataset' from ONS, details at [POPGROUP dataset](#)

Data also available from Stats Wales- Live births by years (1996-2009) for each Unitary Authority: [StatsWales Births](#)

2.2.5 Mortality	Unitary Authorities	Wales
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Data source: Mortality Statistics: Deaths registered in England and Wales by area of usual residence

Usage: Mortality differentials comparing national and district mortality rates – Standardised Mortality Ratio.

Availability: ONS website:
[ONS Deaths by Area of Usual Residence](#) Table 1a provides SMRs for each area.

Further information on fertility and birth statistics by local authority can be obtained from ONS Vital Statistics unit:
VSOB@ons.gsi.gov.uk

2.2.6 Deaths	Unitary Authorities	Wales
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Data source: Deaths by age and sex.

Usage: Deaths total or deaths by age and sex, entered to mort.xls.

Availability: These data are made available as part of the 'POPGROUP dataset' from ONS, details at [POPGROUP dataset](#)

Information also available from StatsWales:
[StatsWales Deaths](#)

2.2.7 Migration - internal	Unitary Authorities	Wales
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Data source: Internal migration data from the patient register data system, combined with NHSCR data.

Usage: Historical migration flows used in 'Mig_INUK.xls' and 'Mig_OUTUK.xls' input files.

Availability: The following datasets are made available (free of charge) to users in England and Wales:

- GOR/local/unitary authority by sex, quinary and broad age group
- GOR/local/unitary authority by sex and single year of age, data aggregated 3 year periods
- Current county by sex and single year of age, data aggregated 3 year period
- Current county by sex, quinary and broad age group
- GOR by sex and single year of age, data for single year

The Migration Statistics Unit is in the process of updating its guidelines and documentation for the use and dissemination of migration statistics to POPGROUP users in England and Wales (migstats@ons.gsi.gov.uk).

Internal migration data is available direct from the ONS website, providing origin, destination and age detail by local authority:

[ONS - Internal Migration](#)

2.2.8 Migration - international	Unitary Authorities	Wales
<i>Data source:</i>	Immigration and emigration estimates.	
<i>Usage:</i>	Historical and projected migration flows used in 'Mig_INOV.xls' and 'Mig_OUTOV.xls' input files.	
<i>Availability:</i>	<p>Immigration and emigration estimates which underpin the mid-year population estimates are available from ONS: MYE Migration Components</p> <p>The estimates of international used in the latest sub-national projections are available from item 6 in the following ONS link: SNPP Components of Change</p> <p>ONS also provides a range of data on international migration through its 'local area migration indicators' initiative: Migration Indicators</p>	
2.2.9 Membership Rates	Unitary Authorities	Wales
<i>Data source:</i>	Household membership rates by age and sex.	
<i>Usage:</i>	Membership rates are used to estimate the number of households associated with a population that is disaggregated by age and sex.	
<i>Availability:</i>	<p>WAG has developed its own household projection methodology for Unitary Authorities. This model is used as a separate Data Module. Information on the model and the availability of its data inputs and assumptions is available from WAG publications.</p> <p>Household estimates and projections are available from StatWales tabulations.</p>	
2.2.10 Communal Establishments	Unitary Authorities	Wales
<i>Data source:</i>	'Population not in households' is a count of those people living in 'communal establishments'.	
<i>Usage:</i>	This population is excluded from the population estimate or forecast before the application of Membership Rates.	
<i>Availability:</i>	'Population not in households' by age and sex can be derived directly from Census table CAS001. The data is available for direct download from the NOMIS website via its 'wizard' tool: NOMIS	
2.2.11 Economic Activity	Unitary Authorities	Wales
<i>Data source:</i>	Economic activity (rates) by age and sex.	
<i>Usage:</i>	Used in the Derived Forecast model to derive labour force estimates from a population estimate or forecast, disaggregated by age and sex.	
<i>Availability:</i>	Economic activity rates can be derived directly from 2001 Census data or can be derived for later years from the Labour Force Survey (2002-4) and the Annual Population Survey (2005-current).	

The LFS and APS data is available for direct download from the NOMIS website via its 'wizard' tool: [NOMIS](#)

A file of economic activity data from the 2001 Census for districts in the UK are provided in the file EcAct01DistsEW.xls which are bundled with the POPGROUP software.

2.3 Scotland

In Scotland a 'district' refers to a Council Area (32 areas), with data also typically available for NHS Board areas (14 areas).

For specific queries to the General Register Office for Scotland (GROS), the following links and contact details should be used.

[GRO Scotland email contact](#)

Statistics Customer Services,
General Register Office for Scotland,
Ladywell House
Edinburgh,
EH12 7TF
Tel: 0131 314 4299

2.3.1 Population

Council Areas

Scotland

Data source: GROS mid-year estimates of resident population, by single year of age (age 0-89, 90+) and sex for each of the 32 councils, 1981-latest.

Usage: Used as a base population for projections (popbase.xls), for annual population constraints (cons.xls) and for derivation of historical demographic rates.

Availability: GROS mid year estimates since 1981 - latest

[GRO mid-year population estimates](#)

2.3.2 Population projections

Council Areas

Scotland

Data source: Population projections by age and sex.

Usage: Used as a constraint for projections or used as a benchmark against which to compare alternative scenarios.

Availability: The latest 2008-based, council area population projections are available from GRO: [GRO Population Projections](#)

2.3.3 Fertility

Council Areas

Scotland

Data source: Birth by area of usual residence of mother, England and Wales, 2010 (Table 1a).

Usage: Fertility differentials comparing national and district Fertility Rates (fert.xls).

A fertility differential measures the ratio (district/national) of either the Total Fertility Rate or age-specific fertility rates.

Availability: Data are available on the ONS website:

[ONS Births by Area of Usual Residence](#) Table 1a provides TFRs for each area. Table 2a provides age-specific fertility rates for each area.

Further information on fertility and birth statistics by local authority can be obtained from ONS vital statistics unit: VSOB@ons.gsi.gov.uk

2.3.4 Births

Council Areas

Scotland

Data source: GROS statistics gives quarterly-year birth estimates from 1998-2009 for each year. Total

births- 1998/2009 and births by sex 1998/2009. Data provided for each council area.

Usage: Birth totals or births by sex for recent years, entered to fert.xls.

Availability: The latest statistics on births and deaths by Council Area are available online :

[GRO Births](#)

More specific queries and for historical tables contact GROS directly:

[GRO General Queries](#)

2.3.5 Mortality

Council Areas

Scotland

Data source: Mortality Statistics: Deaths registered in England and Wales by area of usual residence

Usage: Mortality differentials comparing national and district mortality rates – Standardised Mortality Ratio.

Availability: ONS website:

[ONS Deaths by Area of Usual Residence](#) Table 1a provides SMRs for each area.

Further information on fertility and birth statistics by local authority can be obtained from ONS Vital Statistics unit:

VSOB@ons.gsi.gov.uk

2.3.6 Deaths

Council Areas

Scotland

Data source: Deaths by age and sex for council areas.

Usage: Deaths total or deaths by age and sex, entered to mort.xls.

Availability: The latest statistics on births and deaths by administrative area available online :

[GRO Deaths](#)

More specific queries and for historical tables contact GROS directly:

[GRO General Queries](#)

2.3.7 Migration - internal

Council Areas

Scotland

Data source: Internal and international migration flows.

Usage: Historical migration flows, entered to 'Mig_INUK.xls' and 'Mig_OUTUK.xls' input files.

Availability: Total in, out and net migration by council area by age group and sex, 2001/02 to 2007/2008. [GRO Migration-1](#)

In, out and net migration between administrative areas, 2001 to latest 2007/2008. [GRO Migration-2](#)

Net migration between Scotland and UK and Scotland and Overseas 2001/2002 to 2007/2008. [GRO Migration 3](#)

2.3.8 Migration - international

Council Areas

Scotland

Data source: Immigration and emigration estimates.

Usage: Historical and projected migration flows used in ‘Mig_INOV.xls’ and ‘Mig_OUTOV.xls’ input files.

Availability: Immigration and emigration estimates which underpin the mid-year population estimates are available from GRO Scotland: [MYE Migration components](#)

ONS also provides a range of data on international migration through its ‘local area migration indicators’ initiative: [Migration Indicators](#)

The estimates of international used in the latest sub-national projections should be requested from GRO Scotland.

2.3.9 Household projections & Headship Rates Council Areas Scotland

Data source: Headship rates by household type, age and sex.

Usage: Headship rates are used to estimate the number of households associated with a population that is disaggregated by age and sex.

Availability: General information on Scotland’s household projection methods, its inputs and outputs is available as follows:

Household estimates
[GRO Household Estimates](#)

Household projections
[GRO Household Projections](#)

2.3.10 Communal Establishments Council Areas Scotland

Data source: ‘Population not in households’ is a count of those people living in ‘communal establishments’.

Usage: This population is excluded from the population estimate or forecast before the application of Headship Rates.

Availability: Census theme table T23 provides information on the 2001 population resident in communal establishments.

[GRO Communal Establishments](#)

In the development of its 2008-based household projections, GROS has updated the 2001 estimates to 2008 using a ‘variety’ of local sources. For more information refer to the published documentation:
[GRO Household Projections](#)

2.3.11 Economic Activity Council Areas Scotland

Data source: Economic activity (rates) by age and sex.

Usage: Used in the Derived Forecast model to derive labour force estimates from a population estimate or forecast, disaggregated by age and sex.

Availability: Economic activity rates can be derived directly from 2001 Census data or can be derived for later years from the Labour Force Survey (2002-4) and the Annual Population Survey (2005-current).

The LFS and APS data is available for direct download from the NOMIS website via its ‘wizard’ tool: [NOMIS](#)

2.4 Northern Ireland

In Northern Ireland a 'district' refers to District Council Areas with data also typically available for NHS Board areas (15 areas).

For specific queries to the Northern Ireland Statistics and Research Agency (NISRA), the following links and contact details should be used.

Email: census.nisra@dfpni.gov.uk

Tel: 02890 348160

General enquiries link: [NISRA enquiries](#)

2.4.1 Population

District Council Areas

N Ireland

Data source: Mid year population estimate by single-year of age and sex.

Usage: Used as a base population for projections (popbase.xls), for annual population constraints (cons.xls) and for derivation of historical demographic rates.

Availability: NISRA- [NISRA population estimates](#)

2.4.2 Population projections

District Council Areas

N Ireland

Data source: Population projections by age and sex.

Usage: Used as a constraint for projections or used as a benchmark against which to compare alternative scenarios.

Availability: The latest 2008-based, council area population projections are available from NISRA: [NISRA Population Projections](#)

2.4.3 Fertility

District Council Areas

N Ireland

Data source: Birth by area of usual residence of mother, England and Wales, 2010 (Table 1a).

Usage: Fertility differentials comparing national and district Fertility Rates (fert.xls).

A fertility differential measures the ratio (district/national) of either the Total Fertility Rate or age-specific fertility rates.

Availability: Data are available on the ONS website:

[ONS Births by Area of Usual Residence](#) Table 1a provides TFRs for each area. Table 2a provides age-specific fertility rates for each area.

Further information on fertility and birth statistics by local authority can be obtained from ONS vital statistics unit: VSOB@ons.gsi.gov.uk

2.4.4 Births

District Council Areas

N Ireland

Data source: Births by sex.

Usage: Birth totals or births by sex for recent years, entered to fert.xls.

Availability: [NISRA Births](#)

2.4.5 Mortality

District Council Areas

N Ireland

Data source: Mortality Statistics: Deaths registered in England and Wales by area of usual residence

Usage: Mortality differentials comparing national and district mortality rates – Standardised Mortality Ratio.

Availability: ONS website:
[ONS Deaths by Area of Usual Residence](#) Table 1a provides SMRs for each area.

Further information on fertility and birth statistics by local authority can be obtained from ONS Vital Statistics unit:

VSOB@ons.gsi.gov.uk

2.4.6 Deaths District Council Areas N Ireland

Data source: Deaths by age and sex.

Usage: Deaths total or deaths by age and sex, entered to mort.xls.

Availability: [NISRA Deaths](#)

2.4.7 Migration District Council Areas N Ireland

Data source: Internal and international migration flows.

Usage: Historical migration flows, entered to ‘Mig_INUK’, ‘Mig_OUTUK’, ‘Mig_INOV’ and ‘Mig_OUTOV’ input files.

Availability: A range of migration are published by NISRA for both internal and international migration flows: [NISRA Migration](#)

2.4.8 Headship Rates District Council Areas N Ireland

Data source: Headship rates by household type, age and sex.

Usage: Headship rates are used to estimate the number of households associated with a population that is disaggregated by age and sex.

Availability: General information on the methodology for estimating and projecting household numbers in Northern Ireland is available from the following link:

[NISRA Household Estimates](#)

2.4.9 Communal Establishments District Council Areas N Ireland

Data source: ‘Population not in households’ is a count of those people living in ‘communal establishments’.

Usage: This population is excluded from the population estimate or forecast before the application of Headship Rates.

Availability: This data is available from Northern Ireland 2001 Census tables.

2.4.10 Economic Activity District Council Areas N Ireland

Data source: Economic activity (rates) by age and sex.

Usage: Used in the Derived Forecast model to derive labour force estimates from a population estimate or forecast, disaggregated by age and sex.

Availability: Economic activity rates can be derived directly from 2001 Census data or can be derived for later years from the Labour Force Survey (2002-4) and the Annual Population Survey (2005-current).

The LFS and APS data is available for direct download from the NOMIS website via its ‘wizard’ tool: [NOMIS](#)

3. UK Small Area

3.1 England & Wales

In England and Wales, ‘small areas’ refer to geographies smaller than ‘districts’. The Census Output Area (COA) is the smallest area for dissemination of the 2001 Census data and these fit directly into the larger ward boundaries and approximately into health area geographies.

In addition, ONS has developed a hierarchy of ‘super’ output areas (Lower and Medium Super Output Areas) at which it produces a number of statistical outputs.

A variety of other small areas also exist, including postal geography, electoral geography, health geography. For further guidelines see the ONS introduction to UK geography: [Beginner's Guide to UK Geography](#).

The Census provides the most comprehensive capture of data at the smallest geographical detail and remains the pre-eminent source of ‘small area’ statistics on components of demographic change. In the years between censuses, birth and death data are available for small areas but migration data are not.

Population	Small Area	England & Wales
<i>Data source:</i>	Population by age and sex.	
<i>Usage:</i>	Used as a base population for projections (popbase.xls), for annual population constraints (cons.xls) and for derivation of historical demographic rates.	
<i>Availability:</i>	From the 2001 Census, population data by age and sex is available for all administrative areas, from Output Area and above. NOMIS Census 2001 Since 2001, ONS has published population data by Lower Super Output Area (LSOA) by broad age-group and sex: LSOA Population Estimates On request to ONS, LSOA estimates are available unrounded by 5-year age-group.	
Fertility and Births	Small Area	England & Wales
<i>Data source:</i>	Mid-year to mid-year births for Output Areas and above.	
<i>Usage:</i>	Births by sex for recent years, entered to fert.xls.	
<i>Availability:</i>	Specific requests for births data at small area level should be addressed directly to ONS Vital Statistics Unit: vsob@ons.gsi.gov.uk	
Mortality and Deaths	Small Area	England & Wales
<i>Data source:</i>	Deaths by age and sex for Output Areas and above.	
<i>Usage:</i>	Deaths total or deaths by age and sex, entered to mort.xls.	
<i>Availability:</i>	Specific requests for births data at small area level should be addressed directly to ONS Vital Statistics Unit: vsob@ons.gsi.gov.uk	
Migration	Small Area	England & Wales
<i>Data source:</i>	Migration flows for internal migration and immigration.	
<i>Usage:</i>	Derivation of local migration flow and rate profiles.	

Availability: The 2001 Census provides migration statistics by ward. These data can be used to calibrate small area migration profiles for internal and international migration.

3.2 Scotland

Scotland also has a large number of alternative geographies ([Scottish Geography](#)) but the output area and ward are the main administrative geography for census statistics. Data Zones have been defined (equivalent to LSOA in England and Wales) as an alternative geography for the dissemination of demographic statistics.

[Beginner's Guide to UK Geography](#)

Population	Small Area	Scotland
<i>Data source:</i>	Population by age and sex.	
<i>Usage:</i>	Used as a base population for projections (popbase.xls), for annual population constraints (cons.xls) and for derivation of historical demographic rates.	
<i>Availability:</i>	From the 2001 Census, population data by age and sex is available for all administrative areas, from Output Area and above. GRO Scotland Census 2001 Since 2001, GRO has published population data by Data Zone by age-group and sex. GRO Data Zone Population Estimates	
Fertility and Births	Small Area	Scotland
<i>Data source:</i>	Mid-year to mid-year births for Data Zones and above.	
<i>Usage:</i>	Births by sex for recent years, entered to fert.xls.	
<i>Availability:</i>	Birth statistics at a variety of spatial scales are available from a number of sources, with more information and contact details accessible from the GRO Scotland website: Scottish Neighbourhood Statistics Births	
Mortality and Deaths	Small Area	Scotland
<i>Data source:</i>	Deaths by age and sex for Data Zones and above.	
<i>Usage:</i>	Deaths total or deaths by age and sex, entered to mort.xls.	
<i>Availability:</i>	Death statistics at a variety of spatial scales are available from a number of sources, with more information and contact details accessible from the GRO Scotland website: Scottish Neighbourhood Statistics Deaths	
Migration	Small Area	Scotland
<i>Data source:</i>	Migration flows for internal migration and immigration.	
<i>Usage:</i>	Derivation of local migration flow and rate profiles.	
<i>Availability:</i>	The 2001 Census provides migration statistics by ward. These data can be used to calibrate small area migration profiles for internal and international migration.	

3.3 Northern Ireland

Northern Ireland has a number of alternative geographies ([Northern Ireland Geography](#)). The output area provides the main administrative geography for census statistics and Super Output Areas have been defined as an alternative geography for the dissemination of demographic statistics.

[Beginner's Guide to UK Geography](#)

Population		Small Area	N Ireland
<i>Data source:</i>	Population by age and sex.		
<i>Usage:</i>	Used as a base population for projections (popbase.xls), for annual population constraints (cons.xls) and for derivation of historical demographic rates.		
<i>Availability:</i>	NISRA provides population by sex and broad age-group by Super Output Area for all years since 2001. NISRA SOA Populations		
Fertility and Births		Small Area	N Ireland
<i>Data source:</i>	Mid-year to mid-year births for Output Areas and above.		
<i>Usage:</i>	Births by sex for recent years, entered to fert.xls.		
<i>Availability:</i>	For information and links to statistics on births within geographical areas of Northern Ireland: NISRA Vital Statistics		
Mortality and Deaths		Small Area	N Ireland
<i>Data source:</i>	Deaths by age and sex for Output Areas and above.		
<i>Usage:</i>	Deaths total or deaths by age and sex, entered to mort.xls.		
<i>Availability:</i>	For information and links to statistics on deaths: NISRA Vital Statistics		
Migration		Small Area	N Ireland
<i>Data source:</i>	Migration flows for internal migration and immigration.		
<i>Usage:</i>	Derivation of local migration flow and rate profiles.		
<i>Availability:</i>	The 2001 Census provides migration statistics by ward. These data can be used to calibrate small area migration profiles for internal and international migration.		

3.4 Household data

For the development of household and labour force models at a small area level it is necessary to derive appropriate assumptions on headship (membership), population not in households and economic activity rates.

Headship rates and membership rates

Data on headship and membership rates by small area is not generally available. It is possible to derive these rates using 2001 census data, combining with the CLG district estimates, although this exercise requires a considerable level of census knowledge and data processing expertise. For more information contact popgroup@edgeanalytics.co.uk

Communal establishments

'Population not in households' by age and sex can be derived directly from Census table CAS001 for any level of geography above Output Area. For England and Wales, the data is available for direct download from the NOMIS website via its 'wizard' tool: [NOMIS](#). For Scotland and Northern Ireland data can be accessed from census tables.

Economic activity

Economic activity rates for small areas can again be derived directly from 2001 Census data via the NOMIS website [NOMIS](#) for England and Wales and through census tables for Scotland and Northern Ireland. Survey data, such as the Annual Population Survey (APS) are typically insufficiently representative at a small area level to provide updated economic activity statistics in line with those available at 'district' level.

4. UK Ethnic Group

The ethnic composition of the UK’s population is of increasing interest as local communities develop through relatively high levels of fertility and continued net immigration. Robust statistics on ethnicity are difficult to obtain, with the capture of this data typically done through ‘self reporting’.

Ethnicity is typically defined using 16 categories or a more aggregate 5-fold categorisation.

1		White: British
2	White	White: Irish
3		White: Other White
4		Mixed: White and Black Caribbean
5	Mixed	Mixed: White and Black African
6		Mixed: White and Asian
7		Mixed: Other Mixed
8		Asian or Asian British: Indian
9	Asian	Asian or Asian British: Pakistani
10		Asian or Asian British: Bangladeshi
11		Asian or Asian British: Other Asian
12		Black or Black British: Black Caribbean
13	Black	Black or Black British: Black African
14		Black or Black British: Other Black
15	Chinese & Other	Chinese or Other Ethnic Group: Chinese
16		Chinese or Other Ethnic Group: Other

Despite improved capture of data on ethnicity in both health and education records, the 2001 Census remain the definitive source of detailed information on ethnic demographics: fertility, mortality and migration and the basis for any detailed analysis of ethnic profiles and population growth of geographical areas.

Since 2001, ONS has produced mid-year estimates of ethnic group populations by age

[ONS Ethnic Group Populations](#)

These ‘experimental’ statistics provide population estimates for 2001-2008 for each of the 16 ethnic groups, by five-year age-group and sex. In addition the data provides a decomposition of ethnic group population change into births, deaths and net migration. The data are provided for each local authority ‘district’ in England and Wales.

As part of an ESRC-funded research project, a team at the University of Leeds has produced its own ethnic population estimates and projections for local authority areas in England and Wales and for the countries of Scotland and Northern Ireland. The data, assumptions and results of these projections are to be disseminated to a wider audience as part of a follow-on research project. This process is due to finish in September 2011.

This should enable local authority users to develop their own ethnic projections based upon assumptions used within the Leeds model, with a component of the dissemination process being the provision of data in a format that is compatible with POPGROUP software.

More details on the project can be found at the University of Leeds, School of Geography website:

[Ethnic Group Populations Trends and Projections for UK Local Areas](#)

5. Outside the UK

5.1 Introduction

POPGROUP models can be applied at any spatial scale: national, regional, local. They are driven by the availability of data and assumptions on the key components of demographic change: fertility, mortality and migration.

International organisations typically provide a variety of ‘national’ and ‘regional’ statistics derived from national censuses, civil registration, population registers and other administrative systems

[Eurostat](#)

[United Nations Statistical Division](#)

[World Health Organisation](#)



Eurostat has compiled an ‘online database’ of demographic statistics. The data generally relate to the period since 1991, with more complete data since 2001. Eurostat uses the [NUTS](#) geography as the basis for its data collection, with data available at NUTS1 (region), NUTS2 (counties and groups of counties) and NUTS3 (counties and groups of local authorities).

Data coverage from Eurostat is not complete or consistent but the demographic statistics have been used to produce the latest (2008-based) population projections for NUTS2 regions across Europe.

[Eurostat population projections](#)

In addition, the same statistics, in combination with a variety of data sourced from local National Statistical Organisations (NSO), have been used by an international, ESPON project to evaluate alternative growth scenarios across the NUTS2 geography of Europe (Demographic and Migratory Flows affecting European Regions and Cities – DEMIFER).

[ESPON DEMIFER projections](#)

The [Eurostat Demographic Database](#) provides a browse facility and a ‘bulk download’ facility and contains key statistics on:

- Population estimates
- Population projections
- Components of change - births/deaths/net migration

The ESPON project demonstrated that, with gaps in the database and with geographical detail extending only to the NUTS3 geographical scale, more detailed and more comprehensive statistics are required through direct contact with NSOs. Convenient links to a number of these NSOs, both in Europe and the rest of the world, are provided in the following sections.

5.2 National Statistical Offices: European

Austria	Statistics Austria
Belgium	National Statistical Institute
Bulgaria	National Statistical Institute of Bulgaria
Cyprus	Statistical Service of the Republic of Cyprus
Czech Republic	Czech Statistical Office
Denmark	Statistics Denmark
Estonia	State Statistical Office
Finland	Statistics Finland
France	National institute of statistics and economic studies (INSEE)
Germany	Federal Statistical Office
Greece	National Statistical Service of Greece
Hungary	Hungarian Central Statistical Office
Iceland	Statistical Bureau of Iceland
Ireland	Central Statistics Office Ireland
Italy	National Institute of Statistics of Italy (ISTAT)
Latvia	Central Statistical Bureau of Latvia
Liechtenstein	Statistical Office
Lithuania	Statistics Lithuania
Luxembourg	Service Central de la Statistique et des Etudes Economiques (STATEC)
Malta	National Statistical Office
Netherland	Statistics Netherlands
Norway	Statistics Norway
Poland	Central Statistical Office of Poland
Portugal	National Statistical Institute (INE)
Romania	National Institute of Statistics
Slovakia	Statistical Office of the Slovak Republic
Slovenia	Statistical Office of the Republic of Slovenia
Spain	National Statistical Institute (INE)
Sweden	Statistics Sweden

Switzerland	Federal Statistical Office
UK	Office for National Statistics

5.3 National Statistical Offices: International

For a complete list of all NSOs, users should visit the US Census Bureau site:

[US Census Bureau NSO links](#)

Australia	Australian Bureau of Statistics (ABS)
Brazil	The Brazilian Institute of Geography and Statistics (IBGE)
Canada	Statistics Canada
China	National Bureau of Statistics of China
India	IndiaStat
Japan	Statistics Bureau, Ministry of Internal Affairs and Communication
Mexico	National Institute of Statistics, Geography and Informatics (INEGI)
New Zealand	Statistics New Zealand
Russia	Federal State Statistics Service (ROSSTAT)
USA	FedStats